NON-FINANCIAL DISCLOSURE AND INTEGRATED REPORTING

Practices and Critical Issues

Edited by Lucrezia Songini, Anna Pistoni, Pierre Baret and Martin H. Kunc

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NON-FINANCIAL DISCLOSURE AND INTEGRATED REPORTING

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NON-FINANCIAL DISCLOSURE AND INTEGRATED REPORTING: PRACTICES AND CRITICAL ISSUES

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INTRODUCTION

NON-FINANCIAL DISCLOSURE AND INTEGRATED REPORTING: PRACTICES AND CRITICAL ISSUES

Lucrezia Songini, Anna Pistoni, Pierre Baret and Martin H. Kunc

The financial crisis of 2008 and its economic and social aftermath have highlighted the limits and risks of an increasingly global and embedded economy. They have also weakened society's trust in organizations and institutions and have led to calls for new strategic paradigms that focus more on the ethical conduct of organizations in the broader economy, transparency in reporting the social and environmental impact of business activities, and duties and responsibilities of the organizations toward all stakeholders.

In this context, the landscape of performance measurement and reporting is changing quickly, with calls for more integrated reporting (IR) and compulsory non-financial disclosures. Keeping up with those issues represents a significant concern for managers in many organizations.

On March 1, 2010, the Johannesburg Stock Exchange adopted the King III principles as part of its listing requirements. Since 2010 listed companies in South Africa have been asked to apply King III principles, which recommend IR and hence the requirements for listed companies to issue integrated reports.

In December 2013, the International Integrated Reporting Council (IIRC) generated the International IR framework with the aim to help the development of more comprehensive and comprehensible information about an organization's global, prospective as well as retrospective, performance to meet the needs of an emerging, more sustainable, and global economic model.

Even though there are numerous benefits for stakeholders and organizations, and the great number of studies and evidence on best practices in IR adoption,

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IR is still not so much diffused among companies. The main reason can be traced to difficulties that companies find on implementing the IR framework.

Thus, a debate between academia and practitioners concerning whether the IR must be a compulsory or non-mandatory requirement for companies has emerged in recent years. Attention has been paid by the researchers to issues in IR, particularly, role and objectives, critical issues in its implementation, and the relationship with corporate social responsibility (CSR) and sustainability disclosure and reporting. More recently, the focus has been shifted to the determinants of the adoption of IR and its quality.

In the last few years, to cope with the effects of financial crisis, big interest toward non-financial disclosure has been emerged at the institutional level. In 2014, the European Union issued the Directive 2014/95/EU concerning mandatory disclosure of non-financial and diversity information by public-interest entities. The EU requires all European countries to consistently adopt this directive in their legislation. Since January 1, 2017, all large public-interest organizations with more than 500 employees, listed corporations, and financial institutions have been forced to disclose their Annual Report non-financial information concerning environmental protection, social responsibility and treatment of employees, respect for human rights, anti-corruption and bribery, and diversity on company boards.

The literature on the implementation and effects of the Directive 2014/95/EU on disclosure practices of European enterprises is still limited, but it seems to confirm the relevant role that institutions and regulation have in improving the quality of non-financial disclosure. However, many critical issues emerge in the measurement and communication of non-financial performance, which have negative impact on the quality of such a disclosure. They mainly refer to the relevance, the breadth, the reliability, the comparability, the standardization and harmonization of non-financial indicators, and the need that non-financial disclosure allows significant comparisons of performance of different companies during the particular time. The relationship between compulsory non-financial disclosure and voluntary CSR and sustainability disclosure tools, such as sustainability reporting and environmental reporting, as well as the role of well-established and recognized standards such as global reporting initiative, remains an open question.

This volume critically reviews and advances theorization and empirical research about new trends in disclosure. It will help bridge the outlined gaps in the literature and practice by focusing on the effectiveness, quality and practical issues in non-financial disclosure, and IR. It will shed new light on many of the critical topics in these areas, such as the determinants of disclosure quality; the identification of appropriate metrics for non-financial information; the relationship among the different disclosure mechanisms and between voluntary and mandatory disclosure and more.

The analyzed topics are very relevant for managers in organizations, academics and those in other institutions (e.g., governments and regulators). The topics in this volume will address prominent concerns in practice that managers are seeking guidance on, and a focus of research in many different fields of study.

As such, this volume will appeal to managers in organizations who are interested and involved in the development and implementation of IR and non-financial disclosure; scholars considering research related to non-financial disclosures and IR; and policy-makers in institutions who develop standards and regulations on these issues.

In particular, the volume is attractive to:

- Top and middle management teams in charge of non-financial disclosure, CSR and sustainability performance measurement, and IR, belonging to the following organizational departments: communication, accounting and control, and investor relations.
- Listed firms and multinational companies with operations that affect sustainability.
- Consultants and practitioners involved in accounting, financial communication, and performance measurement.
- Academics and others in research fields that study CSR, sustainability, financial accounting, managerial accounting, strategic planning, and communication.

According to the objectives pursued, the book is divided in two parts: the first one is devoted to highlight some critical issues in non-financial performance measurement and disclosure, while the second part deals with emerging and relevant topics concerning IR. Both conceptual and empirical contributions are presented using various methodologies and drawing on different kinds of organizations and geographical contexts.

A summary of the main contents of the different chapters is provided in the following.

The first part, "Key Issues and Practices in Non-financial Performance Measurement," develops the topic with three contributions focusing on different issues.

Chapter 1, "Desperately Seeking a Standard Metric for Corporate Social Performance," by Marco Masip aims at understanding why, despite all attempts proposed in the literature to measure corporate social performance (CSP), a standard metric is still missing. A wide sample of metrics (69), which have been developed in 51 papers in the last four decades and used as a measure of CSP, has been examined by the author with the purpose of analyzing if socially related corporate performance metrics developed so far in the literature can be used as an agreed common standard. Research findings show that none of the metrics are standard for CSP, highlighting a gap in CSP research. A need to develop measures for the social performance of companies, with a wide orientation to the society, emerges from the analysis. Such a metric should consider a societal point of view, and be applied to most organizations regardless of their size, industry and origin, and with a true integration of the interests and needs of all stakeholders.

Chapter 2, "Evolution of Non-financial Reporting in France: The Innovative Adaptation of a Cognac Producer," by Pierre Baret and Vincent Helfrich aims

at studying the main stakes of non-financial reporting and revealing its possible pitfalls. Especially, the case study presents some innovative and particular practices in terms of non-financial reporting that can represent the guidelines of an "ideal" non-financial reporting strategy that can simultaneously conciliate three stakes: CSR, non-financial reporting, and expectations of the company with a non-financial reporting tool.

Chapter 3, "The Effect of Mandatory Publication of Nonfinancial Disclosure in Europe on Sustainability Reporting Quality: First Insights about Italian and German Companies," by Giorgio Mion and Cristian R. Loza Adaui aims to explore and evaluate the impact of the Directive 2014/95/EU on the sustainability reporting quality in two countries that have recently adopted the EU Directive, and to compare the two different institutional frameworks. Through the analysis of listed companies on the Italian and German Stock Exchanges, the authors show that the mandatory disclosure has a widely predictable effect on the number of sustainability reports published while it has no significant effect on the number of companies developing IR. With reference to the quality of sustainability reporting practices adopted by organizations, two different effects can be outlined: on the one side mandatory disclosure does not have any significant impact on the quality of sustainability reports, on the other hand it contributes in leveling and harmonizing the sustainability reporting practices between the two analyzed countries, thereby favoring a reduction of the effects of the two institutional frameworks.

The second part, "Key Issues and Practices in Integrated Reporting," develops the topic with four contributions focused on IR.

In Chapter 4, "Mapping Circular Economy Processes in Integrated Reporting: A Dynamic Resource-based Approach," Martin H. Kunc, Federico Barnabè, and Maria Cleofe Giorgino propose to adopt the Dynamic Resource-based View (DRBV) approach to IR in order to improve its usefulness as both a management and governance tool. The authors, using a multiple case-study methodology, demonstrate how a combined approach of IR and DRBV is able to move IR from the simple communication tool to represent the business system and evaluate the performance of the organizations with the aim of supporting managerial decision processes and combining integrated thinking and integrated management practices.

Chapter 5, "Integrated Reporting and Social Disclosure: True Love or Forced Marriage? A Multidimensional Analysis of a Contested Concept," by Sergio Paternostro aims at critically analyzing the relationship between IR and social/sustainability disclosure. In particular, the chapter studies if the IR can contribute to improve the sustainability disclosure of the company, compared to the traditional separation between financial and social disclosure and to understand the nature and type (natural or forced) of the link between IR and social disclosure. The analysis has been carried out considering three different perspectives: academics' point of view, which has been traced by an in depth literature review, soft-regulators' perspective identified through a critical content analysis of IIRC

framework and companies, and finally the organizations' perspective which has been drawn by developing four case studies.

A particular focus on the relationship between environmental, social, and governance (ESG) performance and the content and sematic properties of IR is provided in Chapter 6, "Tone at Top in Integrated Reporting: The Role of Non-financial Performance," by Valentina Beretta, Maria Chiara De Martini, and Sara Trucco. The chapter investigates the extent to which the optimistic tone of intellectual capital disclosure (ICD) found in integrated reports is affected by the company's ESG performance. Hypotheses based on the "tone and the top" were conceptually developed and empirically tested through the content and tone analysis of 79 integrated reports issued by European listed firms from 2011 to 2016. The results show that, among the three main ESG performance pillars, governance is the most relevant in contributing to optimistic tone in ICD and particularly the integration between vision and strategy. Workforce health and safety, with reference to social performance, and eco-efficient product innovation, with regard to the environmental performance, play a positive role in enhancing optimistic tone of ICD.

Finally, the quality of IR is approached in Chapter 7, "Integrated Reporting Quality: An Analysis of Key Determinants," by Lucrezia Songini, Anna Pistoni, Francesco Bavagnoli, and Valentina Minutiello. In particular, the authors used the IR scoreboard recently proposed in the literature to assess the quality of 165 integrated report provided by 55 international firms during the period 2013–2015. The quality score was defined considering the level of compliance of the IR content with the IR framework proposed by IIRC. On the basis of the literature review, four main determinants of IR quality have been identified: industry, region (where the firm is established), firm size, and mandatory adoption of IR. Findings show that firms located in Europe and in countries where IR is mandatory have higher IR quality. Conversely, industry and firm size seem not to have any impact on IR quality.

Some concluding remarks are proposed in the last chapter of the book. Particularly, the chapters in this book show important advances in determining the usefulness of non-financial disclosure and in particular IR in improving reporting, corporate performance and disclosing the actions of companies related with CSR, sustainability, and other non-financial aspects. While further research is underway, managers should start accepting that non-financial disclosure and IR provide a solid foundation to generate positive contributions to society. For researchers, the implications of the findings indicate the usefulness of adopting multiple methodologies, for example, case studies, regression analysis, etc., to uncover the impact of non-financial disclosure and IR in companies and activities of CSR.

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PART I

KEY ISSUES AND PRACTICES IN NON-FINANCIAL PERFORMANCE MEASUREMENT

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CHAPTER 1

DESPERATELY SEEKING A STANDARD METRIC FOR CORPORATE SOCIAL PERFORMANCE

Marco Masip

ABSTRACT

Despite all the attempts developed so far to measure corporate social performance in the last decades, a standard metric for it is still missing. In this work, the author tries to understand why is this the case. To do so, the author has reviewed 69 relevant metrics developed in the literature since the 1970s until today, covering approaches based on social, reputational, and environmental ratings, as well as several others constructed ad hoc by reputated scholars. The author analyzes each of them through a double optics, checking if they meet the minimum requirements to be considered standard and truly social. The research reveals that the main factor that prevents such a standard is the lack of truly social orientation of the existing metrics.

Keywords: Corporate social performance; metrics; standard; performance measurement; social value; corporate value; CSP

1. INTRODUCTION

Socially related issues and data are already part of today's companies, often under the Environmental, Social, and Governance (ESG) label. Management teams must report on an increasing number of topics, categories, and practices

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related to those items. Analysts and investors have integrated ESG factors into their portfolio analysis, mostly through rating agencies such as RobecoSAM or MSCI. However, in practice, no metric has been adopted yet as a common, agreed standard for such endeavors. This work tries to understand why this is the case by analyzing the most relevant metrics proposed till date in the literature.

The importance of a standard way to measure the effects of business in society is often overlooked. Every company, whether pursuing specific social goals or not, has an impact on society, at least through the different ways in which it engages with its various stakeholders. If that impact is not measured, it is materially impossible for society to decide whether that impact is in favor of its interests and needs or not. Moreover, the lack of such a metric forces society to make use of other sources of information to base those decisions, though they were built to serve other interests. By relying on these sources (mostly financial ones), society is, in practice, subordinating its own interests and needs to those for whom the metrics were intended. Although the concerns of companies and society may often overlap and coincide, it is clear that it will not always be the case. At least in those cases, society has no reference to define which corporate performances or behaviors are in its benefit and which are not and, therefore, it must find a way, its own way, to do so.

So far, the literature around the corporate social performance (CSP) construct has given more importance to issues like the "point of tension" (Margolis & Walsh, 2003) between the forces that push for some kind of responsibility and involvement of business into social issues (since at least Berle, 1932 and Bowen, 1953) and those against it (Friedman, 1970; Jensen, 2010), as well as the link between social and financial performance, thoroughly discussed under many perspectives, in key reference papers and meta-analysis (Lu, Chau, Wang, & Pan, 2014; Margolis & Walsh, 2002; Orlitzky, 2001; Waddock & Graves, 1997a; Wood, 1991a, 2010), without definitive conclusions.

Understanding why there is no such a standard metric requires, first and foremost, to analyze if any of metrics that is already published in the literature could, in fact, be used as such. If at least one of the metrics does (i.e., if any of the previously developed metrics can be used as a standard), the subsequent discussion would move us to try to understand what has prevented it to be widely adopted and used as a standard so far. If none of them fit in what a standard is, we could aspire, at least, to understand the limits of previous work and potential elements that could be of use to build one.

It is for that purpose that we have examined a wide sample of metrics (69) developed from 51 papers in the last four decades that have been used as a measure for CSP or, at least, as a valid proxy to it. These metrics try to represent the different approaches shown in the literature so far. Several experts in the field were consulted to ensure that no major approach was left out.

Considering the vast number of existing approaches, the wide meaning of the term "standard" and the concept of CSP itself, we have come with our own definition of what a standard CSP metric would be: a measure of the effects generated by a company to society in the course of its activities, regardless of its social intention, that could be used for comparative evaluation.

In our analysis, two key issues have been used to determine if the metrics analyzed can be considered as a standard for CSP: (1) do they fit into what a standard should be? (we call this *standard fit*) and (2) do they fit into what a truly social CSP metric should be? (we call this *social fit*).

Standard fit refers to the possibility of using the metric to most companies, regardless of their size, industry and geographical origin, and requires, at least two factors: openness (do the metrics provide a full picture of how results are estimated, so it can be of general use?) and comparability (do they provide results for each company that can be compared among them?).

By social fit we mean the degree in which each metric gathers and reflects material interests of society. A standard CSP metric should cover at least material interests of the corporation's primary stakeholders (Clarkson, 1995). It may seem obvious, but a CSP metric is not per se socially oriented. In fact, as we will show later, most attempts developed so far are not, as they are either made with data that are material only to some stakeholders (mostly corporate owners, investors, and financial analysts) or are directly addressed to some stakeholders, leaving out real concerns of other socially relevant agents, such as employees, providers, or communities.

The remainder of the chapter is structured in six sections. First, we set forth the theoretical framework in which this research is based. Then we review the different metrics and segments found in the literature, with which the analysis has been carried out. Hypotheses are formulated in section three and the final sections cover methodology, results, and conclusions.

2. THEORETICAL FRAMEWORK

Efforts in the long and winding road of measuring companies' social value have traditionally fallen into one big pothole: the lack of a solid theoretical construct around what social issues or obligations should companies be accounted for.

A major cause for this still unresolved issue is "the inclusive and vague meaning of the word social" (Clarkson, 1995), which has resulted in the birth and development of a myriad of similar, somewhat related terms that swim around the same waters. Waddock (2004) gathered and provided a definition for most of them. The list cannot be exhaustive, but she distinguished some "root concepts," that lay the general framework on top of which business in society scholarship has created more: corporate citizenship (CC), corporate responsibility (CR, which would include corporate social responsibility – CSR), CSP, and stakeholder theory.

We will focus on the latter two, as its combination has perhaps developed the more solid ground for the most significant measurement approaches and includes an integrative view of most of the others.

Carroll (1979) developed the first model for evaluating corporate performance, a three-dimensional approach featuring "the social responsibility categories" (the nature of the social "obligations" that companies have), the "social issues involved" (the questions affected by those responsibilities), and "philosophy of responsiveness" (how those questions are addressed).

Several works were built on Carroll's scheme (Ullmann, 1985; Wartick & Cochran, 1985), but Wood (1991b, reviewed in 2010) was decisive in putting an order in the discussion. Her model, based on the distinction among the "principles of corporate social responsibility," the "processes of corporate social responsiveness," and the "outcomes of corporate behavior," provided the right context to many of the concepts that had been created up to then and particularly set out what could be measured (outcomes) and what not (principles and even processes).

Besides the CSP construct, the emergence of stakeholder theory, particularly after Freeman's (1984) milestone, helped to provide a view of how could society be in relationship with the company (the sum of its relationships with the different stakeholders) and thus framed the responsibilities of the company toward society in a way that could be related to the real scope of each organization.

Significant works have contributed to integrating both streams. Clarkson (1995) provided a more accurate definition of the boundaries in which companies' activity could be evaluated: CSP should consider *stakeholder issues* (as opposed to *social issues*, that would be set by the context of each society over time, and that were out of the company range) and should be evaluated at an *organizational level*, while discussions about CR and responsiveness should be addressed at an *institutional level* and manager's performance at an *individual level*:

> Performance is what counts. Performance can be measured and evaluated. Whether a corporation and its management are motivated by enlightened self-interest, common sense or high standards of ethical behaviour cannot be determined by the empirical methodologies available today. These questions cannot be answered by economists, sociologists, psychologists or any other kind of social scientist. They are interesting questions, but they are not relevant when it comes to evaluating a company's performance in managing its relationships with its stakeholder groups. (Clarkson, 1995, p. 105)

It also restricted CSP to primary stakeholders (those on which company's survival and continuing success depend) as opposed to secondary stakeholders (that have or receive some sort of influence and interest to or from the company but are not "essential for its survival"). Mitchell, Wood, and Agle (1997) added more on this, by providing a framework to identify and weight stakeholders.

What is CSP then? Blackburn, Doran, and Shrader (1994) defined it as "a measure of a firm's attentiveness to multiple stakeholder groups." Luo and Bhattacharya (2009) considered that CSP was "a company's overall performance in these diverse corporate prosocial programs in relation to those of its leading competitors in the industry." Schuler and Cording (2006) provided another definition: "Voluntary business action that produces social (3rd party) effects." Wood (2010) defined it as "a set of descriptive categorizations of business activity, focusing on the impacts and outcomes for society, stakeholders and the firm."

To make the best use of the term, we have opted for a broad perspective of CSP. CSP should cover all effects generated by the company to society in the course of its activity, regardless of its social intention, that is, whether those effects were sought or not. A definition of this sort allows us to bridge most of the issues mentioned above while being open to including the myriad of terms that have arisen around CSP over the years. Consequently, as shown in coming sections of

this work, we will consider metrics from other concepts that are considered close, almost synonyms to those mentioned above, such as social issues, stakeholder management, and environmental performance, among others.

The term "standard" also has several meanings. Oxford Dictionary gathers several definitions of the term, as a noun and as an adjective. For this work, we have focused on the following: "Something used as a measure, norm or model in comparative evaluations" (noun) and "Used as normal or average" (adjective).

Adding both concepts, we have come to a possible definition of standard CSP metric, that we will use along our work: a measure of the effects generated by a company to society in the course of its activities, regardless of its social intention, that could be used for comparative evaluation.

3. RESEARCH FRAMEWORK AND HYPOTHESIS

The purpose of this study is to analyze if socially related corporate performance metrics developed so far in the literature could be used as an agreed, common standard.

In order to become a standard for measuring social value, the structure of the metric should be applicable to most, if not all, companies, regardless of their size, industry, and origin. Proponents of existing metrics have devoted significant effort to validate them in practice and to use real company data. However, despite their diversity, metrics have been tested in a very limited number of ways. Samples usually comprises only of big corporations, likely S&P 500 companies. Lack of data has often determined what could be measured and hence limits the validity of metrics themselves. But, to be used as a standard, the metrics should also allow measuring the performance of other companies beyond their specific test field. Is it the case? Are existing CSP metrics structured in a way that could be applicable to most companies regardless of their size, industry, and origin? Can those metrics be used in contexts that are different to the ones in which they were initially designed? Considering these questions, we will phrase our first hypothesis as follows:

> *H1*. Analyzed CSP metrics can be used to measure the performance of most companies, regardless of their size, industry, and geographical origin.

Using a metric as a standard for CSP not only requires a specific structure but also be truly social, that is, they also need to reflect values that are material for society and aspire to serve society as a whole. Simply put, they need to be relevant for society. Otherwise, they would be metrics of other sort, financial, or operational perhaps, but not social. Ruf, Muralidhar, and Paul (1998) set out their "desired characteristics of a CSP measure":

> A measure of CSP should: (1) be responsive to a variety of factors that constitute social responsibility, (2) be independent of the characteristics of the organization, (3) be based on outcome measures rather than perceptions, and (4) reflect the values of the stakeholders being considered. (p. 122)

It cannot be given for granted that each attempt to measure CSP in the past complies with this approach. The way each metric addresses these points dimensions are defined, weighted, and scored may differ greatly and sometimes may fail to represent a really social material issue. According to characteristic number four (above), we should expect that metrics reflect the values of, at least, primary stakeholders. That is to say, in other words, we need to make sure that metrics try to be an estimation or a proxy for social value, or at least for social impact of the company's activity and not just the value or the impact of social issues for a specific stakeholder (the financial value of social issues, for instance).

We will use one key environmental issue, pollution, to illustrate this point. Pollution emissions are a material issue for the communities in which companies operate, and it can be agreed that, if possible to choose, any community would prefer to have in its territory a company that pollutes less rather than one that generates more emissions (caeteris paribus). However, some metrics incorporate pollution not in terms of what concerns society (emissions) but in terms of a corporate material issue (company risk). The key issue, in these latter cases, is not that the company generates a certain amount of emissions (and therefore, generates a higher level of pollution), but that the way the company handles pollution affects (positively or negatively) the capacity of the company to provide a return to their investors. The same dimension (pollution) is thus being considered in different ways and provides different information that is addressed to different targets with different goals/intentions. While it could be argued that the first case (absolute pollution emissions) is not inexorably directed to society as a whole, the second (environmental risk) is certainly material for specific stakeholders (investors and financial analysts), but not for others.

To analyze this best, we have defined the second hypothesis as follows:

H2. Analyzed CSP metrics are oriented to society as a whole, not to a limited number of stakeholders.

4. LITERATURE REVIEW AND DATA COLLECTION

Our research covers a total of 69 metrics, which were developed in scientific works that have been used to measure CSP or CSP-related concepts or have been considered as valid proxies to it. A full list of the metrics reviewed is provided in Table 1.

Works incorporated into the analysis try to provide a qualitatively relevant sample of the different, relevant approaches developed during the last four decades, since the 1970s until today.

Several key works that integrate a vast number of approaches (Lu et al., 2014; Margolis & Walsh, 2002; Wood, 2010) were used to identify a first set of metrics. Wood (2010) was particularly useful, as it probably covers the widest number of CSP approaches of all kinds. In order to identify additional and also most recent work, we performed searches on the Web of Knowledge database[1] using the key words "corporate social performance." Web of Knowledge is well-known, highly

Table 1. List of Metrics Reviewed by Year and Category.

Type of Metric	1980 and Before	1981–1985	1986–1990	1991–1995	1996–2000	2001–2005	2005–2010	2011 and After
Social rating based				Ruf et al. (1993) Blackburn et al. (1994) Graves and Waddock (1994) Sharfman (1996) (1)	Waddock and Graves (1997a) Turban and Greening (1997) (1) Grifin and Mahon (1997) (2) Berman et al. (1999) Johnson and Greening (1999) Mcwilliams and Siegel (2000)	Hillman and Keim (2001) (1), (2) Ruf et al. (2001) Cox et al. (2004)	Neubaum and Zahra (2006) David, Bloom, and Hillman (2007) Mahoney and Roberts (2007) Choi and Jung (2008) Mahoney et al. (2008) (1), (2), (3) Liston-Heyes and Ceton (2009) (1) Godfrey et al. (2009) Callan and Thomas (2009) (1), (2) Surroca et al. (2010)	Chiu and Sharfman (2011) Baird, Geylani, and Roberts (2012) Ho et al. (2012) Ioannou and Serafeim (2012) Barnett and Salomon (2012) Humphrey et al. (2012) Ducassy (2013) Jayachandran et al. (2013) Boulouta (2013) (1), (2), (3) Brower and Mahajan (2013) Hafsi and Turgut (2013)

(*Continued*)

Table 1. List of Metrics Reviewed by Year and Category. **(Continued)**

Type of Metric	1980 and Before	1981–1985	1986–1990	1991–1995	1996–2000	2001–2005	2005–2010	2011 and After
Reputation rating based			McGuire, Sundgren, and Schneeweis (1988)	Thomas and Simerly (1994) Sharfman (1996) (2)	Grifin and Mahon (1997) (1)		Pivato et al. (2008) Luo and Bhattacharya, (2009) Liston-Heyes and Ceton (2009) (2)	
Environmental rating based		Wiseman (1982)			Grifin and Mahon (1997) (3)			
Ad hoc (survey based)		Aupperle et al. (1985)			Turban and Greening (1997) (2) Albinger and Freeman (2000)			Agudo-Valiente et al. (2014) Agudo-Valiente et al. (2015)
Ad hoc (other)	Vance (1975) Alexander and Buchholz (1978) Bowman and Haire (1976) Ingram (1978)		Lerner and Fryxell (1988) (1), (2), (3)	Sharfman (1996) (3)	Grifin and Mahon (1997) (4), (5)		Brammer and Millington (2008) Muller and Kolk (2010)	

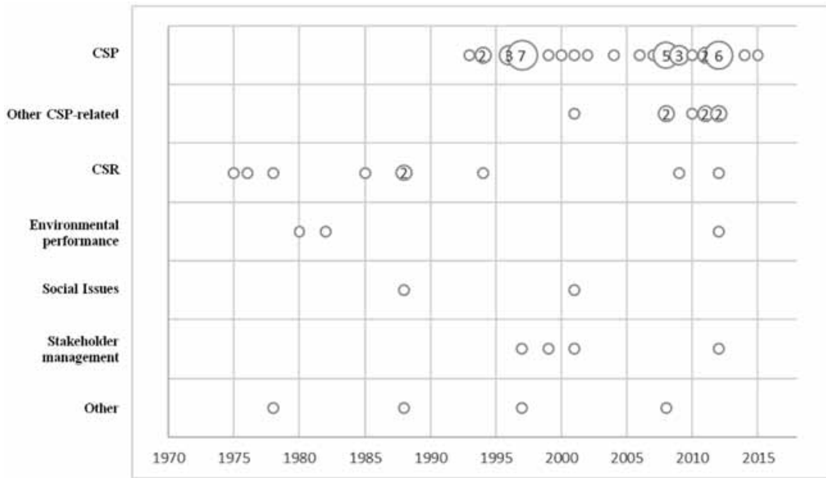

Fig. 1. Concepts Measured by Corporate Social Performance Metrics Included in This Research by Year of Publishing.[a] [a]Bubble represents number of metrics. For the sake of clarity, number "1" was omitted of the chart and is represented by bubble alone.

reputed, and comprehensive research platform containing relevant research citations from 1900 to the present.

We also performed a relevance check, verifying the number of citations of each work in the general collection of the Web of Knowledge database. Though this variable cannot be considered per se a measure of the quality or importance of each work and it is heavily influenced by time (older works may tend to have more citations than newer ones), it has long been considered a proxy of the relevance of any published scientific work. The 51 works considered in this research have an average of 271.5 citations on the above-mentioned database.[2] By linking relevance to citations, we may be leaving out some significant metrics, particularly those that could be published in more recent years. Thus, we have also asked several international experts in the field to suggest any relevant reference that they consider would be missing.[3] We wish to highlight that we are open to integrate into the document the relevant work that could provide innovative, different approaches that we may have missed or have been recently created.

For the purpose of this research, we considered only quantitative proposals of companies' social performance, leaving out works that included only theoretical models that were not quantified and tested, as well as metrics directed to non-profit driven organizations (e.g., NGOs) or restricted to socially driven companies.

Following Igalens and Gond (2005), we segmented the CSP metrics according to the sources used to assign scores. Four categories have been considered according to this criterion: (1) social rating-based metrics, (2) reputation rating-based metrics, (3) environmental rating-based metrics, and (4) Ad hoc measures.

Considering the breadth of CSP-related terms in literature, we have incorporated metrics beyond the literal label of CSP, including "change in CSP" (Ruf, Muralidhar, Brown, Janney, & Paul, 2001), "CSP breadth" (Brower & Mahajan, 2013), "CSP people" and "CSP product (Mahoney, Lagore, & Scazzero, 2008), "social and strategic CSP strengths" (Chiu & Sharfman, 2011), "corporate social responsibility" (nine times, including Aupperle, Carroll, & Hatfield, 1985; Blackburn et al., 1994; Ducassy, 2013; Godfrey, Merrill, & Hansen, 2009), "corporate social responsiveness" and "social issues" (Lerner & Fryxell, 1988), "corporate responsibility performance" (Surroca, Tribó, & Waddock, 2010), "social issues participation" and "stakeholder management" (Hillman & Keim, 2001), "environmental performance" (Ingram & Frazier, 1980; Wiseman, 1982), "environmental and product social performance" (Jayachandran, Kalaignanam, & Eilert, 2013), "organization reputation" (Turban & Greening, 1997), "stakeholder management" (Berman, Wicks, Kotha, & Jones, 1999), "stakeholder relations" (Waddock & Graves, 1997b), and "stakeholder influence capacity" (Barnett & Salomon, 2012). CSP itself is considered in 39 references (Fig. 1).

The metrics included do not represent the importance of each of these terms and cannot be used as a reference of how widely they have been used, either in practice or literature. Our list does not pretend to be exhaustive and there are many other terms, as research in this field is constantly evolving. Those not included here are absent because we did not find specific metrics for them.

For the remainder of the document, metrics will be labeled using the citations of the paper or book in which they are developed. In case there is more than one metric in a document, an additional number will be added.[4]

Social Rating-based Metrics

Metrics that are somehow based on information provided by social rating agencies represent the broadest group in our analysis (40 out of 69, about 60% of the total).

KLD is the most used social rating in literature, being the base for 29 metrics of this kind. Several factors may help to explain KLD's dominance. It was the first in coming into light (was created in 1991) and was exclusive for some time. In addition, since the beginning, it was open to academic research, and was used in milestone CSP research (Graves & Waddock, 1994; Ruf, Muralidhar, & Paul, 1993; Turban & Greening, 1997; Waddock & Graves, 1997b). Its approach has also been extensively discussed, either in favor (Chatterji, Levine, & Toffel, 2009; Sharfman, 1996) or against (Agudo-Valiente, Gargallo, & Salvador, 2014), among others.

Other social raters found in our research include EIRIS (Cox, Brammer, & Millington, 2004), CSID, that followed an approach in Canada that was quite similar to KLD's (Mahoney & Roberts, 2007), Sustainalytics (Surroca et al., 2010), SAM (Humphrey, Lee, & Shen, 2012), Innovest (Ho, Wang, & Vitell, 2012), and CFIE (Ducassy, 2013). We have also included here works based on Council on Economic Priorities (CEP), despite being an organization with a different nature than other social rating agencies.

Each social rating agency has developed its own, unique, certainly opaque approach to company valuation and these methodologies have evolved with time, due to the evolution of techniques, technology, and regulation about data disclosure and regulation, among others. A KLD metric from 1994 does not have the same dimensions and does not follow the same, exact evaluation process than the one developed in, say, 2005 (Hart & Sharfman, 2015). In addition, history of social rating agencies has been somewhat tumultuous so far (e.g., KLD and Innovest were acquired by Riskmetrics in 2009 and then this latter by MSCI; SAM is now part of RobecoSAM; CSID is now Sustainalytics; CEP is missing). All these factors affect our analysis, considering the wide time span of this work (about 40 years). However, valuable outcomes can still be obtained by analyzing these metrics, as they all share a fairly common approach in terms of what social dimensions they consider, what sources of information they are based on, and what is their methodology disclosure and business model.

Reputation Rating-based Metrics

Metrics in this group are all based on the assumption that corporate reputation is a valid proxy for CSR or CSP and rely on external sources to measure it.[5]

We have included six metrics of this sort (about 10% of total), spanning from 1988 to 2009.[6] All of them are based on Most Admired Companies (MAC) index published annually by Fortune magazine.[7]

MAC index is elaborated from a poll made among executives, directors, and securities analysts (3,800 are said to have participated in the 2017 edition). Respondents select the 10 companies they admire most from their own industry, out of a list proposed by Fortune, and provide their perception of company's reputation in a series of categories. The magazine then publishes a ranking, either general or by industry, based on all responses.[8]

Though it remains a reference for a general audience, its importance as a proxy for CSP peaked in the late 1980s and beginning of the 1990s and has faded since then. The rise of social rating agencies, that provided a more comprehensive and complete picture of companies' social performance, is perhaps the main reason for its fading relevance in the scientific field. In addition, some authors criticized the use of this tool as a CSP proxy, reproaching it has a "halo effect" for which financially successful companies tended to be biased to obtain higher reputation scores (Brown & Perry, 1994, 1995).

Environmental Rating-based Metrics

Since the 1970s, several studies developed social value metrics using, mainly or exclusively, environmental data.

We have included three of them in our own research (Grifin & Mahon, 1997 (3); Ingram & Frazier, 1980; Wiseman, 1982). All of them are based on external data, either by the CEP or the Toxic Release Inventory Program (TRI),[9] about company's pollution emissions. We acknowledge that the number of corporate environmental metrics is immensely large. However, only those of them that have been used to reflect CSP as a whole should qualify here.

Two factors may help to explain why environmental data were given high and sometimes unique importance to measure companies' social performance. First, public conscience about the environment has been much higher and for much longer than other components of the CSR/CSP construct. In fact, only a few paid attention initially to issues like diversity, overseas production, local community development or legal compliance, to name some. Second, as big corporations began reporting pollution-related variables, these were often the only available CSR data that could be compared across companies.

Notable research is still being performed on environmental performance and other related concepts. However, as the CSR/CSP constructs were consolidated with a wider view, and only CSP-related works based on environmental data were significantly reduced.

Ad hoc Metrics

Lack of suitable, available data have significantly conditioned CSP measurement research. This issue forced some authors to obtain, even create, the referenced data by themselves, usually through ad hoc designed surveys that elicited and structured information that was useful and valuable but mostly unaudited, unregistered or, simply, unconsidered.

Some of the metrics in previous categories are also based on surveys to some degree. However, our ad hoc metrics included here lay their foundations on study-specific efforts, like polls specifically designed by authors to develop and support their corresponding CSP measurement approach. Rating-based metrics have been made by using work from sources that are external to the metric developer, whose results had often to be worked out to serve as a base for measuring CSP.

Our study covers 17 works of this sort, from Vance (1975) all the way to Agudo-Valiente, Garcés-Ayerbe, and Salvador-Figueras (2015). Many of them were based on surveys, covering a wide of approaches, like surveys to CEOs (Aupperle et al., 1985), college students evaluating organization's reputation (Alexander & Buchholz, 1978; Turban & Greening, 1997), experts panels (Albinger & Freeman, 2000), and interviews with organic food customers (Pivato, Misani, & Tencati, 2008). There are also different geographical scopes, ranging from a representative Spanish region (Agudo-Valiente et al., 2015, 2014), South Korea (Choi & Jung, 2008), and the United States (Aupperle et al., 1985).

Finally, a total of ten metrics, developed in seven papers, could not be included in the above-mentioned categories.

As could be expected, these approaches show a wide variety, including corporate disclosures of social issues as a proxy for ranking companies' social activity (Bowman & Haire, 1976; Ingram, 1978), as well as attempts to provide practical measures to the theoretical concepts that were at the top of CSR/CSP literature in the late 1980s, such as CSR, corporate social responsiveness, and social issues (Lerner & Fryxell, 1988). Sharfman (1996) (3) covered how companies were present in the top social mutual funds as a sign of better

social performance and used it to compare social rating-based and reputation rating-based approaches. Grifin and Mahon (1997) (4) and Brammer and Millington (2008) are based on the foundation on corporate charity spending. Finally, Grifin and Mahon (1997) (5) is, in fact, a combination of other metrics included in the same research.

5. METHODOLOGY

Review

As shown in Section 4 (Literature Review and Data Collection), 69 metrics from 51 articles and books were analyzed for this research and have been grouped into four categories (social rating-based, reputation rating-based, environmental rating-based and Ad hoc metrics).

In most of the cases, placing metrics into any of segments presented no doubts. In the event of potential confusion (when they involved surveys and rating elements combined, for instance) we assigned the metric according to our perception of the importance of the factors involved. If one research included several metrics, each of them is treated individually and classified in its group according to its individual nature.

Note that this research focuses on analyzing metrics themselves, that is, the characteristics of the metrics that have been used in the literature to evaluate social value of companies. No attention is made in proving or supporting any of the metrics. Our only attention is paid to the possibility of using them as a standard. We are not reviewing the conclusions of these research works, nor did we put into question the relationship between CSP and any other variable that could have been found out in them.

We performed a four-stage analysis of each metric. In the first one, we examined the metric itself, through its different components, as detailed by Ruf et al. (1998), which included: (1) the dimensions that are going to be included in the metric, (2) the relative importance of these dimensions, (3) the scores or values to each dimension, and (4) the way dimensions, weights, and results are synthesized. Then we reviewed that if there were control variables considered (such as size or industry, which were the most common). In addition, though not necessarily required to review the social metrics themselves, we examined how the metric was tested, considering issues like the size of the sample, criteria used to include companies in the sample, etc. In the fourth and final part, we analyzed the variables against whichever was the social value compared (most commonly corporate financial performance).

Evaluation

Data obtained in the review enabled two different evaluations: (1) standard fit, to determine if the metric can be considered standard, as stated in *H1* and (2) social fit, to check if it could be considered social, according to *H2*.

Standard Fit

In Section 2 (Theoretical Framework), we defined standard as "Something used as a measure, norm or model in comparative evaluations." This definition poses two factors as key, necessary requirements for a standard: openness and comparability.

Openness refers to the metric being transparent about how its results are obtained, so the same process can be applied to most companies, regardless of their size, industry, and origin. A metric is considered "open" if it provides a full picture of the tools, parameters, and information needed to evaluate CSP and "not open" otherwise. For example, if a metric is elaborated using specific weights and parameters for the different dimensions included and these weights and parameters are not disclosed, they cannot be used to evaluate the performance of companies outside the sample for which it was initially developed. Thus, the metric is considered not open. On the contrary, if the metric contains the needed elements to apply the metric to other companies, not included in the initial sample, then it will be considered open.

Comparability is the possibility of providing effectively contrasting results of the metrics of one company versus another. Some metrics may provide results that are not comparable at all, others may consider different elements to evaluate CSP depending on, for instance, the industry to which the companies belong. A standard CSP should provide comparable results based on the same criteria for any company.

This statement may be subject to criticism, considering the way industry and size differences have been treated in literature. In line with almost every author in the field, we understand that a significant part of a company's social performance is highly influenced (if not closely related) by their specific activity, by the industry to which they belong. This is why a great number of the studies in literature include industry as a control variable when measuring CSP. However, when considering a standard way of measuring CSP, and the possibility of comparing not only aggregated results, but also individual ones, the need of using the same factors is clear: it is not possible to compare results if we are not measuring the same things. Significant efforts have been made to overcome this issue, such as setting different scoring scales depending on the industry (the approach taken by most social rating agencies, so far, such as Sustainalytics or MSCI, affecting all studies based on them, as shown above). Besides, these industry-specific approaches add more subjectivity to an already subjective activity (measurement), not to mention the fact that assigning a company to a specific and single industry is very difficult in some cases.[10] Additionally, it could be argued that this kind of differences are not taken into consideration in most common financial measures (for instance, retail/distribution companies usually have lower net profit margins than banks or telecommunication operators, but net profit is measured the same way).

Following that logic, in our analysis, we use the metric's criteria consistency as a proxy for comparability: a metric is comparable if it applies the same evaluation criteria for all kinds of companies and is not comparable if it changes them according to industry, size, or other variables.

Social Fit

CSP metrics have been designed to provide information for specific groups of people or organizations, either internal (e.g., managers or employees) or external (like market analysts, NGOs, or public institutions). Frequently, information targeted to any of these groups may coincide and the one intended to any of them may be highly interesting to another. However, there will be situations in which this is not the case at all.

As we alluded in the Hypothesis section, when Ruf et al. (1998) set out the "desired characteristics" for CSP metrics, they specifically mentioned the need of reflecting "the values of the stakeholders being considered." In line with this thought, Cox et al. (2004), based on Graves and Waddock (1994) affirmed that "a good aggregate CSP measure will comprise a consistent range of important social issues that are uniformly measured across a wide range of companies." According to these reflections, we will consider two elements to study our second hypothesis: the *metrics' addressees* and its *stakeholder approach*.

By metric's addressees, we refer to those to whom the metric's information is directed. Stakeholder approach appertains to the range of stakeholders considered to define the metric.

A metric that would contain more social dimensions is closer to be used as representative of social value than the one that would consider one or very few. Similarly, a metric directed to a broad range of stakeholders would signal a higher social orientation.

Both of them are qualitative variables that are highly related. We acknowledge the fact that one may influence the other. It is likely that a metric will take into consideration more social dimensions if it targets more social groups than if it focuses only on one of them. But that is not necessarily true every time, so considering both variables provide additional explanatory information that could draw a broader picture of the metric's social orientation.

Regarding what stakeholders should be considered, we use the "primary" stakeholder groups as defined by Clarkson (1995) for both variables: shareholders and investors, employees, customers, suppliers and governments, and communities. As some metrics (infrequently) involve other groups, we added a category of "Others." A final category, "None/Not clear" was made when assigning the metric to a specific category that was uncertain.

6. RESULTS

Standard Fit

Results of the standard fit analysis are shown in Fig. 2.

H1 is accepted only in the case of environmental rating-based metrics and some of the ad hoc approaches. In these cases, metrics are open, as full details are provided regarding how they are estimated and what are the assumptions in which they are based. They are also comparable, as no distinction is made on the items under analysis.

Though based in a wide variety of approaches and with limitations on how they can be scaled up (more on this later), ad hoc metrics do provide full

accountability of how CSP results are estimated. Some of these approaches are based in specific surveys (Agudo-Valiente, Garcés-Ayerbe, & Salvador-Figueras, 2012; Aupperle et al., 1985) that set the base to identify which dimensions have to be considered and weighted. In other cases, authors rely on specific company data, such as discussion of CSR issues in annual reports (Bowman & Haire, 1976) or women and minority presence in companies' Board of Directors and top management positions (Lerner & Fryxell, 1988). They contain what is needed to have a whole understanding of how results are reached and how they can be replicated outside the samples in their studies. In addition, these metrics consider the same items for all companies involved, regardless of size, industry, or geographical origin.

On the contrary, metrics that belong to the reputation and social rating categories fail to qualify for any of the variables considered (openness and comparability).

CSP measurements in these cases cannot be considered as "open," as they are estimated through methodologies and sources that are not fully disclosed. Their CSP results are based on the rating agencies final data for each company. However, full details about how the agencies reached to that result, including what assumptions were made, how the different dimensions were weighted, or if there were external factors, such as country or industry risk, that were taken into consideration, are unknown. In the end, what makes a company being scored in one way and other company in another way, is not available to the authors. This directly affects CSP metrics based on them.

In general terms, we can affirm that none of the metrics based on social ratings can provide enough openness as to allow for them to be used outside the rating's umbrella. Authors designing the metrics analyzed in our work generally provide maximum clarity about how they treat social rating data but cannot tell what the agency does not provide to anybody, including them: clear information of how this information was obtained, what were the exact parameters and weights with which it was estimated, and how specific scores or grades were assigned. Without these key elements, the process cannot be repeated in non-rated companies.

Similar issues apply when considering comparability. Even though some of the agencies common in literature (such as KLD) do no longer exist, and the methodologies they used have evolved, most, if not all, social rating agencies work preferably on an industry-based approach, as their main clients (financial analysts and investors) do. For instance, MSCI[11] expressly states that their evaluation is "industry-specific." So does RobecoSAM, who develops the Dow Jones Sustainability Index using different questionnaires for companies, depending on the industry they belong. This is also the case for Sustainalytics, that affirms that its ESG ratings "provide a summary of a company's ESG performance (…) as well as its relative position within an industry."[12] Thus, even if two companies are reported and scored with the same rating, the process and the evaluation they had to face is often not the same, effectively hampering real comparison.

Reputation-based metrics show similar results. Even though the Fortune's MAC index has a long track-record, broad lines of its methodology are public, and Fortune devotes significant effort to its development (about 3,800 executives,

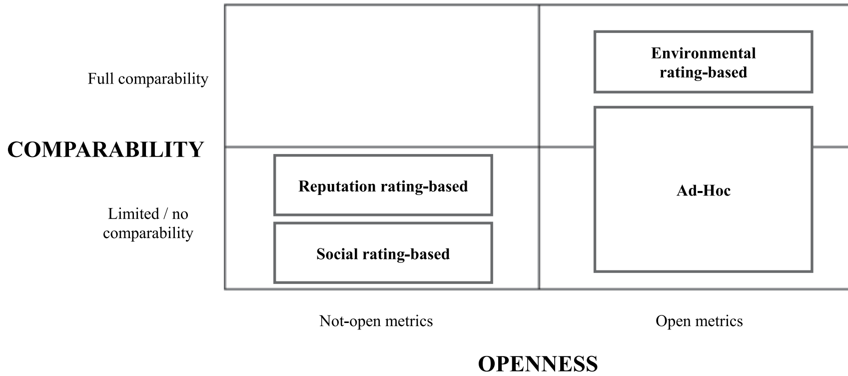

Fig. 2. Standard Fit Analysis by Type of Metric.

managers and analysts have reportedly participated in the 2017 edition), the real details about how scores are evaluated and weighted are not disclosed, clearly signaling non-openness.

In addition, besides the fact that MAC's results are made public as a ranking, in which being the first denotes higher reputation and the last shows less reputation, there is evidence that these metrics provide little comparability, as defined in this work. First, Fortune limits the companies that could be analyzed (its 2016 edition includes US's 1,000 largest companies as well as Fortune's Global 500 non-US companies with revenues over $10bn, later reduced to 680 companies, as it picks only the highest revenue ones in each industry). Second, each participant provides their assessment about companies in his/her own industry, on qualitative issues that are highly subjective, like the quality of management, social responsibility, or ability to attract talent. Therefore, valuation criteria from each participant may present significant differences, greatly affecting comparability.

Social Fit

Results about our social fit analysis are shown in Fig. 3.

According to them, *H2* is rejected in all cases, for all metrics considered, as they fail to include primary stakeholders, either regarding the lens of *metrics' addressees* and/or *stakeholder approach*, as defined in Section 5 (Methodology).

In general, metrics based on ratings are highly influenced by the approach taken by their main information sources. The definition of practically all the elements (dimensions, weights, and scores) in these metrics is based on research and assumptions made by the rating agent. CSP metrics of this kind may tabulate it into a single, linear measure or focus on a particular issue, but assumptions and data are taken "as is" by authors.

Social ratings are clearly oriented to a specific stakeholder group: shareholders and investors. Rating agencies themselves publicly illustrate this point. MSCI (which now owns KLD and Innovest) ESG rating brochure states[13] that:

Fig. 3. Social Fit Analysis by Type of Metric.[a]Turban and Greening (1997) (2) and Choi and Jung (2008), and Bowman and Haire (1975). [b]Lerner and Fryxell (1988) (1), (2), (3), Grifin and Mahon (1997) (4), and Brammer and Millington (2008). [c]Other ad hoc metrics. [d]Vance (1975), Bowman and Haire (1976), Alexander and Buchholz (1978), Ingram (1978), Sharfman (1996) (3), Grifin and Mahon (1997) (5), Chiu and Sharfman (2011), and Muller and Kolk (2010).

> helps investors identify environmental, social and governance (ESG) risks and opportunities within their portfolio. We research and rate companies on an "AAA" to "CCC" scale according to their exposure to industry-specific ESG risks and their ability to manage those risks relative to peers.

RobecoSAM presents itself as

> an investment specialist focused exclusively on Sustainability Investing (…) Our asset management capabilities accommodate institutional asset owners and financial intermediaries and cover a range of investment products in public equities which integrate environmental, social and governance (ESG) factors into the investment process.[14]

Sustainalytics (which now integrates CSID and other former independent agencies) says that its mission "is to provide the insights required for investors and companies to make more informed decisions that lead to a more just and sustainable global economy."[15] Finally, CFIE (in France) has a similar mission: "promote corporate social and environmental responsibility and socially responsible investment with the goal of participating in a deep transformation of economic and financial practices."

However, regarding the other axis in the social fit analysis (stakeholders considered), social ratings include data from an ample breadth of perspectives, to provide a complete, accurate picture of company's performance. This cannot be done without analyzing data from all relevant stakeholders. Thus, social rating-based metrics perform high in the stakeholders considered, though its information is

addressed almost solely to shareholders and investors. As we stated in Section 3 (Research Framework and Hypothesis), these elements end up in metrics covering a fair span of issues, but failing to be relevant for all stakeholders and, thus, for society.

Measures based on reputation ratings show a somewhat transposed approach: Fortune's MAC takes into consideration the opinions of just one stakeholder group (shareholders and investors) and then makes results publicly available. Even though today its data are not fully accessible for free, as it was years ago, the fact that the metric is being carried out by a magazine with significant circulation and that can be found on many newsstands gives an idea of its great audience reach.

Environmental rating-based metrics follow a similar pattern: all stakeholders can be considered as addressees, as information contained in them (such as GHG emissions) are of interest to a wide range of stakeholders. In turn, they provide data regarding a limited (even single) number of dimensions.

Not a general conclusion can be applied to the rest of metrics pertaining to the ad hoc group. Each of them follows its own specific approach, but we have no sign that any of them covers enough stakeholders as both inputs and addressees. Those choosing specific variables as proxies (Lerner & Fryxell, 1988; Sharfman, 1996) of the whole CSP performance of the company do not include the views of the breadth of primary stakeholders. Those based on surveys are limited by the sample they make, which is usually restricted to certain groups, such as CEOs or executives (Agudo-Valiente et al., 2012, 2015; Aupperle et al., 1985). According to these findings, no full social fit can be validated here either.

7. DISCUSSION AND CONCLUSIONS

The first and foremost conclusion of our analysis, as shown in Fig. 4, is that none of the metrics reviewed can be used as a standard for CSP.

The standard fit of some of them has been validated. This was the case of those that were developed ad hoc (mostly survey-based) and those assuming one or few variables as a proxy for the whole social performance of companies, such as environmental.

However, none of the metrics analyzed in this chapter showed a social fit. None of them takes into consideration a wide number of stakeholders as both input and recipients. Though the span of inputs varies more, depending on the type of metric, most of them are in fact addressed to one stakeholder group only, mainly shareholders and investors.

Results mentioned above are hardly surprising if we take into consideration the nature and dynamics of the metrics under analysis and the kind of data in which they are based.

In the case of social rating-based metrics, their results are highly influenced by the way rating agencies operate. The work of any of these agencies (either regarding reputational, social, or financial issues) is based on a closed, proprietary methodology whose value relies mainly on two factors that are effectively incompatible with the standard fit: trust and information scarcity.

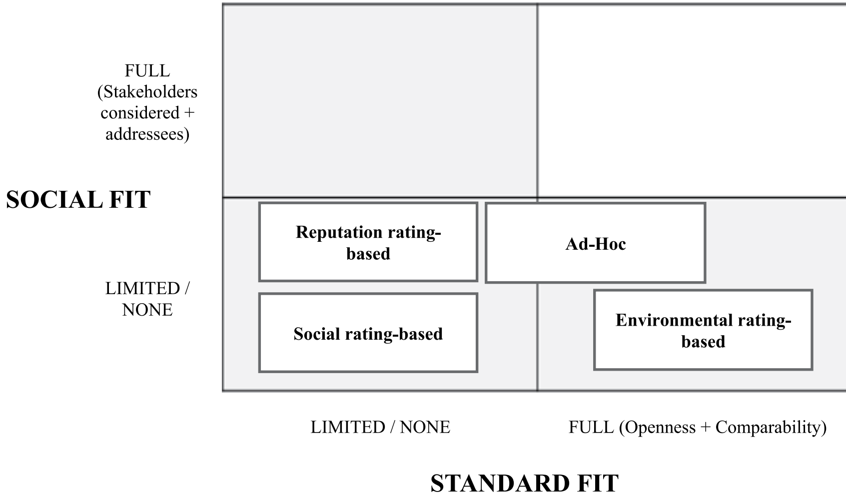

Fig. 4. Summary of Results (Applicability + Social Orientation).[a] [a]White area (full applicability and full social orientation) corresponds to metrics that are standard AND social. Shaded areas correspond to metrics that are either not social, not standard or both.

Methodologies of the agencies are based on trust, as they cannot be fully disclosed. Clients of the agencies need to be convinced about the strength of their methodology but are kept out of full detail on how results are assigned in practice. They need to believe that the results are, in fact, based on that methodology and that the agency is applying the methodology right, but do not have (cannot have) full evidence that this is the case. Keeping a certain degree of secrecy, the agency preserves control and avoids potential replicability.

Besides, public availability of the information provided by the rating agency would dilute its value. Clients (investors and analysts) would have little willingness to pay for information that any market player can have.

Agencies, then, find a right balance for those two factors when there is a limited audience that either trusts their approach or is willing to pay enough for the information they provide, in order to take advantage of it over the rest of the population. Thus, even though some general aspects of social ratings are made public, it is in the interests of all players involved (agencies and clients) that the real processes to measure companies' social aspects remain secret or, at least, hidden, to most of the public. This directly affects CSP metrics and research based on them. As mentioned in Chapter 6 ("Results"), none of the metrics based on social ratings can provide enough openness as to allow for them to be used outside the rating's umbrella, neither are they comparable enough to be considered standard, because, Even if two companies are reported and scored with the same rating, the process and the evaluation they had to face is often not the same.

This does not mean that social rating information cannot be used at all. Social rating-based metrics have contributed enormously to the CSP debate, providing

data when there was (and often there is not still) no another reliable source available. Their work has enabled and enhanced significant lines of research but they cannot serve as the base of standard metrics.

On the other side, metrics based on ad hoc approaches, as well as those grounded on environmental data, face different issues, also related to their nature and dynamics. In most cases, these approaches are based on the need of using a reference as a proxy of the whole CSP performance, in the absence of a better alternative. Beyond the convenience or accuracy of these approaches, the selection of specific variable as a proxy is greatly related to its availability and the possibility to use it in a general way. That is why some of these approaches may pass the standard fit test. Interestingly, this also prevents them to pass the social fit test, as these proxies provide a limited representation of the interests, dimensions, and perspectives of primary stakeholders.

Our analysis shows a clear gap in CSP research and represents also a clear need: to develop a way to measure the social performance of companies with a wide orientation to the society, conceived as an aggregation of, at least, primary stakeholders. There are approaches to do so regarding not-for-profit organizations or the so-called "social enterprises," those that are supposed to have a social orientation, whether they seek for profits or not (Kroeger & Weber, 2014). But companies that have stated no specific social approach have no way to be effectively compared according to their performance on social issues, even though they represent the clear majority of the economic activity of any country.

Moreover, there is also an imbalance between stakeholders. Business owners (current or potential) and financial analysts have some tools or analytics of this kind already available (at least all those provided by social raters), which they generally use to sharpen their investment decisions. The rest of society, at least the rest of primary stakeholders, does not.

Perhaps the first to blame for this gap is the orientation that the CSR/CSP concepts have had in the literature. So far research about CSP has been more about the analysis of how socially related issues affect companies' performance rather than how the performance of companies affects society (Margolis & Walsh, 2003). As the discussion is usually presented as "business AND society," instead of "business IN society" (Waddock, 2004), it is companies that hold the center stage, not society.

Some evidence for this can be found in the vast amount of work devoted to the corporate social and financial performances relationship. That is the old question of deciding if "being good" contributes to generate better returns or reduce financial risks and to what extent, but not how companies provided good to society. Such focus has excessively distracted the literature, without even providing many definitive conclusions yet. Due to the high volume of different, contradicting research on the CSP versus CFP matter, some authors have even called for a moratorium (Margolis & Walsh, 2002; Rowley & Berman, 2000; Wood, 2010), without much success.

The dominance of the CSP–CFP discussion also poses a problem of perspective. The implicit assumption behind this line of work seems to be that we can only convince companies (either shareholder, executives, managers, etc.) of doing things better for society or in a more sustainable way, if we give them proof that they will profit from it. This, in fact, is subordinating society's needs to company

results. Analyzing the relationship between companies' social and financial performance is, of course, very important, but society needs go much further.

A second big issue that has affected this line of research in CSP literature is the lack of suitable, available data (Retolaza, San José, & Ruiz-Roqueñi, 2015). If the few data sources available (mostly social, reputation or environmental ratings) are addressed to one stakeholder only (usually shareholders and investors), it is very difficult, if not impossible, to be able to properly develop analysis and conclusions oriented to other groups, much less to society as a whole.

Certainly, available data sources and analysts, such as social ratings, have favored significant progress in the CSP analysis, but have also limited its view and evolution. By relying on KLD and others, authors have given low importance to issues like what social dimensions must be considered and why, as well as how material are these dimensions to stakeholders, how they should be weighted and how could their metrics be of use beyond its own source. Trusting on agents with a partial social view to defining those elements has conditioned greatly not only the kind of research but particularly its scope, its ambition, and its possibilities.

Moreover, the data issue has reduced the scope of the analysis in terms of size and origin of the companies. S&P500 companies from the US are the ones analyzed in most papers, while companies based in other countries or, even more, of lesser sizes (with some exceptions) are practically absent.

Consequently, a new direction for CSP research is required. We need social performance metrics that not only help shareholders and investors take decisions, but also be useful for other stakeholders. Metrics that could be used as a common point of view for different stakeholders to really understand how a company is performing and help its related stakeholders to take their key decisions upon it. Metrics that would give society the center stage of the CSP discussion. CSP should not help companies to improve their P&L. It should provide society with its own P&L derived from companies' activity, so it (society) can handle its own situation better, so it can take actions regarding companies (such as purchasing, granting public funding, rewarding or punishing behaviors, etc.) based on what is and what is not good for it. It is obvious that this, if well done, could have an impact on corporates' P&L, but it would be indirect, based on what society (as itself or through its stakeholders) would decide to do.

Therefore, we suggest the need to research about CSP standardization from a society point of view and, eventually, develop a metric of this sort that could be applied to most companies, regardless of the size, industry, and origin and with a true integration of the interests and needs of those (stakeholders) who take part in society.

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NOTES

1. www.webofknowledge.com
2. Search was carried out in October 2018, considering references in the general collection of Web of Science.
3. Requests were sent to more than 30 experts in the field. Direct contact was made with 11 of them, either by mail, skype call, or physical meeting: Profs. Sandra Waddock (Boston College), Jacob Brower (Queens University), Kenneth Aupperle (University of Akron), Scott Callan (Bentley), José María Agudo (Universidad Zaragoza), Amy Hillman (Arizona State University), Jenniffer J. Griffin (Loyola University Chicago), Gokhan Turgut (HEC.ca), Catherine Liston-Heyes (Ottawa) and Gregorio Martín de Castro (Universidad Complutense Madrid), and Jed Emerson.
4. For instance, Grifin and Mahon 1997 (1) or Sharfman 1996 (3).
5. Organization's reputation is also a concept included in the "Ad hoc" category.
6. It must be noted that some relevant works previously consider the companies' reputation as a proxy for CSR or CSP (Alexander & Buchholz, 1978; Moskowitz, 1972; Vance, 1975). However, we have considered that they should be contained in the ad hoc category, due to the nature of their data and their specific, tailor-made approaches.
7. We have not found any other corporate reputation metric from other sources that were used as proxy for CSR or CSP. There are other significant corporate reputation metrics other than Fortune's MAC (for instance, Charles Fombrun's Reputation Institute). However, those approaches were intended to reflect corporate reputation itself, but were not used (at least directly) as a direct proxy to measure CSR or CSP.
8. Fortune does no longer publish openly the MAC list with the ranking details.
9. TRI is "a resource for learning about toxic chemical releases and pollution prevention activities reported by industrial and federal facilities." It is part of US Environmental Protection Agency.
10. For example, to what industry should we really assign big industrial conglomerates, such as Bouygues in France, Ferrovial in Spain, or Softbank in Japan, to name some?
11. MSCI ESG ratings brochure. Retrieved from https://www.msci.com/documents/1296102/1636401/MSCI+ESG+Rating+Brochure-V3.pdf/f2b4a27a-58f5-42c7-880b-cf8201039eaa. Accessed on October 23, 2017.
12. Sustainalytics ESG ratings brochure. Retrieved from http://www.sustainalytics.com/esg-research-ratings/. Accessed on October 23, 2017.
13. Retrieved from https://www.msci.com/documents/1296102/1636401/MSCI+ESG+Rating+Brochure-V3.pdf/f2b4a27a-58f5-42c7-880b-cf8201039eaa. Accessed on October 23, 2017.
14. From RobecoSAM's website homepage. Retrieved from http://www.robecosam.com/. Accessed on October 23, 2017.
15. From Sustainalytics. Retrieved from http://www.sustainalytics.com/about-us/. Accessed on October 23, 2017.

REFERENCES

Agudo-Valiente, J. M., Garcés-Ayerbe, C., & Salvador-Figueras, M. (2012). Social responsibility practices and evaluation of corporate social performance. *Journal of Cleaner Production*, *35*, 25–38.

Agudo-Valiente, J. M., Garcés-Ayerbe, C., & Salvador-Figueras, M. (2015). Corporate social performance and stakeholder dialogue management. *Corporate Social Responsibility and Environmental Management*, *22*(1), 13–31.

Agudo-Valiente, J. M., Gargallo, P., & Salvador, M. (2014). Measuring corporative social performance in firms: A Bayesian factor analysis approach. *Journal of Business Economics and Management*, *16*(3), 638–659.

Albinger, H. S., & Freeman, S. J. (2000). Corporate social performance and attractiveness as an employer to different job seeking populations. *Journal of Business Ethics*, *28*(3), 243–253.

Alexander, G. J., & Buchholz, R. A. (1978). Corporate social responsibility and stock market performance. *Academy of Management Journal*, *21*(3), 479–486.

Aupperle, K. E., Carroll, A. B., & Hatfield, J. D. (1985). An empirical examination of the relationship between corporate social responsibility and profitability. *The Academy of Management Journal*, *28*(2), 446–463.

Baird, P. L., Geylani, P. C., & Roberts, J. A. (2012). Corporate social and financial performance re-examined: Industry effects in a linear mixed model analysis. *Journal of Business Ethics*, *109*(3), 367–388.

Barnett, M. L., & Salomon, R. M. (2012). Does it pay to be really good? Addressing the shape of the relationship between social and financial performance. *Strategic Management Journal*, *33*(11), 1304–1320.

Berle, A. A. J. (1932). For whom corporate managers are trustees: A note. *Harvard Law Review*, *45*, 1365–1372.

Berman, S., Wicks, A. C., Kotha, S., & Jones, T. (1999). Does stakeholder orientation matter. *Academy of Management Journal*, *42*(5), 488–506.

Blackburn, V. L., Doran, M., & Shrader, C. B. (1994). The dimensions of social responsibility investigating and the consequences for corporate financial performance. *Journal of Managerial Issues*, *6*(2), 195–212.

Boulouta, I. (2013). Hidden connections: The link between board gender diversity and corporate social performance. *Journal of Business Ethics*, *113*(2), 185–197.

Bowen, H. R. (1953). *Social responsibilities of the businessman* (2013th ed.). Iowa City, IA: University of Iowa Press.

Bowman, E. H., & Haire, M. (1976). Social impact disclosure and corporate annual reports. *Accounting, Organizations and Society*, *1*(1), 11–21.

Brammer, S., & Millington, A. (2008). Does it pay to be different? An analysis of the relationship between corporate social and financial performance. *Strategic Management Journal*, *29*(12), 1325–1343.

Brower, J., & Mahajan, V. (2013). Driven to be good: A stakeholder theory perspective on the drivers of corporate social performance. *Journal of Business Ethics*, *117*(2), 313–331.

Brown, B., & Perry, S. (1994). Removing the financial performance halo from Fortune's 'Most Admired' companies. *Academy of Management Journal*, *37*(5), 1347–1359.

Brown, B., & Perry, S. (1995). Halo-removed residuals of Fortune's 'Responsibility to the Community and Environment' – A decade of data. *Business and Society*, *34*(2), 199–215.

Callan, S. J., & Thomas, J. M. (2009). Corporate financial performance and corporate social performance: An update and reinvestigation. *Corporate Social Responsibility and Environmental Management*, *16*(2), 61–78.

Carroll, A. B. (1979). Three-dimensional conceptual model of corporate performance. *Academy of Management Journal*, *4*(4), 497–505.

Chatterji, A. K., Levine, D. I., & Toffel, M. W. (2009). How well do social ratings actually measure corporate social responsibility? *Journal of Economy & Management Strategy*, *18*(1), 125–169.

Chiu, S.-C. C., & Sharfman, M. (2011). Legitimacy, visibility, and the antecedents of corporate social performance: An investigation of the instrumental perspective. *Journal of Management*, *37*(6), 1558–1585.

Choi, T. H., & Jung, J. (2008). Ethical commitment, financial performance, and valuation: An empirical investigation of Korean companies. *Journal of Business Ethics*, *81*(2), 447–463.

Clarkson, M. B. E. (1995). A stakeholder framework for analyzing and evaluating corporate social performance. *Academy of Management Review*, *20*(1), 92–117.

Cox, P., Brammer, S., & Millington, A. (2004). An empirical examination of institutional investor preferences for corporate social performance. *Journal of Business Ethics*, *52*(1), 27–43.

David, P., Bloom, M., & Hillman, A. J. (2007). Investor activism, managerial responsiveness, and corporate social performance. *Strategic Management Journal*, *28*(1), 91–100.

Ducassy, I. (2013). Does corporate social responsibility pay off in times of crisis? An alternate perspective on the relationship between financial and corporate social performance. *Corporate Social Responsibility and Environmental Management*, *20*(3), 157–167.

Freeman, R. E. (1984). *Strategic management: A stakeholder approach*. Boston, MA: Pitman. https://doi.org/10.2139/ssrn.263511

Friedman, M. (1970). A Friedman doctrine – The social responsibility of business is to increase its profits. *New York Times Magazine*, *6*(33), 122–124.

Godfrey, P. C., Merrill, C. B., & Hansen, J. M. (2009). The relationship between corporate social responsibility and shareholder value: An empirical test of the risk management hypothesis. *Strategic Management Journal*, *30*(4), 425–445.

Graves, S. B., & Waddock, S. A. (1994). Institutional owners and corporate social performance. *Academy of Management Journal*, *37*(4), 1034–1046.

Grifin, J. J., & Mahon, J. F. (1997). The corporate social performance and corporate financial performance debate: Twenty-five years of incomparable research. *Business and Society*, *36*, 5–31.

Hafsi, T., & Turgut, G. (2013). Boardroom diversity and its effect on social performance: Conceptualization and empirical evidence. *Journal of Business Ethics*, *112*(3), 463–479.

Hart, T. A., & Sharfman, M. (2015). Assessing the concurrent validity of the revised Kinder, Lydenberg, and Domini corporate social performance indicators. *Business & Society*, *54*(5), 575–598.

Hillman, A. J., & Keim, G. D. (2001). Shareholder value, stakeholder management, and social issues: What's the bottom line? *Strategic Management Journal*, *22*(2), 125–139.

Ho, F. N., Wang, H.-M. D., & Vitell, S. J. (2012). A global analysis of corporate social performance: The effects of cultural and geographic environments. *Journal of Business Ethics*, *107*(4), 423–433.

Humphrey, J. E., Lee, D. D., & Shen, Y. (2012). Does it cost to be sustainable? *Journal of Corporate Finance*, *18*(3), 626–639.

Igalens, J., & Gond, J. P. (2005). Measuring corporate social performance in France: A critical and empirical analysis of ARESE data. *Journal of Business Ethics*, *56*(2), 131–148.

Ingram, R. W. (1978). An investigation of the information content of (certain) social responsibility disclosures. *Journal of Accounting Research*, *16*(2), 270–286.

Ingram, R. W., & Frazier, K. B. (1980). Environmental performance and corporate disclosure. *Journal of Accounting Research*, *I*(January), 614–622.

Ioannou, I., & Serafeim, G. (2012). What drives corporate social performance? The role of nation-level institutions. *Journal of International Business Studies*, *43*(9), 834–864.

Jayachandran, S., Kalaignanam, K., & Eilert, M. (2013). Product and environmental social performance: Varying effect on firm performance. *Strategic Management Journal*, *34*(10), 1255–1264.

Jensen, M. C. (2010). Value maximization, stakeholder theory, and the corporate objective function. *Journal of Applied Corporate Finance*, *22*(1), 32–42.

Johnson, R. A., & Greening, D. W. (1999). The effects of corporate governance and institutional ownership types on corporate social performance. *Academy of Management Journal*, *42*(5), 564–576.

Kroeger, A., & Weber, C. (2014). Developing a conceptual framework for comparing social value creation. *Academy of Management Review*, *39*(4), 513–540.

Lerner, L., & Fryxell, G. (1988). An empirical study of the predictors of corporate social performance: A multi-dimensional analysis. *Journal of Business Ethics*, *7*(12), 951–959.

Liston-Heyes, C., & Ceton, G. (2009). An investigation of real versus perceived CSP in S&P-500 firms. *Journal of Business Ethics*, *89*(2), 283–296.

Lu, W., Chau, K. W., Wang, H., & Pan, W. (2014). A decade's debate on the nexus between corporate social and corporate financial performance: A critical review of empirical studies 2002-2011. *Journal of Cleaner Production*, *79*, 195–206.

Luo, X., & Bhattacharya, C. B. (2009). The debate over doing good: Corporate social performance, strategic marketing levers, and firm-idiosyncratic risk. *Journal of Marketing*, *73*(6), 198–213.

Mahoney, L., Lagore, W., & Scazzero, J. a. (2008). Corporate social performance, financial performance for firms that restate earnings. *Issues in Social Environmental Accounting*, *2*(1), 104–130.

Mahoney, L., & Roberts, R. W. (2007). Corporate social performance, financial performance and institutional ownership in Canadian firms. *Accounting Forum*, *31*(3), 233–253.

Margolis, J. D., & Walsh, J. P. (2001). *People and profits? The search for a link between a company's social and financial performance*. Mahwah, NJ: Lawrence Erlbaum Associates.

Margolis, J. D., & Walsh, J. P. (2003). Misery loves companies: Rethinking social initiatives by business. *Administrative Science Quarterly*, *48*(2), 268–305.

McGuire, J. B., Sundgren, A., & Schneeweis, T. (1988). Corporate social-responsibility and firm financial performance. *Academy of Management Journal*, *31*(4), 854–872.

Mcwilliams, A., & Siegel, D. S. (2000). Research notes and communications corporate social responsibility and financial performance: Correlation or misspecification? *Strategic Management Journal*, *21*(January 1999), 603–609.

Mitchell, R. K., Wood, D. J., & Agle, B. (1997). Toward a theory of stakeholder identification and salience: Defining the principle of who and what really counts. *Academy of Management Review*, *22*(4), 853–886.

Moskowitz, M. R. (1972). Choosing socially responsible stocks. *Business & Society Review*, *1*, 71–75.

Muller, A., & Kolk, A. (2010). Extrinsic and intrinsic drivers of corporate social performance: Evidence from foreign and domestic firms in Mexico. *Journal of Management Studies*, *47*(1), 1–26.

Neubaum, D. O., & Zahra, S. A. (2006). Institutional ownership and corporate social performance: The moderating effects of investment horizon, activism, and coordination. *Journal of Management*, *32*(1), 108–131.

Orlitzky, M. (2001). Does firm size confound the relationship between corporate social performance and firm financial performance? *Journal of Business Ethics*, *33*(2), 167–180.

Pivato, S., Misani, N., & Tencati, A. (2008). The impact of corporate social responsibility on consumer trust: The case of organic food. *Business Ethics – A European Review*, *17*(1), 3–12.

Retolaza, J. L., San José, L., & Ruiz-Roqueñi, M. (2015). Monetizando el valor social: teoría y evidencia. *Monetarizing the Social Value: Theory and Evidence* (83), 43–62.

Rowley, T., & Berman, S. (2000). A brand new brand of corporate social performance. *Business & Society*, *39*(4), 397–418.

Ruf, B. M., Muralidhar, K., Brown, R. M., Janney, J. J., & Paul, K. (2001). An empirical investigation of the relationship between change in corporate social performance and financial performance: A stakeholder theory perspective. *Journal of Business Ethics*, *32*(2), 143–156.

Ruf, B. M., Muralidhar, K., & Paul, K. (1993). Eight dimensions of corporate social performance: Determination of relative importance using the analytic hierarchy process. Best Papers Proceedings, Academy of Management Annual Meeting, Atlanta, GA.

Ruf, B. M., Muralidhar, K., & Paul, K. (1998). The development of a systematic, aggregate measure of corporate social performance. *Journal of Management*, *24*(1), 119–133.

Schuler, D. A., & Cording, M. (2006). A corporate social performance-corporate financial performance behavioral model for consumers. *Academy of Management Review*, *31*(3), 540–558.

Sharfman, M. (1996). The construct validity of the Kinder, Lydenberg & Domini social performance ratings data. *Journal of Business Ethics*, *15*(3), 287–296.

Surroca, J., Tribó, J. A., & Waddock, S. A. (2010). Corporate responsibility and financial performance: The role of intangible resources. *Strategic Management Journal*, *31*, 463–490.

Thomas, A. S., & Simerly, R. L. (1994). The chief executive officer and corporate social performance: An interdisciplinary examination. *Journal of Business Ethics*, *13*(12), 959–968.

Turban, D. B., & Greening, D. W. (1997). Corporate social performance and organizational attractiveness to prospective employees. *Academy of Management Journal*, *40*(3), 658–672.

Ullmann, A. (1985). Data in search of a theory: A critical examination of the relationships among social performance, social disclosure, and economic performance of U.S. firms. *Academy of Management Review*, *10*(3), 540–557.

Vance, S. C. (1975). Are socially responsible firms good investment risks? *Management Review*, *64*(8), 18–24.

Waddock, S. A. (2004). Parallel universes: Companies, academics, and the progress of corporate citizenship. *Business and Society Review*, *109*(1), 5–42.

Waddock, S. A., & Graves, S. B. (1997a). The corporate social performance – Financial performance link. *Strategic Management Journal*, *18*(4), 303–319.

Waddock, S. A., & Graves, S. B. (1997b). Quality of management and quality of stakeholder relations. *Business and Society*, *36*(3), 250–279.

Wartick, S. L., & Cochran, P. L. (1985). The evolution of the corporate social performance model. *Academy of Management Review*, *10*(4), 758–769.

Wiseman, J. (1982). An evaluation of environmental disclosures made in corporate annual reports. *Accounting, Organizations and Society*, *7*(1), 53–63.
Wood, D. J. (1991a). Corporate social performance revisited. *Academy of Management Review*, *16*(4), 691–718.
Wood, D. J. (1991b). Social issues in management theory and research in CSP. *Journal of Management*, *17*(2), 383–406.
Wood, D. J. (2010). Measuring corporate social performance: A review. *International Journal of Management Reviews*, *274*(1), 371–376.

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CHAPTER 2

EVOLUTION OF NON-FINANCIAL REPORTING IN FRANCE: THE INNOVATIVE ADAPTATION OF A COGNAC PRODUCER

Pierre Baret and Vincent Helfrich

ABSTRACT

Based on a single and innovative case study (Siggelkow, 2007; Yin, 2014), this research aims to identify the main issues of non-financial reporting. They are related to:

- *the complexity of the corporate social responsibility (Alcouffe, Berland, Dreveton, & Essid, 2010; Ancori, 2008; Antheaume, 2007; Brichard, 1996; Buritt, 2004; Chan, 2005; Gray & Bebbington, 2001; Herborn, 2005; Savall & Zardet, 2013; Vatn, 2009);*
- *the legislator's and stakeholders' expectations (Ancori, 2005; Batifoulier, 2001; Caillaud & Tirole, 2007; Lewis, 1969); and*
- *the company's expectations (Argyris & Schön, 1978; Chiapello & Gilbert, 2013; David 1998; Grimand, 2012; Moisdon, 1997; Senge, 1992; Wood, 1991).*

Symmetrically, it reveals possible pitfalls. Through the study of the way the Rémy Cointreau Group developed its reporting tool, the authors analyze how a company can take the opportunity of a legal obligation to deploy a strategy of non-financial reporting that comes to support and structure a responsible

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approach. Of course, these results are only replicable under certain conditions related to this singular case.

Keywords: Single-case study; non-financial reporting; complexity; stakeholder-agency theory; management tools; organizational learning; corporate social responsibility

1. INTRODUCTION

Inexistent for a long time, obligations of non-financial reporting appeared on the eve of the twenty-first century. Since then, they have constantly been reinforced. The French case is symptomatic of this evolution. It began on May 15, 2001 with article 116 of the NRE Law (related to new economic regulations). It consisted then of a first relatively loose regulation concerning the biggest listed companies (CAC 40). Following this, the first generation of sustainable/corporate social responsibility (CSR)/non-financial reports emerged. However, most of them remained relatively vague documents, using story telling (Igalens, 2007).

Under the pressure of some stakeholders (unions, non-governmental organizations, NGOs, etc.), the legislator gradually raised the requirement level. In France, it took the form of a series of modifications legislated by order, with a milestone, the entry into force, on April 24, 2012, of the 2012-557 decree on the social and environmental transparency obligations of companies. It is intended to ensure the effective application of the article 225 of the *Grenelle 2* Law from the July 12, 2010 for listed companies of more than 500 employees. This law requires the listed companies to provide non-financial information (including 32 indicators) on the social, environmental, and societal components and demands the verification of these declarations by an independent third-party body. Its latest update, dated from July 19, 2017 (Ordinance n°2017-1180), is meant to transpose the European directive 2014/95/EU of the December 6, 2014 for an application in 2018 reporting.

At present, French listed companies of more than 500 employees are subject to relatively precise non-financial reporting obligations. It is interesting to examine to the extent up to which this legal obligation can lead a company to improve its responsible approach.

For this purpose, in a first part, based on the existing literature, we will identify the issues of a non-financial reporting both from a reflexion about the complexity of the "CSR object," the meaning of the reporting, and about the company expectations. Second, we will analyze the singular case[1] of a company (it sells worldwide spirits strongly identified to a very specific territory and whose cycles of production can take several decades). It has developed innovative practices in terms of non-financial reporting. In the third and last part, we will see extent up to which these innovative practices allow us to avoid the pitfalls of too technical, idealistic, or layperson reporting.

2. THE ISSUES OF NON-FINANCIAL REPORTING

Non-financial reporting is facing three major challenges. The first one is to reflect a responsible approach in all its complexity. This means to manage the complexity of the responsible approach, its qualitative dimensions as well as the evolution of knowledge (on CSR issues), regulations, and methods (new standards and guidelines are constantly emerging). This will be the object of Section 2.1. The second major challenge is to comply with the legislator's expectations in terms of reduction of information asymmetry between the firm and its stakeholders. On this point, the aim is to guarantee the inherent issues of the non-financial reporting: accountability, liability, and legitimacy. This is developed in Section 2.2. The third major challenge is to elaborate a non-financial reporting tool which meets the company's expectations. This means that it makes sense for the company's employees. In doing so, it helps in the learning process of CSR. This also implies that it matches with the specificities of the organization and guarantees a non-rigid stability of the indicators. These aspects will be specified in the Section 2.3.

2.1. Managing the Complexity of CSR

There are many ways to consider a responsible approach (Phillips, Freeman, & Wicks, 2003; Rasche, Morsing, & Moon, 2017). Moreover, it is directed to a large set of stakeholders with heterogeneous expectations (Freeman, 1984; Freeman & Reed, 1983; Jones, 1980). Since a lot of these expectations are related to legitimate issues of sustainable development (WCED, 1987), it is hard to rank them (Mitchell, Agle, & Wood, 1997), especially since they are often contradictory (debate about perceptions of sustainability: divergent time horizons, gap of importance given to environmental, social, and societal issues). In fact, in a holistic perspective, the whole turns out to be more complex than a simple addition of individual expectations (Simon, 1962). Moreover, the developments related to the stakeholders theory (Frooman, 1999; Mitchell et al., 1997) or to the stakeholder agency theory (Hill & Jones, 1992) show that these stakeholders are constantly interacting and in different ways. Henceforth, players, individuals, and institutions involved in the frame of the CSR constitute a complex socio-cognitive system (Ancori, 2008). To reflect this complexity is one of the major issues of a non-financial reporting tool and, of course, one its main difficulties.

Reporting relies on quantitative indicators that are supposed to be objective, hence comforting. In many cases, the complexity of the responsible approach turns out to be irreducible to simple figures. First, there is a need to report on purely qualitative elements (company's values, vision, etc.). Second, there are elements, like externalities or global performance, which turn out to be very difficult and expensive to quantify (Vatn, 2009). Many methods of internalizing externalities coexist, but remain too approximate and incomplete to establish themselves as legitimate in the eyes of all the stakeholders (Pearce & Turner, 1989). Symmetrically, many solutions of comprehensive accounting (including social and environmental issues) appear but equally meet difficulties with formalization (Brichard, 1996), complexity (Chan, 2005), anticipation (Gray & Bebbington, 2001),

and consensus as for their functions (Alcouffe, Berland, Dreveton, Essid, 2010; Antheaume, 2007; Buritt, 2004; Herborn, 2005). Hence, their use remains marginal. Finally, there is also an irreducible part of qualitative elements that the non-financial tool must be able to integrate.

To report on a responsible approach implies constantly integrating three forms of evolutions. First, both qualitative (issued from scientific research: Intergovernmental Panel on Climate Change [IPCC], etc.) and quantitative (fed by NGOs, internet, etc.) improvement of knowledge (and, then, the resulting new signals of unsustainability: discovery of new forms of pollution, working conditions in some subcontracted countries, etc.). Second, the profusion of standards and always more completed and complex repositories (Global Compact, Global Reporting Initiative, OHSAS 18001, ISO 26000, etc.) (Savall & Zardet, 2013). Third, the emergence of new solutions of audit, management control, and comprehensive accounting: green accounts (Gray, Bebbington, & Walters, 1993; Jasch, 2003; Xiamei, 2014), system of economic accounting, International Financial Reporting Standards (IFRS), global environmental costs (Lockhart & Taylor, 2007), hidden costs (Savall & Zardet, 2013), *Triple Depreciation Line* (Rambeau & Richard, 2015), etc. In order to remain relevant at all times, the non-financial reporting tool must adapt and integrate these constant evolutions of knowledge.

Finally, as shown in Fig. 1, the non-financial reporting tool must integrate a first knot of constraints related to the complexity of the socio-cognitive system linked to the responsible approach, its qualitative dimensions, and the constant evolution of knowledge, regulations, standards, and methodologies.

2.2. Guaranteeing the Inherent Issues of Non-financial Reporting

The first purpose of non-financial reporting is to reduce the information asymmetry (Akerlof, 1970) which exists between the company managers and the stakeholders. In line with the agency theory (Jensen & Meckling, 1976), it is about preventing the risk of opportunistic behavior of the management of a company, not only to the detriment of the shareholders (Berle & Means, 1932), but of the all of the stakeholders (Freeman, 1984). We then think in terms of "stakeholder model" which constitutes

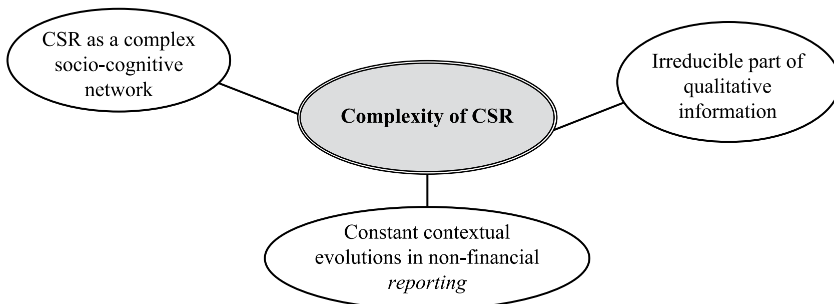

Fig. 1. The Nexus of Constraints Linked to the Complexity of CSR (as well as its Irreducibility and its Scalability).

stakeholder agency theory (Hill & Jones, 1992). Hence the legislator requests from the non-financial reporting tool to provide the most relevant, complete, liable, neutral, and clear information in order to gain the best possible understanding of the environmental, social, and societal impacts of the company. This is all the more difficult to achieve since there are no conventions, rules, or single standards in the matter. That leaves the door open for many variations of interpretations of indicators and measures according to a minimalist or demanding conception one can have of CSR.

Consequently, another stake of non-financial reporting is the need of coordination of the players (companies and stakeholders), reliability, and standardization. This can be analyzed through the prism of the convention theory (Batifoulier, 2001) and, more precisely, of its genesis (Lewis, 1969) which derives from the consensus building (Caillaud & Tirole, 2007). In this regard, Ancori (2005) proposes to insist on the role of the first-time adopters of local conventions which precede the stabilization of a more global convention. Hence, the local convention can take shape in the uses of some companies that share a same approach of non-financial reporting (cognitive proximity). These uses then inspire the formulation of local convention (laws like the Grenelle 2) which will influence other companies. This process can then lead to a conventional lock within which indicators of non-financial reporting and the way of its representation will form a common knowledge (in Lewis' 1969 meaning). The challenge is that the stability of this common knowledge might, finally, equal the stability of the financial reporting. Thus, this form of non-financial reporting would be established as a new convention.

Then another stake appears for the non-financial tool which is to gain an equal legitimacy as "standard" financial accounting tools which already benefits from a conventional statute. The most advanced companies and Independent Third-party Bodies (in charge of certifying non-financial reports) seem to favor the option of elaborating the non-financial reporting tool by mimicking the practices of financial reporting in order to access an equal legitimacy. It consolidates its credibility and sends a positive message to the addressed stakeholders. This good practice can constitute the basis of a local convention (Ancori, 2005) which can start, with ones of other companies, a process of legitimation of non-financial reporting. Here, the difficulty is that the reporting tool comes only within the scope of a more global responsible approach (Baret & Helfrich, 2016). This implies for it to be co-built internally and for the company to be mature in terms of CSR.

Finally, as shown in Fig. 2, the non-financial reporting tool must integrate a second knot of constraints related to the goals of the legislator's accountability, the needs of reliability and standardization, as well as the need of legitimacy.

2.3. Meeting the Company's Expectations

Beyond the issues of accountability of a complex object, from the company's point of view, the non-financial reporting tool must be used in learning about CSR among all the personnel. It constitutes a management tool in the sense that it takes its part in classic tasks of management (Grimand, 2012) and, therefore, has an impact on organizational dynamics and collective action (Grimand, 2012). It is consequently aimed at accompanying the processes of organizational change

Fig. 2. The Nexus of Constraints Linked to the Inherent Issues of Non-financial Reporting.

(David, 1998; Moisdon, 1997). This is truer in terms of CSR that is also aimed at giving sense to the work. So the stake here is that the reporting tool contributes to the organizational learning process (Argyris & Schön, 1978) of CSR within the company (Senge, 1992; Wood, 1991). By making sense toward the employees who make it live, feed it directly or indirectly, it will provide a "double-loop learning" (Argyris & Schön, 1978; Wood, 1991) of the responsible approach. Otherwise, it will be experienced as an additional constraint of reporting, with a counterproductive effect on the responsible approach.

To allow learning about CSR via the reporting tool in turn raises another stake for the latter, at the level of its conception and its use: to conciliate the legislators' generic expectations with the specificities of the organization. The regulatory requirement of non-financial reporting is very precise in order to effectively reduce the information asymmetry (cf. *supra*). It is reporting conceived regardless of the characteristics of the company. To that extent, it can be seen as a "circulating state" where by the management tool is used on a large national perimeter, even international (Chiapello & Gilbert, 2013, p. 250). The analysis of the "circulating state" helps to understand the "why" of the reporting (i.e., to reduce the information asymmetry). But to understand the "how" (i.e., how to set up a reporting that makes sense, contributes to a deep/double loop learning of the CSR?) implies to examine the "inscribed state" of the tool that correspond with contextualized tools, specifics to an organization, and its inner context (Chiapello & Gilbert, 2013, p. 251). Hence, the analysis of the inscribed state helps to grasp this other stake of the non-financial reporting tool that is to elaborate an adapted tool to the proper specificities of the company, in order for it to both make sense for the employees and be sure that it meets the legislators' expectations.

From the company's point of view, another stake, for the non-financial reporting tool, is to be noticed: the need to stabilize the indicators in order to implement organizational routines (Becker, 2004; Nelson & Winter, 1982) for questions of practicality and comparability. Nevertheless, it challenges the tool: not to be a hindrance, to become obsolescent. We find here the classic opposition between the *exploration strategy* and the *exploitation strategy* (March, 1991), within which routines take an unclear place. Hence, the building of a tool perfectly meeting the

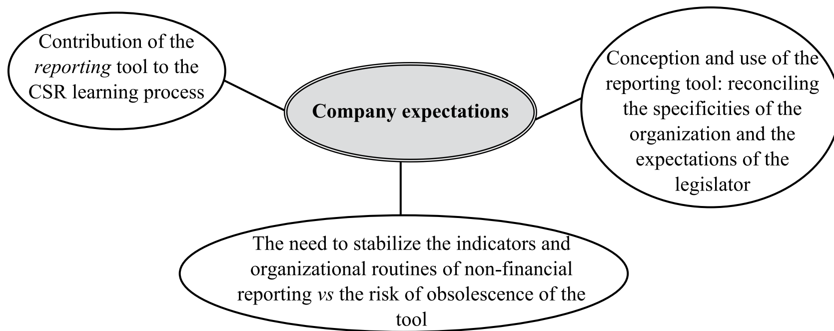

Fig. 3. The Nexus of Constraints Linked to Company's Expectations.

regulatory requirement of non-financial reporting constitutes an exploration phase. Then comes the *exploitation phase* when a daily use of the tool generates new routines and stabilizes itself. Of course, this second step implies the success of the organizational learning around the tool and the fact that it is not rejected by players, on the basis of other already well-established routines in the organization and ill-treated by the tool. Let us keep in mind here that the moving contexts of the CSR and the company constitute compulsory points of flexibility for the tool. This reminds us that the non-financial tool is by nature a subject conductive to exploratory strategies. Consequently, all organizational routines are not adapted.

Finally, as shown in Fig. 3, the non-financial reporting tool must integrate a third knot of constraints related to the company's expectations: to contribute to CSR's organizational learning, match the specificities of the organization, and guarantee a non-rigid stability of the indicators.

In this first part, we can clearly see that the issues of the non-financial reporting tool are numerous. We divided them into three categories: (1) the complexity of the CSR approach, (2) the legislators' expectations and (3) the company's expectations. From that perspective, how to elaborate an "optimal"[2] tool? At this level, it is interesting to study the practises implemented by a rather singular company, a cognac producer: the Rémy Cointreau Group.

3. THE CASE OF RÉMY COINTREAU AND ITS CSR REPORTING

The presentation of the case of Rémy Cointreau is based on the study of source documents (Rémy Cointreau, 2015a, 2017) and of the reporting procedure of the group (Rémy Cointreau 2015b), as well as on two interviews with Christian Lafage (CSR Director of the group).

3.1. Presentation of the Rémy Cointreau Group and its CSR Reporting

Rémy Cointreau is a French group in the wine and spirits sector, whose brand Rémy Martin goes back as far as 1724. In 2017, the group has 49 companies worldwide

(America, Asia, Africa, and Europe) and generates an annual turnover of 1,094 billion Euros with 1,810 employees. The group owns 10 international brands which are attached to two divisions: *La Maison Rémy Martin* for the *Rémy Martin* and *Louis XIII* Cognacs and the division *Liqueurs et Spiritueux* for the other spirits (orange liqueur *Cointreau*; passion fruit liqueur *Passoa*; brandy *St-Rémy* and *Metaxa*; rhum *Mount Gay*; whiskies *Bruichladdich*, *Westland* and *le Domaine des HautesGlaces*; and gin *The Botanist*). The group brands are positioned in different categories of goods (cognacs, whisky, liqueurs, and gin) and different range levels. Nevertheless, the group remains positioned on top range brands, especially for the cognacs.

The Rémy Cointreau group initiated its CSR approach in 2003 by adopting the *Global Compact* Chart. From then on, the group started at the same time the structuring of its reporting strategy. It aims to communicate in the best way about the CSR issues and the information about its performance within its structures and toward its stakeholders. Its field of action in terms of CSR is based on both internationally recognized references, such as the ISO 26000 standard, the Global Reporting Initiative (GRI) or the UN Sustainable Development Goals (SDG). It is also based on a more local approach, consistent with the French law and adapted to specific issues of the wine and spirits sector. With over 15 years of experience in terms of CSR, the group has gained a certain maturity in the matter, which appears through its responsible practices and its methodology in CSR reporting.

The 2017 CSR reporting of the group (Rémy Cointreau, 2017) covers a perimeter of 23 companies dedicated to production and distribution activities. Therefore, financial societies of the group, joint-ventures it does not control and structures in the process of being sold or bought during the period are not taken into account. Each of the 23 societies communicates the whole of the social, environmental, and societal information as required by the French law on non-financial reporting (n°2012-557 decree of the 225 article of the law "Grenelle II" of the July 12, 2010). This CSR reporting is subjected to an inspection by an independent third body and the provided indicators meet the expectations of the French law and international reference sources. In fact, the reference document published by the group offers for instance concordance tables between the CSR reporting of the group and the expected themes of the French law (N° 2012-557 decree), the GRI indicators, SDG, and the commitment of the Global Compact (GC advanced). Thanks to this work, the group has thus seen the *GC Advanced* qualification of its CSR reporting renewed.

3.2. Structuring and Reliability of the CSR Reporting at Rémy Cointreau

The current nature of the CSR reporting of the Rémy Cointreau Group is the result of a work of structuring and anticipation of legal requirements. Before 2012, and the change of the French law about reporting, only the Rémy Cointreau group used to propose an environmental reporting on the two main sites of production (which represents though 90% of the production) and a social reporting on all the sites. The latter was complete as far as the French sites were concerned, as a result of the legal framework on social report, but remained partial for the oversees sites. This CSR reporting already dealt with indicators which would be established in the 2012 French law. However, this new regulation will impose

three new constraints to the group: (1) obligation of providing a reporting for the consolidate societies of the group on all the issues of CSR (23 in 2017); (2) obligation of control of the non-financial data by an independent third party body; and (3) creation and provision of a process document that explains and formalizes the methodology of the CSR reporting.

To meet these constraints, the group has decided to develop an IT tool in order to structure and to secure the collection of CSR data in the different sites of the established perimeter. The group wished to take advantage of this context to set up a system that would raise the CSR reporting to the same requirement level as financial reporting. This choice answers the recommendations of the Autorités des Marchés Financiers (AMF – Financial Markets Regulator) which wants the annual report to deal with financial and non-financial data in a consistent way.

The CSR reporting tool has been created and deployed by an external society in cooperation with Rémy Cointreau IT department, its CSR board, and the Human Resources Department. The risk of error concerning the collection of CSR data is dealt with the same care as the one of financial data. Besides, the proposed tool is inspired by the one already used for financial data (history of the inputs stored, limited rights of access, validation, etc.). The reporting tool is bilingual (French/English) and covers around 50 indicators. Their composition is detailed in the process document of reporting addressed to the auditors. The software has been conceived in order to deal with the issues of units of measure conversions by itself, which can differ among the branches. It integrates alerts on abnormal variations of an indicator (warning level at 10% but editable), thus making the verification and explanation of anomalies compulsory (providing qualitative data). It also can take into account the variations of the size of the group in the interval of two exercises (sales or acquisitions), in order to correct their effects on the indicators. A test phase has also been initiated with a data collection on a five years period in order to improve the software. The first reporting of the group elaborated with the help of the tool covered the exercise dated from April 2014 to March 2015 (Rémy Cointreau, 2015a).

Two auditors from Ernst & Young came to verify the solidity of the tool and the traceability of the data collection. During the audits of the sites (Cognac and Angers), auditors visited the software contributors and asked for the uploaded files in order to control the consistency between the previous table and what has been entered into the software. At the end of this audit, they underlined the quality of the latter and the fact that it offers real progress concerning the control of the reliability, the analysis of the evolution, and the consolidation.

In their recommendations, auditors drew attention to the importance of being able to improve the reporting tool in order to give it the possibility to adapt in accordance with the evolution of the number of companies in the group, the appearance of new indicators, the change in calculation methods of the indicators, possible reorganization of the group, etc. Concerning the comparability over time, auditors insisted on the fact that the software automatically requires justifications for any variation of more than 10% between two exercises.

The experience of the group in terms of reporting in general and in CSR in particular has been decisive in leading quickly to operational software. Despite this

favorable context, the project involved significant human resources (around 80 working days for the enlisted teams with important commitment of different departments) and financial means (around 44,000€ of IT expenses and the use of an external service provider). Moreover, the deployment of the tool had to be carried out in a step by step approach and the co-building with the final users. The preliminary maturity in terms of CSR and the fact that the employees already embraced the CSR issues have been a preceding *sine qua non* condition for the quick implementation of the tool.

In the following section, we will analyze and discuss the ability of this case to deal with the constraints of the non-financial reporting we identified in the introduction of this chapter.

4. METHODOLOGY: THE CHOICE OF THE RÉMY COINTREAU SINGULAR SINGLE-CASE STUDY

Our chapter is based on a singular (Siggelkow, 2007) single-case study (Yin, 2014). We chose this method because our theoretical model (presented Section 2) implies the possibility of moving toward an "optimal reporting" (presented in the discussion – Section 5). The purpose of this chapter is clearly (and only) to show the possibility for a company to move toward this "optimal reporting." The reader should keep in mind that concerning non-financial reporting meeting the requirement of a recent law, there are few companies mature enough to anticipate the coming law as the Rémy Cointreau group did. Because of this, we adopt Yin's (2014) approach of the singular case as experimentation, more precisely of an unusual case of extreme nature (Siggelkow, 2007). The aim of this methodological choice is to identify a singular single-case study rich enough to challenge our preliminary theoretical reflexions.

This singularity of the Rémy Cointreau case leans on the convergence of several points. First, we are studying a group whose structure is relatively complex and changeable with several branches, different products, and an international presence. Therefore, the consolidation of non-financial data constitutes an important challenge for the group, as well as the tracking of mistakes of compilation and conversion of potentially heterogeneous data. Second, we are analyzing a listed company which has to meet French and European regulations in terms of non-financial reporting. Its CSR reporting must meet the legal requirements on both form and content. Moreover, it is subjected to a codification (process) and to an independent third body organism control. Because of all these specificities, the CSR reporting task represents a major stake for the group. Third, cognac production, the historical activity of the group, seems to influence the perception of temporality of the group and thus the feeling of its responsibilities concerning sustainable development. In fact, cognac production is a long-term activity. For instance, the production of the Louis XIII (top range brand of Rémy Cointreau) is the fruit of the work of four generations of cellar masters. The company is thus compelled to strongly anticipate the environmental changes in viticulture and to be proactive in its sector in order to continue. This characteristic surely influences the way they manage the CSR strategy and its reporting. It can also

counterbalance the critics of an activity which could not be by definition sustainable (spirit production) since the company has built its communication around the preservation of ancestral and regional know-how, before the spirit production.

Finally, the project of elaboration of CSR reporting software is specific to this case in terms of solution of optimization of CSR reporting, based on a 15 years maturity of a CSR approach and on the technical expertise of a company that has been listed for nearly 30 years.

This singular case gives the opportunity to identify internal and sectoral factors that may influence the success of reporting work and illustrates how an international group can deal with the three knots of constraints of non-financial reporting we identified early on.

5. ANALYSIS AND RESULTS: THE RÉMY COINTREAU CASE AND THE KNOTS OF CONSTRAINTS OF CSR REPORTING

In the first part, we have identified three knots of constraints of the non-financial reporting. Now, we will discuss the strategy of the Rémy Cointreau Group and its capacity to conciliate the requirement of the different knots of constraints to comprehend the issues of CSR, the inherent issues of non-financial reporting and the expectations of the company regarding a non-financial reporting tool.

Table 1. CSR Reporting Constraints in the Rémy Cointreau Single-case Study.

	Reporting Issues	Rémy Cointreau Case study
1. Set of obligations linked to complexity, irreducibility and scalability of CSR (Fig.1)	1.1. CSR as a complex socio-cognitive network	The maturity of the Rémy Cointreau Group in terms of CSR, the support of international reference sources (GRI, ISO 26000, and GC), allows them to modularize the different themes of CSR in order to deal with its complexity.[a] The software deals with the complexity of the CSR data collected on several plants
	1.2. The irreducible part of the qualitative information	Some sections of the background document guarantee the upholding of the irreducible part of the qualitative information. The use of the software strengthens the liability of quantitative data and its system of alert (variations >10%) and imposes new qualitative data
	1.3. Dynamics of the context of non-financial reporting: a non-stop evolution	The annual audit of the reporting process and the possible updates of the reporting software allow dealing at best the potential changes of measuring systems.
2. Set of obligations linked to the inherent issues of non-financial reporting (Fig. 2)	2.1. The issues of accountability to the stakeholders	With the adoption of the GC in 2003, the group wishes to take the role of "ambassador of international good practices" as far as human rights, labor standards, environmental issues, and fight against corruption are concerned. The stated goal of the CSR reporting project of the group is to improve its accountability toward stakeholders

Table 1. (*Continued*)

	Reporting Issues	Rémy Cointreau Case study
2. Set of obligations linked to the inherent issues of non-financial reporting (Fig. 2)	2.2. Coordination problems, reliability, and standardization of the CSR reporting	The elaboration of the reporting software aims to locally standardize (within the Rémy Cointreau Group) collection and conversion of data. It is then able to address the problem of local coordination inherent to any complex organization. The CSR reporting of Rémy Cointreau is based on a foundation of international conventions (ISO 26000, GRI, etc.) and on a national legal frame (decree n°2012-557) that encourages a certain coordination of the participants (producer and reader of the reporting)
	2.3. The quest of legitimacy of non-financial reporting	The Rémy Cointreau software was designed in order to legitimate the collection and treatment of non-financial data while using the same principles as for accounting data (locked software, storage of inputs history, identification of the contributors, etc.). This good practice and the commitment of the Rémy Cointreau group in business clubs and different actions of communication can constitute the basis for a local convention (cf. Ancori, 2005) that may initiate, with the one of other companies, a process of legitimization of the CSR reporting
3. Nexus of constraints linked to company expectations (Fig. 3)	3.1. Contribution of the reporting tool to the learning process of CSR	The work around reporting is also conceived as a means to raise awareness among contributors and to empower them. The choice of a similar representation as with the software used for financial reporting symbolically confers the same importance to the collection of non-financial information
	3.2. Conception and use of the reporting tool: conciliate specificities of the organization and legislator's expectations	The construction of the reporting tool has been proposed as a collective project. Actually, in addition to the executive management, several departments came together to elaborate the *reporting* process (CSR department, of course, but also IT, HR, communication and financial departments, etc.). As soon as the tool appeared to be functional, an important awareness campaign and training has been deployed in the different sites of the group. The employees' commitment around the tool was boosted, beforehand, through a validation of the project step by step (co-building) and, later, thanks to technical support during the first uses. The entire CSR reporting of the Rémy Cointreau group allows us to process the specificities of the wine-making activity, specificities of different productions (rum, whisky, and cognac), and to meet the generic expectations in terms of CSR (French law, GRI, etc.)
	3.3. Need of stabilization of the indicators and organizational routines of CSR reporting versus the risk of obsolescence of the tool	The elaboration of the tool constituted a *phase of exploration* in March's (1991) meaning in order to answer a challenge issued by the French law. In the same time, the latter has been completed thanks to the maturity of the company in terms of CSR, which constitutes a heuristic model of innovation based on daily practices (Nelson & Winter, 1982 p. 128). Afterwards, the stabilization of the tool can establish new routines related to its use (*phase of exploitation* according to March, 1991). However, this step is determined by the success of the organizational learning around the tool and by the fact that is has not been rejected by the players, on the basis of other already well-established routines in the organization and ill-treated by the tool. Finally, the moving contexts of CSR (modification of the law in 2017 and so of the 2018 reporting of the group) and of the company (sales and acquisitions) will constitute compulsory points of flexibility for the tool which will have to adapt to the changes of the company and the evolutions of the nature of a CSR reporting

[a]This means that the non-financial reporting tool can integrate and adapt the most relevant items from different sources according to the specificities of the Remy Cointreau CSR approach (environmental and social items).

6. DISCUSSION

It is worth noting that the way the Rémy Cointreau group structured its tool to address all the issues of non-financial reporting we identified earlier on, also allowed it to avoid, or to limit, some pitfalls. In reflexion of three large categories of issues (CSR complexity, legislator's expectations, and company's specificities), we also offer to classify these pitfalls into three categories.

We will qualify the first form of pitfall as "idealistic reporting." The tool integrates the complexity of CSR (as well as its qualitative and upgradeable dimensions). It is liable and standardized. It also allows a solid accountability as expected by the legislator. In this way, it appears to be legitimate toward the stakeholders. The risk then is for it to remain the privilege of an "insider" group (the CSR senior management and/or the dedicated monitoring committee). It will not make sense toward the other actors of the company. Far from contributing to a double loop learning process of CSR (Argyris & Schön, 1978; Senge, 1992; Wood, 1991), it will be seen as an additional constraint of reporting. Over time, the tool may progressively die because being only used under the pressure of a small group of insiders. Furthermore, its conception is disconnected of the real strategy of the company. By endowing itself with the means to co-build progressively the tool with all the employees supposed to fill it and by making sure that it makes sense to everyone (learning and sensitization, management as a collective project, phase of exploration then of exploitation – stabilization around new routines – Becker, 2004; March, 1991; Nelson & Winter, 1982), the CSR direction of the Rémy Cointreau Group seems to have avoided this pitfall to a large extent.

We identify a second form of pitfall we will qualify as "lay reporting." The tool is not very restrictive and easy to comprehend for the all set of actors. Thereby it facilitates the diffusion of the responsible approach within the company. In the short term, it can be a means to start a CSR approach and its learning. But the price to be paid is a poorly structured and incomplete tool. Oversimplified to respect the conventional frame (Batifoulier, 2001; Lewis, 1969), it does not respect the principle of comparability and accountability aimed at reducing the information asymmetry toward the stakeholders (Akerlof, 1970; Freeman, 1984; Hill & Jones, 1992). Therefore, it neither satisfies the legislator's expectations nor legitimates the action of the company (risk of *greenwashing*). By complying with a foundation of international standards and conventions (GRI, ISO 26000, etc.) as well as national and European regulations, on the one hand and by building its software with the same constraints of liability as for a financial reporting, on the other hand, the Rémy Cointreau group has laid a groundwork for a possible local convention (Ancori, 2005), source of legitimacy, that avoid this other form of pitfall.

At last, we identify a third form of pitfall that we offer to qualify as "technical reporting." Built in strict compliance with the national and European regulatory requirements, it meets the legislator's expectations (reduction of the information asymmetry toward the stakeholders) and legitimates, to a certain extent, the action of the company. Moreover, in its conception, it facilitates the establishment of organizational routines that fosters the implementation of the tool. Nevertheless, by nature, it emphasizes the quantitative indicators to the detriment of qualitative ones (vision, values, etc.) or elements too difficult to estimate (Brichard, 1996; Chan, 2005; Gray & Bebbington, 2001; Vatn, 2009). Likewise, the purely technical dimension does not

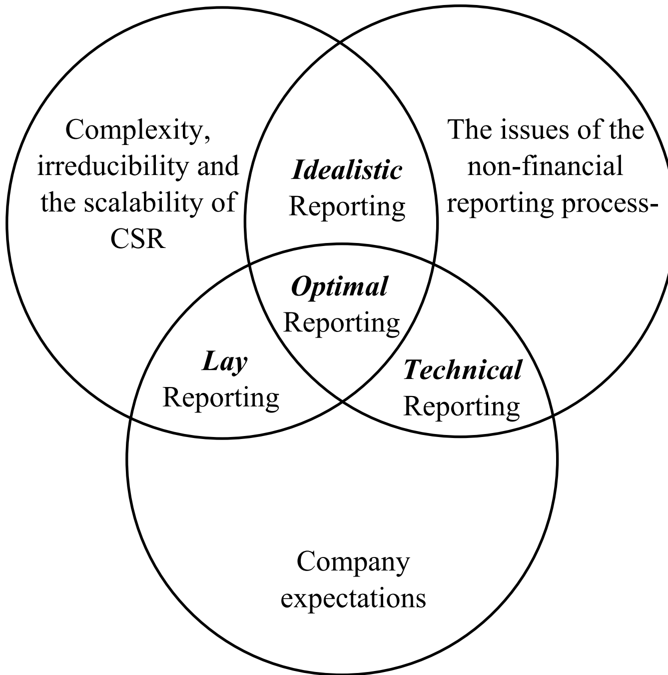

Fig. 4. The Three Constraints of Non-financial Reporting, the Pitfalls, and an Ideal Solution.

stimulate the dialogue between the stakeholders and, thus, the inclusion of the complexity of their expectations (Ancori, 2008; Frooman, 1999; Mitchell et al., 1997, Simon, 1962). Finally, the rigid character of the tool poorly adapts to quick evolutions of solutions of non-financial reporting (Lockhart & Taylor, 2007; Rambeau & Richard, 2015; Savall & Zardet, 2013; Xiaomei, 2004). The Rémy Cointreau group tried to avoid this pitfall with a system of alert that the use of qualitative data compulsorily, a process of annual audit of the reporting procedure, and an upgradeable software. Let us make one major point: the fact that the company has nearly 15 years of experience in CSR. It has given a better understanding of the complexity of CSR before the building of the non-financial reporting tool.

This interconnection between the knots of constraints and the related pitfalls can be illustrated in the form of a Venn Diagram (Fig. 4) which shows in its center the ideal solution toward which the designers of the reporting tool of the Rémy Cointreau group are focusing their efforts:

7. CONCLUSION AND LIMITS

From the case study of the Rémy Cointreau Group, we can draw up the guidelines of a strategy of an "ideal type" non-financial reporting. According to our studies,

this latter must try to conciliate simultaneously the requirements of three different knots of constraints:

- all the stakes of CSR, integrating (1) the complexity of the socio-cognitive system, (2) the quantitative and qualitative dimensions of CSR, as well as (3) the constant evolutions in the context on non-financial reporting;
- all the inherent issues on non-financial reporting, integrating (1) the objectives of accountability to the stakeholders, (2) the needs of coordination, reliability, and standardization of reporting, as well as (3) the objectives of legitimacy that non-financial reporting brings;
- all the expectations of the company with a non-financial reporting tool (1) which contribute to the learning process of CSR, (2) which in the conception and use reconcile the specificities of the organization (inscribed state) with the expectations of the legislator (circulating state), and (3) that know how to combine the need of stability of the indicators and organizational routines with the risk prevention of the obsolescence of the tool.

To get close to this "optimal reporting," the Rémy Cointreau group tried to develop a tool that:

- concerning the first knot of constraints, integrates the complexity of CSR with about 50 indicators (indicators requested by the legislator as well as proper indicators) and including qualitative information (written speeches of the CSR senior management, of the HR directors, etc.), while staying upgradeable (possibility of changing indicators and conversion for the prior years);
- concerning the second knot of constraints, meets the same requirement of liability as the financial reporting (collection of reliable data on all the sites, traceability, comparability over time, analysis of gaps, etc.) and validated by external auditors;
- concerning the third knot of constraints, has been co-built by getting together all departments (HR, communication, IT, etc.), by moving step by step with all the users, using an apparatus of awareness campaign, learning session, and support on all the sites.

Self-evidently, we are talking about an innovative practice of a singular group. Its reproducibility is closely linked to a certain number of factors. One of the most specific of them is the CSR's long experience of the Rémy Cointreau Group (about 15 years), but also of non-financial reporting (anticipating the legal requirements). The fact that the employees already integrate the CSR issues was a *sine qua non* condition to the implementation of the tool. Moreover, it was essential to invest significant human resources (in dedicated time and in number of people involved, to address the step by step approach of the co-building will all the users) and financial resources (internally, IT expenses and, externally, assistance of a SSII). Finally, a strong and constant commitment of the executive management is an essential prerequisite for a non-financial reporting tool (and more generally for a responsible approach).

Despite all its efforts, the Rémy Cointreau Group is not immune to pitfalls. It has to maintain the employees' commitment to make sure that they upgrade the tool according to the context as well as to stay aware of the legislator's expectations and, more broadly, of all their stakeholders'. This "optimal reporting" requires an important CSR maturity. It also requires not to be deterred in adhering to the logic of co-building despite the cost and the complexity of the tool.

Other empirical studies remain to be pursued. First, in order to validate the pitfalls we highlighted. Second, in order to identify other good practices that are targeting an "optimal reporting" (especially for less mature companies in terms of CSR or with fewer means).

NOTES

1. A "singular case" (Siggelkow, 2007; Yin, 2014) refers to an atypical case study with particularly innovative and original characteristics. It is not intended to be representative of a "state of the art" of French companies in terms of extra-financial reporting. Its purpose is to open up new and innovative approaches that are particularly interesting.
2. We use the term "optimal" to design a maximization under constraint (i.e., the best possible CAT which fits the three categories of issues we identified and avoid the four kind of pitfalls we will present in the next section).

REFERENCES

Akerlof, G. (1970). The market for "lemons": Quality uncertainty and the market mechanism. *Quarterly Journal of Economics*, *84*(3), 488–500.

Alcouffe, S., Berland, N., Dreveton, B., & Essid, M. (2010). An empirical study of environmental cost drivers. *Crises et nouvelles problématiques de la Valeur*, May, Nice, France. CD-ROM, Retrieved from https://hal.archivesouvertes.fr/hal-00479538.

Ancori, B. (2005). «Réseau complexe et genèse des conventions». CD Rom des Actes du 6ème Congrès Européen de Science des Systèmes [6th European Congress of System Science], 19–22 septembre.

Ancori, B. (2008). «Espace-temps d'un réseau sociocognitif complexe. Jalons pour une épistémologie naturalisée et évolutionnaire. I. Propension à communiquer et présent spécieux». Nouvelles perspectivesen sciences sociales. *Revue internationale d'analyse complexe et d'études relationnelles [International review of complex analysis and relational studies]*, *3*(2), 113–181.

Antheaume, N. (2007). Valuing external costs – From theory to practice: Implications for full cost environmental accounting. *European Accounting Review*, *13*(3), 443–464.

Argyris, C., & Schön, D. (1978). *Organizational learning: A theory of action perspective*. Reading, MA: Addison Wesley.

Baret, P., & Helfrich, V. (2016). Vers un *reporting* RSE structuré et fiabilisé à l'image du *reporting* financier. In P. Baret & F. Romestant (Eds.), *10 cas de RSE : Etudes de cas de responsabilité sociétale des entreprises [10 CSR cases studies: Case studies of corporate social responsibility]* (pp. 219–232). Malakoff, Paris: Dunod.

Batifoulier, P. (2001). *Théorie des conventions*. Paris: Economica.

Berle A. A., & Means G. C. (1932). *The modern corporation and private property*. New York, NY: Macmillan.

Becker, M. C. (2004). Organizational routines: A review of the literature. *Industrial and Corporate Change*, *13*(4), 643–677.

Brichard, B. (1996). The latest and greatest environmental measures, *Tomorrow*, *6*(3, May–June), 33–34.

Burritt, R. L. (2004). Environmental management accounting: Roadblocks on the way to the green and pleasant land. *Business Strategy and the Environment*, *13*(1), 13–32.

Caillaud, B., & Tirole, J. (2007). Consensus building: How to persuade a group. *American Economic Review*, *97*(5), 1877–1900.

Chan, W. (2005). Partial analysis of the environmental costs generated by hotels in Hong Kong. *Hospitality Management*, *24*, 517–531.

Chiapello, E., & Gilbert, P. (2013). *Sociologie des outils de gestion. Introduction à l'analyse sociale de l'instrumentation de gestion [Sociology of management tools. Introduction to the social analysis of management instrumentation]*. Paris, France: La Découverte.

Freeman, R. E. (1984). *Strategic management: A stakeholder approach*. Boston, MA: Pitman.

Freeman R. E., & Reed D. L. (1983). Stockholders and stakeholders: A new perspective on corporate governance. *California Management Review*, *25*(3, Spring), 88–106.

Frooman, J. (1999). Stakeholder influence strategies. *The Academy of Management Review*, *24*(2), 191–205.

Gray, R., Bebbington, J., & Walters, D. (1993). *Accounting for environment*. Princeton, NJ: Markus Wiener Publishers.

Grimand, A. (2012). L'appropriation des outils de gestion et ses effets sur les dynamiques organisationnelles: le cas du déploiement d'un référentiel des emplois et des compétences. *Revue Management et Avenir [Management & Future Review]* (54, June), 237–257.

Hill, C. W. L., & Jones, T. M. (1992). Stakeholder-agency theory. *Journal of Management Studies*, *29*, 131–154.

Igalens, J. (2007). L'analyse du discours de la responsabilité sociale de l'entreprise à travers les rapports annuels de développement durable d'entreprises françaises du CAC 40. *Revue Finance, Contrôle et Stratégie [Finance, Control and Strategy Review]*, *10*(2, June), 129–157.

Jasch, C. (2003). The use of environmental management accounting (EMA) for identifying environmental costs. *Journal of Cleaner Production*, *11*, 667–676.

Jensen, M. C., & Meckling, W. H. (1976). Theory of the firm: Managerial behavior, agency costs and ownership structure. *Journal of Financial Economics*, *3*(4), 305–360.

Jones, T. M. (1980). Corporate social responsibility, revisited, redefined. *California Management Review*, *22*(3), 59–67.

Lewis, D. K. (1969). *Convention a philosophical study*. Cambridge, MA: Harvard University Press.

Lockhart J., & Taylor A. (2007). Environmental considerations in product mix decisions. Using ABC and TOC. *Management Accounting Quarterly*, *9*(1), 13–21.

March, G. (1991). Exploration and Exploitation in Organizational Learning. *Organization Science*, *2*(1), 71–87.

Mitchell, R. K., Agle, B. R., & Wood, D. J. (1997). Toward a theory of stakeholder identification and salience: Defining the principle of who and what really counts. *The Academy of Management Review*, *22*(4), 853–886.

Moisdon, J.-C. (1997). *Du mode d'existence des outils de gestion. Les instruments de gestion à l'épreuve de l'organisation*. Paris: Seli Arslan.

Nelson, R., & Winter, S. G. (1982). *An evolutionary theory of economic change*. Cambridge, MA: Belknap Press of Harvard University Press.

Pearce, D. W., & Turner R. K. (1989). Economics of natural resources and the environment. Brighton: Wheatsheaf.

Phillips, R. A., Freeman, R. E., & Wicks A. C. (2003). What stakeholder theory is not. *Business Ethics Quarterly*, *13*(4), 479–502.

Rambeau, A., & Richard, J. (2015). The "triple depreciation line" instead of the "triple bottom line": Towards a genuine integrated reporting. *Critical Perspectives on Accounting*, *33*(December), 92–116.

Rasche, A., Morsing, M., & Moon, J. (Eds.). (2017). *Corporate social responsibility: Strategy, communication, governance*. Cambridge: Cambridge University Press.

Rémy Cointreau. (2015a). Registration document 2014/2015 and annual financial report. Rémy Cointreau.

Rémy Cointreau. (2015b). Responsabilité Sociale et Environnementale Protocole de reporting. Rémy Cointreau, document interne.

Rémy Cointreau. (2017). Registration document 2016/2017 and annual financial report. Rémy Cointreau.

Savall, H., & Zardet, V. (2013). *The dynamics and challenges of tetranormalization research in management consulting*. Charlotte, NC: IAP.

Senge, P. M. (1992). *The fifth discipline – The art and practice of the learning organization*. London: Century Business.

Siggelkow, N. (2007). Persuasion with case studies. *Academy of Management Journal*, *50*(1), 20–24.

Simon, H. (1962). The architecture of complexity. *Proceedings of the American Philosophy Society*, *106*, 467–482.

Vatn, A. (2009). An institutional analysis of methods for environmental appraisal. *Ecological Economics*, *68*(8/9), 2207–2215.

WCED. (1987). *Our common future*. World commission on environment and development. Oxford: Oxford University Press.

Wood, D. J. (1991). Corporate social performance revisited. *Academy of Management Review*, *16*(4), 691–718.

Xiaomei, L. (2004). Theory and practice of environmental management accounting: Experience of implementation in China. *International Journal of Technology Management and Sustainable Development*, *3*(1), 47–57.

Yin, R. K. (2014). *Case study research: Design and methods*. Los Angeles, CA: Sage.

Young, H. P. (1996). The economics of convention. *Journal of Economic Perspectives*, *10*, 105–122.

CHAPTER 3

THE EFFECT OF MANDATORY PUBLICATION OF NONFINANCIAL DISCLOSURE IN EUROPE ON SUSTAINABILITY REPORTING QUALITY: FIRST INSIGHTS ABOUT ITALIAN AND GERMAN COMPANIES

Giorgio Mion and Cristian R. Loza Adaui

ABSTRACT

Public-interest entities – among which are listed companies – are obliged to publish nonfinancial disclosure in some countries and regions. The European Commission established mandatory nonfinancial disclosure by Directive 2014/95/EU. While a large body of literature was developed on sustainability reporting quality (SRQ) in voluntary context, evidence about the effect of mandatory nonfinancial disclosure on SRQ is controversial and previous experiences worldwide did not make clear if obligatoriness improves SRQ. This chapter aims to bridge the gap of empirical evidence about this phenomenon in European countries, focusing on first implementation of new legislation by Italian and German companies. The research has an explorative character and it adopts content analysis methods performed on sustainability reporting practices of companies listed in FTSE-MIB and DAX 30. The analysis aims

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to understand if obligatoriness affects SRQ, causes some changes in reporting practices such as harmonizing Italian and German ones by performing a cross-country comparison. The findings suggest that obligatoriness improves reporting quality and, above all, it fills the gap between different countries by fostering the adoption of international guidelines and the consequent introduction of some content, such as materiality analysis and quantitative measures of social and environmental performance.

Keywords: Sustainability reporting; CSR reporting; Nonfinancial disclosure; Mandatory reporting; content analysis; Sustainability reporting quality

1. INTRODUCTION

Following implementation of Directive 2014/95/EU regarding mandatory publication of nonfinancial information by public-interest entities, all European Union member countries were required to modify their legislation to ensure disclosure of nonfinancial information. Consequently, beginning on January 1, 2017, all public-interest entities with more than 500 employees were obliged to disclose nonfinancial information related to "environmental, social and employee matters, respect for human rights, anti-corruption and bribery matters" (2014/95/EU, Art. 19a). This obligatory disclosure became effective, for capital market oriented corporations – independently from their dimension – and for financial institutions.

At the state of the art, evidence about mandatory disclosure of nonfinancial information is controversial. The outcomes of previous experiences in different countries are unclear regarding whether introducing new regulatory requirements that establish obligatory nonfinancial disclosure improves the quality of the information disclosed (Grewal, Riedl, & Serafeim, 2019; Ioannou & Serafeim, 2017; KPMG, Center for Corporate Governance in Africa, GRI, & UNEP, 2013; KPMG, GRI, UNEP, & Center for Corporate Governance in Africa, 2016).

After the entry into force of the Directive 2014/95/EU sustainability reporting practices have spread in all European Union member countries. However, considering that mandatory disclosure was only introduced in most countries after the implementation of the above-mentioned directive of the European Union (with the exception of France, where mandatory disclosure of nonfinancial information was required prior to the publication of the EU Directive), there is a lack of evidence regarding the effect of the legislation on SRQ.

To bridge the gap about this phenomenon, especially in European countries, it is useful to analyze reporting practices before and after the new legislation entered into force. Thus, we aim to explore, evaluate, and compare the effects of the Directive 2014/95/EU on SRQ in two countries that have recently introduced obligatory disclosure (Italy and Germany). This research has an explorative character because we can only consider the first edition of reports published after implementation of the new legislation; however, it is plausible to assume that the major effects of the new legislation would arise in this first year.

Therefore, this chapter presents empirical evidence guided by two questions:

(1) Did SRQ improve after the implementation of Directive 2014/95/EU about mandatory publication of nonfinancial information in Italy and Germany?
(2) After the entry into force of Directive 2014/95/EU, did enterprises prefer international standards and, consequently, did Italian and German companies publish more similar reports in terms of quality between each country than before the implementation of EU Directive?

To achieve our aim, we analyze a sample of companies listed on the Italian and German stock exchanges by collecting reports published before and after the regulation on nonfinancial disclosure entered into force. We concentrate the analysis on Italian companies listed on the FTSE MIB (40 companies) and German companies listed on the DAX 30 (30 companies). We then perform a qualitative content analysis of the documents in which the companies disclosed nonfinancial information (sustainability reports, SRs; annual reports; integrated reports; and so forth). The instrument developed for the evaluation assigns a score to each report and analyzes the quality of sustainability reporting practices. We perform our analysis on both the entire samples and on homogeneous groups of companies taking into account two important determinants: the sector of the business activity (Kuzey & Uyar, 2017) and the form of publication of nonfinancial disclosure, especially stand-alone reports.

In this chapter, after exploring previous literature about sustainability reporting quality (SRQ) and mandatory nonfinancial disclosure, we present our methodological design based on qualitative content analysis and on cross-country comparison. After that, we present the findings of the analysis and discuss them in the light of academic literature on the topic. Finally, we present our conclusions, including the strengths and the limitations of the research.

2. LITERATURE REVIEW

2.1. Growing Attention to Sustainability Reporting

During recent decades, sustainability reporting has been the focus of a number of academic studies as a result of the increasing adoption of social and environmental accountability practices by corporations (KPMG, 2017), nonprofit organizations (Ott, Wang, & Bortree, 2016), and organizations managed by public administration (Adams, Muir, & Hoque, 2014; Domingues, Lozano, Ceulemans, & Ramos, 2017). Sustainability reporting practices have been the focus of attention in academia, especially regarding the differences in the quantity and content of the SRs published. An increasing number of companies started to publish SRs during the 1990s, and the focus of attention in research was the differences caused by the belonging to different industries, as well as the possible effects of different cultural, social, and political contexts on the

content of corporate disclosure. In this regard, there is empirical evidence from Europe (e.g., Adams, Hill, & Roberts, 1998) and from the rest of the world (e.g., Fekrat, Lnclan, & Petroni, 1996; Williams & Ho Wern Pei, 1999). A factor causing diversity in the reporting practices researched during the 1990s was the absence of international standards and external assurance (Beets & Souther, 1999). After the diffusion of assurance practices, the importance of reporting standards and the credibility of SRs was discussed during the following decades, confirming partially the importance of assurance practices for credibility of SRs (Braam & Peeters, 2018; Dando & Swift, 2003; Kolk & Perego, 2010; Simnett, Vanstraelen, & Chua, 2009; Smith, Haniffa, & Fairbrass, 2011).

After the wide diffusion of social accountability practices and the publication of largely accepted international standards, the attention of scholars has changed to focus on a larger understanding of SRQ beyond just credibility. This attention considers the growing role of accountability in the promotion of corporate reputation and legitimacy (Cho & Patten, 2007; Deegan, 2002) and the different risks linked to conflicts between marketing rhetoric and sustainability disclosure communicating different messages (Hess & Dunfee, 2007). Furthermore, this attention is motivated by the effect of social and environmental disclosure practices on different issues: first, there is a growing attention devoted toward the consequences of socio-environmental disclosure on capital market behavior (Aerts, Cormier, & Magnan, 2008; Braam, Uit De Weerd, Hauck, & Huijbregts, 2016; Dhaliwal, Li, Tsang, & Yang, 2011; Healy & Palepu, 2001; Mills & Gardner, 1984; Plumlee, Brown, Hayes, & Marshall, 2015). Second, there is attention oriented toward the influence of socio-environmental disclosure on consumers' behavior (Marin, Ruiz, & Rubio, 2009). Third, there is attention directed to the contribution of improved quantity and quality of socio-environmental disclosure in reducing information asymmetries between investors, managers, and other stakeholders (Guidry & Patten, 2012). Consequently, a large academic debate has arisen regarding the factors that encourage corporations to publish SRs (Boyer-Allirol, 2013; Lewis, 2016; Mahoney, Thorne, Cecil, & LaGore, 2013; Marquis & Qian, 2014; Thorne, Mahoney, & Manetti, 2014; Wilson, 2013) and the potential risks of using SRs for greenwashing (Delmas & Burbano, 2011; Laufer, 2003; Lyon & Maxwell, 2011).

The relationship between sustainability performance and sustainability disclosure has been long discussed; however, the emerging evidence about this relationship is ambiguous (Cho, Patten, & Roberts, 2006; Clarkson, Li, Richardson, & Vasvari, 2008; Clarkson, Overell, & Chapple, 2011; de Villiers & van Staden, 2006; Hummel & Schlick, 2016). As such, there is a need for more empirical evidence. In this context, the notion of SRQ has become crucial and an increasing number of studies have focused on this topic (Hahn & Kühnen, 2013). However, there is no unanimously accepted notion of "quality" of disclosure (Leuz & Wysocki, 2008). Moreover, it is largely recognized that the quantity of disclosure is not a good proxy for the quality of disclosure, even though it is always used to evaluate SRQ (Beretta & Bozzolan, 2008). Further, it is clear that quality is a synthesis of a complex system of elements, including the credibility of SR (Lock & Seele, 2016), the content of the report, and the

managerial orientation that companies adopt toward social and environmental issues (Michelon, Pilonato, & Ricceri, 2015).

Regardless of the research methodology applied, scholars have indicated significant differences in sustainability reporting practices depending on different variables. In the absence of common rules of disclosure, particular attention has been devoted to the influence of the different institutional contexts (Ferri, 2017) in which corporations make their nonfinancial disclosure choices. Consequently, after some decades of diffusion of sustainability disclosure practices, the importance of institutional context has emerged as a key determinant that fosters cross-country analysis.

2.2. Sustainability Reporting in Italy and Germany

Italy and Germany are two large European industrialized countries that have apparently similar conditions concerning the nonfinancial disclosure topic, given that no obligations were operating before the adoption of Directive 2014/95/EU, even though in both countries there were laws that recommended voluntary disclosure. Furthermore, both legal systems are civil law oriented. However, other economic, social, and cultural determinants mark significant differences between these two interesting institutional contexts.

A larger number of small and medium-sized enterprises than in Germany and other large European countries characterizes the Italian industrial sector, although this factor does not affect perceptions of corporate social responsibility and corporate citizenship (Coppa & Sriramesh, 2013; Perrini, Pogutz, & Tencati, 2006). However, discussions of these topics seem more recent and less structured than in other European countries (Habisch, Jonker, Wegner, & Schmidpeter, 2005). Moreover, the social and environmental behavior of Italian corporations is less apparent than that of German corporations (Snider, Hill, & Martin, 2003). However, reporting practices have significantly spread among Italian companies during recent decades (Cantele, 2014) and the interest of academics and practitioners has increased, as testified by the activity of the Gruppo di Studio per il Bilancio Sociale (GBS) – an organization that aims to develop accountability practices in Italy by publishing social reporting standards.

Before the implementation of EU Directive, in Italy, nonfinancial disclosure was voluntary and the disclosure practices were different. Several previous studies aimed to identify the shared practices of Italian corporations by analyzing different aspects of the topic (Mio, 2010; Patelli & Prencipe, 2007; Perrini, 2006; Prencipe, 2004; Rossi & Tarquinio, 2017). After adoption of the EU Directive, yet before it was entered into force, Venturelli, Caputo, Cosma, Leopizzi, and Pizzi (2017) demonstrated that Italian listed corporations were not fully compliant with the new legislative requirements, and that the effect of the new harmonized rules could be important. In contrast, through analyzing the effect of the Italian Legislative Decree 32/2007 on the social and environmental information disclosed in both the annual consolidated reports and SRs of Italian listed corporate groups, Costa and Agostini (2016) indicated good responsiveness of corporations to the legislation. The adaptation of Directive 2014/95/EU for Italian legislation was undertaken through Legislative Decree 124/2016.

In Germany, as in Italy, the disclosure of nonfinancial information was voluntary prior to implementation of Directive 2014/95/EU. According to Fifka (2014, p. 1), in 2010, 87% of the German companies included in the DAX 30 already disclosed nonfinancial information in a report. According to Kirchhoff Consulting (2017), only two companies in the DAX 30 did not report information on their social and environmental performance in 2016. The social and environmental reporting practices of companies included in the DAX index have been previously studied. Attention devoted to the quality of environmental disclosure in German companies can be traced back to the works of Cormier, Magnan, and Van Velthoven (2005), who studied not only the quality of environmental disclosure, but also the role that economic incentives, public pressure, and institutional conditions play in this disclosure. The study by Blankenagel (2007) was also one of the first to address this issue. More recently, attention has been devoted to identifying the determinants of CSR disclosure (Gamerschlag et al., 2011) and the relevance of this information for investors (Verbeeten, Gamerschlag, & Möller, 2016).

Some previous studies were also dedicated to the analysis of particular industrial sectors. The study by Zimara and Eidam (2015) addressed the reporting practices of the German chemical industry, while Stibbe and Voigtländer (2014) examined the German real state sector. Finally, some studies addressed the performance of companies from different countries and included German companies in their analysis. For example, Fifka (2011) studied the corporate citizenship practices of companies from Germany and the United States (US), while Chen and Bouvain (2009) compared CSR reporting practices from companies in the US, the United Kingdom, Australia, and Germany. Further, Freundlieb and Teuteberg (2013) compared online CSR reports from companies in the US, Germany, and the rest of Europe. Similarly, Hetze, Bögel, Glock, and Bekmeier-Feuerhahn (2016) compared public listed companies from Germany, Austria, and Switzerland, and, more recently, D. El-Bassiouny and N. El-Bassiouny (2018) compared the CSR reporting of top-listed companies from Egypt, Germany, and the US. In Germany, the adaptation of Directive 2014/95/EU was undertaken through the *Law for the Strengthening of Nonfinancial Reporting from Enterprises* (Bundestag, 2017). The new regulatory requirements have been discussed from a juridical perspective (Saenger, 2017; Scheuch, 2018); however, to the best of our knowledge, empirical evidence remains nonexistent.

2.3. Mandatory Sustainability Reporting

The effects of mandatory requirements for nonfinancial disclosure have been discussed in the literature (Ioannou & Serafeim, 2017), even though few countries have introduced specific laws on the mandatory publication of nonfinancial information. In the current state of the debate, it is unclear whether obligatory disclosure has an effective influence on the quality of reports, while it clearly has an effect on the quantity of published reports. Archel, Fernández, and Larrinaga (2008) indicated that voluntary disclosure does not contribute to improving SRQ, while Hahn and Lülfs (2014) debated the risks of voluntariness in the case of negative aspect disclosure.

As aforementioned, some scholars have highlighted the ways in which nonfinancial disclosure can affect the credibility of corporations and influence investors' behavior in financial markets, yet there have been no significant studies about the causal relationship between this effect on stakeholders' behavior and the compulsoriness of SR. Regardless, Directive 2014/95/EU cannot be viewed as a sporadic intervention by the European Union, but as part of an aim to strengthen and harmonize accountability practices. Nonfinancial disclosure is only a portion of a larger process aimed to create an increasingly transparent European economic arena to uphold the interests of investors and all stakeholders involved in corporations' behavior and to prevent the risk of any abuse of power or conflict of interests.

Nevertheless, after the first year that the compulsory disclosure entered into force, the effectiveness of the EU Directive and national laws remains unclear. This issue is exacerbated because previous experiences are not unanimous and consequently simple to interpret. These experiences vary and the effect of obligatory disclosure on SR quality has not been recognized by previous studies. For example, Luque-Vílchez and Larrinaga (2016) demonstrated that, in Spain, the recent introduction of a "sustainable economy" law did not affect the quality of reports, and the Spanish case was influenced by the lack of power of the single national legislation in the European and Global context. Moreover, the authors questioned the effect of the Spanish law on the number of published reports without an express legislative provision. Previously, Criado-Jiménez, Fernández-Chulián, Husillos-Carqués, and Larrinage-González (2008) also focused on the Spanish case, and highlighted similar results regarding the quality of reports and compliance with the analyzed standard (ICAC-2002), although there was growth in the number of published reports.

In contrast, the French pioneer experience began with the *New Economic Regulations Act 2001*, and indicates a completely different situation (Delbard, 2008). Perrault Crawford and Clark Williams (2010) examined the cases of the US and France, and highlighted that mandatory publication in France had a positive effect on SRQ, while, in the US – where corporations are completely free in their accountability choices – social and economic factors affect SRQ, promoting SRQ of only some leader companies. Further, in Denmark, the publication of a governmental action plan for CSR caused widespread adoption of reporting practices by corporations (Danish Government, 2012), so that, when the mandatory publication of nonfinancial information entered into force, a large portion of Danish corporations had already been publishing SR (Ioannou & Serafeim, 2017, p. 8).

3. RESEARCH METHODS

3.1. Research Design

This chapter focuses on the effects of the mandatory nonfinancial disclosure introduced by Directive 2014/95/EU on the quality of sustainability reporting in Italy and Germany. The research undertakes an exploratory analysis of

two important groups of major corporations listed on the FTSE MIB (Borsa Italiana) and DAX 30 (Börse Frankfurt) to verify whether obligatory disclosure has affected reporting practices. We chose to compare two groups of corporations that belong to two different institutional frameworks – Italy and Germany – that have different traditions regarding financial statements and sustainability reporting, yet are exposed to the same European discipline and characterized by a similar civil law system.

In this chapter, we adopt qualitative methods of research, which are useful to explore the research field and verify the initial effects of the legislation on the mandatory publication of nonfinancial information. This question has been previously examined in the literature with regard to other countries that introduced obligatory nonfinancial disclosure before implementation of the EU Directive (Ioannou & Serafeim, 2017). Nevertheless, this legislation is a novelty for Italy and Germany, where corporations have dealt with mandatory sustainability disclosure only since 2017.

This research has an exploratory nature because it is possible to observe only the first edition of reports published after the implementation of the EU Directive. However, it is credible to suppose that the major effects of the obligatory disclosure would emerge in the first year of implementation of the new laws.

In details, our research aims to attain significant answers to the aforementioned two research questions that concern the improvement of the quality of reporting after the implementation of the EU Directive, and the harmonization of Italian and German sustainability reporting practices.

To reach the aims of the research, we carried out the content analysis technique on hand-collected data, which enabled us to codify qualitative information into categories and express a synthetic evaluation with a quantitative scale (Abbott & Monsen, 1979). Previous studies successfully applied content analysis methods to study the reporting practices during nonfinancial disclosures (Clarkson, Fang, Li, & Richardson, 2013; Cormier et al., 2005; da Silva Monteiro & Aibar-Guzmán, 2010; Kuo & Yi-Ju Chen, 2013; Verbeeten et al., 2016). We developed an evaluation instrument applicable to all different forms of statements. This evaluation scale rates each sustainability reporting output and, when applied to reports published before and after the legislation entered into force, enables determination of whether the quality of reporting had increased.

Scholars developed different instruments to evaluate the quality of SRs, involving in different measure the subjectivity of the researcher. Among these different possibilities, we selected a consolidated methodology that adopts a dichotomous indicator to measure SRQ variables. This approach limits the arbitrary judgment by researchers and enables comparison of the scores of different cases. This methodology is largely adopted to determine the quality of reporting, such as in relation to environmental (Clarkson et al., 2008) and labor matters (Sutantoputra, 2009). Consistently, to avoid bias, two researchers performed the content analysis independently and then compared the results and discussed the differences to reach consensus in the analysis of the data.

To allow the application of statistical tests, the score was parametrized as follows:

$$\text{SRQ} = \frac{\sum \text{SRQ indicators}}{\text{maximum score}}$$

After the results of the content analysis, a normal distribution was checked and the SRQ scores before and after the entry into force of Directive 2014/95/EU were analyzed by applying *F*-test to verify the relevance of the improvements (Field, 2009).

Furthermore, to understand which variables of SRQ positively affected the improvement of the score, we verified the significance of the changes of each indicator by applying McNemar's test (McCrum-Gardner, 2008). This test is suitable to understand the change caused by an exogenous factor – the implementation of the EU Directive – it required to transform our data in another binary form (0 = negative effects; 1 = positive effects).

3.2. Sample for Analysis

The sample of analysis includes corporations listed in the Italian and German top lists as of July 2018: FTSE MIB and DAX 30. The Italian Stock Exchange (Borsa Italiana), FTSE MIB, includes 40 titles issued by 40 different corporations; however, we exclude four of these corporations, as follows:

- ITA05 because 2017 was the first financial year when this new group published a unified annual report, while, for 2016, there were two different reports autonomously published by two different groups; thus, it was impossible to evaluate the effectiveness of the new law.
- ITA16 and ITA38 because they belong to two different groups (ITA37 and ITA39) and had exercised the right to not publish a nonfinancial disclosure report because it was included in the consolidation area of their holdings.
- ITA40 because it had not yet published its SR at the date of this analysis (July 10, 2018).

In contrast, it was possible to analyze all 30 corporations listed on the German DAX 30 for the Frankfurt Stock Exchange.

3.3. Evaluation Scale

Based on the literature review, starting with the seminal work of Wiseman (1982), we built an evaluation scale by adopting a largely acknowledged approach that considered a broad number of determinants of SRQ (Amran, Lee, & Devi, 2014; Bachoo, Tan, & Wilson, 2013; Choi, 1999; Clarkson et al., 2008; da Silva Monteiro & Aibar-Guzmán, 2010; Huang & Kung, 2010; Lanis & Richardson, 2012; Patten, 2002; Perrini, 2006; Post, Rahman, & Rubow, 2011; Stanny & Ely, 2008; Sutantoputra, 2009). Our scale included 20 indicators, partially extrapolated from the previous studies (see Table 1). The indicators considered the content of SRs and the possibility of immediately verifying the quality of information included in the reports; the availability

Table 1. Instrument of Analysis.

Indicator	SR Quality Indicator	Questionnaire	References
SRQ1	Adoption of sustainability reporting guidelines	*Is there a clear reference to the adoption of sustainability reporting guidelines (such as Global Reporting Initiative [GRI] or GBS)?*	Amran et al. (2014), Clarkson et al. (2008), Nikolaeva and Bicho (2011), and Sutantoputra (2009)
SRQ2	Independent verification or assurance of nonfinancial disclosure	*Is there information regarding the verification of nonfinancial disclosure in the letter of assurance of a third party?*	Amran et al. (2014), Clarkson et al. (2008), Dando and Swift (2003), Kolk and Perego (2010), Simnett et al. (2009), and Sutantoputra (2009)
SRQ3	Stakeholder engagement in SR process	*Is there information about stakeholder engagement in the SR process?*	Amran et al. (2014), Clarkson et al. (2008), Perrini (2006), and Sutantoputra (2009)
SRQ4	Instruments of stakeholder engagement in the SR process	*Is there information about which instruments the firm used to engage stakeholders in the SR process?*	Habisch, Patelli, Pedrini, and Schwartz (2011) and Manetti (2011)
SRQ5	Quantitative data about sustainability-related expenditures	*Does the firm disclose quantitative data regarding sustainability-related expenditures (excluding fines or other sanctions levied against the firm by an environmental regulator)?*	Bachoo et al., (2013), da Silva Monteiro and Aibar-Guzmán (2010), and Patten (2002)
SRQ6	Quantitative data about sustainability performance	*Does the firm provide quantitative analysis of its sustainability performance, with (at a minimum) cross-sectional or time-series comparisons?*	Bachoo et al. (2013), da Silva Monteiro and Aibar-Guzmán (2010), and Hess (2007)
SRQ7	Materiality analysis on SR	*Has the firm included a report of materiality analysis on SR?*	Bellantuono, Pontrandolfo, and Scozzi (2016), Font, Guix, and Bonilla-Priego (2016), Khan, Serafeim, and Yoon (2016)
SRQ8	Availability of a standalone SR	*Is there a standalone sustainability/CSR report available?*	Thorne et al. (2014)
SRQ9	Availability of brochure or other autonomous documents about sustainability	*Is there a brochure or other autonomous document about sustainability available on the website?*	Seele and Lock (2015)
SRQ10	Sustainability/CSR webpage	*Is SR included on an independent sustainability/CSR webpage?*	Chapple and Moon (2005) and Kühn, Stiglbauer, and Fifka (2018)

Table 1. (*Continued*)

Indicator	SR Quality Indicator	Questionnaire	References
SRQ11	Availability of sustainability information via social media	*Is there information regarding sustainability available on social media channels?*	Manetti and Bellucci (2016)
SRQ12	Chief executive officer (CEO) statement about sustainability	*Is there a CEO letter in a SR or a clear reference to sustainability in a CEO letter in an IR?*	Barkemeyer, Comyns, Figge, and Napolitano (2014)
SRQ13	Sustainability policy/strategy	*Are there references to sustainability policies/ strategies for the companies?*	da Silva Monteiro and Aibar-Guzmán (2010)
SRQ14	Reference to sustainable development goals	*Is there a clear reference to sustainable development goals in the SR?*	Adams (2017) and Busco, Izzo, and Granà (2018)
SRQ15	Reference to the United Nations Global Compact	*Is there clear reference to subscription to the United Nations Global Compact?*	Orzes et al. (2018)
SRQ16	Integrated reporting	*Is the SR integrated into financial reporting or is there information about sustainability in the annual financial report?*	Stubbs and Higgins (2018)
SRQ17	Sustainability/CSR committee	*Does governance include a sustainability/CSR committee?*	Peters and Romi (2015)
SRQ18	Certification by independent agencies regarding environmental issues	*Has the firm been certified by independent agencies about environmental programs?*	Amran et al. (2014) and Clarkson et al. (2008)
SRQ19	Certification by independent agencies regarding social issues	*Has the firm been certified by independent agencies about social programs?*	Sutantoputra (2009)
SRQ20	Ethical code	*Has the firm adopted an ethical code?*	Erwin (2011) and Painter-Morland (2006)

of information on different channels, including the web and social networks; and the existence of a clear commitment to sustainability in strategic and organizational documents.

4. RESULTS

The implementation of the evaluation scale allowed assigning a score to Italian and German corporations' nonfinancial disclosure before and after the entry into force of EU Directive and calculating the change in SRQ. The results are presented in Table 2.

Table 2. SRQ Scores of Italian and German Companies.

Italian Companies	2016	2017	Δ 2016–2017	German Companies	2016	2017	Δ 2016–2017
ITA01	0.95	0.95	0	GER01	0.95	0.95	0
ITA02	0.8	0.75	−0.05	GER02	0.65	0.85	0.2
ITA03[a]	0	0.25	0.25	GER03	0.85	0.9	0.05
ITA04	0.7	0.65	−0.05	GER04	0.95	0.95	0
ITA06	0.45	0.65	0.2	GER05	0.95	0.95	0
ITA07	0.6	0.65	0.05	GER06	0.8	0.9	0.1
ITA08	0.7	0.65	−0.05	GER07	0.95	0.95	0
ITA09	0.5	0.8	0.3	GER08	0.85	0.95	0.1
ITA10	0.9	0.9	0	GER09	0.75	0.95	0.2
ITA11	1	1	0	GER10	0.95	0.95	0
ITA12	0.95	0.95	0	GER11	0.85	0.85	0
ITA13[a]	0	0.25	0.25	GER12	0.95	0.95	0
ITA14[a]	0	0.8	0.8	GER13	0.95	0.95	0
ITA15	0.9	0.9	0	GER14	0.95	0.95	0
ITA17	0.85	0.75	−0.1	GER15	0.95	0.95	0
ITA18	0.9	0.95	0.05	GER16	0.5	0.55	0.05
ITA19	0.75	0.75	0	GER17	0.25	0.6	0.35
ITA20	0.8	0.9	0.1	GER18	0.75	0.8	0.05
ITA21[a]	0	0.6	0.6	GER19	0.95	0.95	0
ITA22[a]	0	0.5	0.5	GER20	0.85	0.95	0.1
ITA23[a]	0	0.5	0.5	GER21	0.75	0.85	0.1
ITA24	0.7	0.8	0.1	GER22	0.95	0.95	0
ITA25	0.95	0.95	0	GER23	0.9	0.95	0.05
ITA26[a]	0	0.95	0.95	GER24	0.85	0.9	0.05
ITA27	0.8	0.85	0.05	GER25	0.8	0.85	0.05
ITA28[a]	0	0.65	0.65	GER26	0.85	0.9	0.05
ITA29	0.9	0.95	0.05	GER27	0.9	0.9	0
ITA30	0.7	0.7	0	GER28	0.3	0.8	0.5
ITA31	1	1	0	GER29	0.65	0.65	0
ITA32	0.95	0.95	0	GER30	0.9	0.95	0.05
ITA33	0.9	0.95	0.05				
ITA34	0.6	0.65	0.05				
ITA35	0.9	0.9	0				
ITA36	0.75	0.8	0.05				
ITA37	0.8	0.8	0				
ITA39	0.8	0.95	0.15				

[a]New reporters (corporations that published their first Nonfinancial Disclosure (NFD) for fiscal year 2017).

Regarding Italy, it is clear that the number of corporations that disclosed non-financial information increased because all corporations fulfilled the obligatory disclosure. However, eight corporations had no experience with sustainability reporting before the EU Directive implementation, and they preferred stand-alone reports than other forms of reporting, but their reports were of lower quality. The score of new reporters was sensible lower than the score of continual reporters. The average score of new reporters was 0.5625, while the average score of continual reporters was 0.8036 in 2016 and 0.8375 in 2017. Only in two cases (ITA14 and ITA26), the score was high (>0.75) even though the reports were the

companies' first edition. However, ITA14 belongs to a group that had published SRs previously and for a long time.

Only in four cases did the score decrease in 2017; however, these differences are modest and regard above all changes of models of reporting. In 12 cases, the score did not change after the mandatory nonfinancial disclosure entered into force. The average score of this sub-group was elevated (0.8958) and testified the good practice in sustainability reporting, independent of the legislation.

Furthermore, it emerged that only one Italian corporation published a report without explicitly referring to guidelines. All other reporters adopted the GRI, which can be considered the generally accepted standard for large Italian corporations.

Regarding Germany, the disclosure of nonfinancial information by companies on the German DAX 30 between the years 2016 and 2017 showed moderate to reduced changes regarding quality. First, it is important to mention that all the companies analyzed reported information regarding sustainability in 2016 and 2017. This tradition of reporting evident among German companies can be partially attributed to the effect of a previous reform law that allowed companies to incorporate nonfinancial information in their reporting instruments. Thus, according to Fifka (2018), the German legislator labeled the EU guideline a "law for the strengthening" of reporting and did not consider the implementation of the guideline as a new reporting law. A total of 16 companies maintained SRQ at the same level in both years.

There was improvement in the SRQ of 14 companies; however, the improvement was limited – on average, the SRQ score improved by 0.0683. The largest improvement occurred in the companies GER17 and GER28. In the case of GER17, the improvement seems to be triggered by the implementation of international standards. In the case of GER28, the improvements involved different dimensions of quality and one factor that could explain this improvement is the increment in the delivery of information regarding the sustainability elements included in the company's annual report for the fiscal year 2017.

In general, one potential consequence of the implementation of the law in Germany is arguably the homogenization and convergence of reporting practices. The improvements involved the diffusion of the adoption of international standards. In the case of Germany, in 2017, all companies declared that they would follow the GRI. Moreover, there is an increment in the number of reports that has been independently audited in Germany.

Overall, we observed a positive effect from the implementation of the EU guideline for compulsory publication of nonfinancial information in both Italy and Germany, with both countries indicating improved SRQ. The comparison of the average scores of each indicator shows that the SRQ was higher for Germany than for Italy in almost all cases, as presented in Fig. 1. However, after the introduction of mandatory disclosure, Italian SRQ scores increased and the gap with German companies reduced.

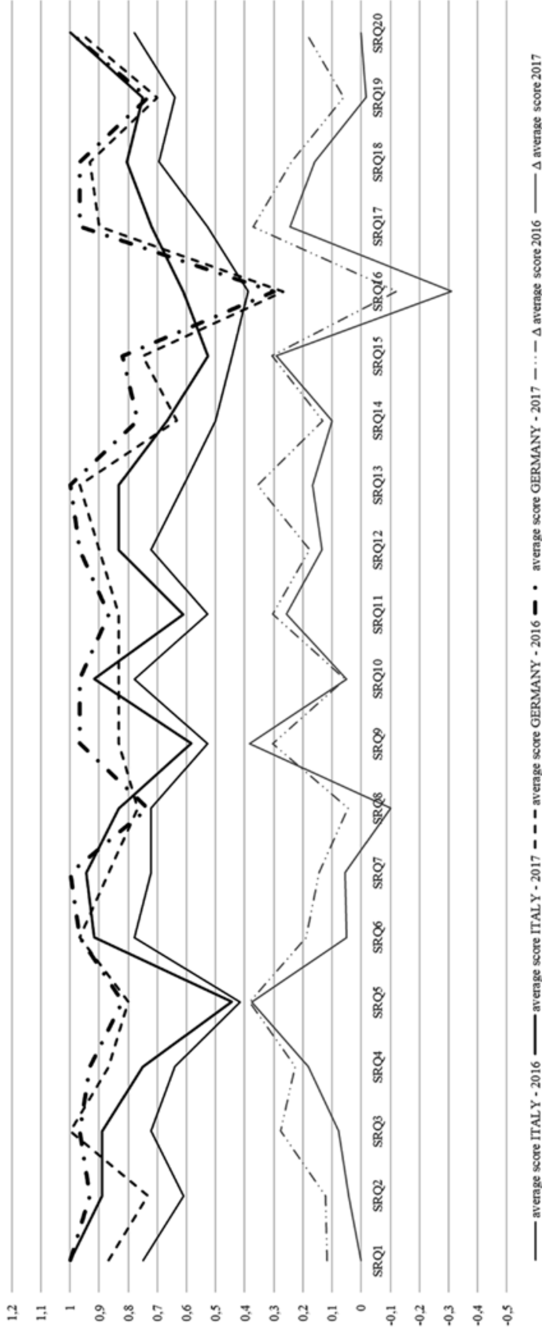

Fig. 1. Average SRQ Scores and Variations.

To analyze the significance of the differences between SRQ before and after the entry into force of EU Directive an F-test was performed. The results presented in Table 3 show that the improvements of the SRQ are significant for both Italy ($F = 3.5772$; $p = 0.0001$) and Germany ($F = 2.9131$; $p = 0.0026$).

Through analyzing the scores of stand-alone reports (excluding the indicator SRQ16), we found that SRQ did not vary significantly for those companies that published stand alone-reports before and after the entry into force of the Directive. This observation was valid in both countries: Italy and Germany. This finding suggests that mandatory publication affects quality of other forms of nonfinancial disclosure, while companies that voluntary published stand-alone reports also in 2016 have a good expertise in sustainability reporting and have best practices than other companies. Therefore, in terms of reporting quality, obligatoriness can be considered more effective on other reporting forms – such as integrated reporting – than on stand-alone ones.

We also analyzed the scores of SRQ before and after implementation of EU Directive through classifying companies based on their industry. We adopted a macro-classification in four categories – finance, manufacturing, service, and public utilities – and the results of this analysis are shown in Tables 4 and 5.

Table 3. Comparison of SRQ Scores by Year.

	SRQ 2016	SRQ 2017	Δ	F	p-Value	Fcrit
Italy ($N = 36$)						
Mean	0.6250	0.7764	0.1514	3.5772	0.0001*	1.7571
Variance	0.1310	0.0366				
Germany ($N = 30$)						
Mean	0.8150	0.8833	0.0683	2.9131	0.0026*	1.8608
Variance	0.0338	0.0116				

*Indicates statistically significant change at $p < 0.01$.

Table 4. Comparison of SRQ Scores by Country and Industrial Sector.

	Italy				Germany			
	N	2016	2017	Δ	N	2016	2017	Δ
Finance	10				5			
Mean		0.5250	0.6550	0.1300		0.8700	0.9100	0.0400
Variance		0.1311	0.0577			0.0016	0.0014	
Manufacturing	16				18			
Mean		0.6250	0.7938	0.1688		0.7889	0.8806	0.0917
Variance		0.1066	0.0150			0.0477	0.0142	
Public utilities	6				3			
Mean		0.9250	0.9250			0.8333	0.8833	0.0500
Variance		0.0073	0.0073	0		0.0072	0.0022	
Service	4				4			
Mean		0.4250	0.7875	0.3625		0.8500	0.8625	0.0125
Variance		0.1819	0.0342			0.0150	0.0155	

Table 5. Comparison SRQ Scores by Country and Industrial Sector.

	SRQ 2016	SRQ 2017	Δ	*F*	*p*-Value	Fcrit
Finance ($N = 15$)						
Mean	0.6400	0.7400	0.1000	2.1423	0.0832	2.4837
Variance	0.1226	0.0572				
Manufacturing ($N = 34$)						
Mean	0.7118	0.8397	0.1279	4.9925	0.0000*	1.7878
Variance	0.0846	0.0169				
Public Utilities ($N = 9$)						
Mean	0.8944	0.9111	0.0167	1.5258	0.2819	3.4381
Variance	0.0103	0.0067				
Services ($N = 8$)						
Mean	0.6375	0.8250	0.1875	5.4702	0.0197	3.7870
Variance	0.1641	0.0300				

* Indicates statistically significant change at $p < 0.01$.

The number of companies included in some groups was very low and statistical tests did not demonstrate significant results for three industries. Nonetheless, a very relevant difference can be highlighted for manufacturing sector whose companies increased significantly their SRQ after the implementation of EU Directive.

In Italy, finance companies seemed to be less attentive to the quality of disclosure, while public utilities companies had higher SRQ scores that did not change after the implementation of the EU Directive. Germany had a situation similar to the previous one and belonging to specific industrial sectors that did not influence SRQ.

Finally, the results of McNemar's test on single indicators are shown in Table 6 and they allow appreciating the significance of the effect produced by the new regulatory requirements on each indicator of SRQ considered in our evaluation instrument.

The results show that Italian corporations have significantly increased their score about different dimensions of SRQ, above all regarding methodological aspects of sustainability reporting such as the adoption of guidelines, the performance of a materiality analysis, and the inclusion of quantitative data. It is remarkable that it is not significant the change in the score of SRQ4 even though there is a significant change in SRQ3; this finding suggests a low level of deepening of the phase of stakeholder engagement crucial for the credibility of the reports. Significant changes are detected also for some strategical issues such as the disclosure about sustainability strategy and the introduction of a specific sustainability committee into the governance. On the contrary, the results are less remarkable for German companies; the only two indicators that registered a significant change concern the availability of other public documents related to sustainability politics/performances and the assessment of the reports.

Table 6. McNemar's Test on Single SRQ Indicators.

Indicator	SR Quality Indicator	Italy		Germany	
		N	χ^2	*N*	χ^2
SRQ1	Sustainability reporting guidelines	9	8.0278*	4	3.0625
SRQ2	Independent verification or assurance	10	9.0250*	6	5.0417*
SRQ3	Stakeholder engagement	6	5.0417*	0	0.2500
SRQ4	Instruments of stakeholder engagement	4	3.0625	2	1.1250
SRQ5	Quantitative data about sustainability-related expenditures	2	0.0833	1	0.2500
SRQ6	Quantitative data about sustainability performance	5	4.0500*	1	0.1250
SRQ7	Materiality analysis on SR	8	7.0313*	4	3.0625
SRQ8	Availability of a standalone SR	5	2.0417	1	0.1250
SRQ9	Availability of brochure or other autonomous documents	5	0.2813	5	4.0500*
SRQ10	Sustainability/CSR webpage	5	4.0500*	4	3.0625
SRQ11	Availability of sustainability information via social media	3	2.0833	1	0.2500
SRQ12	CEO statement about sustainability	5	2.0417	2	1.1250
SRQ13	Sustainability policy/strategy	8	7.0313*	1	0.2500
SRQ14	Reference to sustainable development goals	6	5.0417*	4	3.0625
SRQ15	Reference to the United Nations Global Compact	4	1.2500	3	2.0833
SRQ16	Integrated reporting	8	7.0313*	2	0.0833
SRQ17	Sustainability/CSR committee	7	6.0357*	3	2.0833
SRQ18	Certification regarding environmental issues	4	3.0625	1	0.2500
SRQ19	Certification regarding social issues	6	1.5313	2	1.1250
SRQ20	Ethical code	8	7.0313*	1	0.2500

N, number of companies that increased their score in the SRQ indicator.
*Indicates statistically significant change with χ^2 *crit*. 3.8415 ($p < 0.05$).

5. DISCUSSION

Despite the explorative nature of our research, results of content analysis suggest some first interesting remarks about the impact of mandatory nonfinancial disclosure on SRQ and allow us to give some preliminary but relevant answers to our research questions.

First, it emerged that stand-alone reports remained the preferred way to comply with the mandatory nonfinancial disclosure as well as it was the most frequent

form of voluntary nonfinancial disclosure before the entry into force of obligatoriness. Indeed, the publication of stand-alone reports is an ongoing practice of several Italian and German companies and those ones did not change their form of accountability after EU Directive. In addition, also new reporters choose more frequently stand-alone reports than other forms of nonfinancial disclosure.

Regarding the first research question, the Italian situation before the implementation of EU Directive was quite different from German one in term of both quantity and quality of sustainability reporting and the level of compliance to the new legislation in Italy was quite law as demonstrated by Venturelli et al. (2017). On the contrary, the entry into force of the same legislation about mandatory nonfinancial disclosure harmonized the practices and above all the SRQ, at least relative to our sample of analysis.

The performed content analysis of the Italian and German disclosure practices and the comparison between the two countries indicated that the mandatory publication had a predictable positive effect on the quantity of published reports, but also a considerable effect on quality was observed. The improvement of SRQ clearly emerged analyzing Italian and German samples, even though the quality of stand-alone reports remained about unchanged for experienced companies.

Therefore, a clear effect of mandatory publication emerged. Consequently, far from considering sustainability reporting a mere administrative burden, it seems that the compulsoriness of the reporting practices was viewed by these companies as an instrument to build competitive advantage (Fifka & Loza Adaui, 2015).

It is interesting to highlight that only in a few cases did the score change significantly. This observation is valid for all German companies, but also for the great part of Italian ones. Thus, we argue that compulsoriness can be an incentive to publish a report, yet has little effect on the quality of reports. This outcome aligns with the opinion of scholars that the discussion regarding the obligatoriness of sustainability reporting was more an issue for small and medium enterprises because large companies – above all in Germany – have a long-standing tradition and experience with reporting (Fifka, 2014).

Regarding the second research question, the content analysis disclosed the widespread adoption of international guidelines as the GRI. This methodological option renders all reports similar in their content, particularly in regard to the required content, such as information about stakeholder engagement and materiality analysis. This also created a harmonized effect in the scores. However, this finding should be analyzed in more detail because the quality of reports can certainly vary, depending on the level of implementation of the GRI standards in the disclosure (in accordance, core disclosure, or comprehensive disclosure of information). Nonetheless, as shown also by previous studies (e.g., Hahn & Lülfs, 2014), the usage of the GRI affects the reliability of reports, for example, by the inclusion of materiality analysis in the reports and the delivery of quantitative and qualitative data about social and environmental performance. In contrast, only a few reports included quantitative data about expenditures for social or environmental programs or grants donated to nonprofit organizations or local organizations. We argue that the absence of an explicit request for this information in the GRI guidelines discouraged corporations from disclosing this sensitive information.

Finally, the content analysis highlighted other interesting topics related to nonfinancial disclosure on which we can make some preliminary considerations. Regarding the availability of nonfinancial information, one relevant phenomenon that can be attributed to the implementation of the law is a lack of clarity regarding the nonfinancial disclosure required by law. While some companies decided to disclose all the information as part of an integrated report, other companies disclosed nonfinancial information in different documents, such as the annual report, stand-alone reports, and a new type of report titled the "combined separate nonfinancial report" or "nonfinancial report" which was published explicitly to comply with the new reporting requirements.

The analysis made clear also some insights about strategic anchorage of sustainability reporting practices. Indeed, the companies that published new reports in 2017 had fewer references to a specific sustainability strategy than did the companies with longer experience with sustainability reporting. This observation indicates that the adoption of a report is only a bureaucratic fulfillment if it does not include complete integration of sustainability into the corporate strategy. This lack of effectiveness may be an outcome of the very recent introduction of the EU Directive, which has stimulated corporations to publish a report, even if the process of strategic integration is incomplete.

6. CONCLUSIONS

This chapter sought to clarify whether the obligatory nonfinancial disclosure – introduced in the Italian and German legal systems after implementing Directive 2014/95/EU – affected SRQ. To infer some initial conclusions about the research questions, we developed a content analysis of reports published by Italian corporations listed on the FTSE MIB and German corporations listed on the DAX 30. The content analysis was performed by adopting an evaluation scale based on 20 dichotomous indicators. The analysis was only able to capture the short-term effects of the obligatory disclosure because the EU Directive only entered into force from 2017. Nevertheless, because it is plausible to presume that the EU Directive would mainly cause the variations of SRQ from 2016 to 2017, the principal strength of this research regards the timing of the analysis.

Our analysis indicates that the obligatory disclosure had a widely predictable effect on the number of published reports, especially in Italy, where a number of listed corporations did not publish nonfinancial information before the compulsory reporting was introduced. Further, our analysis indicates that the effect of obligatory disclosure on SRQ is significant, even though the improvement concerns less the companies which voluntarily published stand-alone reports before the entry into force of the EU Directive.

Furthermore, the comparison between the two national groups of corporations indicated that the obligatory disclosure had the effect of harmonizing SRQ, thereby bridging the previous gap between average SRQ of Italian and German companies. The EU Directive had the effect of leveling SRQ between the two analyzed countries, thereby contributing to reducing the effect of different

institutional frameworks on SRQ. The cross-country approach can be considered as other strength of our research.

The conclusions of our analysis should be considered initial observations and this study has some limitations that call for further research.

First, the study was able to capture only the short-term effect of the introduction of mandatory nonfinancial disclosure in Europe and focused two interesting but limited samples. The research can be expanded through further analysis of other Italian and German listed companies – above all smaller ones that could invest less resource in accountability practices – and corporations in other European countries that have introduced mandatory disclosure through implementing Directive 2014/95/EU. Further, after some years of implementation of the EU Directive, operating with public-interest entities, it will be interesting to determine whether good reporting practices by large corporations have positively affected the reporting practices of other firms.

Second, the content analysis shows some insights about different dimensions of SRQ, but the evaluation instrument did not allow the full understanding of the different dimensions that would require a further improvement of the scale.

Finally, previous studies showed the effects of some endogenous determinants on SRQ such as company size, profitability, and industry. The present study does not provide information regarding the role of those determinants in SRQ. Further studies could improve the outcomes of this study by integrating the analysis of those relevant determinants and their relation to the mandatory disclosure of nonfinancial information.

REFERENCES

Abbott, W. F., & Monsen, R. J. (1979). On the measurement of corporate social responsibility: Self-reported disclosures as a method of measuring corporate social involvement. *Academy of Management Journal*, *22*(3), 501–515. http://amj.aom.org/cgi/doi/10.2307/255740

Adams, C. A. (2017). *The sustainable development goals, integrated thinking and the integrated report*. London: International Integrated Reporting Council (IIRC) and ICAS.

Adams, C. A., Hill, W. Y., & Roberts, C. (1998). Corporate social reporting practices in Western Europe: Legitimating corporate behavior? *British Accounting Review*, *30*(1), 1–21. https://doi.org/10.1006/bare.1997.0060

Adams, C. A., Muir, S., & Hoque, Z. (2014). Measurement of sustainability performance in the public sector. Sustainability Accounting, *Management and Policy Journal*, *5*(1), 46–67. http://doi.org/10.1108/SAMPJ-04-2012-0018

Aerts, W., Cormier, D., & Magnan, M. (2008). Corporate environmental disclosure, financial markets and the media: An international perspective. *Ecological Economics*, *64*(3), 643–659. http://doi.org/10.1016/j.ecolecon.2007.04.012

Amran, A., Lee, S. P., & Devi, S. S. (2014). The influence of governance structure and strategic corporate social responsibility toward sustainability reporting quality. *Business Strategy and the Environment*, *23*(4), 217–235. http://doi.org/10.1002/bse.1767

Archel, P., Fernández, M., & Larrinaga, C. (2008). The organizational and operational boundaries of triple bottom line reporting: A survey. *Environmental Management*, *41*(1), 106–117. http://doi.org/10.1007/s00267-007-9029-7

Bachoo, K., Tan, R., & Wilson, M. (2013). Firm value and the quality of sustainability reporting in Australia. *Australian Accounting Review*, *23*(1), 67–87. http://doi.org/10.1111/j.1835-2561.2012.00187.x

Barkemeyer, R., Comyns, B., Figge, F., & Napolitano, G. (2014). CEO statements in sustainability reports: Substantive information or background noise? *Accounting Forum*, *38*(4), 241–257. http://doi.org/10.1016/J.ACCFOR.2014.07.002

Beets, D. S., & Souther, C. C. (1999). Corporate environmental reports: The need for standards and an environmental assurance service. *Accounting Horizons*, *13*(2), 129–145. http://doi.org/10.2308/acch.1999.13.2.129

Bellantuono, N., Pontrandolfo, P., & Scozzi, B. (2016). Capturing the stakeholders' view in sustainability reporting: A novel approach. *Sustainability*, *8*(4), 1–12. http://doi.org/10.3390/su8040379

Beretta, S., & Bozzolan, S. (2008). Quality versus quantity: The case of forward-looking disclosure. *Journal of Accounting, Auditing & Finance*, *23*(3), 333–376. http://doi.org/10.1177/0148558X0802300304

Blankenagel, L. (2007). *CSR-Berichte als Kommunikationsinstrument der DAX-Unternehmen: Eine Analyse der Ist-Situation und die daraus resultierenden Handlungsempfehlungen. [CSR-Reports as Instrument for Communication of the DAX Companies: An Analysis of the Current Situation and Recommendations.]*. Riga, Latvia: VDM Verlag Dr. Müller.

Boyer-Allirol, B. (2013). Faut-il mieux reglementer le reporting extra financier pour ameliorer sa prise en compte par les investisseurs? *Comptabilité sans Frontières. The French Connection*, May 2013, Canada. pp.cd-rom. (hal-00992961).

Braam, G. J. M., & Peeters, R. (2018). Corporate sustainability performance and assurance on sustainability reports: Diffusion of accounting practices in the realm of sustainable development. *Corporate Social Responsibility and Environmental Management*, *25*(2), 164–181. http://doi.org/10.1002/csr.1447

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. *Journal of Cleaner Production*, *129*, 724–734. http://doi.org/10.1016/j.jclepro.2016.03.039

Bundestag. (2017). Gesetz zur Stärkung der nichtfinanziellen Berichterstattung der Unternehmen in ihren Lage- und Konzernlageberichten. *Bundesgesetzblatt*, (German Federal Law Gazette), *20*(Teil I), 802–814.

Busco, C., Izzo, M. F., & Granà, F. (2018). *Sustainable development goals and integrated reporting*. London: Routledge.

Cantele, S. (2014). The trend of sustainability reporting in Italy: Some evidence from the last decade. *International Journal of Sustainable Economy*, *6*(4), 381–405. http://doi.org/10.1504/IJSE.2014.065403

Chapple, W., & Moon, J. (2005). Corporate social responsibility (CSR) in Asia: A seven-country study of CSR Web site reporting. *Business and Society*, *44*(4), 415–441. http://doi.org/10.1177/0007650305281658

Chen, S., & Bouvain, P. (2009). Is corporate responsibility converging? A comparison of corporate responsibility reporting in the USA, UK, Australia, and Germany. *Journal of Business Ethics*, *87*(1), 299–317. http://doi.org/10.1007/s10551-008-9794-0

Cho, C. H., & Patten, D. M. (2007). The role of environmental disclosures as tools of legitimacy: A research note. *Accounting, Organizations and Society*, *32*(7–8), 639–647. http://doi.org/10.1016/j.aos.2006.09.009

Cho, C. H., Patten, D. M., & Roberts, R. W. (2006). Corporate political strategy: An examination of the relation between political expenditures, environmental performance, and environmental disclosure. *Journal of Business Ethics*, *67*(2), 139–154. http://doi.org/10.1007/s10551-006-9019-3

Choi, J.-S. (1999). An investigation of the initial voluntary environmental disclosures made in Korean semi-annual reports. *Pacific Accounting Reviews*, *11*(1), 73–102.

Clarkson, P. M., Fang, X., Li, Y., & Richardson, G. (2013). The relevance of environmental disclosures: Are such disclosures incrementally informative? *Journal of Accounting and Public Policy*, *32*(5), 410–431. http://doi.org/10.1016/j.jaccpubpol.2013.06.008

Clarkson, P. M., Li, Y., Richardson, G. D., & Vasvari, F. P. (2008). Revisiting the relation between environmental performance and environmental disclosure: An empirical analysis. *Accounting, Organizations and Society*, *33*(4–5), 303–327. http://doi.org/10.1016/j.aos.2007.05.003

Clarkson, P. M., Overell, M. B., & Chapple, L. (2011). Environmental reporting and its relation to corporate environmental performance. *Abacus*, *47*(1), 27–60. http://doi.org/10.1111/j.1467-6281.2011.00330.x

Coppa, M., & Sriramesh, K. (2013). Corporate social responsibility among SMEs in Italy. *Public Relations Review*, *39*, 30–39. http://doi.org/10.1016/j.pubrev.2012.09.009

Cormier, D., Magnan, M., & Van Velthoven, B. (2005). Environmental disclosure quality in large german companies: Economic incentives, public pressures or institutional conditions? *European Accounting Review*, *14*(1), 3–39. http://doi.org/10.1080/0963818042000339617

Costa, E., & Agostini, M. (2016). Mandatory disclosure about environmental and employee matters in the reports of Italian-listed corporate groups. *Environmental Accountability Journal*, *36*(1), 10–33. http://doi.org/10.1080/0969160X.2016.1144519

Criado-Jiménez, I., Fernández-Chulián, M., Husillos-Carqués, F. J., & Larrinage-González, C. (2008). Compliance with mandatory environmental reporting in financial statements: The case of Spain (2001–2003). *Journal of Business Ethics*, *79*(3), 245–262. http://doi.org/10.1007/s10551-007-9375-7

da Silva Monteiro, S. M., & Aibar-Guzmán, B. (2010). Determinants of environmental disclosure in the annual reports of large companies operating in Portugal. *Corporate Social Responsibility and Environmental Management*, *17*(4), 185–204. http://doi.org/10.1002/csr.197

Dando, N., & Swift, T. (2003). Transparency and assurance: Minding the credibility gap. *Journal of Business Ethics*; *44*, 195–200. http://doi.org/10.1023/A:1023351816790

Danish Government. (2012). *Responsible growth – Action plan for corporate social responsibility 2012–2015*. Retrived from http://csrgov.dk/danish_action_plan_2012

de Villiers, C., & van Staden, C. J. (2006). Can less environmental disclosure have a legitimising effect? Evidence from Africa. *Accounting, Organizations and Society*, *31*(8), 763–781. http://doi.org/10.1016/j.aos.2006.03.001

Deegan, C. (2002). Introduction: The legitimising effect of social and environmental disclosures – A theoretical foundation. *Auditing & Accountability Journal*, *15*(3), 282–311. http://doi.org/10.1108/09513570210435852

Delbard, O. (2008). CSR legislation in France and the European regulatory paradox: An analysis of EU CSR policy and sustainability reporting practice. *Corporate Governance: The International Journal of Business in Society*, *8*(4), 397–405. http://doi.org/10.1108/09513579510146996

Delmas, M. A., & Burbano, V. C. (2011). The drivers of greenwashing. *California Management Review*, *54*(1), 64–87. http://doi.org/10.1525/cmr.2011.54.1.64

Dhaliwal, D. S., Li, O. Z., Tsang, A., & Yang, Y. G. (2011). Voluntary nonfinancial disclosure and the cost of equity capital: The initiation of corporate social responsibility reporting. *Accounting Review*, *86*(1), 59–100. http://doi.org/10.2308/accr.00000005

Domingues, A. R., Lozano, R., Ceulemans, K., & Ramos, T. B. (2017). Sustainability reporting in public sector organisations: Exploring the relation between the reporting process and organisational change management for sustainability. *Journal of Environmental Management*, *192*, 292–301. http://doi.org/10.1016/j.jenvman.2017.01.074

El-Bassiouny, D., & El-Bassiouny, N. (2018). Diversity, corporate governance and CSR reporting: A comparative analysis between top-listed firms in Egypt, Germany and the USA. *Management of Environmental Quality: An International Journal*, *30*(1), 116–136. http://doi.org/10.1108/MEQ-12-2017-0150

Erwin, P. M. (2011). Corporate codes of conduct: The effects of code content and quality on ethical performance. *Journal of Business Ethics*, *99*(4), 535–548. http://doi.org/10.1007/s10551-010-0667-y

Fekrat, M. A., Lnclan, C., & Petroni, D. (1996). Corporate environmental disclosures: Competitive disclosure hypothesis using 1991 annual report data. *The International Journal of Accounting*, *31*(2), 175–195. https://doi.org/10.1016/s0020-7063(96)90003-5

Ferri, L. M. (2017). The influence of the institutional context on sustainability reporting. A cross-national analysis. *Social Responsibility Journal*, *13*(1), 24–47. https://doi.org/10.1108/SRJ-11-2015-0172

Field, A. (2009). *Discovering statistics using SPSS* (3rd ed.). London: Sage.

Fifka, M. S. (2011). *Corporate citizenship in Deutschland und den USA Gemeinsamkeiten und Unterschiede im gesellschaftlichen Engagement von Unternehmen und das Potential eines transatlantischen Transfers. [Corporate Citizenship in Germany and in the USA: Similarities and Differences in the Social Engagement from Companies and the Potentialities of a Transatlantic Transfer.]*. Wiesbaden, Germany: Gabler Verlag.

Fifka, M. S. (2014).Einführung - Nachhaltigkeitsberichterstattung: Eingrenzung eines heterogenes Phänomen. [Introduction - Sustainability Reporting: Definition of a Heterogeneous

Phenomenon.] In M. S. Fifka (Ed.), *CSR und Reporting [CSR and Reporting]* (pp. 1–18). Berlin, Germany: Springer Gabler. http://doi.org/10.1007/978-3-642-53893-3_1

Fifka, M. S. (2018). CSR-Kommunikation und Nachhaltigkeitsreporting – Alles neu macht dieBerichtspflicht? [CSR-Communication and Sustainability Reporting – Does the Mandatoriness of Reporting Makes Everything New?] In P. Heinrich (Ed.), *CSR und kommunikation [CSR and Communication]* (pp. 139–153). Berlin, Germany: Springer Gabler. http://doi.org/10.1007/978-3-662-56481-3_9

Fifka, M. S., & Loza Adaui, C. R. (2015). Corporate social responsibility (CSR) reporting—Administrative burden or competitive advantage? In L. O'Riordan, P. Zmuda, & S. Heinemann (Eds.), *New perspectives on corporate social responsibility* (pp. 285–300). Wiesbaden, Germany: Springer Fachmedien Wiesbaden. http://doi.org/10.1007/978-3-658-06794-6_15

Font, X., Guix, M., & Bonilla-Priego, M. J. (2016). Corporate social responsibility in cruising: Using materiality analysis to create shared value. *Tourism Management*, *53*, 175–186. http://doi.org/10.1016/j.tourman.2015.10.007

Freundlieb, M., & Teuteberg, F. (2013). Corporate social responsibility reporting – A transnational analysis of online corporate social responsibility reports by market-listed companies: Contents and their evolution. *International Journal of Innovation and Sustainable Development*, *7*(1), 1–26. http://doi.org/10.1504/IJISD.2013.052117

Gamerschlag, R., Möller, K., Verbeeten, F., Gamerschlag, R., Möller, Á. K., & Verbeeten, F. (2011). Determinants of voluntary CSR disclosure: Empirical evidence from Germany. *Review of Managerial Science*, *5*, 233–262. http://doi.org/10.1007/s11846-010-0052-3

Grewal, J., Riedl, E. J., & Serafeim, G. (2019). Market Reaktion to mandatory Nonfinancial Disclosure. *Management Science*. *65*(7), 3061–3084. https://doi.org/10.1287/mnsc.2018.3099

Guidry, R. P., & Patten, D. M. (2012). Voluntary disclosure theory and financial control variables: An assessment of recent environmental disclosure research. *Accounting Forum*, *36*(2), 81–90. http://doi.org/10.1016/j.accfor.2012.03.002

Habisch, A., Jonker, J., Wegner, M., & Schmidpeter, R. (Eds.). (2005). *Corporate social responsibility across Europe*. Heidelberg: Springer. http://doi.org/10.1007/b138371

Habisch, A., Patelli, L., Pedrini, M., & Schwartz, C. (2011). Different talks with different folks: A comparative survey of stakeholder dialog in Germany, Italy, and the U.S. *Journal of Business Ethics*, *100*(3), 381–404. http://doi.org/10.1007/s10551-010-0686-8

Hahn, R., & Kühnen, M. (2013). Determinants of sustainability reporting: A review of results, trends, theory, and opportunities in an expanding field of research. *Journal of Cleaner Production*, *59*, 5–21. http://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. *Journal of Business Ethics*, *123*(3), 401–420. http://doi.org/10.1007/s10551-013-1801-4

Healy, P. M., & Palepu, K. G. (2001). Information asymmetry, corporate disclosure, and the capital markets: A review of the empirical disclosure literature. *Journal of Accountancy and Research*, *31*(1–3), 405–440. https://doi.org/10.1016/S0165-4101(01)00018-0

Hess, D. (2007). Social reporting and new governance regulation: The prospects of achieving corporate accountability through transparency. *Business Ethics Quarterly*, *17*(3), 453–476. http://doi.org/10.5840/beq200717348

Hess, D., & Dunfee, T. W. (2007). The Kasky–Nike threat to corporate social reporting: Implementing a standard of optimal truthful disclosure as a solution. *Business Ethics Quarterly*, *17*(1), 5–32. http://doi.org/10.5840/beq200717119

Hetze, K., Bögel, P. M., Glock, Y., & Bekmeier-Feuerhahn, S. (2016). Online-CSR-Kommunikation: Gemeinsamkeiten und Unterschiede börsennotierter Unternehmen in der DACH-Region. [Online CSR communication: Similarities and differences between listed companies in the DACH region.] *Umweltwirtschaftsforum [Sustainability Management Forum]*. *24*(2–3), 223–236. http://dx.doi.org/10.1007/s00550-016-0418-3

Huang, C. L., & Kung, F. H. (2010). Drivers of environmental disclosure and stakeholder expectation: Evidence from Taiwan. *Journal of Business Ethics*, *96*(3), 435–451. http://doi.org/10.1007/s10551-010-0476-3

Hummel, K., & Schlick, C. (2016). The relationship between sustainability performance and sustainability disclosure – Reconciling voluntary disclosure theory and legitimacy theory. *Journal of Accounting and Public Policy*, *35*(5), 455–476. http://doi.org/10.1016/j.jaccpubpol.2016.06.001

Ioannou, I., & Serafeim, G. (2017). *The consequences of mandatory corporate sustainability reporting*. Boston, MA: Harvard Business School. Retrieved from http://www.ssrn.com/abstract=1799589

Khan, M., Serafeim, G., & Yoon, A. (2016). Corporate sustainability: First evidence on materiality. *Accounting Review*, *91*(6), 1697–1724. http://doi.org/10.2308/accr-51383

Kirchhoff Consulting. (2017). *Nachhaltigkeitsberichterstattung im Wandel* Sustainability Reporting in Transition. Hamburg, Germany. Retrieved from https://www.kirchhoff.de/fileadmin/20_Download/Studien/20170821_Kirchhoff-Consult_DAX-30-Studie_CSR-Reporting.pdf

Kolk, A., & Perego, P. (2010). Determinants of the adoption of sustainability assurance statements: An international investigation. *Business Strategy and the Environment*, *19*(3), 182–198. http://doi.org/10.1002/bse.643

KPMG. (2017). *The KPMG survey of corporate responsibility reporting 2017*. Retrieved from: https://assets.kpmg/content/dam/kpmg/xx/pdf/2017/10/kpmg-survey-of-corporate-responsibility-reporting-2017.pdf

KPMG, Center for Corporate Governance in Africa, GRI, & UNEP. (2013). Carrots and sticks. Sustainability reporting policies worldwide – Today's best practice, tomorrow's trends. Retreived from: https://www.carrotsandsticks.net/wp-content/uploads/2016/03/Carrots-Sticks-2013.pdf

KPMG, GRI, UNEP, & Center for Corporate Governance in Africa. (2016). Carrots and sticks. Global trends in sustainability reporting regulation and policy. Retreived from: https://www.carrotsandsticks.net/wp-content/uploads/2016/05/Carrots-Sticks-2016.pdf

Kühn, A.-L., Stiglbauer, M., & Fifka, M. S. (2018). Contents and determinants of corporate social responsibility website reporting in Sub-Saharan Africa: A seven-country study. *Business & Society*, *57*(3), 437–480. http://doi.org/10.1177/0007650315614234

Kuo, L., & Yi-Ju Chen, V. (2013). Is environmental disclosure an effective strategy on establishment of environmental legitimacy for organization? *Management Decision*, *51*(7), 1462–1487. http://doi.org/10.1108/MD-06-2012-0395

Kuzey, C., & Uyar, A. (2017). Determinants of sustainability reporting and its impact on firm value: Evidence from the emerging market of Turkey. *Journal of Cleaner Production*, *143*, 27–39. http://doi.org/10.1016/j.jclepro.2016.12.153

Lanis, R., & Richardson, G. (2012). Corporate social responsibility and tax aggressiveness: An empirical analysis. *Journal of Accounting and Public Policy*, *31*(1), 86–108. http://doi.org/10.1016/j.jaccpubpol.2011.10.006

Laufer, W. S. (2003). Social accountability and corporate greenwashing. *Journal of Business Ethics*, *43*, 253–261.

Leuz, C., & Wysocki, P. D. (2008). Economic consequences of financial reporting and disclosure regulation: A review and suggestions for future research. *SSRN Electronic Journal*, *79*(10), 24. http://doi.org/10.2139/ssrn.1105398

Lewis, J. K. (2016). Corporate social responsibility/sustainability reporting among the Fortune Global 250: Greenwashing or green supply chain? Entrepreneurship, *Business and Economics*, *1*, 347–362. http://doi.org/10.1007/978-3-319-27570-3_27

Lock, I., & Seele, P. (2016). The credibility of CSR (corporate social responsibility) reports in Europe. Evidence from a quantitative content analysis in 11 countries. *Journal of Cleaner Production*, *122*, 186–200. http://doi.org/10.1016/j.jclepro.2016.02.060

Luque-Vílchez, M., & Larrinaga, C. (2016). Reporting models do not translate well: Failing to regulate CSR reporting in Spain. *Social and Environmental Accountability Journal*, *36*(1), 56–75. http://doi.org/10.1080/0969160X.2016.1149301

Lyon, T. P., & Maxwell, J. W. (2011). Greenwash: Corporate environmental disclosure under threat of audit. *Journal of Economics & Management Strategy*, *20*(1), 3–41. Retrieved from http://www.corpwatch.org/article.php?id=3648.

McCrum-Gardner, E. (2008). Which is the correct statistical test to use? *British Journal of Oral and Maxillofacial Surgery*, *46*(1), 38–41. https://doi.org/10.1016/j.bjoms.2007.09.002

Mahoney, L. S., Thorne, L., Cecil, L., & LaGore, W. (2013). A research note on standalone corporate social responsibility reports: Signaling or greenwashing? *Critical Perspectives on Accounting*, *24*(4–5), 350–359. http://doi.org/10.1016/j.cpa.2012.09.008

Manetti, G. (2011). The quality of stakeholder engagement in sustainability reporting: Empirical evidence and critical points. *Corporate Social Responsibility and Environmental Management*, *18*(2), 110–122. http://doi.org/10.1002/csr.255

Manetti, G., & Bellucci, M. (2016). The use of social media for engaging stakeholders in sustainability reporting. *Accounting, Auditing & Accountability Journal*, *29*(6), 985–1011. http://doi.org/10.1108/AAAJ-08-2014-1797

Marin, L., Ruiz, S., & Rubio, A. (2009). The role of identity salience in the effects of corporate social responsibility on consumer behavior. *Journal of Business Ethics*, *84*(1), 65–78. http://doi.org/10.1007/s10551-008-9673-8

Marquis, C., & Qian, C. (2014). Corporate social responsibility reporting in China: Symbol or substance? *Organization Science*, *25*(1), 127–148. http://doi.org/10.1287/orsc.2013.0837

Michelon, G., Pilonato, S., & Ricceri, F. (2015). CSR reporting practices and the quality of disclosure: An empirical analysis. *Critical Perspectives on Accounting*, *33*, 59–78. http://doi.org/10.1016/j.cpa.2014.10.003

Mills, D. L., & Gardner, M. J. (1984). Financial profiles and the disclosure of expenditures for socially responsible purposes. *Journal of Business Research*, *12*(4), 407–424. http://doi.org/10.1016/0148-2963(84)90022-5

Mio, C. (2010). Corporate social reporting in Italian multi-utility companies: An empirical analysis. *Corporate Social Responsibility and Environmental Management*, *17*(5), 247–271. http://doi.org/10.1002/csr.213

Nikolaeva, R., & Bicho, M. (2011). The role of institutional and reputational factors in the voluntary adoption of corporate social responsibility reporting standards. *Journal of the Academy of Marketing Science*, *39*(1), 136–157. http://doi.org/10.1007/s11747-010-0214-5

Orzes, G., Moretto, A. M., Ebrahimpour, M., Sartor, M., Moro, M., & Rossi, M. (2018). United Nations global compact: Literature review and theory-based research agenda. *Journal of Cleaner Production*, *177*, 633–654. http://doi.org/10.1016/J.JCLEPRO.2017.12.230

Ott, H., Wang, R., & Bortree, D. (2016). Communicating sustainability online: An examination of corporate, nonprofit, and university websites. *Mass Communication and Society*, *19*(5), 671–687. http://doi.org/10.1080/15205436.2016.1204554

Painter-Morland, M. (2006). Triple bottom-line reporting as social grammar: Integrating corporate social responsibility and corporate codes of conduct. *Business Ethics: A European Review*, *15*(4), 352–364. http://doi.org/10.1111/j.1467-8608.2006.00457.x

Patelli, L., & Prencipe, A. (2007). The relationship between voluntary disclosure and independent directors in the presence of a dominant shareholder. *European Accounting Review*, *16*(1), 5–33. http://doi.org/10.1080/09638180701265820

Patten, D. M. (2002). The relation between environmental performance and environmental disclosure: A research note. *Accounting, Organizations and Society*, *27*, 763–773. http://doi.org/10.1016/S0361-3682(02)00028-4

Perrault Crawford, E., & Clark Williams, C. (2010). Should corporate social reporting be voluntary or mandatory? Evidence from the banking sector in France and the United States. *Corporate Governance: The International Journal of Business in Society*, *10*(4), 512–526. https://doi.org/10.1108/14720701011069722

Perrini, F. (2006). The practitioner's perspective on non-financial reporting. *California Management Review*, *48*(2), 73–103. http://doi.org/10.2307/41166339

Perrini, F., Pogutz, S., & Tencati, A. (2006). Corporate social responsibility in Italy: State of the art. *Journal of Business Strategies*, *23*(1), 1–44.

Peters, G. F., & Romi, A. M. (2015). The association between sustainability governance characteristics and the assurance of corporate sustainability reports. *AUDITING: A Journal of Practice & Theory*, *34*(1), 163–198. http://doi.org/10.2308/ajpt-50849

Plumlee, M., Brown, D., Hayes, R. M., & Marshall, R. S. (2015). Voluntary environmental disclosure quality and firm value: Further evidence. *Journal of Accounting and Public Policy*, *34*, 336–361. http://doi.org/10.1016/j.jaccpubpol.2015.04.004

Post, C., Rahman, N., & Rubow, E. (2011). Green governance: Boards of directors' composition and environmental corporate social responsibility. *Business and Society*, *50*(1), 189–223. http://doi.org/10.1177/0007650310394642

Prencipe, A. (2004). Proprietary costs and determinants of voluntary segment disclosure: Evidence from Italian listed companies. *European Accounting Review*, *13*(2), 319–340. http://doi.org/10.1080/0963818042000204742

Rossi, A., & Tarquinio, L. (2017). An analysis of sustainability report assurance statements: Evidence from Italian listed companies. *Managerial Auditing Journal*, *32*(6), 578–602. https://doi.org/10.1108/MAJ-07-2016-1408

Saenger, I. (2017). Disclosure and Auditing of Corporate Social Responsibility Standards: The Impact of Directive 2014/95/EU on the German Companies Act and the German Corporate Governance Code. In J. J. du Plessis & C. K. Low (Eds.), *Corporate Governance Codes for the 21st Century* (pp. 261–273). Cham: Springer International Publishing. http://doi.org/10.1007/978-3-319-51868-8_12

Scheuch, A. (2018). Soft Law Requirements with Hard Law Effects? The Influence of CSR on Corporate Law from a German Perspective. In J. J. du Plessis, U. Varottil, & J. Veldman (Eds.), *Globalisation of Corporate Social Responsibility and its Impact on Corporate Governance* (pp. 203–229). Cham: Springer International Publishing. http://doi.org/10.1007/978-3-319-69128-2_9

Seele, P., & Lock, I. (2015). Instrumental and/or deliberative? A typology of CSR communication tools. *Journal of Business Ethics*, *131*(2), 401–414. http://doi.org/10.1007/s10551-014-2282-9

Simnett, R., Vanstraelen, A., & Chua, W. F. (2009). Assurance on sustainability reports: An international comparison. *The Accounting Review*, *84*(3), 937–967. http://doi.org/10.2308/accr.2009.84.3.937

Smith, J., Haniffa, R., & Fairbrass, J. (2011). A conceptual framework for investigating "capture" in corporate sustainability reporting assurance. *Journal of Business Ethics*, *99*(3), 425–439. http://doi.org/10.1007/s10551-010-0661-4

Snider, J., Hill, R. P., & Martin, D. (2003). Corporate social responsibility in the 21st century: A view from the world's most succesful firms. *Journal of Business Ethics*, *48*, 175–187. http://doi.org/10.1023/B:BUSI.0000004606.29523.db

Stanny, E., & Ely, K. (2008). Corporate environmental disclosures about the effects of climate change. *Corporate Social Responsibility and Environmental Management*, *15*(6), 338–348. http://doi.org/10.1002/csr.175

Stibbe, R., & Voigtländer, M. (2014). Corporate sustainability in the German real estate sector. *Journal of Corporate Real Estate*, *16*(4), 239–251. http://doi.org/10.1108/JCRE-10-2013-0030

Stubbs, W., & Higgins, C. (2018). Stakeholders' perspectives on the role of regulatory reform in integrated reporting. *Journal of Business Ethics*, *147*(3), 489–508. http://doi.org/10.1007/s10551-015-2954-0

Sutantoputra, A. W. (2009). Social disclosure rating system for assessing firms' CSR reports. *Corporate Communications*, *14*(1), 34–48. http://doi.org/10.1108/13563280910931063

Thorne, L. S. Mahoney, L., & Manetti, G. (2014). Motivations for issuing standalone CSR reports: A survey of Canadian firms. *Accounting, Auditing & Accountability Journal*, *27*(4), 686–714. http://doi.org/10.1108/AAAJ-07-2013-1393

Venturelli, A., Caputo, F., Cosma, S., Leopizzi, R., & Pizzi, S. (2017). Directive 2014/95/EU: Are Italian companies already compliant? *Sustainability*, *9*(8), 1–19. http://doi.org/10.3390/su9081385

Verbeeten, F. H. M., Gamerschlag, R., & Möller, K. (2016). Are CSR disclosures relevant for investors? Empirical evidence from Germany. *Management Decision*, *54*(6), 1359–1382. http://doi.org/10.1108/MD-08-2015-0345

Williams, S. M., & Ho Wern Pei, C.-A. (1999). Corporate social disclosures by listed companies on their web sites: An international comparison. *The International Journal of Accounting*, *34*(3), 389–419. http://doi.org/10.1016/S0020-7063(99)00016-3

Wilson, M. (2013). A critical review of environmental sustainability reporting in the consumer goods industry: Greenwashing or good business? *Journal of Management and Sustainability*, *3*(4), 1–13. http://doi.org/10.5539/jms.v3n4p1

Wiseman, J. (1982). An evaluation of environmental disclosures made in corporate annual reports. *Accounting, Organizations and Society*, *7*(1), 53–63. http://doi.org/10.1016/0361-3682(82)90025-3

Zimara, V., & Eidam, S. (2015). The benefits of social sustainability reporting for companies and stakeholders – Evidence from the German chemical industry. *Journal of Business Chemistry*, *12*(3), 85–103.

PART II

KEY ISSUES AND PRACTICES IN INTEGRATED REPORTING

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CHAPTER 4

MAPPING CIRCULAR ECONOMY PROCESSES IN INTEGRATED REPORTING: A DYNAMIC RESOURCE-BASED APPROACH

Martin H. Kunc, Federico Barnabè and Maria Cleofe Giorgino

ABSTRACT

The study aims to contribute to the debate on how to identify and manage an organization's sustainability-related resources and processes by understanding the impact of business activities on the environment and evaluating actions to ameliorate their impacts. Within this debate, and specifically taking into consideration the opportunity to support circular economy actions and initiatives, the study focuses on integrated reporting (IR) practices. In detail, this study advocates the joint use of IR principles with the dynamic resource-based view (DRBV) of the firm, adopting their representation of resources and impact of the business activities to identify environmental friendly "hot spots" in organizations. The framework is illustrated through two exploratory case studies.

Keywords: Sustainability; circular economy; integrated reporting; dynamic resource-based view; resource mapping; integrated thinking

1. INTRODUCTION

As the world faces an increasing and worrying scarcity of resources and severe ecological and social consequences, it is becoming clear that business activities

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need to be carried out with respect to the environment and mitigating possible negative consequences. Investors and boards are called not only to develop long-term corporate strategies to maximize the organization's performance but also to respect a variety of needs and goals defined by stakeholders and sustainability concerns. The challenge is to adopt an integrated view to business activities, developing corporate strategies leading both to outstanding economic results *and* to good environmental, social, and governance (ESG) performance. This is particularly true when considering the so-called "circular economy."

As stated by the European Commission (EC, 2014, p. iv):

> the circular economy is rapidly rising up political and business agendas. In contrast to today's largely linear, "take-make-use-dispose" economy, a circular economy represents a development strategy that enables economic growth while aiming to optimise the chain of consumption of biological and technical materials.

This certainly requires a deep transformation of production and consumption processes, the re-design of industrial system as to keep materials circulating for longer periods in the economy and to favor a cascading use of materials and waste. Even more relevant, this also requires an *accounting and reporting framework* that facilitates the integration of information on systemic and long-term activities as well as intangible and non-financial assets.

Over the last few years, many companies all over the world drafted and published reports and communications based on the voluntary disclosure of data and information related to environmental, sustainability, and corporate social responsibility (CSR) (see Belkaoui & Karpik, 1989; Tian & Chen, 2009). If on one hand these actions undoubtedly increased the information for stakeholders, they also entailed the release of a variety of accounting reports with heterogeneous contents, aims, and communication forms, spanning from very quantitative reports to very qualitative and narrative reports – especially in the field of CSR (Beattie & Smith, 2013; de Villiers & Sharma, 2017; Dumay, 2016; Gray, 2006). The high extent of diversity in reporting subsequently stimulated and fueled the debate toward the definition of *integrated* forms of reporting, that is to say, documents including and "integrating" both financial values and sustainability, social, and environmental information relevant to all of the organization's stakeholders (e.g., Adams, 2004, 2015; Dumay, 2015; Eccles & Saltzman, 2011). Subsequently, various multidimensional frameworks for strategic management and accounting reporting were derived from the idea of developing "one report" (see Eccles & Krzus, 2010a) on the business activities, such as global reporting initiative (GRI) or other CSR reports and frameworks (de Villiers & Sharma, 2017; Dumay, 2015; Eccles & Krzus, 2010b; Milne & Gray, 2013).

Among these frameworks, this study focuses on the so-called *Integrated Reporting* (hereafter IR), whose aim is to "support integrated thinking, decision making, and actions that focus on sustainable value creation for stakeholders" (International Integrated Reporting Council (IIRC), 2013a, p. 35). Specifically, IR builds on the ultimate goal of bringing together financial and sustainability reporting practices to support strategic decision making and create long-term sustainable value (Abeysekera, 2013). However, further research on the IR practices

is required to answer some open questions related to its implementation and the connected consequences on both the internal and external business processes (de Villiers, Rinaldi, & Unerman, 2014; Dumay, Bernardi, Guthrie, & Demartini, 2016). Some scholars, for example, industrial ecology's scholars, are concerned with bringing the industrial economy and the environment into harmony through the identification and analysis of a wide variety of "eco-industrial initiatives" that reduce the use of energy and resources in industrial activities.

This study aims to contribute to this debate and fill a gap by enhancing the IR beyond the simple communication tool with the adoption of a specific perspective, the dynamic resource-based view (hereafter DRBV). The DRBV builds on the combination of system dynamics (Forrester, 1961, 1968a; Richardson & Pugh, 1981; Sterman, 2000) with the resource-based view of the firm (Barney, 1991; Penrose, 1959; Peteraf, 1993; Wernerfelt, 1984), and similarly to IR, it assumes that strategic resources (or capitals, according to the IR terminology) need to be managed simultaneously in order to create value in a holistic perspective. System dynamics approach offers a holistic approach where the circular processes existing in the economy can be represented through shared resources and feedback closed systems. Therefore, this study illustrates the application of the DRBV approach to IR in order to improve the IR usefulness as both a management and governance tool (Flammer & Luo, 2017).

This study is structured as follows: Section 2 provides the literature review as well as our proposal, whereas Section 3 presents the research method we applied. The following sections provide the results, the discussion, the limitations and some ideas for further research, and alongside the conclusion.

2. LITERATURE REVIEW

2.1. The Circular Economy

In industrial ecology, it is implied that a circular economy will be beneficial to society and to the economy as a whole (Andersen, 2007). Benefits will be obtained, not only by minimizing the use of the environment as a sink for residuals but also – perhaps more importantly – by minimizing the use of virgin materials for economic activity (Andersen, 2007). Intuitively, the potential benefits seem straightforward, but it is important to stress that the perspective prevailing within the circular economy approach is, in fact, based on physical rather than economic observations.

The conventional perception of the economic system is that it is open-ended. The open-ended system can convert into a circular system when the relationship between resource use and waste residuals is considered. The implication is that the amount of waste generated in any one period must be equal to the amount of resources depleted. Capital goods can function as a temporary stock of resources but they are converted to waste somewhere in the environmental system when they are consumed. Energy cannot be destroyed, but it can be converted or dissipated. However, the relationship between resource use and waste in any one

period is non-linear because of the stocks of natural resources embedded in capital goods. In the open-ended system, some of the waste can be converted back to resources. In this way, the economy becomes circular. Not all waste is recycled, however – partly because of missed opportunities and partly because of some basic physical laws (Andersen, 2007).

This is a key concept of the circular economy, being extensively taken into consideration also by several studies carried out by the EC, such as the "Scoping study to identify potential circular economy actions, priority sectors, material flows & value chains" – launched by the EC (DG Environment) and carried out by the Policy Studies Institute, Institute for European Environmental Policy, BIO, and Ecologic Institute – which summarizes the functioning of circular-based economy (see EC, 2014, p. 5). Specifically, the circular economy can be thought as a complex pattern of closed loops (i.e., feedback processes). Consider that an ideal closed-loop supply chain disposal to the landfill should not to be an option and all materials used in products reaching the end of life should be reused in the forward supply chain. Realizing the significance of a closed-loop supply chain, many scholars have continued to write on recovery options from a management perspective (Thiery, 1995). Furthermore, many organizations or governments are using the three Rs of Reduce, Reuse, and Recycle to encourage end-customers to recycle or reuse the products and reduce disposal to landfills.

The potential benefits of this behavior are straightforward and include material cost savings, reduced price volatility, improved security of supply, potential employment benefits, as well as reduced environmental pressures and impacts (EC, 2014, p. 3).

Notably, these benefits are clearly in line with a definition of "sustainability" that goes beyond the environmental and ecological impacts generated by economic (or human) activities, also including economic and social (both positive and negative) outputs and outcomes. More specifically, we could also refer to the broader concept of *sustainable development*, which according to the well-known Brundtland Report (see Commission on Environment and Development, 1987): "Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs."

This said, moving toward a circular economy and the development of circular economy-strategies is not an easy task. The literature already emphasized the existence of several barriers, such as (e.g., EC, 2014, pp. 11–12):

- the lack of skills and investments in circular product design and production;
- the lack of enablers to improve cross-cycle and cross-sector performance due inter alia to non-alignment of power and incentives for transformation between actors within and across value chains;
- the lack of waste separation at source (especially for food waste and packaging);
- the lack of sustainable procurement incentives for public authorities; and
- the lack of investment and innovation in recycling and recovery infrastructure and technologies (related to this is the lock-in of existing technologies and infrastructure).

Last, three additional barriers, which are particularly relevant for this study, are the following:

- the lack of *transparency* and *knowledge sharing* tools and initiatives, as to create more awareness about (potential) circular economy actions;
- the *short-term thinking approach* that still prevails and guides most of the investment decisions; and
- the scarce financial support, which is available to develop circular initiatives, especially because of the fact that the *financial benefits of the circular economy are very often not directly evident being distant in time and in space*.

2.2. Integrated Reporting

IR is a model of corporate reporting developed by the *IIRC* to represent and communicate the organization's process. IR adheres the managerial principle of *Integrated Thinking* and the underlining necessity of a decision-making process that considers all of the interrelationships existing among the organization's stakeholders, business units, functions, and resources. Based on this idea, the *International IR Framework* (IIRC, 2013a) underlines the importance of an IR process to consolidate the organization's information into one document.

The starting point of the business is the amount of organization's resources (or *inputs*, according to the IR framework) that are combined, through the *business activities*, in order to realize the organization's *outputs* (i.e., products or services) offered in the market. The complete process includes the *outcomes* obtained from the output sales, which embrace both techno-economic outcomes, referred to the process innovation and the organization's profitability, and psychosocial outcomes, related to the development of specific dispositions such as self-esteem and trust inside and outside the organization (Tikkanen & Alajoutsijärvi, 2001). The process represents a dynamic and circular system (see Fig. 1) because the outcomes obtained affect the organization's availability of inputs that may be

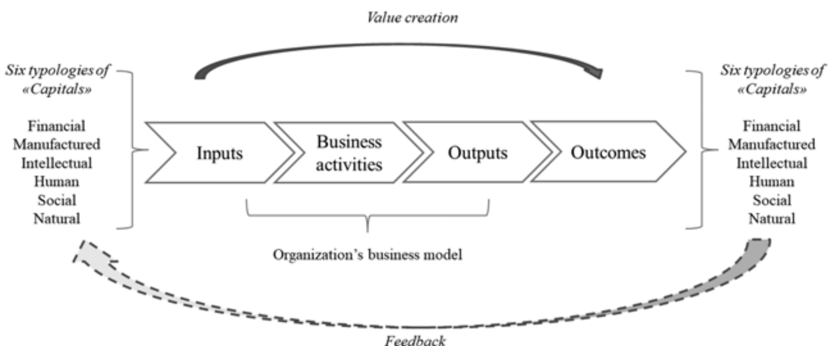

Fig. 1. Business Model Functioning and Positioning. *Source*: Own Elaboration from IIRC (2013a, p. 13).

adopted in the next business activities and contribute to create value through the services rendered (Penrose, 1959).

According to the IR framework, inputs (or *capitals*) may be divided into six categories (IIRC, 2013b): the *financial* capital, including all of the organization's funds (both debt and equity financing), the *manufactured* capital, represented by the set of equipment and tools adopted in the production process, the *human* capital, corresponding to the stock of knowledge, skills, and competencies embodied in the organization's people, the *intellectual* capital, referring to the different types of intangibles providing a competitive advantage (i.e., the organization's reputation, its brand, or intellectual property), the *social* capital, including the set of relationships established by the organization with its stakeholders, and the *natural* capital, embodying all of the environmental resources (such as water, soil, and air) affecting (and affected by) the organization's action.

Notably, we can observe the location of the organization's capitals, both at the beginning and at the end of the flow, to highlight the circular feature of this dynamic system. In detail, through the dynamic and circular system of the business model, the organization: (a) supports the costs related to the utilization of its capitals and the value built into them; (b) adds new value through the transformation process of the inputs and the outputs realization; and (c) shares with all its stakeholders the value created by the products sale and the achievement of its outcomes (see Fig. 2).

Overall, IR has the potential to assist organizations in better understanding circular economy initiatives and subsequently in developing circular economy-related actions, for several reasons. IR can support decision making, because it may be useful to combine external market benefits related to the requirement of more ESG information obtained by customers and investors with internal benefits related to greater stakeholder engagement and better resource allocation (Beck, Dumay, & Frost, 2017; Eccles & Saltzman, 2011; Melloni, Stacchezzini, & Lai, 2016), as emphasized in the literature for both the private and the public sector (e.g., Atkins, Solomon, Norton, & Joseph, 2015; Burke & Clark,

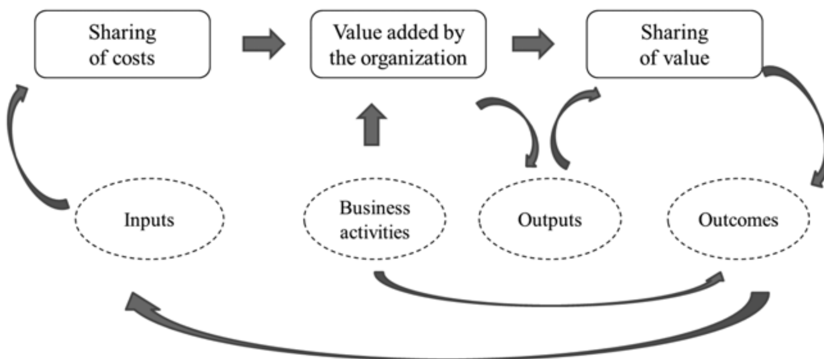

Fig. 2. Interaction of Business Model with Internal and External Capitals.
Source: Own Elaboration from IIRC (2013c, p. 9).

2016; Busco, Frigo, Quattrone, & Riccaboni, 2013; Busco, Frigo, Riccaboni, & Quattrone, 2013; Giorgino, Barnabè, & Paolicelli, 2016; Giorgino, Supino, & Barnabè, 2017).

However, some critiques to IR and/or to the IIRC's framework encourage further investigation on the topic. For instance, according to Flower (2015), the IIRC's framework should have abandoned sustainability accounting, promoting reporting practices focused on a concept of "value" which is intended for investors and not for the society. According to Atkins, Atkins, Thomson, and Maroun (2015, p. 652), instead, although approaches (such as IR) "may lead to improved quality and quantity of sustainability disclosures, they do not (at present) satisfy the needs of broad stakeholder groups." In a similar way, Perego Kennedy, and Whiteman (2016, p. 54) argued that most companies still "have weak understanding of the business value of integrated reporting" and, more in general, "how integrated reporting may be successfully implemented remains challenging and contested." Finally, de Villiers et al. (2014) identified several research gaps related to IR practices and analyses, such as the IR's ability to simultaneously consider all of the capitals *and* all of the perspectives suggested by IIRC.

Therefore, a key limitation of IR is the lack of a clear representation of sustainability aspects of the business process. More specifically, how the outcomes are managed to avoid impacting the environment and fostering a circular economy?

To resolve these questions, our study suggests that the IR framework would benefit from the combination with management approaches and techniques supporting the operationalization of the report. More specifically, we propose the combination of the IR framework with the approach suggested by the DRBV (Kunc & Morecroft, 2010).

2.3. A Dynamic Resource-based Perspective

The starting point of the framework adopted in this work is the resource-based view (RBV) of the firm, according to which an organization's performance is determined by the set of "resources" and "capabilities" developed or acquired over time (Barney, 1986, 1991; Kunc & Morecroft, 2009, 2010; Penrose, 1959; Peteraf, 1993; Wernerfelt, 1984).

In consideration of this assumption and with the ultimate aim to operationalize a resource-based perspective, Kunc and Morecroft (2009) formulated their proposal of combining RBV with system dynamics modeling principles and tools. The result is a specific branch of RBV, named DRBV.

Originally theorized by Jay Forrester (1961), system dynamics is a methodology aimed at building qualitative and quantitative models useful to tackle a variety of complex and dynamics issues (Forrester, 1961, 1968a; Qudrat-Ullah, Spector, & Davidsen, 2007; Richardson & Pugh, 1981; Sterman, 2000) in business, management and social systems (Morecroft & Sterman, 2000; Sterman, 2000). The system dynamics representation of an organization as a system:

> consists of the feedback loops, stocks and flows, and nonlinearities created by the interaction of the physical and institutional structure of the system with the decision-making processes of the agents acting within it. (Sterman, 2000, p. 107)

Three key concepts are at the core of system dynamics: stocks, flows, and feedback loops.

Stocks (or state variables) characterize the state of the system and generate the information upon which decisions and action are based. Stocks can change only through the action of *inflows* and *outflows* that build or deplete them. The relationship between the concepts of stocks and flows underpins any dynamics within a system, because the former represents the accumulation of resources in the system, whereas the latter identifies the rates of change that alter those resources. *Feedback loops* subsequently emerge from the interaction of stocks and flows, being the basic structures "within which the system condition provides the input to a decision process that generates action which modifies the system condition," in "a continuously circulating process" (Forrester, 1968b, p. 402). Saysel and Barlas (2001, p. 182) argue that "a feedback loop is a succession of cause and effects such that a change in a given variable travels around the loop and comes back to affect the same variable" in terms of reinforcement (positive feedback loop) or counteraction (negative feedback loop) "of a given change in a system variable." All dynamics arise from the action and interaction of the two typologies of feedback loops aforementioned: positive (that reinforce what is happening in the system) and negative (that balance or counter-act change). In sum, through the identification, representation and analysis of the critical stocks, flows, and feedbacks at the core of the systemic structures under analysis, the main aim of a system dynamics model (regardless if it is a qualitative or a quantitative model) is to assist managers in gaining insights into a specific complex problem, thus favoring conceptualization and sense making, and subsequently informing future decision making (Forrester, 1961, 1968a, 1992; Mollona, 2008; Sterman, 2000; Wolstenholme, 1999).

System dynamics has been increasingly employed in circular economy issues. For example, Golroudbary and Zahraee (2015) developed a system dynamics model to evaluate the system behaviour of manufacturing companies to improve customer satisfaction and Green Image Factor by optimizing recycling and collection of waste material in a closed-loop supply chain. Xu, Li, and Wu (2009) used system dynamics for planning a regional circular economy and evaluating various risks in the strategies to achieve waste reduction through sensitivity analysis. Finally, Wang, Chang, Chen, Zhong, and Fan (2014) explored the impact of subsidy policies on the development of recycling and remanufacturing in the Chinese auto parts industry. Results suggest that subsidies play an active role in improving remanufacturing activities and fostering industry development.

2.4. Enriching IR with a DRBV to Support Sustainability

We propose to adopt the DRBV approach (and its related methodology of resource mapping) to overcome the limits existing to operationalize the IR in terms of evaluating the impact of business activities in a circular economy. Our proposal builds on the observation that DRBV and IR have a common theoretical setting, because they share the idea that organizational capitals (or resources,

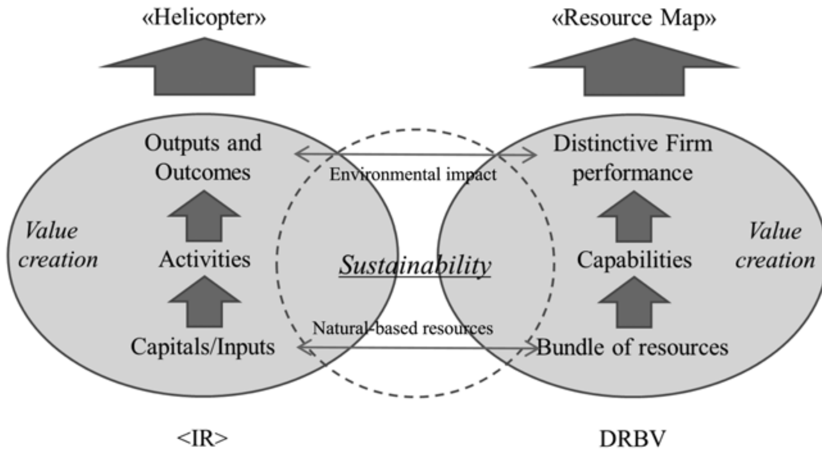

Fig. 3. Parallelism between IR's and DRBV's Business Model Patterns.

adopting the DRBV terminology) are interconnected and need to be simultaneously managed in order to create value in a holistic perspective (see the parallelism between IR and DRBV in Fig. 3). *In this integration, we define sustainability and its impact on a circular economy in terms of environmental impacts and the use of natural-based resources to achieve business objectives*. The resource map, which is the outcome of resource mapping, represents the data existing in IR in a visual way while presenting potential hot spots of activities developed by the organization that affect sustainability.

3. RESEARCH METHOD

This work adopts the methodology of multiple case studies (Yin, 1994), developing the analysis of two separate study objects in order to highlight differences and similarities between them (Baxter & Jack, 2008). The case study is a research strategy that creates propositions from case-based, empirical evidence, aimed to capture the complexity of the object under analysis (Eisenhardt, 1989; Stake, 1995). In our analysis, we considered the data entered in the two latest (available at the time of the analysis, i.e., 2015 and 2016) integrated reports drafted by two well-known Oil & Gas organizations (i.e., SASOL and ENI). These data are used to develop two tailored resource maps aimed to understand how the suggested enrichment to IR will work and provide propositions about the organizations' value-creation processes and the subsequent impacts on the environment and the key stakeholders.

The main reason for choosing SASOL and ENI as our case studies is that organizations operating in the Oil & Gas, mining (i.e., basic materials), and/or energy sectors are particularly active in reporting the outputs and outcomes of the activities to all their stakeholders for several reasons. First, these organizations frequently operate in several countries across the world and provide products,

by-products, and services to customers worldwide. Second, through their operations these organizations tend to generate a variety of environmental impacts (e.g., GhG emissions) and natural resources consumption. Last, they are usually strongly involved with the communities of reference, for example, in terms of employment, or social programs. Particularly, we could argue that the Oil & Gas is one of the most analyzed industries in terms of sustainability and reporting practices (Kolk, 2010; Roca & Searcy, 2012).

Notably, SASOL and ENI are two of the early pioneers in the field of IR and have joined the IIRC program earlier, releasing multiple integrated reports to date. As mentioned, this work focuses on two annual integrated reports for both companies, that is, the 2015 and 2016 IRs (respectively retrieved from the web on 2 December 2016 for the two 2015 releases and on 9 June 2017 for the two 2016 releases), in order to analyze updated releases of the report and to ensure a more complete analysis of data and information.[1]

During the process of developing the resource maps and discovering the hot spots of circular economy activities, we followed the following stages.

First, we reviewed in detail the four annual integrated reports (analyzed separately for SASOL and ENI), focusing on all sections of the reports explaining the two organizations' business model and value-creation processes.

The information retrieved was explored according to a *coding technique* that involves, as suggested by Kim and Andersen (2012, p. 315), "discovering concepts and their relationships from raw data and iteratively working with the concepts and relationships to allow theories to emerge from the data." Based on this approach, we proceeded to the second stage of our research process, using the software Vensim (Eberlein & Peterson, 1992) to develop the resource map for each organization accordingly with the seven steps outlined in Table 1 (Kunc & Morecroft, 2009; Kunc & O'Brien, 2017).

The last step described in Table 1 is fundamental to identify the critical areas of activities related to the circular economy and the impact on sustainability, as they emerged from the analysis of the integrated reports. Therefore, the maps were analyzed with reference to the structure of feedback loops and link polarities, relying on the SDM_Doc software (Martinez-Moyano, 2012).

4. RESULTS

This section directly provides the main results of the process of resource mapping developed for the two case studies analyzed, after the completion of the seven steps outlined in Table 1. The details of the process have been explained in Barnabè, Giorgino, and Kunc (2019).

The complete resource maps that represent the ultimate result of this study are presented in Figs. 4 and 5.

The SASOL's resource map highlights the existence of 23 capitals (the boxes in Fig. 4), divided into 5 different typologies according to the classification provided by IIRC (2013a). Among these capitals, and in reference to the aims of this study, we identified three resources explicitly dealing with sustainability

Table 1. Methodology to Develop a Resource Map for IR and Identification of Circular Economy-related Activities.

Resource Mapping	
Steps of the Process	*Synthetic Explanation*
1. Lay out the resources (boxes)	Identify the key resources included in the sustainability reports and visualize them as stocks
2. Identify the processes (flows) responsible for building or eroding resources	The information collected has to be codified in order to recognize and represent the processes causing the resource growth or decrease, that is, inflows and outflows. In this case, we highlight the natural resources affected in the business
3. Identify capabilities	Capabilities originate from either a single resource or from a set of related resources. Capabilities can build other resources, generate value by attracting customers or generate activities influencing external stakeholders. The capabilities discovered in the integrated reports are presented in the resource maps using auxiliary variables
4. Portray relationships (direct and indirect) and polarities (positive and negative)	This entails representing the causal links in the organization. They are depicted through the use of connectors (lines) that contain the direction of the linkage and the type of linkage, that indicates a positive impact – an increase in A increases B, or a negative one – an increase in A decreases B
5. Include additional external or unmanageable effects	If existing, such events have to be included in the resource map, specifying the type of effect produced (e.g., negative or positive)
6. Identify feedback loops (reinforcing and balancing)	The resource mapping is finished with the identification of the feedback processes between resources and flows[a]
7. Identify the key activities related to environmental impact and the circular economy	After building the map, we focus on the "hot spots" of activities and organizational outcomes related to environmental impact and the creation of value within the circular economy

[a]A feedback process consists of a circular relationship between a set of concepts (or parts of a system), for example, A affects B, then B affects C and ultimately C affects A, determining a circular relationship among A–B–C. They are recognized and labeled as either reinforcing (positive, generating growth) or balancing (negative, inducing stagnation).

and circular economy-related actions: hydrocarbon (gas) reserves, coal assets, and crude oil and liquids (see Table 2 for the full list of capitals included in the two resource maps). It is clear that SASOL needs to invest in optimizing the extraction of these resources in order to be sustainable. Similarly, when considering the value-creation outcomes considered as key for SASOL, our analysis allowed identifying seven variables, three of whom were subsequently considered as key for sustainability and circular economy-related activities: environmental footprint and social impacts, pollution and waste (gas flared, particles, water usage, land usage), and social and economic development. The focus of the business activities is on reducing the impact of the hydrocarbon resources on pollution and footprint while supporting the social and economic development of communities that depend on the natural non-renewable resources.

Overall, the simultaneous consideration of these resources and outcomes leads to the identification of the main areas for this firm, which are related to business

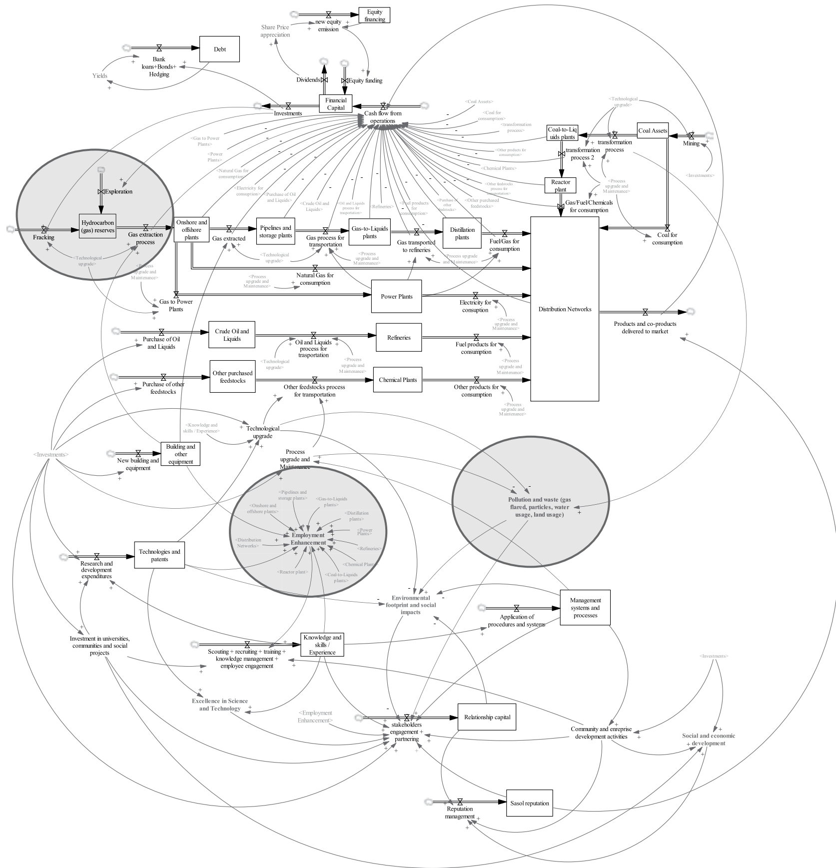

Fig. 4. SASOL's Complete Resource Map (with Hot Spots of Value Creation within a Circular Economy).

activities and value creation within a circular economy. The identification of the main areas is based on two criteria: the *resource* has to be a *natural resource (either renewable or non-renewable)* and *activities* have to be *at the center of business processes related to sustainability and the circular economy* (red concepts) while *affecting key business processes*. These areas are portrayed as circular-shaped "hot spots" within SASOL's resource map.

More details and comments derived from the analysis and the coding of the information contained in the organization's integrated reports are provided subsequently for each of them. For example, for the hydrocarbon (gas) reserves, which are converted by the Sasol's operating facilities "into a range of high-value product streams" (SASOL, 2016, p. 18), the reports indicate the organization's projects aimed "to ensure sustainable coal reserves" (SASOL, 2015, p. 34) and the SASOL's attention to exploit its "existing reserves through higher extraction

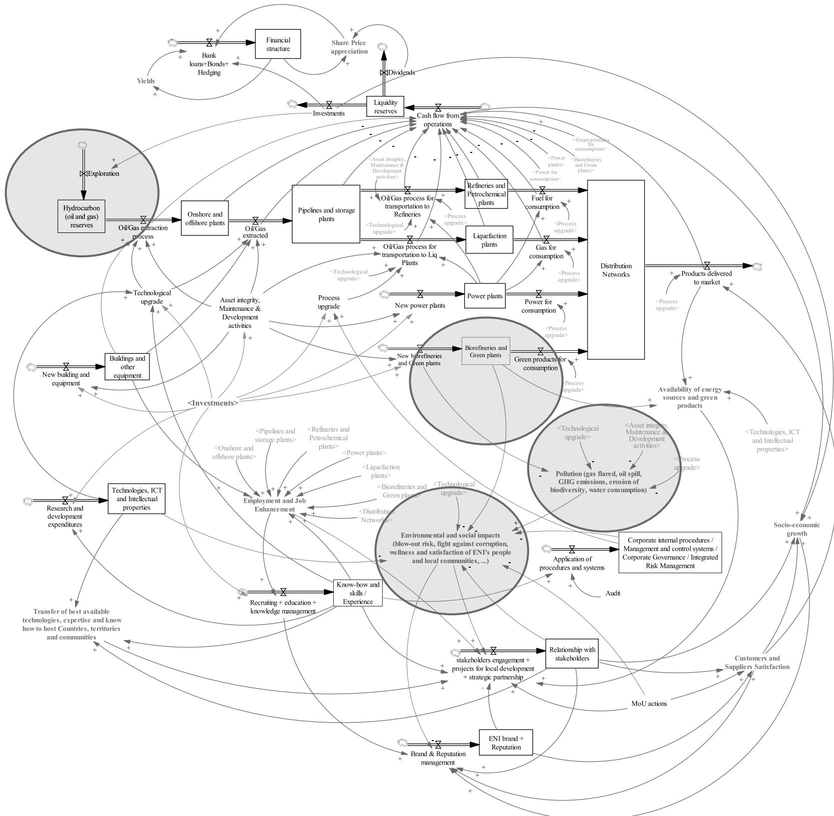

Fig. 5. ENI's Complete Resource Map (with Hot Spots of Value Creation within a Circular Economy).

methods and alternative mining techniques without an additional impact on the environment" (SASOL, 2015, p. 85).

According to the SASOL's reports, employment enhancement is certainly a focus area of sustainability for SASOL because the organization invests in its people with the aim of "developing and empowering high performing people, enhancing workforce diversity" and promoting the employee's "safety, health and wellbeing" (SASOL, 2015, p. 40), as well as "embedding critical behaviours" and "driving cultural transformation" (SASOL, 2016, p. 7).

About the third and last hot spot identified, the SASOL's reports highlight the organization's commitment in terms of "partnering with municipalities and communities to promote water stewardship and minimize air pollution" (SASOL, 2015, p. 30). In the awareness of the "growing pressure for air quality improvements," considering "the health effects of air pollution (…) and water scarcity" (SASOL, 2016, p. 15), the SASOL's IRs emphasize the organization's transition "to the requirements of the Minimum Emission Standards relating to air quality," as well as to investments in environmental programs, according

to the strengthened "understanding of health risks of air pollution" (SASOL, 2016, p. 39).

Similarly to what we did for SASOL, the process subsequently led to identify hot spots of value creation for sustainability in a circular economy within ENI's resource map. Moving forward, the ENI's resource map shows the existence of 16 capitals (the boxes in Fig. 5; see Table 2 for the full list), divided into 6 typologies (according to the classification provided by IIRC, 2013a). Among these capitals, we identified two resources key for sustainability and circular economy-related actions, that is, hydrocarbon (oil and gas) reserves, and biorefinery and alternative energy sources. Additionally, when considering ENI's value-creation outcomes, our analysis identified nine variables, four of whom are the most relevant for sustainability and circular economy-related activities: environmental and social impacts (blow-out risk, fight against corruption, wellness, and satisfaction of ENI's people, and local communities); pollution (gas flared, oil spill, GHG emissions, erosion of biodiversity, and water consumption); availability of energy sources and green products; and socio-economic growth.

The environmental and social impact is certainly a core issue of the ENI's strategy that is aimed to combine "financial strength with social and environmental sustainability" integrating three critical success factors: (i) the cooperation and development model relating to the countries in which ENI operates (…); (ii) the operating model able to minimize risks and the social and environmental impacts of the activities; and (iii) a clear and defined strategy of decarbonization (ENI, 2016, p. 16).

Such a strategy of ENI is directly related to also the second hot spot identified for this organization, that is, the pollution (including gas flared, oil spill, GHG emissions, erosion of biodiversity, and water consumption). Indeed, the ENI's report emphasizes the materiality of sustainability issues such as "combating climate change (GHG reduction, energy efficiency) and reduction of environmental impact (protection of water resources and biodiversity, oil spill prevention and response)" (ENI, 2015, p. 13). Moreover, the business model of the organization supports:

> the use of well-advanced technologies, electricity supply provided to the platform from the mainland and the re-injection of produced water and natural gas into reservoir as well as zero gas flaring during production activities. (ENI, 2015, p. 43)

About the last two hot spots identified for ENI, that is, hydrocarbon (oil and gas) reserves and biorefineries (with green plants), the IRs of the organization remember that:

> offshore accidents and spills could have impacts also of catastrophic proportions on the ecosystem and health and security of people due to the objective difficulties in handling hydrocarbons containment, pollution, poisoning of water and organisms, length and complexity of cleaning operations and other factors. (ENI, 2015, p. 79)

To avoid this, the present management priority of ENI is certainly "the achievement of a stable positive operating profit and free cash flow, leveraging on: (i) the ongoing reconversion of industrial plants in bio-refinery" (ENI, 2015, p. 55) and the development of "green chemical and critical sites reconversion" (ENI, 2016, p. 21).

Moving forward, Tables 2 and 3 summarize the key data for the two firms (i.e., number of capitals and outcomes) observed in the resource map. The tables also highlight the level of centrality of each hot spot in terms of feedback processes within the business and the circular economy (calculated using SDM_Doc software – Martinez-Moyano, 2012). Overall, the two tables clearly and immediately show the relative importance of sustainability for both firms in terms of the feedback processes responsible for business performance. Moreover, we used bold to accentuate the resources linked with sustainability and the circular economy. Although green letter was employed to show if the resource has a positive impact, black letter was used to indicate resources that can have a negative impact or they should be under strict watch in terms of sustainability, for example, carbon assets.

Table 2. SASOL's and ENI's IR Capitals and the Feedback Processes Responsible for the Dynamics of Value Creation and Sustainability.

SASOL's Capital/ Resource	Percentage of Loops Involving This Resource	ENI's Capital/ Resource	Percentage of Loops Involving This Resource
Financial capital	~100	Financial structure	~0
Debt Equity	~0	Liquidity reserves	98
Financing	~0		
Hydrocarbon (gas) reserves	**21**	Onshore and offshore plants	27
Onshore and offshore plants	62	Pipelines and storage plants	19
Pipelines and storage plants	29	Liquefaction plants	33
Gas-to-liquids plants	40	Refineries	33
Distillation plants	37	Distribution networks	57
Distribution networks	58	Power plants	32
Coal Assets	**22**	Buildings and other equipment	13
Coal-to-liquids plants	20	**Hydrocarbon (oil and gas) reserves**	**3**
Reactor plant	17		
Crude oil and liquids	**2**		
Refineries	8		
Other purchased feedstocks	9		
Chemical Plants	8		
Power Plants	57		
Building and other equipment	11		
Technologies and patents	51	Technologies, ICT and intellectual property	40
Management systems and processes	51	Corporate internal procedures/ management and control systems/corporate governance/ integrated risk management	37
Knowledge and skills/ experience	98	Know-how and skills/experience	94
Relationship capital	26	Relationship with stakeholders	58
SASOL reputation	30	ENI brand + reputation	54
		Biorefinery and Alternative energy sources	**20**

Table 3. SASOL's and ENI's IR Outcomes and the Feedback Processes Responsible for the Dynamics of Value Creation and Sustainability.

SASOL's Outcome	Percentage of Loops Involving This Outcome	ENI's Outcome	Percentage of Loops Involving This Outcome
Share price appreciation	0	Share Price appreciation	~0
Yields	~0		
Employment enhancement	97	Yields	~0
		Employment and job enhancement	98
Environmental footprint and social impacts	**10**	**Environmental and social impacts (blow-out risk, fight against corruption, wellness and satisfaction of ENI's people and local communities, etc.)**	**47**
Pollution and waste (gas flared, particles, water usage, and land usage)	**14**	**Pollution (gas flared, oil spill, GHG emissions, erosion of biodiversity, and water consumption)**	**18**
Excellence in science and technology	2	Transfer of best available technologies, expertise and know how to host countries, territories and communities	7
Social and economic development	**3**	**Availability of energy sources and green products**	**11**
		Socio-economic growth	**16**
		Customers and suppliers satisfaction	68

Table 2 shows two different positions for SASOL and ENI. Although SASOL has a lot of attention to its non-renewable resources given the high percentage of processes involving the resources, ENI has less focus on them. Moreover, ENI has strong attention to a green resource, biorefinery, demonstrating more commitment to sustainability.

Table 3 focuses on the importance of key activities on sustainability and the circular economy considering the percentage of feedback processes affecting each outcome variable identified in this study for the two organizations. Green letters identify outcomes considered to be environmentally friendly and supporting the circular economy. Orange letters show outcomes that are economic and social sustainable. Black letters define the activities that are focused on ameliorating negative impacts on the environment.

Again Table 3 shows ENI as a more committed organization with respect to environment and sustainability compared with SASOL.

5. DISCUSSION

After the presentation of the results, we can now discuss some of the main contributions and propositions from our study.

In broad terms, we believe that this study is of interest for the academic debate as well as for practitioners presenting two exploratory case studies in which resource mapping was used to translate qualitative and quantitative sustainability data (in this case from integrated reports) into formalized resource maps. Additionally, the study presents a general template that can be applied to model sustainability reports, extracting data from them according to a few guidelines that could be generally applied.

More specifically, the discussion below focuses separately on the usefulness of the suggested DRBV enrichment of the IR in the managerial context and in the circular economy context.

5.1. The Utility in the Managerial Context

In the second section of this study we highlighted three possible barriers to the development of circular economy strategies, when considered from a managerial point of view:

- the lack of transparency and knowledge sharing tools and initiatives, as to create more awareness about (potential) circular economy actions;
- the short-term thinking approach that still prevails and guides most of the investment decisions;
- the scarce financial support, which is available to develop circular initiatives, especially because of the fact that the financial benefits of the circular economy are very often not directly evident being distant in time and in space.

(a) With reference to the first barrier, the case studies presented show that the combined approach between IR and DRBV can support organizations and decision-makers to develop "integrated thinking," a key skill for managing complex and dynamic businesses, and to increase the degree of "transparency" in such domains, this confirming several other studies (see Adams & Simnett, 2011; Dumay & Dai, 2017; Eccles & Saltzman, 2011). Specifically, our enriched IR framework basically underpins the actual process of IR to consider organizational elements in a holistic perspective. In more detail, our study illustrates that a combined use of IR contents and guidelines, together with resource mapping, can generate a number of benefits.

First, the IR-based resource map contributes to a clear and formalized identification of all the organization's *capitals/resources*, visualizing them as stock variables or stocks of capital (Dierickx & Cool, 1989; Kunc & Morecroft, 2009). The two resource maps developed in this study contain 23 stocks for SASOL and 16 stocks for ENI. Particularly, the resources related to sustainability and circular economy for the two firms are, respectively, 3 and 4.

Second, resource mapping entails drawing and labeling *causal links* among the stocks, flows and value outcomes included in the maps. This helps to clarify how the business domain under analysis is organized, which are the interconnections among the key constituents, and how value-creation patterns are structured.

This information is also useful to understand which are the dominant logic and mental models guiding management actions (Gary & Wood, 2011; Gary, Kunc, Morecroft, & Rockart, 2008; Prahalad, 2004; Prahalad & Bettis, 1986; Vennix, 1996). In our study, the data collected, the relationships portrayed and, more in general, the resource maps suggest that one of the organizations reveals a dominant logic mostly oriented toward growth, reinforcement actions and value creation in terms of sustainability, and within a circular economy.

(b) In reference to the short-term thinking approach that still prevails and guides most of the investment decisions, we can argue that our method is able to support managers, decision-makers, and stakeholders to visualize, analyze, and assess how to exploit the key capitals at the organization's disposal to generate medium and long-term valuable outcomes, at the same time reducing (and, possibly, recycling and reusing) waste.

In this regard, the accurate identification of the *flows* (both inflows and outflows) and governance *actions* in the resource map clearly shows how they actually build and/or erode the capitals over time, not only in the short period but also over medium- and long-term horizons.

(c) The third barrier we referred to is related to the scarce financial support, which is available to develop circular initiatives, especially because of the fact that the financial benefits of the circular economy are very often not directly evident being distant in time and in space.

Resource maps clearly show how capitals are connected and influence each other across the business domain under analysis in time and space (e.g., for SASOL the financial capital is depleted whenever an investment is carried out, whereas it increases because of cash flow from operations, which are in turn caused by a number of other activities carried out by the organization). In detail, the management of financial resources is a critical task in any governance scheme, so our results (also see Table 2 in reference to financial capital for SASOL and liquidity reserves for ENI) confirm the importance of adequate financial reporting. Additionally, resource mapping supports decision-makers in understanding how *trade-offs* among the capitals actually occur, starting from a financial investment and moving subsequently across the whole organization and all of its capitals (e.g., for SASOL an investment decision will immediately erode the financial capital but will translate in an increased intellectual capital through the generation of new patents and technologies). Interestingly, such an analysis is at the centre of the IR debate (e.g., Cheng, Green, Conradie, Konishi, & Romi, 2014; de Villiers et al., 2014) and would help to tackle one of the aforementioned barriers.

In sum, our analysis exploited the usefulness of the DRBV enrichment of IR as a management – *feedback process-oriented* – tool (Kazakov & Kunc, 2016; Kunc & Morecroft, 2007), verifying its suitability to provide the organizations and their managers with the additional information useful to understand and explore interdependencies and connections among the factors at disposal (e.g., the capitals), as well as the determinants of value creation within a circular economy. This point is discussed in more details below.

5.2. The Utility in the Circular Economy Context

In this context, the analysis of the SASOL's and ENI's integrated reports illustrates the potentials of IR enhanced with visual DRBV methods to clarify which are the main determinants for value creation and the incredible complexity behind the process of creating value within a circular economy.

In this regard, if on one hand the IIRC Framework (IIRC, 2013a) supports organizations in visualizing and managing the whole value-creation chain (from the identification and use of various capitals to the outputs, outcomes and waste subsequently resulting from the activities carried out), on the other hand resource mapping formally clarifies and visualizes how this process actually takes place, thus providing an analytical explanation of performance and value creation within a circular economy.

In broad terms, our methodology is suitable to tackle some of the barriers mentioned in our literature review (see EC, 2014, pp. 11–12), because it:

- describes which are the capitals at the organization's disposal, and how they are used in combination with the natural resources to create value in a similar fashion as Golroudbary and Zahraee (2015) did with the manufacturing company;
- shows how different capitals contributed (or may contribute) to the generation of value within a circular economy (this would subsequently inform shared decision making, specifically aligning resource management with stakeholders' needs and goals, as shown in regional planning for a circular economy by Xu et al. (2009);
- allows to "reorganize" IR data, making the value-creation processes visible in a broad, multi-stakeholder, and holistic perspective (Druckman, 2014; Eccles, Krzus, & Ribot, 2015; Westwood, 2014); and
- clarifies how the management and governance actions eventually create value and impact on the organization's selected outcomes as Golroudbary and Zahraee (2015) did with the manufacturing company.

Specifically, the combined approach of IR and DRBV favors the identification of a few "hot spots of value creation within a circular economy" as resources or value outcomes affected by dense feedback processes that are controlled by the management of the organization or its stakeholders. In detail, we remind that Figs. 4 and 5 portray the hot spots we identified for the two organizations considered in this study, whereas Tables 2 and 3 offer the evidence to identify those hot spots, highlighting the percentage of feedback processes interesting each organization's capital and outcome. From the stakeholders' perspective and in the consideration of the aforementioned barriers to the development of circular economy strategies, the identification of the hot spots can help to explain not only the amount of actions involving those critical areas but also the relative strength and emphasis given by the organization's managers to the various stakeholders related to a certain hot spot. This could eventually clarify which spots are the most (or the least) considered, and which are the key trade-offs to be exploited

to develop circular economy strategies and to create value in a multi-stakeholders perspective.

In sum, the results we reported seem to show that both organizations are active in environmental-related and circular economy-related activities but one has achieved more development. Overall, ENI – when compared to SASOL – seems to show a predominance in terms of circular economy activities and actions: this organization reveals more hot spots (four spots to the three of SASOL), relies on a specific natural capital (i.e., biorefinery and alternative energy sources) devoted to the green economy (this capital is interested by 20% of the feedback loops identified for this organization), reports on and is characterized by a higher number of environmental, natural, and circular economy-related outcomes (three for SASOL and four for ENI, i.e., environmental and social impacts, pollution, availability of energy sources and green products, and socio-economic growth). Interestingly, one of these outcomes is interested by almost half (environmental and social impacts, with a percentage of 48% on the total) of the feedback processes identified for the whole activities carried out by ENI.

6. LIMITATIONS AND FURTHER RESEARCH

Our study has some limitations too. First, it presents only two exploratory case studies, even though we believe they are relevant given the history of the two companies under the IR initiative and in terms of sustainability-related activities. Additionally, similar results between the two resource maps offer confidence on the method. However, we will continue applying the enhanced framework to other companies that are more active in the circular economy (e.g., manufacturing) and in the IR initiative to confirm the suitability of our framework. In particular, the authors already planned an additional case study in the manufacturing industry as performed by Lieder and Rashid (2016).

Second, a possible limitation is related to our research design. We applied an external approach to resource mapping through the use of an external coding technique. Therefore, we could not discuss with managers and stakeholders neither their perspectives on the visual enhancement versus traditional reporting, nor the identification and relevance of the key "hot spots" of value creation within a circular economy we referred to. Our future work will use focus groups with both sets of actors to evaluate their opinions.

7. CONCLUSION

A combined approach of IR and DRBV has the potentials to support organizations in a comprehensive way, representing the fundamental architecture according to which the specific business system operates, being influenced by the network of interdependencies existing both within and outside the organization, and more importantly between the organization and its key stakeholders. This, as we have shown previously, may help to explain and explore trade-offs between

capitals, visualize the key hot spots of value creation within a circular economy, and explain clearly strategies aimed at introducing changes in resources that eventually affect the future of the organization and its various stakeholders.

Additionally, the analysis and evaluation of the feedback processes represented in the IR resource map demonstrate analytically the dynamic complexity existing in business models and its impact on natural resources and circular economy-related value-creation activities (Kazakov & Kunc, 2016). Particularly, IR facilitates the visualization of value-creation patterns as the ability to exploit the organization's (natural) resources with the ultimate goal to produce outputs and outcomes. In detail, this is mostly done in integrated reports through the use of chains of causes and effects, however linearly connected and/or textually (and wordy) described. On the contrary, our enriched resource maps provide a feedback-oriented representation of the organizations' business models. Actually, the data and the information that a resource map provides are crucial to the understanding of how the elements of the organization interact and feed back to create value.

Summarizing, it is authors' opinion that a combined approach of IR and DRBV is able to move IR beyond the "simple" communication to the various organization's stakeholders of data and information about the business system in place and the organization's operations and performance, into supporting extensively decision making of managers and combining integrated thinking and integrated management practices.

NOTES

1. Because of copyright issues the reports (or images from the reports) cannot be presented in this work. The full reports are available on the official webpages of the two organizations: ENI (2015) – https://www.eni.com/docs/en_IT/enicom/company/integrated-annual-report-2015.pdf; ENI (2016) – https://www.eni.com/docs/en_IT/enicom/publications-archive/publications/reports/reports-2016/Integrated-Annual-Report-2016.pdf; SASOL (2015) – http://www.sasol.com/extras/air_reports/air_2015/files/assets/basic-html/page-1.html#; SASOL (2016) – http://www.sasol.com/financial-reports/annual-integrated-report-30-june-2016.

REFERENCES

Abeysekera, I. (2013). A template for integrated reporting. *Journal of Intellectual Capital*, *14*(2), 227–245.

Adams, C. A. (2004). The ethical, social and environmental reporting-performance portrayal gap. *Accounting, Auditing and Accountability Journal*, *17*(5), 731–757.

Adams, C. A. (2015). The International Integrated Reporting Council: A call to action. *Critical Perspectives on Accounting*, *27*(1), 23–28.

Adams, S., & Simnett, R. (2011). Integrated reporting: An opportunity for Australia's not-for-profit sector. *Australian Accounting Review*, *21*(3), 292–301.

Andersen, M. S. (2007). An introductory note on the environmental economics of the circular economy. *Sustainability Science*, *2*(1), 133–140.

Atkins, J. F., Atkins, B. C., Thomson, I., & Maroun, W. (2015). "Good" news from nowhere: Imagining utopian sustainable accounting. *Accounting, Auditing & Accountability Journal*, *28*(5), 651–670.

Atkins, J. F., Solomon, A., Norton, S., & Joseph, N. L. (2015). The emergence of integrated private reporting. *Meditari Accountancy Research*, *23*(1), 28–61.

Barnabè, F., Giorgino, M. C., & Kunc, M. (2019). Visualizing and managing value creation through integrated reporting practices: A dynamic resource-based perspective. *Journal of Management and Governance*, *23*(2), 537–575.

Barney, J. B. (1986). Strategic factor markets: Expectations, luck and business strategy. *Management Science*, *32*(10), 1231–1241.

Barney, J. B. (1991). Firm resources and sustained competitive advantage. *Journal of Management*, *17*(1), 99–120.

Baxter, P., & Jack, S. (2008). Qualitative case study methodology: Study design and implementation for Novice researchers. *The Qualitative Report*, *13*(4), 544–556.

Beattie, V., & Smith, S. J. (2013). Value creation and business models: Refocusing the intellectual capital debate. *The British Accounting Review*, *45*(4), 243–254.

Beck, C., Dumay, J., & Frost, G. (2017). In pursuit of a 'single source of truth': From threatened legitimacy to integrated reporting. *Journal of Business Ethics*, *141*(1), 191–205.

Belkaoui, A., & Karpik, P. G. (1989). Determinants of the corporate decision to disclose social information. *Accounting, Auditing and Accountability Journal*, *2*(1), 36–51.

Burke, J. J., & Clark, C. E. (2016). The business case for integrated reporting: Insights from leading practitioners, regulators, and academics. *Business Horizons*, *59*(3), 273–283.

Busco, C., Frigo, M. L., Quattrone, P., & Riccaboni, A. (2013). Redefining corporate accountability through integrated reporting. *Strategic Finance*, *8*(August), 33–41.

Busco, C., Frigo, M. L., Riccaboni, A., & Quattrone, P. (Eds.). (2013). *Integrated reporting. Concepts and cases that redefine corporate accountability*. Cham, Switzerland: Springer.

Cheng, M., Green, W., Conradie, P., Konishi, N., & Romi, A. (2014). The international integrated reporting framework: Key issues and future research opportunities. *Journal of International Financial Management & Accounting*, *25*(1), 90–119.

Commission on Environment and Development. (1987). *Our common future*. New York, NY: World Commission for Environment and Development.

de Villiers, C., Rinaldi, L., & Unerman, J. (2014). Integrated reporting: Insights, gaps and an agenda for future research. *Accounting, Auditing & Accountability Journal*, *27*(7), 1042–1067.

de Villiers, C., & Sharma, U. (2017). A critical reflection on the future of financial, intellectual capital, sustainability and integrated reporting. *Critical Perspectives on Accounting*, in press.

Dierickx, I., & Cool, K. (1989). Asset stock accumulation and sustainability of competitive advantage. *Management Science*, *35*(12), 1504–1511.

Druckman, P. (2014). Integrated reporting: A new governance tool. *The Corporate Board*, *35*(206), 6–10.

Dumay, J. (2015). Who is the IIRC's integrated reporting rhetoric really for? *Social Value & Intangibles Review*, *2*(Spring), 86–88.

Dumay, J. (2016). A critical reflection on the future of intellectual capital: From reporting to disclosure. *Journal of Intellectual Capital*, *17*(1), 168–184.

Dumay, J., Bernardi, C., Guthrie, J., & Demartini, P. (2016). Integrated reporting: A structured literature review. *Accounting Forum*, *40*(3), 166–185.

Dumay, J., & Dai, T. (2017). Integrated thinking as a cultural control?. *Meditari Accountancy Research*, *25*(4), 574–604.

Eberlein, R. L., & Peterson, D. W. (1992). Understanding models with Vensim™. *European Journal of Operational Research*, *59*(1), 216–219.

Eccles, R. G., & Krzus, M. P. (2010a). *One report. Integrated reporting for a sustainable strategy*. New York, NY: Wiley and Sons.

Eccles, R. G., & Krzus, M. P. (2010b). Integrated reporting for a sustainable strategy. *Financial Executive*, *26*(2), 28–32.

Eccles, R. G., Krzus, M. P., & Ribot, S. (2015). *The integrated reporting movement: Meaning, momentum, motives and materiality*. Hoboken, NJ: Wiley.

Eccles, R. G., & Saltzman, D. (2011). Achieving sustainability through integrated reporting. *Stanford Social Innovation Review*, *59*(Summer), 56–61.

Eisenhardt, K. M. (1989). Building theories from case study research. *Academy of Management Review*, *14*(4), 532–550.

ENI. (2015). *Integrated annual report 2015*. Retrieved from https://www.eni.com/docs/en_IT/enicom/company/integrated-annual-report-2015.pdf. Accessed on 2 December 2016.

ENI. (2016). *Integrated annual report 2016*. Retrieved from https://www.eni.com/docs/en_IT/enicom/publications-archive/publications/reports/reports-2016/Integrated-Annual-Report-2016.pdf. Accessed on 9 June 2017.

European Commission (EC). (2014). *Scoping study to identify potential circular economy actions, priority sectors, material flows and value chains*. Brussels, Belgium: European Commission

Flammer, C., & Luo, J. (2017). Corporate social responsibility as an employee governance tool: Evidence from a quasi-experiment. *Strategic Management Journal*, *38*(2), 163–183.

Flower, J. (2015). The International Integrated Reporting Council: A story of failure. *Critical Perspectives on Accounting*, *27*, 1–17.

Forrester, J. W. (1961). *Industrial dynamics*. Cambridge, MA: The MIT Press.

Forrester, J. W. (1968a). *Principles of systems*. Cambridge, MA: The MIT Press.

Forrester, J. W. (1968b). Industrial dynamics-after the first decade. *Management Science*, *14*(7), 398–415.

Forrester, J. W. (1992). Policies, decisions and information sources for modeling. *European Journal of European Research*, *59*(1), 42–63.

Gary, M. S., Kunc, M., Morecroft, J. D. W., & Rockart, S. F. (2008). System dynamics and strategy. *System Dynamics Review*, *24*(4), 407–429.

Gary, M. S., & Wood, R. E. (2011). Mental models, decision rules, and performance heterogeneity. *Strategic Management Journal*, *32*(6), 569–594.

Giorgino, M. C., Barnabè, F., & Paolicelli, N. (2016). Searching for the missing link between business model and strategy: The integrated reporting perspective. In A. Jablonski (Ed.), *Business models: Strategies, impact and challenges* (pp. 101–133). New York, NY: Nova Science Publishers, Inc.

Giorgino, M. C., Supino, E., & Barnabè, F. (2017). Corporate disclosure, materiality, and integrated report: An event study analysis. *Sustainability*, *9*(12), 2182.

Golroudbary, S. R., & Zahraee, S. M. (2015). System dynamics model for optimizing the recycling and collection of waste material in a closed-loop supply chain. *Simulation Modelling Practice and Theory*, *53*, 88–102.

Gray, R. (2006). Social, environmental and sustainability reporting and organisational value creation? Whose value? Whose creation?. *Accounting, Auditing & Accountability Journal*, *19*(6), 793–819.

International Integrated Reporting Council (IIRC). (2013a). The international IR framework. Retrieved from http://www.theiirc.org/international-ir-framework/. Accessed on 30 April 2016.

International Integrated Reporting Council (IIRC). (2013b). *Capitals*. Background paper for IR. Retrieved from http://integratedreporting.org/wp-content/uploads/2013/03/IR-Background-Paper-Capitals.pdf. Accessed on 30 April 2016.

International Integrated Reporting Council (IIRC). (2013c). *Business model*. Background paper for IR. Retrieved from http://www.theiirc.org/wp-content/uploads/2013/03/Business_Model.pdf. Accessed on 30 April 2016.

Kazakov, R., & Kunc, M. (2016). Foreseeing the dynamics of strategy: An anticipatory systems perspective. *Systemic Practice and Action Research*, *29*(1), 1–25.

Kim, H., & Andersen, D. F. (2012). Building confidence in causal maps generated from purposive text data: Mapping transcripts of the Federal Reserve. *System Dynamics Review*, *28*(4), 311–328.

Kolk, A. (2010). Trajectories of sustainability reporting by MNCs. *Journal of World Business*, *45*(4), 367–374.

Kunc, M., & Morecroft, J. D. W. (2007). System dynamics modelling for strategic development. In R. Dyson & F. O'Brien (Eds.), *Supporting strategy: Frameworks, methods and models* (pp. 157–190). Chichester: John Wiley.

Kunc, M., & Morecroft, J. D. W. (2009). Resource-based strategies and problem structuring: Using resource maps to manage resource systems. *Journal of the Operational Research Society*, *60*(2), 191–199.

Kunc, M., & Morecroft, J. D. W. (2010). Managerial decision-making and firm performance under a resource-based paradigm. *Strategic Management Journal*, *31*(11), 1164–1182.

Kunc, M., & O'Brien, F. A. (2017). Exploring the development of a methodology for scenario use: Combining scenario and resource mapping approaches. *Technological Forecasting and Social Change*, *124*, 150–159.

Lieder, M., & Rashid, A. (2016). Towards circular economy implementation: A comprehensive review in context of manufacturing industry. *Journal of Cleaner Production*, *115*, 36–51.

Martinez-Moyano, I. J. (2012). Documentation for model transparency. *System Dynamics Review*, *28*(2), 199–208.
Melloni, G., Stacchezzini, R., & Lai, A. (2016). The tone of business model disclosure: An impression management analysis of the integrated reports. *Journal of Management & Governance*, *20*(2), 295–320.
Milne, M. J., & Gray, R. (2013). W(h)ither ecology? The triple bottom line, the global reporting initiative, and corporate sustainability reporting. *Journal of Business Ethics*, *118*(1), 13–29.
Mollona, E. (2008). Computer simulation in social sciences. *Journal of Management & Governance*, *12*(2), 205–211.
Morecroft, J. D. W., & Sterman, J. D. (Eds.). (2000). *Modeling for learning organizations* (1st paperback ed.). Portland, OR: Productivity Press.
Penrose, E. T. (1959). *The theory of the growth of the firm*. Oxford: Basil Blackwell.
Perego, P., Kennedy, S., & Whiteman, G. (2016). A lot of icing but little cake? Taking integrated reporting forward. *Journal of Cleaner Production*, *136*, 53–64.
Peteraf, M. A. (1993). The cornerstones of competitive advantage: A resource-based view. *Strategic Management Journal*, *14*(3), 179–191.
Prahalad, C. K. (2004). The blinders of dominant logic. *Long Range Planning*, *37*(2), 171–179.
Prahalad, C. K., & Bettis, R. A. (1986). The dominant logic: A new linkage between diversity and performance. *Strategic Management Journal*, *7*(6), 485–501.
Qudrat-Ullah, H., Spector, M. J., & Davidsen, P. I. (2007). *Complex decision making: Theory and practice*. New York, NY: Springer.
Richardson, G. P., & Pugh, A. (1981). *Introduction to system dynamics modeling with dynamo*. Waltham, MA: Pegasus Communications.
Roca, L. C., & Searcy, C. (2012). An analysis of indicators disclosed in corporate sustainability reports. *Journal of Cleaner Production*, *20*(1), 103–118.
SASOL. (2015). *Maintaining momentum*. Annual Integrated Report, 30 June 2015. Retrieved from http://www.sasol.com/extras/air_reports/air_2015/files/assets/basic-html/page-1.html#. Accessed on 2 December 2016.
SASOL. (2016). *SASOL Limited*. Integrated Report, 30 June 2016. Retrieved from http://www.sasol.com/financial-reports/annual-integrated-report-30-june-2016. Accessed on 9 June 2017.
Saysel, A. K., & Barlas, Y. (2001). A dynamic model of salinization on irrigated lands. *Ecological Modelling*, *139*(2), 177–199.
Stake, R. E. (1995). *The art of case study research*. Thousand Oaks, CA: Sage.
Sterman, J. D. (2000). *Business dynamics. System thinking and modeling for a complex world*. Boston, MA: McGraw-Hill.
Thiery, M. (1995). Strategic issues in product recovery management, *California Management Review*, *37*(2), 114–120.
Tian, Y., & Chen, J. (2009). Concept of voluntary information disclosure and a review of relevant studies. *International Journal of Economics and Finance*, *1*(2), 55–59.
Tikkanen, H., & Alajoutsijärvi, K. (2001). *Competence strategies of growth firm*s. Helsinki, Finland: MET Publishing.
Vennix, A. M. J. (1996). *Group model building. Facilitating team learning using system dynamics*. Chichester: Wiley.
Wang, Y., Chang, X., Chen, Z., Zhong, Y., & Fan, T. (2014). Impact of subsidy policies on recycling and remanufacturing using system dynamics methodology: A case of auto parts in China. *Journal of Cleaner Production*, *74*, 161–171.
Wernerfelt, B. (1984). A resource-based view of the firm. *Strategic Management Journal*, *5*(2), 171–180.
Westwood, J. (2014). Co-operative accountability. *International Journal of Co-operative Management*, *7*(1), 73–78.
Wolstenholme, E. F. (1999). Qualitative vs quantitative modelling: The evolving balance. *The Journal of Operational Research Society*, *50*(4), 422–428.
Xu, J., Li, X., & Wu, D. D. (2009). Optimizing circular economy planning and risk analysis using system dynamics. *Human and Ecological Risk Assessment*, *15*(2), 316–331.
Yin, R. K. (1994). *Case study research: Design and methods* (2nd ed.). Newbury Park, CA: Sage.

CHAPTER 5

INTEGRATED REPORTING AND SOCIAL DISCLOSURE: TRUE LOVE OR FORCED MARRIAGE? A MULTIDIMENSIONAL ANALYSIS OF A CONTESTED CONCEPT

Sergio Paternostro

ABSTRACT

There are still many different theoretical approaches and practical interpretations about what an integrated report is. Starting from this premise, the overall purpose of this chapter is to critically analyze the relationship between integrated reporting (IR) and social/sustainability disclosure. Indeed, although some scholars considered IR as a tool to improve the sustainability approach of the companies allowing to disclose more relevant social information, others are more critical about the potentiality of IR to improve social disclosure. Therefore, the general research question is: Is there a natural link between IR and social disclosure (true love) or is the IR a practice to "normalize" the social disclosure and accounting (forced marriage)?

In the attempt to provide a preliminary answer to the research question, the chapter analyzes what is the approach of three categories: (1) academics; (2) soft-regulators; and (3) companies. From the methodological point of view, a mixed method of analysis has been adopted.

From the analysis of the three different points of view, IR can be considered as a "contested concept" because of the heterogeneous and sometimes conflicting

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interpretations and implementation that are done on this type of report. This leads to relevant theoretical and practical implications.

Keywords: Integrated reporting; social disclosure; sustainability; contested concept; multidimensional analysis; accountability

1. INTRODUCTION

In the last years, integrated reporting (IR) has been proposed as a new frontier for corporate disclosure. This approach combines financial and non-financial information in one report. Although the idea of combining financial and non-financial information in a single report is not new (Burgman & Ross, 2007; Eccles & Krzus, 2010; Pedrini, 2007), after the publication of International Integrated Reporting Council (IIRC) Framework in 2013, that for the first time tried to codify what an integrated report should be, a body of literature and many practical experiences have been rapidly developed (de Villiers, Rinaldi, & Unerman, 2014; Dumay, Bernardi, Guthrie, & De Martini, 2016; Gibassier, Rodrigue, & Arjaliès, 2018).

Although some scholars affirm that the IR is an area of research in which actually the majority of studies belong to the second stage of an emerging research area (Silvestri, Veltri, Venturelli, & Petruzelli, 2017), there are still many different theoretical approaches and practical interpretations about what an integrated report is (de Villiers et al., 2014; Dumay, Bernardi, Guthrie, & La Torre, 2017; Perego, Kennedy, & Whiteman, 2016). Some authors emphasize the innovation spirit of this report that could be considered as a new way to conceive the accounting able to change the way of thinking of companies in terms of purposes other than mere profit (Adams, 2015). Others are less enthusiastic, highlighting different opinions among researchers: some scholars support the strong potentialities of integrated report in enhancing the relevance of sustainability issues in corporate disclosure and thinking, whereas others think it is a new way to maintain the capitalism mainstream thinking (Brown & Dillard, 2014). Also in the practical implementation, despite the attempt of standardization by the IIRC, this kind of report remains voluntary and with the possibility for companies to interpret it in a heterogeneous way (Dumay et al., 2017). In addition, it seems there is a strong gap between academics and practitioners, in fact Dumay et al. (2016) say "practitioners are from Mars and academics are from Venus."

Probably, the evolution of the study about IR has been too rapid and it is still unclear the substantial nature of this tool and why companies decide to implement it (Perego et al., 2016; Stubbs & Higgins, 2014; Van Bommel, 2014).

Starting from these premises, the chapter assumes a specific perspective that is related to the role of social/sustainability information in the IR domain. In particular, this chapter intends critically analyzing the relationship between IR and social/sustainability disclosure. In this chapter, social/sustainability disclosure is considered the communication by the firms of information related to the

interactions with and the impacts on social context (Dierkes & Peterson, 1997; Parker, 1986). Social disclosure can be provided in different ways: within traditional financial reporting or by a stand-alone reports specifically devoted to social\ sustainability information (i.e., social or sustainability report (SR)). Integrated report has been seen as a tool able to improve the sustainability approach of the companies allowing to provide more relevant social information (Eccles & Krzus, 2010) and it is proposed as a last development of sustainability reporting and disclosure or as a way to implement a sustainability strategy (Burke & Clark, 2016; Eccles & Saltzman 2011; Frías-Aceituno, Rodríguez-Ariza, & García-Sánchez, 2013; Sierra-García, Zorio-Grima, & García-Benau, 2015; Stubbs & Higgins, 2014). In this vein, the IR is called to overcome the limitations of stand-alone SR often accused to not provide a faithful representation of the sustainability and social performance and to not represent many relevant social issues (Gray, 2010; Hopwood, 2009; Milne & Gray, 2013). Therefore, the general research question of the chapter is: can the IR contributing to improve the social disclosure of the companies compared to the traditional separation between financial and social disclosure (i.e., the "silos or stand-alone disclosure")? Is there a natural link between IR and social disclosure (true love) or is the IR a practice to "normalize" the social disclosure and accounting (forced marriage)?

The topic is complex and the analysis of different visions could be particularly useful in this preliminary stage of the IR evolution (Burke & Clark, 2016). For this reason, in the attempt to provide a preliminary answer to the research question, the chapter analyzes what is the approach of three categories: (1) academics; (2) soft-regulators; (3) companies. For each category the approach about some key aspects of the relationships between social disclosure and IR will be analyzed. By this analysis it will be possible to analyze the different views of the three categories that can offer different perspectives related to the topic of the chapter.

From the methodological point of view, a mixed method of analysis using different approaches to investigate about the three different perspectives will be adopted: to investigate the opinions of academics the more appropriate approach is the literature review; to analyze the perspective of soft-regulators, a critical content analysis of IIRC framework will be done, comparing it with the most widespread guidelines about social disclosure (i.e., Global Reporting Initiative (GRI)); to have a picture of the companies side the chapter will propose some cases of IR that can demonstrate the wide range of possible interpretations. In so doing, although the relevance of the internal effects of the IR (management accounting, organizational roles, etc.) is well known (Maniora, 2017; Mio, Fasan, & Pauluzzo, 2016; Stubbs & Higgins, 2014), the focus will be on the external output of the process, that is, the report.

The chapter responds to the call of Dumay et al. (2016) for "more research that critiques IR's rhetoric and practice." In particular, the chapter tries to go beyond the idea that IR is a practice completely identifiable with the model proposed by the IIRC framework, suggesting the idea of IR as an "essentially contested concept" (Gallie, 1956).

Other papers have investigated about the potentiality of IR to improve the social disclosure and accountability (Montecalvo, Farneti, & de Villiers, 2018; Silvestri et al., 2017; Stacchezzini, Melloni, & Lai, 2016) or have used a multidimensional approach (Burke & Clark, 2016) but no paper has proposed a mixed approach.

The chapter is structured as follows. Section 2 describes the theoretical background analyzing the main criticalities in social disclosure and briefly presenting the IR model; Section 3 presents the research design of the chapter; Section 4 analyzes the literature review on IR; Section 5 compares IIRC and GRI guidelines; Section 6 illustrates four ideal type company's approaches to IR; and finally Section 7 presents a discussion and provides some conclusions.

2. THEORETICAL BACKGROUND: SOCIAL DISCLOSURE AND IR

To respond to the main research objective, that is the relationship between social disclosure and IR, this section will present: (a) the main limitations of traditional stand-alone social reporting in providing social information and (b) a first brief illustration of the main characteristics of the IR as a "new" corporate reporting paradigm. In the following sections, the IR will be analyzed according to three different perspectives that represent the three main players able to influence the evolution of this new reporting method: academics, soft-regulators and companies. In this way, it will be possible to understand if the IR is a tool that can improve the traditional manner of communicating social information.

2.1. The Journey of Social Disclosure by Stand-alone Reports

The corporate social disclosure is the way by which a firm communicates to the external environment the social aspects and impacts of its activity. Before the introduction of IR, the more widespread social communication strategy was to prepare a stand-alone document called social or SR that aims to cover the social (in a broad sense) issues of an organization's performance and their interrelations with natural and social environment (Deegan, 2007). This practice emerges as a reaction to a demand of more non-financial information in corporate disclosure. The first experimental attempts date back to the first decades of the last century both in the United States and in Europe (Gray, 2010; Guthrie & Parker, 1989, 2005). Although until the 1980s the more used practice was to provide social information (above all related to employees and environmental issues) as part of the Annual Report, from the 1980s, and in a stronger manner from the 1990s, companies started to prepare stand-alone reports contributing to generate a huge literature about the topic (Cho, Laine, Roberts, & Rodrigue, 2015; Fifka, 2013; Milne & Gray, 2013).

Concerning the reasons leading a firm to prepare an SR or to implement a social disclosure strategy, summarizing and simplifying, there are two different approaches to an SR: a strategic and an accountability one.

From the first point of view a company decides to implement an SR mainly for self-interest motivations. In this vein, several financial benefits of the adoption of an SR are considered, such as the possibility to improve the access to capital obtaining a higher credit rating (Hefflin, Shaw, & Wild, 2011; Roberts, 1992), a good corporate image and reputation (Bebbington, Larrinaga-González, & Moneva-Abadía, 2008) and a more efficient risk management system (Kytle & Ruggie, 2005). In general, the social disclosure can decrease the information asymmetries between corporate reporting preparers and users (Stacchezzini et al., 2016). In so doing, in order to maintain their legitimacy the companies can react to demands of powerful stakeholders able to affect the survival of organizations realizing a sort of "solicited disclosure" (Deegan, 2007; Van Der Laan, 2009). From an ethical perspective, the risk is that companies, assessing the strategic relevance of their stakeholder, could manipulate information trying to meet only the needs considering more valuable for the business strategy. On the other hand, according to the accountability perspective, each category of stakeholders has the right to have information not only about the financial results but also about the social impacts of one organization to represent the complex interconnections with the environment (Churret & Eccles, 2014; Gray, 2006; Gray, Owen, & Adams, 1996; O'Dwyer, Unerman, & Bradley, 2005). Therefore, accountability is considered the duty to account for the actions for which an organization is held responsible (Gray et al., 1996). Only if there is an awareness of firm's social obligations the duty of accountability arises and the SR becomes a manner to inform the society on the global outcomes of the business activity and to discharge social accountability (Deegan, 2007; Gray et al., 1996). In this perspective the information provided are not the more valuable for the business strategy but the more relevant for the stakeholder needs. Although the two motivations (self-interest and accountability) are not always alternatives or separable, the logic of accountability will be adopted in this chapter. Therefore, the SRs will be considered as a means to discharge the social and ethical obligation to provide relevant information (in social terms) to stakeholders.

In terms to accountability, several limitations of stand-alone SRs have been highlighted:

(a) *Only public relations and strategic tool*: many scholars affirm stand-alone SRs are only motivated by self-interest and public relations and the flexibility of the report is an instrument used to enforce a communication strategy (Adams & Larrinaga-Gonzalez, 2007; Bebbington et al., 2008; Kolk, 2004). More than the information needs of stakeholders, in the stand-alone document of social disclosure emerges the will to close a legitimacy gap (Deegan, 2007) or the necessity to conform with social or institutionalized norms (Larrinaga-Gonzales, 2007).
(b) *Incompleteness in order to represent the social and sustainability performance*: the SRs have been considered incomplete and limited in terms of social information provided that are not able to faithfully represent the sustainability performance (Adams & Evans, 2004; Gray, 2010; Milne & Gray, 2013).

Some scholars even sustain SRs can contribute to hide the material social performance of one organization (Gray & Milne, 2002) working as a sort of "corporate veil, simultaneously providing a new face to the outside world while protecting the inner workings of the organization form external view" (Hopwood, 2009, p. 437).

(c) *Poor reliability, too and no relevant information*: SRs have been accused to increase the amount of information without adding concrete insights to stakeholder because there is not a concrete analysis of materiality (Adams & Simmet, 2011). In this manner, the provision of information does not contribute to a better understanding of the sustainability performance but it leads to an increase of confusion for stakeholders creating a sort of information overload (Fries, McCulloch, & Webster, 2010; Ioana & Adriana, 2014).

(d) *Managerial capture and irrelevance for the implementation of a sustainability strategy*: another criticism of social disclosure practices is related to the so-called managerial capture process according to which the management of organizations has taken the control of the social accounting practices adapting them to the logic of business both in terms of language and of logics, orienting the reports to the purpose of maximizing the profit (O'Dwyer, 2003; Owen, Gray, & Bebbington, 1997; Owen, Swift, Humphrey, & Bowerman, 2000). The managerial capture neutralizes the potentiality of social disclosure to change the world's business, preventing substantial improvements in global sustainability indices (Visser, 2011).

(e) *Lack of integration between information and lack of holistic picture of performance*: in the stand-alone SRs have often highlighted a lack of integration with financial information, as well as often a lack of correspondence between what is written in the SR and what is shown in the annual reports (Adams & Simmet, 2011; Setia, Abhayawansa, Joshi, & Vu Huynh, 2015; Simnett, Vanstraelen, & Chua, 2009). This can lead to promote a sort of "silo-thinking" in which there is a clear but artificial separation between social and sustainability issues and core business (Adams & Simmet, 2011; Setia et al., 2015). In so doing, the description of value creation process is neither holistic nor systemic denying the relations between social and financial variables and a conception of value and performance that integrates sustainability and financial results (Adams & Frost, 2007; Perrini & Tencati, 2006).

Starting from this criticism to stand-alone SRs, the chapter is an attempt to understand if new IR approach can improve the social disclosure in a perspective of a better accountability.

2.2. The IR: A New Paradigm for Corporate Reporting

The first theoretical proposals and the first practical experiments related to IR date back to the early years of this century (de Villiers et al., 2014; de Villiers, Kelly Hsiao, & Maroun, 2017). The experiences of Novozymes and Novo Nordisk in Denmark in 2002 are considered the first pioneering experiences of IR practices (de Villiers et al., 2014; de Villiers, Venter, & Kelly Hsiao, 2017).

The financial crisis started in 2008, leading also to a diffused crisis of confidence in the "traditional" corporate communication, has contributed to the search for new ways to prepare corporate reporting (de Villiers, Kelly Hsiao et al., 2017). The idea of a single report that can combine different kinds of information is not entirely a novelty: Pedrini (2007) has suggested the preparation of a Global or Holistic Report that combines the report on intellectual capital with the SR; Burgman and Ross (2007) have proposed an integration between financial and non-financial information; Kolk and Pinkse (2010) suggested the integration between social and corporate governance reports; and Eccles and Krzus (2010) proposed the more complete analysis about the possibility to integrate financial reporting with other non-financial information to meet the information needs of all stakeholders. Although in South Africa there was the first example of legislation that provided the introduction of IR (King III, 2009), the first attempt for a standardization was carried out by IIRC with the preparation of a framework aimed at coding what an IR is (IIRC, 2013). After the publication of the IRC Framework, the number of companies that have decided to implement an integrated report has dramatically increased (Gibassier et al., 2018). Despite this attempt of standardization, probably the only commonly shared assertion about IR is that it is a practice through which financial and non-financial information can be combined into a single report. Beyond this simple idea, it is possible to find only a plurality of views and interpretations about the aims and content of IR. These interpretations are sometimes radically different, others with only nuanced differences. Indeed, being the model proposed by the IIRC principle based it is not to be understood in a rigid way allowing the different companies to adapt the IR to their needs and ideas. This is confirmed by the fact that, although the Framework is designed for profit companies, other companies, such as universities, are starting to use IR (Brusca, Labrador, & Larran, 2018; Veltri & Silvestri, 2015).

3. RESEARCH DESIGN: A MULTIDIMENSIONAL INVESTIGATION ON THE JOURNEY OF IR

It is not true that IR must necessarily follow the principles illustrated in the Framework, and it is wrong to confuse the IR "brand" proposed by the IIRC with the different possible variations that can be realized by the companies. For these reason the analysis of different visions related to different perspectives could be particularly useful to understand the IR evolution (Burke & Clark, 2016). Therefore, in order to answer to the research question, this chapter will analyze the points of view of three important players for IR: academics, soft-regulators, and companies. In so doing, from a methodological point of view, the chapter uses mixed methods. Using mixed methods means combining and integrating data concurrently collected adopting different methods to study the same underlying phenomenon (Creswell, 2009; Leech & Onwuegbuzie, 2008). Specifically, a concurrent triangulation approach is used, in which the aim is to compare data collected in different manner to search a confirmation, disconfirmation, cross-validation or corroboration between the different information (Bryman, 2008; Creswell, 2009).

The use of mixed methods is suggested when it is relevant to shed light on different views and to ask questions about part of a social whole (Bryman, 2008; Mason, 2006). In this case for each unit of analysis investigated the more appropriate method to collect data has been chosen.

As for the academics, a qualitative literature review has been carried out to investigate the views about: the purpose of the IR, the relevance of accountability and sustainability concepts, the users of the report, the role of IR within the reporting system, content of the IR related to materiality, connectivity, value and performance representation, resources disclosed, and some consequences of the IR practices. Concerning the soft-regulators, the chapter uses a qualitative and deductive content analysis (Berg, 2001; Krippendorff, 2004). The qualitative content analysis aims at drawing some interpretations from a text and the researcher search for the underlying meaning in the document analyzed (Berg, 2001). In particular, the content analysis will be conducted comparing two relevant standards in the field of non-financial information: IIRC framework for IR and GRI for social and SR. The basic idea is to understand how it is changing (if it is) the social disclosure moving from a stand-alone approach to an integrated approach. The comparison between the two guidelines is based on similar issues considered for academics: the purpose of the reports, the relevance of accountability and sustainability concepts, the users of the reports, the relationship between different reports within the corporate reporting system, content of the report related to materiality, connectivity, value and performance representation, resources disclosed. Finally, for the companies' perspective, we use four case studies based on a longitudinal and qualitative content analysis of IRs prepared by companies that can be interpreted as a sort of ideal types of IR approaches: IR pioneer, IR experimenter, IR compliant. In this manner, the idea is not to identify cases to generalize findings but to illustrate paradigmatic approaches to IR that can create ideal types. Ideal types can be considered as theoretical and analytical models that can contribute to interpret the logic of a social phenomenon (Bengtsson & Hertting, 2014). They can be productive in interpreting or reconstructing the logic of social interaction in a certain context. In so doing, in the multiple case design, a theoretical replication logic has been used. Following a theoretical replication logic, the cases are selected to predict contrasting results for predictable reasons (Yin, 2014). Therefore, the cases show different patterns of behavior related to a social phenomenon.

4. THE ACADEMIC POINT OF VIEW

Some aspects are selected in order to analyze the literature about IR. In particular, three general elements related to the preparation have been considered relevant: the purpose, the users, and the role of IR in the corporate reporting system. Other aspects are related to the content of the report, that is, three concepts (value, performance, and resources) and two principles (materiality and connectivity).

4.1. The Purpose

The first aspect to be analyzed in the literature about IR is the purpose of this report and as consequence the relevance of accountability and sustainability concepts to justify its adoption and main users. One difficulty is that often authors do not have in mind the same format of IR when they describe the main purpose of the reports because the identification of the meaning of an IR is still far to be stabilized (Brown & Dillard, 2014). Although some authors refer to the IIRC framework (e.g., Brown & Dillard, 2014; Busco, Frigo, Quattrone, & Riccaboni, 2014; de Villiers, Kelly Hsiao et al., 2017; de Villiers, Venter et al., 2017; Perego et al., 2016), others seem to idealize a different kind of IR (Abeysekera 2013; Eccles & Krzus, 2010) even if, of course, from the publication of the IIRC framework the first option is certainly the most widespread. The relevance attributed to the framework has led to a confusion between the IR "brand" and the concrete tool, transforming the IR into a sort of "rational myth" (Gibassier et al., 2018).

The purpose of IR is related to the opportunity to describe the comprehensive picture of a company. In this vein, the IR is considered a document "telling the story" of the organization's journey toward performance (Abeysekera, 2013) or "unveil" the value creation dynamics (Veltri & Silvestri, 2015). This could lead toward a more holistic representation of business activities going beyond the only financial representation (Busco et al., 2014). The IR would allow this holistic representation through the introduction of integrated thinking understood as the integration of sustainability goals into the business strategy, which in turn should lead to an improvement in the quality of the information provided to stakeholders, facilitating the understanding of the interconnection between social, environmental and economic dimensions of a company (de Villiers, Kelly Hsiao et al., 2017; Lodhia, 2015; Perego et al., 2016). The point is to understand why to seek this more integrated representation. The scholars propose two different perspectives that are very similar to those related to SR:

(a) *Strategic*: IR as means to achieve external benefits and to improve the quality of information provide to investors of financial capital.
(b) *Social/sustainability*: IR as means to improve the sustainability performance and to be more accountable to stakeholders.

From the first point of view, the sustainability issues can be considered as externalities with strong financial impact for shareholders and investors and for this reason it is important to include it in corporate reporting (Brown & Dillard, 2014). In this vein, the IR is prepared, like each other voluntary report, by companies having in mind strategic goals (Higgins, Stubbs, & Love, 2014). Therefore, the IR can improve the firm valuation or the earnings valuation coefficient allowing a better allocation of capital improving the quality of information for investors (Baboukardos & Rimmel, 2016; Bernardi & Stark, 2016; Lee & Yeo, 2016; Macias & Farfan Lievano, 2017). Consistently with these premises, it has been found that the presentation of financial and non-financial information improves the access to information to professional investors (Reimsbach, Hahn, & Gürtürk, 2017).

A body of literature has developed the so-called "business case" for IR, according to which "integrated reporting is the best way for a company to create value for shareholders over the long term" (Eccles & Armbrester, 2011, p. 16). Some researches have started to investigate on the relation between IR practices and financial performance or firm valuation to verify if this new practice can achieve its strategic goals. Lee and Yeo (2016) found a positive correlation between IR practices and firm valuation in a sample of listed companies in South Africa, in particular highlighting that this correlation is stronger in more complex firms demonstrating how the IR has a positive effect in order to mitigate the information asymmetry between companies and investors. These findings have been confirmed also in other economic contexts (Garcia-Sanchez & Noguera-Gamez, 2017). On the contrary, other studies found IR is not a superior mechanism of reporting compared with stand-alone reporting strategy both in order to entail a better performance and in the market evaluation of the information (Maniora, 2017; Mervelskemper & Streit, 2017). This instrumental approach suggests IR can communicate a message to an audience and not discharging of a duty of accountability toward all stakeholders. Indeed, a stream of research emphasizes the manipulation of information in IR practices used as tools of impression management aimed to manipulate the perception of stakeholder about the organization's activities and performance (Melloni, Stacchezzini, & Lai, 2016; Stacchezzini et al., 2016). Higgins et al. (2014) emphasize the interpretation of IR as a tool to tell the company story in order to exalt "heroic managers" to solve strategic problems and to achieve the business success.

Going beyond the basic business case for IR, some scholars sustain an institutional approach to IR that represents a sort of intermediate position between the strategic and the social one. In this view, that voluntary information provided by companies is explained by expectations created by institutional dynamics related to collective perceptions and pressures to act in a manner considered consistent with beliefs and values of the social actors (Higgins & Larrinaga, 2014; Marquis, Glynn, & Davis, 2007). In this perspective, also IR is considered a manner to compliance with requirements related to best practices or to competitive environment (McNally, Cerbone, & Maroun, 2017). In particular, the role of external and institutionalized guidelines (e.g., IIRC framework) can have a relevant role in shaping a legitimacy strategy (Beck, Dumay, & Frost, 2017). This stream is corroborated by some findings of empirical researches, in particular, in South Africa, where the IR has been experimented as obligation in the corporate law. Setia et al. (2015) show the use of a legitimacy strategy of listed companies in South Africa highlights the symbolic management approach to IR. Similarly, Haji and Anifowose (2017) argued the adoption of IR as a means to replay to external pressure institutionalized across and within various industries. Other scholars stressed the influence of institutional and cultural environmental analyzing the different behaviors between companies operating in civil law versus common law countries or in different national cultural systems or other country-level determinants (Frías-Aceituno et al., 2013; García-Sánchez, Lázaro Rodríguez-Ariza, & Frías-Aceituno, 2013; Jensen & Berg, 2012; Vaz, Fernandez-Feijoo, & Ruiz, 2016).

Another stream of literature is more optimistic about the possibility that IR can contribute to improve sustainability strategies and to foster the accountability of the companies. Eccles and Krzus (2010) claim IR is a key element to implement a sustainability strategy, and a widespread adoption of IR could lead to a more sustainable society. Other scholars consider IR as a sort of call for a more responsible business management and for making the companies more aware about the sustainable practices (de Villiers & Maroun, 2017; de Villiers, Kelly Hsiao et al., 2017; Rivera-Arrubla, Zorio-Grima, & García-Benau, 2017; Van Zyl, 2013). In this perspective, IR can be proposed as a tool to make the company more accountable to all stakeholders communicating a simpler and concise message by one single report (Abeysekera, 2013; Eccles & Krzus, 2010). Maniora (2017) proposes IR as a driver to promote an ethical corporate culture contributing to avoid misconduct. In particular, IR would allow a better awareness of the holistic nature of business, and in this manner it can provoke a behavioral change within the organization by processes of internalization and externalization. In order to make this change, it is relevant the capacity to share internally relevant information before to disclose them to stakeholders (Argento, Culasso, & Truant, 2018). Although some scholars underline the adoption of IR does not lead to a more sustainable approach to business and it is characterized by a weak sustainability paradigm (Stubbs & Higgins, 2018; Van Zyl, 2013), some case studies highlighted the capacity of IR practices to disseminate values and vision within the organization and to make the disclosure of material aspects of sustainability more balanced (Del Baldo, 2017; Montecalvo et al., 2018). Some authors, actually, have many doubts about the ability of the IR to change and innovate the mechanisms of disclosure within the companies. In particular, some studies underline that IR is not able to change deeply the values and culture of an organization and this reporting practice can at best produce incremental and not radical changes (Dumay & Dai, 2017; Stubbs & Higgins, 2014). In order to create a more effective change, the role of management accounting systems or professional managers (e.g., corporate social responsibility manager) is considered very relevant (Argento et al., 2018; Dumay & Dai, 2017; McNally et al., 2017). In addition, the difficulties of IR to be a factor of change in order to improve sustainability or accountability of organizations depend on the (complicated) capacity of all actors involved to combine different logics, interest and discourses related to IR like industrial, market, civic, and green order of worth (Van Bommel, 2014). According to Van Bommel (2014), the logic that seems to be predominant is the professional/accountants one, risking to contribute to a sort of market or managerial capture of the IR field.

4.2. Users

Confirming this heterogeneity in the accounting literature, the identification of the users of IR is also contested. Although, for some scholars, IR should provide information for all stakeholders (Abeysekera, 2013; Eccles & Krzus, 2010; Frías-Aceituno et al., 2013; Gianfelici, Casadei, & Cembali, 2018), others scholars are convinced that investors remain the main users in the mind of preparers

of reports (Rensburg & Botha, 2014). In an empirical analysis, Gianfelici et al. (2018) highlight customers, employees, community and investors are the categories of stakeholder considered more salience. There is a two-fold criticality about the relations between integrated report and users/stakeholders: on one hand there are few evidences about how stakeholders use information included in IR (Potter & Soderstrom, 2014), on the other hand there is a gap perceived by companies about the information valued by their stakeholder (Naynar, Ram, & Maroun, 2018).

4.3. Role of IR in the Reporting System

A similar fragmented scenario concerns the role of IR in the corporate reporting. The first disputable question is if the IR is an evolution of traditional annual report or of SR (Silvestri et al., 2017). One reason for the confusion is that many companies use indifferently the labels "annual report," "sustainability report," or "integrated report" to indicate the same type of integrated document (Giorgino, Supino, & Barnabè, 2017). The advocates of the first position (evolution of annual report) consider the IR the final step of the advancements in the renewal of traditional annual reports starting from some limitations of those reports become too complex, compliance-driven and insufficient to meet the needs of the users and to represent the capacity to create value (Busco, Frigo, Quattrone, & Riccaboni, 2013; Cheng, Green, Conradie, Konishi, & Romi, 2014; Fasan, 2013; Lev, 2001). In this view, the social/sustainability information provided in IR can improve, compared with traditional annual report, the capacity of companies to communicate the long-term growth strategy of the business (Churret & Eccles, 2014). A possible risk associated with this view is to marginalize the social information that could be considered only a driver of financial performance (Brown & Dillard, 2014). Notably, Atkins and Maroun (2015) show how IR is perceived as an evolution of traditional annual report for South African institutional investment industry experts. The second position considers the IR an evolution of the SR. According to many scholars, IR is a practice to resolve the problems, previous highlighted, of stand-alone SRs (Jensen & Berg, 2012; Morros, 2016; Stubbs & Higgins, 2014). In this vein, the idea is that IR can stimulate a more integrated thinking to take seriously in account the sustainability issues (Burke & Clark, 2016; Stacchezzini et al., 2016). A third option is that IR is an evolution of both reports aimed at creating a common platform with an holistic purpose (Abeysekera, 2013; Mio et al., 2016). Following this third option remains one under-investigated topic: the relations between the "new" IR and the "old" SR. It is not clear whether the IR is called to substitute the stand-alone reports or the stand-alone reports could co-exist with different information purposes (de Villiers, Kelly Hsiao et al., 2017; Eccles & Krzus, 2010; Paternostro, 2013).

4.4. Value, Performance, and Resources

As for the content of the IR, three concepts deserve to be analyzed in a logic of description of the input–output system of a company: value, performance, and resources. Telling the value creation story is often considered one of the main characteristics of an IR (Busco et al., 2013). In this vein, IR could intercept the

call for a more hybrid redefinition of the value's concept (Battilana, Lee, Walker, & Dorsey, 2012; Porter & Kramer, 2011). Therefore, IR can be seen as an attempt to think about what value means and to whom it should be created (Adams, 2015). However, according to a critical position, IR could only make visible the sustainability value from a financial perspective in order to consider its impact in financial performance maintaining the "mainstream" concept of value (Brown & Dillard, 2014). Value is a key concept in the IIRC framework, and a more detailed analysis will be provided in the next section. Also the kind of performance to be disclosed in IR is not an over-investigated topic. In general, the few authors engaged in it stress the role of IR in representing an holistic view of performance oriented to demonstrate how the company achieve its institutional mission (Abeysekera, 2013; Gibassier et al., 2018; Lodhia, 2015). In terms of inputs, the next section will analyze the form of capitals considered in the IIRC framework. Although some authors highlighted the differences between resources and capitals (Rambaud & Richard, 2015), others emphasized the multidimensional nature of the inputs to be disclosed (Abeysekera, 2013; Kilic & Kuzey, 2018). The empirical researches underline that the most amount of the information is provided for relational and social capitals (Haji & Anifowose, 2017; Melloni, 2015).

4.5. Materiality and Connectivity

Finally, in the preparation of an IR, two principles are considered relevant: materiality and connectivity. Many authors highlight the key role of materiality of information is to make the IR able to disclose useful information (de Villiers et al., 2014; Fasan & Mio, 2016; Higgins et al., 2014). Despite materiality is a concept of the traditional accounting literature, there is no shared definition in IR literature (Giorgino et al., 2017; Lai, Melloni, & Stacchezzini, 2017). It is related to the capacity of the report to disclose information relevant and able to change the decision-making process of the users. The empirical researches on materiality have been dedicated to different topics: Fasan and Mio (2016) investigated the determinants of the materiality disclosure that are identified in firm-level characteristics and industry; Lai et al. (2017) studied the prepares side, stressing a strong link between strategy of the firm and materiality; Giorgino et al. (2017) investigated the materiality of information verifying if the IR can create an effect on the share price. The other principle is the connectivity of the information that is crucial, because it should guarantee avoidance of the "silo" effect that is considering every relevant information separated by the others not identifying the systemic interconnection among the different parts of a firm (Adams & Simmet, 2011; Morros, 2016; Paternostro, 2013). In other words, only the connectivity of information can make a report integrated. The connectivity can be applied between: financial and non-financial information; information related to different times (past, present and future); different kinds of firm performance. The connectivity is not achieved when the firms only "sum" different sources of information (e.g., different stand-alone reports) to create a unique document in which the information about different aspects is provided separated from each other (Paternostro, 2013). In spite of the relevance of this principle, few empirical researches have

been conducted. Incollingo and Bianchi (2016) in a preliminary study found a heterogeneous application of this principle, highlighting a good connectivity of information related to the risk disclosure but a very low application for performance and business model representation.

5. THE SOFT-REGULATORS' POINT OF VIEW

In order to analyze if the IR can contribute to solve the criticalities of sustainability reporting, in the soft-regulators' point of view, we compare the two main guidelines related to the two different reporting models: GRI and IIRC frameworks. The GRI guidelines have been published in 2002 by Coalition for Environmental Responsible Economies, and they rapidly achieved a worldwide diffusion as point of reference for the preparation of an SR. In the online database of the GRI, there are 30,454 reports registered in compliance with the guidelines. In our analysis, we consider two versions of GRI guidelines: the so-called G4 (published in 2013) and the GRI Sustainability Reporting Standards (the last version of the guidelines published in 2016). In this way, methodologically we can compare both a version published almost simultaneously to the IIRC framework and a version published later to understand if and how the introduction of the IR model can also change the sustainability reporting approach. The IIRC framework has been published in 2013 and it is the first attempt to standardize the IR practices. Although the GRI guidelines are principles and content standards providing both general indication about how an SR should be prepared and specific topic and indicators that should be covered, the IIRC framework is only a principle-based standard. Although they are related to two different report models, the two guidelines are linked to each other (Rivera-Arrubla et al., 2017): since the first experiments, many of the GRI-compliant social reports are self-declared by companies as "integrated"; GRI is one of the bodies that helped found the IIRC. The aspects analyzed to compare the two standards are the same of the literature review of Section 4.

5.1. The Purpose

The first topic to be analyzed is the purpose of the report. According to the G4 (GRI, 2013, p. 3), the aim of an SR is helping:

> organizations to set goals, measure performance, and manage change in order to make their operations more sustainable. A sustainability report conveys disclosures on an organization's impacts – be they positive or negative – on the environment, society and the economy.

Consistently, in the last version of the standards (GRI, 2016, p. 3) one can read:

> it is an organization's practice of reporting publicly on its economic, environmental, and/or social impacts, and hence its contributions – positive or negative – towards the goal of sustainable development.

The understanding of how an organization can contribute to the sustainable development is, therefore, the main purpose of the report according to the GRI

standards. In the IIRC framework, the purpose of the IR is very different (IIRC, 2013, p. 4): "The primary purpose of an integrated report is to explain to providers of financial capital how an organization creates value over time." There is a sustainability-oriented approach versus a value-creation-based approach. Interestingly, in both of the standards the word accountability has not been used often: in the 2016 version of GRI we count three times the use of the words "accountability," whereas five times in IIRC framework. Not surprisingly the word sustainability is often used in the GRI standards but we find only three times in the IIRC framework. Many authors emphasize a "regressive" approach in terms of sustainability of IIRC framework compared with the GRI (Milne & Gray, 2013). In particular, they highlight how the IIRC is dominated by the business case approach and by the neoclassic and capitalist paradigm contributing to "normalize" the sustainability disclosure into the mainstream accounting (Brown & Dillard, 2014; Flower, 2015; Thomson, 2015).

5.2. The Users

In GRI standards, the stakeholders are considered the main users of an SR. Indeed, the stakeholder inclusiveness is one of the principles to define report content (GRI, 2013, 2016): "The reporting organization shall identify its stakeholders, and explain how it has responded to their reasonable expectations and interests." In addition another principle to define report content is completeness (GRI, 2013, 2016):

> the report shall include coverage of material topics and their boundaries, sufficient to reflect significant economic, environmental, and social impacts, and to enable stakeholders to assess the reporting organization's performance in the reporting period.

On the contrary, the IIRC framework identifies, as quoted in IR definition, the providers of financial capital as the primary users of the information included in the report. Nevertheless, the framework underlines that the information is useful *also for* stakeholders (IIRC, 2013, p. 7):

> an integrated report benefits all stakeholders interested in an organization's ability to create value over time, including employees, customers, suppliers, business partners, local communities, legislators, regulators and policy-makers.

In addition, stakeholder relationships are considered one of the guiding principles of an IR (IIRC, 2013, p. 17):

> an integrated report should provide insight into the nature and quality of the organization's relationships with its key stakeholders, including how and to what extent the organization understands, takes into account and responds to their legitimate needs and interests.

In the IIRC, the approach toward stakeholders seems to be ambiguous, because the providers of financial capitals (e.g., investors) are identified as the category mainly interested in understanding the value-creation process of the organization but the others stakeholders can also have interested in. Some scholars highlight the risk that IR can be captured by investors and mainstream accountants (Brown & Dillard, 2014; Flower, 2015; Van Bommel, 2014).

5.3. The Relationship between SR and IR

Another point is the relationships between SR and IR according the two standards. The 2013 version of GRI (2013, p. 85) tried to delineate the different roles of the reporting models: "although the objectives of sustainability reporting and integrated reporting may be different, sustainability reporting is an intrinsic element of integrated reporting. Sustainability reporting considers the relevance of sustainability to an organization and also addresses sustainability priorities and key topics, focusing on the impact of sustainability trends, risks and opportunities on the long term prospects and financial performance of the organization" although "the integrated report interacts with other reports and communications by making reference to additional detailed information that is provided separately." It emerges a sort of instrumental role of sustainability reporting in contributing to assess the factors that can affect the financial value of an organization represented in IR and at the same time a "separated" role that is providing detailed information about the sustainability impact of the organization. According to IIRC framework (2013, p. 8): "an integrated report may be either a standalone report or be included as a distinguishable, prominent and accessible part of another report or communication" and it "can provide an 'entry point' to more detailed information outside the designated communication, to which it may be linked."

In this scheme, the IR should avoid the publication of many and disconnected stand-alone reports, but it does not replace a sustainability reporting that can give more specific information about specific issues. The reporting systems designed could include more than one report but the IR is the main and concise report to illustrate the value-creation process, whereas other linked reports should provide information useful for specific categories of stakeholders.

5.4. Value, Performance, and Resources

About the content of the report, some interesting differences can be found analyzing the concepts of value, performance, and resources/capitals provided by the two standards. Although the concept of value is not very important for the GRI standard, it is a key concept of the IIRC framework that contributes to define the vision of what the IR is. The framework identifies two types of value (IIRC, 2013, p. 10): one created for the organizations itself "which enables financial returns to the providers of financial capital" and another created for all stakeholders. As the main users are the providers of financial capital, the framework (IIRC, 2013, p.10) clearly states:

> providers of financial capital are interested in the value an organization creates for itself. They are also interested in the value an organization creates for others when it affects the ability of the organization to create value for itself.

The instrumental role of the value created for "the others" is finally recognized when the framework says:

> when these interactions, activities, and relationships (e.g. elements related to value for others) are material to the organization's ability to create value for itself, they are included in the integrated report.

In this theoretical approach it is clear that IR should represent the process of creation of financial value that, in turn, is strongly influenced by sustainability issues. The sustainability disclosure has not an intrinsic relevance but is linked to the ability to create value for the organization. Starting from this point, it is interesting to investigate on what performance is for GRI and IIRC. According to GRI (2013, 2016), following the principle of "sustainability context" "The report should present the organization's performance in the wider context of sustainability," therefore an SR fails if it discloses "only on trends in individual performance" because "reports should therefore seek to present performance in relation to broader concepts of sustainability." This broad concept of performance is not fully confirmed in IIRC framework (2013, p. 28) when the key question to answer to an appropriate representation of the organization's performance is: "to what extent has the organization achieved its strategic objectives for the period and what are its outcomes in terms of effects on the capitals?" Even though the framework requires to combine KPI related to financial and non-financial factors in order to demonstrate the connectivity of different kinds of performance, the achievement of the strategic objectives is the main criteria to evaluate the performance. In addition, in a logic on input–output representation, the IIRC framework identifies the concept of multidimensional capital as a fundamental concept. For the IIRC framework (2013, p. 11), "the capitals are stocks of value that are increased, decreased or transformed through the activities and outputs of the organization." The activities of the organization can increase or decrease the different kinds of capitals (financial, manufactured, intellectual, human, social and relationship, and natural) creating overall positive or negative flows. The point is that according to the framework (IIRC, 2013, p. 11), the value-creation process is not related to the increase or decrease of the overall stock of capitals: "in this Framework, the term value creation includes instances when the overall stock of capitals is unchanged or decreased (i.e., when value is preserved or diminished)." This ambiguous sentence can be explained only with the idea that the value-creation process for the framework is related only to a kind of capital: the financial one. The vagueness of the definition of value-creation process in relation with the capitals is considered one of the weak points of the framework, and it emphasizes the view of sustainability as a strategy to create financial value (Brown & Dillard, 2014; Cheng et al., 2014; Dumay et al., 2017).

5.5. Materiality and Connectivity

Finally, the concepts of materiality and connectivity can also illustrate the different approaches between the two guidelines. In particular, some relevant aspects are related to the different visions of materiality. In GRI (2013, 2016) the materiality is one of the principles for defining the report content: "The report should cover aspects that: – reflect the organization's significant economic, environmental and social impacts; or – substantively influence the assessments and decisions of stakeholders." Therefore, two criteria are relevant: the effect in terms of sustainable development for the society and (recalling the decision usefulness approach used for financial reporting) the possibility that one information can be crucial for the decisions of stakeholders. In IIRC framework (2013, p. 18), materiality is

one of the guiding principles: "an integrated report should disclose information about matters that substantively affect the organization's ability to create value over the short, medium and long term." This means that an IR should disclose only information that can impact on the creation of economic value. Therefore, if a sustainability issue (even if morally relevant) does not impact on the value-creation process it is not material for an IR. As for the connectivity of information, in GRI guidelines there is no attention to the connectivity of information that is the ability to connect information related to different aspects of the organization's activity. Also among the indicators related to economic, social and environmental issues, there is no space to KPIs that try to combine the different aspects. On the contrary, connectivity is the another guiding principle of the IIRC framework. It is the ability to combine "the factors that affect the organization's ability to create value over time" (IIRC, 2013, p. 16). In the framework the connectivity is proposed between: the content elements of the report; information related to past, present and future; capitals; financial and non-financial information; quantitative and qualitative information; management information, board information and information reported externally; information in the integrated report; information in the organization's other communications; and information from other sources. The principle that characterizes the IR as a manner to operationalize the integrated thinking avoids the "silos" approach of the corporate reporting.

6. THE COMPANIES' POINT OF VIEW

In this section, four examples of companies that prepare an IR are provided to illustrate different approaches in order to understand how the sustainability disclosure is changed in those companies. In investigating what the IR is for companies, the main starting point was to select companies that had adopted different choices with reference to two variables: the decision to follow the IIRC framework and the role of the IR in the corporate reporting system. Therefore, four ideal types of companies have been identified:

- *The pioneer*: a company that carried out IR practices before the IIRC framework was published.
- *The experimenter*: a company that has prepared IR without being IIRC compliant.
- *The IIRC compliant by an "integrated" SR*: a company that after the introduction of IR made the SR more integrated.
- *The IIRC compliant by an "integrated" annual report*: a company that after the introduction of IR made the annual report more integrated.

For each of these four ideal types, one Italian-based company has been selected to consider a similar institutional context. This four ideal types have not to be considered a complete list of the possible approaches, and the companies selected for each category cannot be considered representative of each companies included in that ideal type. The selection of cases, therefore, was aimed at choosing four

critical cases, being a critical case that having a strategic relevance for a general problem (Flyvbjerg, 2006). The ideal types and the companies selected should be interpreted as peculiar examples of the evolution of the sustainability disclosure for the effect of the introduction of IR practices. The analysis of the companies will be based on the analysis of the reports published. For each companies the following aspects will be analyzed: the evolution of the reporting systems; the declared purpose of the reports; the stakeholder orientation; the manner in which the sustainability disclosure evolves; the manner in which the concepts of value, performance, and resources/capitals are disclosed; and the materiality and the connectivity of the reports. Table 1 comparing some of the elements relating to the four cases has been proposed.

6.1. The Pioneer: Sabaf

Sabaf is an Italian company operating in the market of manufactures of household gas cooking appliances. From 2000 to 2004, it published a social report (from the 2001 report the title of the document was "Social report. Socially responsible management for sustainable development"), but in early 2005 (therefore eight years before the publication of IIRC framework) it adopted a so-called Integrated Annual Report (IAR), which in the next years it is called simply Annual Report (in some years with the sub-title "financial, social and environmental performance"). In the 2000 version of the Social Report the purpose of the document was to carry out a tool to apply the sustainability paradigm to represent the social performance to achieve Corporate Social Responsible goals. In 2002, the managing director (Angelo Bettinzoli) says that the Social Report is "not just as a self-referential instrument, but as a process of management that opens itself up to the judgment of stakeholders to whom it makes commitments." Moving to the Integrated Annual Report, 2005, this decision is explained with the intention "to highlight how social responsibility is integrated into our corporate and business policies." It is clear that the anticipation of the topic of integrated thinking will characterize the debate on IR. This idea is confirmed in the introduction of the 2006 version:

> for a company for which long-term sustainability is its paradigm of reference, combined presentation of financial, social, and environmental facts and figures confirms its will (and need) to assess every single strategy, policy, and decision in terms of all its implications for the business and its stakeholders.

The 2013 version is the first after the publication of the IIRC framework and the report is affected by this event, indeed we can read that "Integrated Reporting represents a significant development in corporate reporting, which is increasingly focused on promoting cohesion and efficiency in the reporting process and adopting 'integrated thinking.'"

The format of the report and the relevance of sustainability disclosure changed during the years. The length of the social report extended from 65 pages in 2000 to 141 in 2004, whereas the format was in accordance with the guidelines by the European Institute of Social Accounting but had also the GRI as reference and it includes these sections: *identity – financial information – social performance – stakeholder*

engagement – suggestions for improvement. This format was changed in 2002 because the *sustainability governance* section was added and the performance was split into three different *sections* related to *economic, social, and environmental* performance (in accordance with the sustainability paradigm). The introduction of the IAR entails an increase of the length from 213 pages in 2005 to 232 pages in 2017. The format of the first edition of IAR included the following sections: *identity and governance – information on operations – consolidated annual account – Statutory annual account (parent company)*. In this format the sections related to sustainability disclosure were *identity and governance*, and three paragraphs of *information on operations* section (*director's report on social and environmental performance, key performance indicators,* and *proposal for improvement*) that counted about 100 pages. The format and length of the sustainability disclosure did not change until 2008 when the *governance* section was split by *identity* and two specific sections were dedicated to sustainability: *social sustainability* and *environmental sustainability*. The amount of pages of the Annual Report was 165 but the part related to sustainability counted only 56. The next substantial change was in 2011, after the publication of the Discussion Paper of IIRC (2011) that is the preliminary documents that will lead to the definitive IIRC framework. The section of report are *business model and strategy approach – international operations and core markets – governance, risk management, compliance and remuneration – social and environmental sustainability – report on operations – consolidated financial statement – statutory financial statement of Sabaf spa*. In this version, the report counts 163 pages and the sustainability part (*business model and strategy approach and social and environmental sustainability*) only 34 pages. The format did not change until 2017, whereas the length of sustainability disclosure extended from 34 to 56 pages. In 2017, the Legislative Decree 254 in implementation of Directive 2014/95/EU on Non-financial and diversity information lead to another format introducing a section entitled *consolidated non-financial information*. The length of the report achieved 232 pages and the sustainability disclosure to 66 pages. The evolution from stand-alone to IR led to a decrease of the amount of sustainability information provided.

In spite of this quantitative decrease, the report maintained a strong stakeholder orientation because in each report (both stand-alone and integrated) are provided information and commitments toward at least these categories: staff; shareholders; customers; suppliers; financiers; competitors; public administration; and community. As noted before, although in the stand-alone report the information was more detailed in the integrated version, they are more concise. In particular, in the 2017 version the most information were provided for employees, whereas a reduced number of pages were dedicated to the other categories.

The Sabaf's reports demonstrated an holistic concept of value that is not only related to the economic dimensions but also clear both in the social reports and in the integrated ones. In the letter of CEO in 2000 Social Report the "creation of value has to be combined with the commitment to the improvement of the quality of life." In the same report, the corporate vision (confirmed also in the next reports) designed a managerial philosophy "oriented not only to the value creation but also to the respect of the values." In the 2005 version, the governance section

made explicit the idea of combination between value and social/ethical dimension following a model "that views social interest and the creation of value for all shareholders as being the benchmark for director's work." In addition there is also a definition of "sustainability value" as the "ability to create value in a sustainable manner, combining business growth with eco-efficiency and respect of the values that create growing legitimacy and reputation." In 2011, in the letter of CEO is introduced the "shared value" concept (Porter & Kramer, 2011) and the output of the strategic approach is considered the sustainable value. In the stakeholder engagement section it is affirmed that "Sabaf is committed to constantly strengthening the social value of its business activities through the careful management of its relations with stakeholders." This broad concept of value is also presented in the next reports. Also the concept of performance is considered in a multidimensional perspective. Since the 2000 Social report there were both economic and social performance indicators. In each Integrated Report the KPIs provided concern for both financial and non-financial indicators but starting from 2014 they were classified according to the capitals identified in IIRC framework.

In order to evaluate the strategy in terms of materiality only in early 2010 it is explicitly declared that it is based on GRI principles and from the 2014 a specific methodological section (with a materiality matrix) is provided. Interestingly, the concept of materiality has been based on GRI guidelines (more stakeholder oriented) also after the publication of IIRC framework. Concerning the connectivity of information in the reports seems to be highlighted a multidimensionality but not a strong connectivity. Also in the social reports there was reference to many aspects (economic and social) of the organization's life but the information was not connected. Only for the connectivity related to time in each report there is a strong attention because almost each indicator is related to past and often there is outlook information. Above all in integrated report, it is easy to identify (and potentially separating) the single stand-alone reports (e.g., SR or financial statement or remuneration report) that are added can shape the integrated report. This kind of report could be defined as "aggregated report" (Paternostro, 2013). This characteristic decrease in the last versions of the reports more influenced by IIRC framework.

Summarizing, the evolution of IR has led to:

- a more strategic approach to sustainability reporting;
- a reduction in the amount of sustainability disclosure;
- a more detailed information about materiality (but aligned to the GRI guidelines);
- more concise information;
- a reduced "aggregated" approach to IR; and
- maintain an holistic view of value and a stakeholder-oriented approach.

6.2. The Experimenter: Guna

Guna is a company operating in the production and distribution of natural supplements and homeopathic medicines used in alternative or complementary medicine.

The company started the journey in the sustainability reporting in 2009 publishing the first social report, although from 2010 the report became an IR. The innovative approach of Guna is related to its "social hub" that is a web portal by which from 2012 it carried out an experiment of continuous and interactive reporting. The information was updated in real time and also the stakeholder can have access to modify the report. At the end of the year one "annual" version of the report is released. The purpose of the first edition of the social report is declared in the introduction: "the document you are reading is a partial summary of everything commitment, goals and passion of this group." The decision to move to IR is not justified in the 2010 version where in the report the financial statement was included. In 2012, when the "social hub" was introduced by which the report was updated in real time, the President of Guna said that this document:

> it is not a summary of business activities printed at end of the year but a dashboard of indicators that are online 365 days for years and they are systematically updated, by which each stakeholder can extrapolate data and information considered useful or interesting for him, in a totally disintermediated and direct way and without any possibility of manipulation.

A crucial aspect of the Guna's approach was added in the sentence in 2014: "this report is not an output but a process."

The format of the report did not change during the years. Indeed, in 2009, the Social Report had four main section: *introduction – understanding the Guna's world – the corporate social responsibilities activity and stakeholders relationships – the future*. In 2010, two sections were added: *financial statement and what was not done*. In particular the second section is quite innovative because it discloses about the bad news according to a logic of transparency. Substantially this format remains the same also for the other years. In the reporting approach of Guna this format is not rigid because from the 2012 in the social hub each reader can build his own report combining the different information and reading only the sections considered more interesting. Moreover, different "reading paths" are proposed based on the time available or on specific thematic areas (e.g. financial area; Guna's World; social issues). During the different versions of the report the amount of information dedicated to sustainability disclosure is not changed. There is no link with format or principles or suggestion of the IIRC framework.

The reporting system is strongly stakeholder oriented both in terms of disclosure and engagement. For the first point of view both in the first social report and in the next IRs there is information about many categories of stakeholders: patients, employees, pharmacists and doctors, suppliers, public administration, community, competitors, mass media, next generations, and environment. One particular category of stakeholder is peculiar to the Guna's approach: citizens who criticize alternative medicines. The choice to consider as stakeholder who criticizes the "core business" of Guna is a clear sign of the accountability approach of the company. For the second point of view, stakeholders are also players of the process of reporting having the possibility to "build" the IR directly updating the information without any intermediation of the company.

In the reports of Guna there are no specific references to the value-creation process in economic terms. On the contrary the concept of value is often linked

to social and ethical issues. For example, the reports describe Guna as "a company in which the financial interests are combined with an intangible value of extraordinary importance: the protection of public health and the implementation of population health index" or illustrating a social initiatives the "slogan" is "when dialogue with patients becomes value added." The description of the performance, except for the social report of 2009, is multidimensional offering KPIs related to financial and non-financial aspects illustrated using quantitative and narrative languages. There is any reference to the concepts of capitals or to an input–output logics.

In the different versions of the report there is no analysis of the materiality of information. Nevertheless, the broad concept of materiality is signaled by the following aspects: high number of stakeholder considered and high amount of information; "hostile" stakeholders taken into account; bad news disclosed. The idea of accountability seems to be consistent with the purpose to meet the information needs of all categories of stakeholders. As for the connectivity of information there are some positive aspects: the connectivity related to time is assured by the time series of different indicators even if the link with the future (by means of outlook information or goals) is not always highlighted; in the disclosure of stakeholders there is a strong combination between quantitative and narrative information; by the social hub, users can build their own report and in this way can combine information related to different dimensions illustrated using different metrics and languages. From the other side, the reports lack of strategic approach (there is not a description of a business model; the corporate social responsibility activities are not always linked to the business) and they seem to be more as "enhanced social report" in which the financial statement is added to the sustainability disclosure than an IR (Paternostro, 2013).

Summarizing, the moving from SR to IR has led to:

- a social interpretation of IR which is a sort of "enhanced social report";
- a strong connectivity of information;
- an innovative approach to IR independent from the evolution of "institutionalized" practices;
- a flexible approach in which the focus is in the process and not in the output; and
- a transparent approach considering also bad news and "hostile" stakeholders.

6.3. The IIRC Compliant by an "Integrated" SR: Unicredit

Unicredit is a commercial bank group operating in Western, Central and Eastern Europe. The journey of Unicredit in sustainability disclosure is long and heterogeneous. From 2000 to 2005 it published a social and environmental report, in 2006, it was not a stand-alone report but one section of the annual report was dedicated to sustainability, from 2007 to 2013 an SR had disclosed and, finally, from 2014 Unicredit prepared an IR. The peculiarity of Unicredit is that IR is the "new label" of SR because it is the document dedicated to the communication about sustainability issues. Indeed, Unicredit publishes also a Consolidated Reports and Accounts with a strictly financial focus.

In 2000, the chairman of Unicredit presented the social and environmental report in the following way:

> this Social and Environmental Report gives UniCredito Italiano the opportunity to report on results achieved and the obligations it has assumed for the future, and at the same time, serves as a tool to involve all those who work with us, from our employees to our customers, suppliers and partners, to move clearly in the direction of sustainable development.

The declared approach of Unicredit is not using this reports as a tool to improve profitability as it is said in 2002 by the new chairman: "the company's commitment in this area should not be seen just as another way of achieving higher growth rates." The accountability orientation of the document was declared in 2003 version:

> when applied at the socio-environmental level, the concept of an "annual report," which brings to mind disclosure based on rigid accounting principles, acquires a broader meaning, best expressed by the concept of "accountability." This method of reporting, when applied to the broad variety of issues that concern corporate interlocutors, requires a commitment to identify their requirements, gather data and information that meet these needs and provide transparent, accurate and precise communication.

The connection between strategy and sustainability emerges in the introduction of the first report called "sustainability report" according to which the document "reflects the full operational scope of UniCredit Group in 2007 and describes the connection between business strategies and stakeholder relationship management." This connection will be one of the bases of the IR approach. Indeed, the introduction of the first IR (2014) presented the document highlighting an holistic approach: "the Integrated Report 2014 aims to describe the Group's financial and sustainability performance, business model, corporate governance, risk management, compliance, competitive environment, strategy and capitals." The continuity between the SR and IR was declared in the next edition:

> UniCredit published a Sustainability Report each year from 2000 to 2013. […] since 2014 the Group has continued to report on sustainability in an Integrated Report (the "Report") under the GRI Guidelines and the IIRC Framework.

In addition, the 2017 IR has also a role of compliance, indeed "UniCredit has prepared this document in compliance with the requirements of Articles 3 and 4 of Legislative Decree 254/2016, which implements European Directive 2014/95/EU in Italy."

The lengths of the report changed during the 17 years of sustainability disclosure but the amount of pages remained similar. In the social and environmental report of 2000 the pages were 143, whereas in the IR of 2017 they were 136. The only difference is that in the last version several information was provided by some supplement files (e.g., determination and distribution of value added; main partnerships and affiliations, governance, risk management and compliance, stakeholder engagement, human capital, social and relationship capital, and natural capital). The format of the report included three different stages. The first (from 2000 to 2002) in which the structure of the report was organized for thematic areas: quality of labor; market and territory; environment, health and safety; security and privacy; listening and dialogue; and corporate citizenship.

The second stage (from 2003 to 2013) the report was more stakeholder oriented in its structure; therefore the disclosure was related to the different categories of stakeholders (this is more evident from the 2007 edition): our people, our customers, suppliers, our communities, investors and markets, and environment. The third stage (from 2014 until now) is related to IR and it is characterized for a more strategic approach and for the attempt to put the sustainability issues into the business model to demonstrate the strong link between these two aspects. The structure provided by the IRs are: our purpose and identity (business model, governance, and risk and compliance) – our business environment (market overview and stakeholder engagement) – our value creation (value creation over time, strategic plan, and capitals).

The stakeholder orientation of the SR was more clear in the period between 2003 and 2013 because the main information was classified for stakeholders categories although after the introduction of IR the capitals approach (peculiar characteristic of the IIRC framework) becomes the way to disclose data. The editions of IRs lead to a more strategic approach in which stakeholder are more embedded in the business model and also in the risk management of the bank. Nevertheless, the stakeholder orientation of the reports is demonstrated also by a specific box in which the contribution of Unicredit to a "stakeholder economy" is provided. In each edition of the reports, however, the categories of stakeholder most considered are: shareholders, customers, and employees.

A broader concept of value is acknowledged since the first social and environmental reports. In the 2000, the goals of Unicredit were creating value over time for shareholders, customers and employees. In 2003, one part of the report was on "the measure of the value" and significantly in this section were included: calculation and allocation of value added; evaluation of intangible assets; sustainability indexes. The concept of value creation beyond the shareholder focus was underlined in the CEO letter in 2007 SR: "Ultimately banking is not about generating transient short-term profits, but about returning sustainable long-term value to our customers, our employees, the communities, and other stakeholders we depend on." In addition, the relevance of sustainability issues for creating value for shareholders was emphasized "in the long run, sustainable practices are vital to the financial health of any large business […] while profits are a prerequisite, they are not sufficient on their own." This leads to an idea of holistic value: "the final value generated for stakeholders is the combined result of both our ability to generate consistent profits and the sustainability of UniCredit Group's business practices and reputation." In the moving from SR to IR the focus on value creation increases but also there is a sort of ambiguity in this concept, probably following the IIRC approach. Indeed, in the first IR the sub-title of the report is "our sustainable value creation" and in the mission statement there is a broad idea of value:

> we UniCredit people are committed to generating value for our customers. As a leading European bank, we are dedicated to the development of the communities in which we live, and to being a great place to work. We aim for excellence and we consistently strive to be easy to deal with. These commitments will allow us to create sustainable value for our shareholder.

However, in the strategic part of "Our value creation" section the focus of the report is on the shareholders' dimension of value-creation process and on the capacity to use the capitals to increase the financial value. From the next edition, there was no section about value creation (transforming before in "our sustainability strategy" and after in "our strategy") but only one paragraph (*our value creation over time*) within the "Our purpose and identity" section. In this section a figure of the bank's business model highlighted three types of outcomes: economic value, social value, and environmental value. From the performance point of view, in the social and environmental reports there was a wider part dedicated to the description of the performance related to different sustainability themes or category of stakeholders. For example, in the 2007 SR there was about 100 pages dedicated to sustainability actions and performance. From the introduction of IR a reduction of the information related to the sustainability performance can be highlighted: in the different editions of IR the pages related to sustainability performance were about 20 plus some supplement documents provided in the report package. In addition, the KPIs provided as highlights were only related to the business dimension. Finally, the capitals approach was adopted only after the introduction of IR.

The materiality analysis started from the 2007 SR in which "mission and values, concerns expressed directly by stakeholders and the most significant indicators of GRI" were presented as the main factors used to determinate it. The analysis was developed in the next editions, in particular in 2010 some focus groups based on stakeholder reactions to the 2009 report were organized and "the result is the multi-stakeholder materiality chart that represents the varying levels of importance that our stakeholders (customers, employees, and communities) place on different topics." The same process was followed also in the IRs, and in the report, its purpose is explained:

> it also allows us to identify topics that require a new strategic approach or management decisions that would make it possible to seize new opportunities, mitigate risks and ensure long-term value creation.

In this manner, the concept to materiality seems to align with the IIRC framework. Although in the social and environmental reports there is no high level of connectivity because the different topics are not combined each other, in the IRs this aspect improves in terms of better frame of the sustainability issues in the company's strategic approach remaining the other types of connectivity not highlighted.

Summarizing, the moving from SR to IR has led to:

- the publication of "integrated" SR;
- a more strategic approach to sustainability disclosure;
- the "capitals approach" to disclose sustainability information;
- a more focus on value-creation process;
- a reduction of information about sustainability performance;
- a materiality principle aligned to the IIRC framework; and
- some improvements in terms of connectivity.

6.4. The IIRC Compliant by an "Integrated" Annual Report: Generali

Generali is an international group operating in the insurance industry. The reporting approach of the group can be summarized in the following manner: an SR had been prepared from 2004 to 2012; from 2013 to 2016 the group had published an IAR and a stand-alone SR; in 2017 only an IAR had been published. In the letter of CEO, in 2004 emerged the management relevance of the report:

> this Sustainability Report has given our Group the opportunity to analyze and understand to what extent our operations have been conducted in accordance with business ethics and corporate relations since our origins.

This approach is confirmed by the declared purpose of the report:

> this Report is the outcome of Executive Management taking the decision to devote increasing attention to the social and environmental impacts of its business operations, in particular by ensuring sustainable product innovation, and building a sustainability reporting system that is consistent across the Group.

Before the introduction of IR the choice to prepare a stand-alone report was justified:

> the SR is published as a separate document, distinct from the Group's other information tools, to dedicate attention to social and environmental issues that wouldn't be able to find any space in financial reports. Nevertheless, the SR is increasingly more integrated with the Management Report and Consolidated Financial Statements.

In the first IR, Generali affirms that it has decided:

> to take this new approach to corporate reporting since it represents an innovative and effective way to communicate the Group's ability to create value in a sustainable manner over time.

There is not a clear and declared difference with the stand-alone SR that "aims at describing everything we have done, why and how we have taken these actions, and the results we have achieved." In the 2014 IR an important evolution in reporting was declared:

> this year our reports have taken a further step ahead towards a true narrative dimension. The coherence of the different communicative languages used highlights the story, the "symbolic universe" around which our targets and aspirations are set.

This approach was also in SR that was presented in the following manner: "we wrote this Report by narrating and symbolically representing our activities and our universe." In the IR of 2016 the reporting strategy was better explained, although IR is the document providing an overview of the Group's value-creation process, other reports (such as SR) can provide specific information about single themes. Surprisingly, in 2017, the SR is not between these stand-alone reports.

The format of the SR has remained almost the same from 2004 to 2012. Except for the first edition, the structure of the report has been organized in this sections: *our group – economic/financial performance – direct stakeholders – competitive stakeholders – social/environmental stakeholders*. Substantially the format in the 2012 version is the same in spite of the fact that categories of stakeholders are split in different sections. In 2013, there is a restyling maintaining the same approach, using different name for the sections: *we Generali – deliver on the*

promise – value our people – live the community – Generali and the environment. In the version of the 2014, a section was added: *Generali for the economy and the market*. In the last edition of the SR a more concise format are chosen with only two main sections: *we Generali – our business model and our impact*. Indeed, the three main sections of the first IR are: *our group – our performance – outlook*. This format does not change up now. In the years the lengths of the reports have decreased. The first SR had almost 200 pages, whereas the last version had about 100 pages. The different edition of IR had about 100 pages.

Since the first version of SR, the stakeholder orientation of the disclosure was clear starting from the structure that classified the stakeholder in three main categories: direct stakeholders (employees, sales force, and shareholders); competitive stakeholders (clients, suppliers, and issuing companies); and social environmental stakeholders (community and environment). This orientation becomes increasingly softened until it almost disappears in the latest version of SR. None of the IR versions is structured by stakeholders.

In the early stages of the sustainability disclosure in Generali, the concept of value was mainly related to the financial dimensions. Before the 2013 only with some references to the social value of some products and with the relevance of the intangible value the SR went beyond the financial concept of value. Since the 2013, the narrative of the report changes because the value is associated with a broad context: "the group identity is the fundamental pillar at the base of the global growth of Assicurazioni Generali: one single overall view which, thanks to the main focus on business development in each country, respects context and market-related differences, creates synergy between financial and social responsibility, produces value for each stakeholder" or "this applies to all our stakeholders with whom we interact – clients, employees, the community, non-profit *organisations*, etc. – and with whom we want to create shared value because we feel a responsibility towards each and every one of them." In the 2016 SR there is a paragraph about "how to create sustainable value" and in this letter the Chairman says:

> Our report also reveals what creating shared value means to us, which originates from a mutual and elementary but at the same time sophisticated notion that is at the basis of insurance. Value is shared when the protection of individuals or companies turns into benefits for our employees and distributors, who thanks to Generali develop their professional skills and achieve their aspirations; for the communities in which we operate, made up of all those who have no business relationships with us but towards which we extend our vision to improve the lives of people; for the state and supranational entities.

On the contrary, in the IRs, except from some references to shared value or similar topics, few times the concept of value is linked to a broad context than the financial one. In each SR the representation of performance is multidimensional providing information both on financial performance and on sustainability performance. In order to better understand the performance, from 2004 to 2007 at end of the section dedicated at a specific stakeholders' category there was a list of objectives for the next years. The highlight of the reports presents KPIs related to financial performance and sustainability issues. As for the IRs, in each documents there is a section related to performance but if in 2013 within this section there was paragraphs on performance related to people, clients and sales

force in the next years this section is related only to the financial dimension. Also the highlights of this document are financial focused with few KPIs about people, clients or gas emissions. Only starting from the 2015 IR Generali considered the concepts of capital in its reporting strategy. In particular, in each IR and in the 2016 SR there is a representation of the business model using the capital schemes but the information was not provided following this approach.

Although since the 2007 SR is said that the report follows the principle of materiality, no formal explanation is provided about how the principle is adopted. Only after the introduction of IR information about the materiality analysis is disclosed, even if SR and IR seem to follow two different concept of materiality. In 2013 SR the GRI approach was adopted:

> the process of definition of the contents is based on the principles of materiality, stakeholder inclusiveness, sustainability context and completeness, and the process to guarantee information quality is based on the principles of balance, comparability, accuracy, timelines, clarity and reliability envisaged by the GRI.

In 2014, for the first time the analysis of materiality had been formalized following four phases: identification – assessment and prioritization – validation – issuing. Interestingly, the assessment and prioritization phase is carried out by top management which assigns "a priority to the individual topics based both on the impact for the Group and the interests of external stakeholders." The process was updated in 2015 "including a broad evaluation of the scenario and the pressure of public opinion and the media on the Group and a stakeholder dialogue activity." On the contrary the IR follows the IIRC approach and in 2013 IR the purpose of the materiality analysis was explained:

> Generali takes into account the primary purpose of integrated reporting, which is to explain to providers of financial capital how the organization creates value over time. Generali believes that value is created by focusing on the following primary stakeholders: the financial community, clients, human resources and distribution channels.

Nevertheless these differences between IR and SR, the 2016 IR refers to SR to have further information about the materiality process as if the analysis was valid for both documents. In 2017 IR, the materiality was explained but seems that it has been carried out internally without dialogue with stakeholder. Finally, the connectivity of information of the SR during the years increased only with reference to a more strategic approach to the issues although it is considered one of the main principles of the IRs. The connectivity of IR was mainly explained by the publication of an interactive version of the report and by the cross-references between sections.

Summarizing, the moving from SR to IR has led to:

- a more symbolic and strategic communication;
- the elimination of a stand-alone SR and the publication of an "integrated" annual report";
- a non-stakeholder-oriented reporting structure;
- a more financial focused representation of value and performance;
- a more detailed analysis of materiality of information; and
- a better connectivity of information.

Table 1. Comparison between Companies.

	Sabaf	Guna	Unicredit	Generali
Evolution of Corporate reporting	Social Report → IAR	Social Report → Integrated Report	Social and environmental report → SR → Integrated Report	SR → IAR and SR → Only IAR
Purpose of IR	"How social responsibility is integrated in corporate policies"	"Summary of commitments, goals and passions"	"Description of financial and sustainability performance"	"Demonstrating the ability to create value in a sustainable manner"
Stakeholder orientation of IR	Strong stakeholder orientation	Strong stakeholder orientation	No strong stakeholder orientation	No strong stakeholder orientation
Evolution of social disclosure in IR	More strategic approach; Reduction of disclosure; More connectivity	Strong connectivity; A flexible approach; A transparent approach	More strategic approach; "Capitals approach"; More focus on value creation process; Reduction of disclosure	More symbolic communication; More financial focus in representing value and performance; More connectivity

7. DISCUSSION AND CONCLUSIONS

From the multidimensional analysis of IR as a useful tool to improve sustainability disclosure, there is not an unequivocal answer to the proposed research question. Indeed, analyzing the points of view of academics, soft-regulators, and companies IR can be considered as a "contested concept" because of the heterogeneous and sometimes conflicting interpretations and implementation that are done on this type of report. In the social and political field, Gallie (1956), starting from the concept of art, defines an essentially contested concept as a concept for which the debate about the meaning and the different approaches used to explain it are difficult or impossible to be settled. The essentially contested concept framework has been used in different field such as social entrepreneurship (Choi & Majumdar, 2014). Seven criteria are proposed by Gallie (1956) to identify an essentially contested concept: appraisiveness, internal complexity, various describability, openness, aggressive and defensives uses, original exemplar, and progressive competition. Based on the analysis made, all these characteristics can be applied to the IR. Although the first IR practices precede the IIRC framework, we can consider the IR concept proposed by the framework as "the original exemplar" that is challenged or defended by scholars and that is applied or disregarded by companies. The literature review has highlighted that many interpretations of what IR means have been proposed but without achieving a common interest or purpose: is IR a tool to create value for shareholders (Eccles & Armbrester, 2011) or is it an instrument to promote ethical culture (Maniora, 2017) or is it only part of a legitimacy strategy (Beck et al., 2017)? The four case studies analyzed underline that the companies are also interpreting IR practices in different ways: is IR a new social report that replaces the previous one (Unicredit and Guna cases)?

Is it something that integrates and puts together annual reports and SRs and then replaces the two (Sabaf case)? Is it a synthetic overview that gives a holistic vision while a whole series of stand-alone documents coexist (Generali cases up to 2016)? Is it a more IAR that incorporates social disclosure (Generali case in 2017)?

Considering the IR as an essentially contested concepts entails some relevant implications for empirical research because it should always be clarified what type of IR is studied. In particular the quantitative researches, selecting samples using specific database, are also selecting specific models of IR. For example, many studies used the early pilot program of IIRC as database or the so-called "reporting emerging practice examples database" (Giorgino et al., 2017; Melloni, 2015; Melloni et al., 2016; Stacchezzini et al., 2016). In this paper, the documents analyzed will be mainly affected by the IIRC approach and therefore with a very different focus compared with documents prepared without strictly following the framework. The normal caution in generalizing the findings should be enhanced. Another example is related to the studies about IR in South Africa (Haji & Anifowose, 2017; Setia et al., 2015), which are affected by the particular corporate law of that country.

A problem is because of the fact that IR has quickly turned into a successful brand that is considered innovative so it is used even when the contents of the document are more in line with the traditional stand-alone report (Brusca et al., 2018). The idea of standardizing and institutionalizing IR practices, which was the basis of the creation of an internationally shared framework, has often been reduced to the use of a "brand" that does not involve neither standardization of contents nor processes. In terms of social disclosure, the risk is the use of the brand leads to move away from an accountability perspective. For example, using the IR brand as if it were the new frontier of social reporting, while the reports are mainly financial oriented, could lead to a "cannibalization" or "neutralization" of the practices of social disclosure. In this sense, the transition from financial reporting to stand-alone social/SRs and then to IR would be an involutionary path according to an accountability perspective. This line of thought can be confirmed by the comparative analysis between the GRI and the IIRC framework, which highlighted how in terms of purpose, users and materiality of information, the transition from one standard to another involves the transition from a social/sustainability-oriented approach towards a financial/investors-oriented one. On the other hand, Gibassier et al. (2018) show how IR can be considered a "rational myth" that the companies after the first adoption re-interpreted according to its own personal view consistent with the culture and vision of the specific organization. Therefore, potentially, every company can make its own personal version of the conceptual idea of IR (which may or may not be inspired by the IRC framework).

Starting from the idea of IR as contested concept the answer to the research question should be heterogeneous. From the multidimensional analysis it is possible to deduce some factors that can affect the possibility that IR can improve or not the sustainability disclosure.

The first factor is the external or internal motivation of IR practices. The IR practices are external driven when they are explained by the attempt to compliance with institutional or sector pressures according to which IR is considered

a best practices (McNally et al., 2017). In this case, IR could not be for sustainability but it could be a concrete evidence of isomorphism between organizations or a sort of "solicited disclosure" (Adams, Potter, Singh, & York, 2016; Van Der Laan, 2009). The publication of IIRC framework represented a moment of shock in which a new reporting revolution was proposed, inspiring reporting changes in many companies. When these changes are not an effect of an internal re-framing of the reporting approach (or a broader reconfiguration of the organization's mission), the consequence is a change only in design archetypes (structure, processes, and systems) and the tangible sub-systems without changing the DNA core of the organization (Stubbs & Higgins, 2014). In other words, the IR is not the output of a process of change but only a part of a legitimacy strategy (Beck et al., 2017) using the IIRC framework as acknowledged model to change society's or stakeholders perceptions (Sethi, 1978). For this reason an external driven IR that follows the IIRC framework unlikely can overcome the limitations of sustainability disclosure highlighted in Section 2. Indeed, the IR risk to be only a tool of impression or symbolic management to improve corporate reputation and image (Melloni et al., 2016; Setia et al., 2015; Stacchezzini et al., 2016). In some cases (e.g., Unicredit), the IR is only the new "label" of the previous SR rethought on the light of the new framework. This type of IR cannot disclose a more complete social and sustainability performance because the IIRC framework is based on the idea that sustainability performance is functional to good financial performance and does not have its own intrinsic importance (Brown & Dillard, 2014). No new metrics are identified; there are not (as opposed to the GRI guidelines) suggested sustainability performance indicators; there is not a concept of value that goes beyond its financial significance, which results in a reduced concept of performance. The risk is to reduce the amount of information provided (as in the case of Unicredit) and then also the quality. As for the relevance of information, the moving from a stand-alone SR to an IR following the IIRC framework has led to a change in the concept of materiality that becomes more investors oriented. Interestingly in the Unicredit and Sabaf cases, after the publication of IIRC framework (where the materiality is a core concept), the disclosure of materiality has increased. The risk of managerial capture of sustainability disclosure is not avoided but maybe strengthened adopting an IIRC-based view (Brown & Dillard, 2014; Flower, 2015; Thomson, 2015; Van Bommel, 2014). The IIRC framework uses a language typical of financial accounting and management (business model, strategy, capitals, and materiality) incorporating the issues of sustainability within the financial field by completing an involutional historical process of sustainability/social disclosure. In this sense, we see the Unicredit case in which the information has gone from a classification by stakeholder (also using a more social-oriented language) to one for capitals. In terms of language it is very significant that in the framework the term 'accountability' does not appear, almost never. As for the integration between information and lack of holistic picture of performance, the IIRC framework has exalted the so-called connectivity of information. The way in which connectivity has often been interpreted (see the cases of Sabaf, Unicredit, and Generali) is making the link between sustainability issues and business model more evident, while there is still

not a holistic representation of the performance that highlights the interconnections between financial and non-financial aspects from a broader perspective.

Although in an IR based on the IIRC framework and external driven, integration with sustainability/social disclosure appears a forced marriage, a different answer (true love?) could be associated with the case where the IR is the point of arrival of a process mainly of internal nature in which the change is radical involving the company DNA in a morphogenesis process (Stubbs & Higgins, 2014) or it can simply be related to the reporting function. In this case, relevant is the orientation of the internal change that is: what should be improved and for whom? Three possible answers emerge from the analysis: a financial, a social, and an holistic view. According to a financial view, the improvement in the financial reporting is the goal and IR practices are framed in the business case approach (Burke & Clark, 2016; Eccles & Armbrester, 2011). The main users are, consistently with IIRC framework, investors (Rensburg & Botha, 2014). Also in this case the improvement of sustainability disclosure for its intrinsic value is out of the field, and IIRC framework appears a natural model of reference. The design of reporting systems provides an "integrated" or "enhanced" annual report with (Generali up to 2016) or without (Generali in 2017 IR) a stand-alone SR. This interpretation of IR cannot overcome the limitations of traditional SR. Differently, in the social perspective the purpose of the introduction of IR is to improve the sustainability disclosure for the benefits of all stakeholders categories and more generally to improve the sustainability performance (Abeysekera, 2013; Eccles & Krzus, 2010; Maniora, 2017). This kind of interpretation can consider the IIRC framework as one of the points of reference but not the unique one. Potentially, this interpretation can promote a substantial change in sustainability disclosure making it more strategic, favoring a connectivity of information, using a concept of materiality closer to the GRI one. In this view, the typical system of reporting should provide a more "integrated" or "enhanced" SR and a financial focused annual report (e.g., Unicredit and Guna cases). The risk is to create only a more strategic report without an holistic perspective of the company's performance. The third interpretation is the holistic perspective in which IR is considered a new reporting model that combines annual report and SR creating an overview of the company's performance. The idea is to consider the value and the performance of a company as a combination of financial and social aspects relationship following an holistic approach to business management that while allows to meet the expectations of stakeholders permits the aligned between business strategy and social needs (McNally et al., 2017). This entails interpreting the creation of value for all stakeholders as the company's goal in a fully holistic vision (which does not deny the role of profit and shareholders) in which therefore integrated holistic accounting and reporting are functional to the change of company's mission. In this case, the reporting system will be characterized by an IR and by several stand-alone documents including the annual report with a financial focus and the SR with a social focus (see Generali's reporting system from 2013 to 2016).

Two other dichotomies, which are intertwined with the previous ones, can be useful for defining other IR interpretations. The first is that between IR pre-IIRC framework and post-IIRC framework. Companies like Sabaf who have started IR

practices in an early and pioneering manner compared to IIRC have developed distinctive models characterized by a strong internal awareness about the importance of reporting in an integrated manner. The Sabaf case, although difficult to be generalized, demonstrates that even in pioneering companies, while maintaining the particular characteristics of its reporting system, the new framework has nevertheless influenced the approach adopted above all in terms of a more strategic approach to sustainability disclosure. Starting from a single structured report, although more aggregate than integrated as in the case of Sabaf, before the publication of the IIRC framework is however an advantage in the search for "true love" between IR and sustainability reporting. The last dichotomy, however, is inspired by the Guna case and is that between IIRC compliant and non-compliant. Guna has adopted a social-oriented approach to IR (poorly influenced by the concepts present in the framework) able to propose innovative solutions such as the social hub, which can promote a stakeholder-customized disclosure and high connectivity of information. In addition, the presence in the reporting of the so-called bad news favors a transparent and accountable approach. On the contrary, a compliant logic risks to promote a more formal and substantial approach to IR, also considering the possibility of fulfilling with this type of document at obligations set out in the European Directive 2014/95/EU on non-financial information.

Summarizing, this multidimensional analysis tried to combine three different and relevant points of view in studying the IR in a sustainable perspective. In so doing, the chapter contributes to the literature on IR in different ways. Previous studies have analyzed IR from a sustainability perspective (see Stacchezzini et al., 2016) or using a multidimensional approach investigating the visions of different actors involved (Burke & Clark, 2016) but no previous papers tried to combine these two approaches. Therefore, this chapter contributes to literature: first because it proposes a multidimensional analysis of IR studying the different nuances that academics, soft-regulators, companies have in thinking, designing, and implementing IR; second, in so doing the chapter adopts a sustainability perspective investigating on the capacity of IR to improve the limitations of "traditional" stand-alone reports using a pre-post-approach; third, the chapter proposes the IR as an essentially contested concept suggesting the need to identify different IR models to better interpreting the findings of empirical researches and distinguishing these models for belonging to different fields with different purposes (e.g., financial, social, or holistic approach).

Further researches could follow the call of Dumay et al. (2016) for a fourth stage of IR research oriented to an eco-system approach to understand how IR practices can promote social and environmental sustainability for the benefits of large categories of stakeholders. However, to tackle this path in an effective and conscious way (at the same time trying to bridge the gap between theory and practice), we should realize that, beyond the attempt to standardize, there is not only one IR but also the "orthodox" version of the model proposed by the IRC framework which is not the most suitable to pursue objectives aimed at improving sustainability disclosure and, more broadly, at improving sustainability performance. Research should be fully aware of the "contested" nature of IR, which therefore remains an instrument that is absolutely flexible and can be shaped by

the different objectives pursued. Being able to differentiate within IR research among the various usable models could avoid emphasizing a rhetoric that seems to propose IR as a "panacea for all ills." The awareness about the varied nature of this practice, however, can facilitate the understanding about the fact that the IR is able to obtain potential benefits related to the specific focus that is intended to be given to the tool.

This chapter is not without limitations. In an attempt to combine the three different points of view (academics, soft-regulators, and companies), from the methodological point of view it is difficult to be absolutely rigorous in each of the three dimensions. As for the literature review, it is qualitative and not structured, although the analysis of cases concerns only the study of reporting without analyzing the internal implementation processes beyond the fact that the identified ideal types are not exhaustive of possible feasible alternatives but they have the purpose to describe possible types of approach carried out by the companies. In addition, other methodological limits concern the four case studies: they concern only one country; they cannot be considered statistically representative, although the generalization mechanism related to the case studies methodology is different than the quantitative studies; the study uses only the logic of theoretical replication and not of literal replication oriented, instead, at selecting cases with similar conditions to verify if the same results are obtained.

REFERENCES

Abeysekera, I. (2013). A template for integrated reporting. *Journal of Intellectual Capital*, *14*(2), 227–245.

Adams, C. (2015). The international reporting council: A call for action. *Critical Perspectives on Accounting*, *27*, 23–28.

Adams, C., & Evans, R. (2004). Accountability, completeness, credibility and the audit-expectations gap. *Journal of Corporate Citizenship*, *14*, 97–115.

Adams, C., & Frost, G. R. (2007). Managing social and environmental performance: Do companies have adequate information? *Australian Accounting Review*, *17*(3), 2–11.

Adams, C., & Larrinaga-Gonzalez, C. (2007). Engaging with organisations in pursuit of improved sustainability accounting and performance. *Accounting, Auditing and Accountability Journal*, *20*(3), 333–355.

Adams, C., Potter, B., Singh, P., & York, J. (2016). Exploring the implications of integrated reporting for social investment (disclosures). *British Accounting Review*, *48*, 283–296.

Adams, S., & Simmet, R. (2011). Integrated reporting: An opportunity for Australia's not-for-profit sector. *Australian Accounting Review*, *58*(21), 292–301.

Argento, D., Culasso, F., & Truant, E. (2018). From sustainability to integrated reporting: The legitimizing role of the CSR manager. *Organization and Environment*, *32*(4), 484–507.

Atkins, J., & Maroun, W. (2015). Integrated reporting in South Africa in 2012: Perspectives from South African institutional investors. *Meditari Accountancy Research*, *23*(2), 197–221.

Baboukardos, D., & Rimmel, G. (2016). Value relevance of accounting information under an integrated reporting approach: A research note. *Journal of Accounting and Public Policy*, *35*(4), 437–452.

Battilana, J., Lee, M., Walker, J., & Dorsey, C. (2012). In search of the hybrid ideal. *Stanford Social Innovation Review*, *10*, 49–55.

Bebbington, J., Larrinaga-González, C., & Moneva-Abadía, J. M. (2008). Legitimating reputation/the reputation of legitimacy theory. *Accounting, Auditing & Accountability Journal*, *21*(3), 371–374.

Beck, C., Dumay, J., & Frost, G. (2017). In pursuit of a 'Single Source of Truth': From threatened legitimacy to integrated reporting. *Journal of Business Ethics*, *141*, 191–205.

Bengtsson, B., & Hertting, N. (2014). Generalization by mechanism: Thin rationality and ideal-type analysis in case study research. *Philosophy of the Social Sciences*, *44*(6), 707–732.

Berg, B. L. (2001). *Qualitative research methods for the social sciences*. Boston, MA: Allyn and Bacon.

Bernardi, C., & Stark, A. W. (2016). Environmental, social and governance disclosure, integrated reporting, and the accuracy of analyst forecasts. *The British Accounting Review*, *50*(1), 16–31.

Brown, J., & Dillard, J. (2014). Integrated reporting: On the need for broadening out and opening up. *Accounting, Auditing & Accountability Journal*, *27*(7), 1120–1156.

Brusca, I., Labrador, M., & Larran, M. (2018). The challenge of sustainability and integrated reporting at universities: A case study. *Journal of Cleaner Production*, *188*(1), 347–354.

Bryman, A. (2008). Of methods and methodology. *Qualitative Research in Organizations and Management: An International Journal*, *3*(2), 159–168.

Burgman, R., & Ross, G. (2007). The importance of intellectual capital reporting: Evidence and implications. *Journal of Intellectual Capital*, *8*(1), 7–51.

Burke, J., & Clark, C. (2016). The business case for integrated reporting insights from leading practitioners, regulators, and academics. *Business Horizons*, *59*, 273–283.

Busco, C., Frigo, M., Quattrone, P., & Riccaboni, A. (2013). Redefining corporate accountability through integrated reporting. What happens when values and value creation meet? *Strategic Finance* pp.33–41, August, pp. 33–41.

Busco, C., Frigo, M., Quattrone, P., & Riccaboni, A. (2014). Leading practices in integrated reporting. *Strategic Finance*, September, pp. 23–32.

Cheng, M., Green, W., Conradie, P., Konishi, N., & Romi, A. (2014). The international integrated reporting framework: Key issues and future research opportunities. *Journal of International Financial Management and Accounting*, *25*(1), 90–119.

Cho, C. H., Laine, M., Roberts, R. W., & Rodrigue, M. (2015). Organized hypocrisy, organizational façades, and sustainability reporting. *Accounting, Organizations and Society*, *40*, 78–94.

Choi, N., & Majumdar, S. (2014). Social entrepreneurship as an essentially contested concept: Opening a new avenue for systematic future research. *Journal of Business Venturing*, *29*, 363–376.

Churret, C., & Eccles, R. (2014). Integrated reporting, quality of management, and financial performance. *Journal of Applied Corporate Finance*, *26*(1), 56–64.

Creswell, J. (2009). *Research design. Qualitative, quantitative and mixed methods*. Thousand Oaks, CA: Sage Publications

Deegan, C. M. (2007). *Financial accounting theory*. New York, NY: McGraw-Hill.

Del Baldo, M. (2017). The implementation of integrating reporting <IR> in SMEs: Insights from a pioneering experience in Italy. *Meditari Accountancy Research*, *25*(4), 505–532.

de Villiers, C., Kelly Hsiao, P., & Maroun, W. (2017). Developing a conceptual model of influences around integrated reporting, new insights and directions for future research. *Meditari Accountancy Research*, *25*(4), 450–460.

de Villiers, C., & Maroun, W. (2017). *Sustainability accounting and integrated reporting*. Oxfordshire: Routledge.

de Villiers, C., Rinaldi, L., & Unerman, J. (2014). Integrated reporting: Insights, gaps and an agenda for future research. *Accounting, Auditing & Accountability Journal*, *27*(7), 1042–1067.

de Villiers, C., Venter, E., & Kelly Hsiao, P. (2017). Integrated reporting: Background, measurement issues, approaches and an agenda for future research. *Accounting & Finance*, *57*, 937–959.

Dierkes, M., & Peterson, A. B. (1997). The usefulness and use of social reporting information. *Accounting Organizations and Society*, *10*(1), 29–34.

Dumay, J., Bernardi, C., Guthrie, J., & De Martini, P. (2016). Integrated reporting: A structured literature review. *Accounting Forum*, *40*(3), 166–185.

Dumay, J., Bernardi, C., Guthrie, J., & La Torre, M. (2017). Barriers to implementing the international integrated reporting framework: A contemporary academic perspective. *Meditari Accountancy Research*, *25*(4), 461–480.

Dumay, J., & Dai, T. (2017). Integrated thinking as a cultural control? *Meditari Accountancy Research*, *25*(4), 574–604.

Eccles, R., & Armbrester, K. (2011). Integrated reporting in the cloud. *Iese Insight*, *8*, 13–20.

Eccles, R., & Krzus, M. (2010). *One report. Integrated reporting for a sustainable strategy*. Hoboken, NJ: John Wiley & Sons.

Eccles, R., & Saltzman, D. (2011). Achieving sustainability through integrated reporting. *Stanford Social Innovation Review*, Summer, 57–61.

Fasan, M. (2013). Annual reports, sustainability reports and integrated reports: Trends in corporate disclosure. In C. Busco, M. Frigo, P. Quattrone, & A. Riccaboni (Eds.), *Integrated reporting. Concepts and cases that redefine corporate accountability* (pp. 41–55). Berlin, Germany: Springer.

Fasan, M., & Mio, C. (2016). Fostering stakeholder engagement: The role of materiality disclosure in integrated reporting. *Business Strategy and the Environment*, *26*(3), 288–305.

Fifka, M. S. (2013). Corporate responsibility reporting and its determinants in comparative perspective – A review of the empirical literature and a meta-analysis. *Business Strategy and the Environment*, *22*(1), 1–35.

Flower, J. (2015). The international integrated reporting council: A story of failure. *Critical Perspectives on Accounting*, *27*, 1–17.

Flyvbjerg, B. (2006). Five misunderstandings about case-study research. *Qualitative Inquiry*, *12*(2), 219–245.

Frías-Aceituno, V., Rodríguez-Ariza, L., & García-Sánchez, I. M. (2013). Is integrated reporting determined by a country's legal system? An exploratory study. *Journal of Cleaner Production*, *44*, 45–55.

Fries, J., McCulloch, K., & Webster, W. (2010). The prince's accounting for sustainability project: Creating 21st-century decision making and reporting system to respond to 21st-century challenges and opportunities. In A. G. Hopwood, J. Unerman, & J. Fries (Eds.), *Accounting for sustainability. Practical insights* (pp. 29–46). London: Earthscan.

Gallie, W. B. (1956). Art as an essentially contested concept. *The Philosophical Quarterly*, *6*(23), 97–114.

García-Sánchez, I., Lázaro Rodríguez-Ariza, J., & Frías-Aceituno, V. (2013). The cultural system and integrated reporting. *International Business Review*, *22*(5), 828–838.

Garcia-Sanchez, I., & Noguera-Gamez, L. (2017). Integrated reporting and stakeholder engagement: The effect on information asymmetry. *Corporate Social Responsibility and Environmental Management*, *24*(5), 395–413.

Gianfelici, C., Casadei, A., & Cembali, f. (2018). The relevance of nationality and industry for stakeholder salience: An investigation through integrated reports. *Journal of Business Ethics*, *150*, 541–558.

Gibassier, D., Rodrigue, M., & Arjaliès, D. L. (2018). Integrated reporting is like God: No one has met Him, but everybody talks about Him: The power of myths in the adoption of management innovations. *Accounting, Auditing & Accountability Journal*, *31*(5), 1349–1380.

Giorgino, M., Supino, E., & Barnabè, F. (2017). Corporate disclosure, materiality, and integrated report: An event study analysis. *Sustainability*, *9*, 2182.

Gray, R. (2006). Social, environmental and sustainability reporting and organizational value creation. Whose value? Whose creation? *Accounting, Auditing & Accountability Journal*, *19*(6), 793–819.

Gray, R. (2010). A re-evaluation of social, environmental and sustainability accounting. *Sustainability Accounting, Management and Policy Journal*, *1*(1), 11–32.

Gray, R., & Milne, M. (2002). Sustainability reporting: Who's kidding whom? Chartered. *Accountants Journal of New Zealand*, *81*(6), 66–70.

Gray, R., Owen, D., & Adams, C. (1996). *Accounting and Accountability*. London: Prentice Hall.

GRI. (2013). *G4 sustainability reporting guidelines*. Global Reporting Initiative. Retrieved from http://www.globalreporting.org/resourcelibrary/GRIG4-Part1-Reporting-Principles-and-Standard-Disclosures.pdf. Accessed on 1 June 2018.

GRI. (2016). *Consolidated set of GRI sustainability reporting standards*. Global Reporting Initiative. Retrieved from https://www.globalreporting.org/standards/. Accessed on June 1, 2018.

Guthrie, J., & Parker, L. (1989). Corporate social reporting: A rebuttal of legitimacy theory. *Accounting and Business Research*, *19*(76), 343–352.

Haji, A., & Anifowose, M. (2017). Initial trends in corporate disclosures following the introduction of integrated reporting practice in South Africa. *Journal of Intellectual Capital*, *18*(2), 373–399.

Hefflin, F., Shaw, K., & Wild, J. J. (2011). Credit ratings and disclosure channels. *Research in Accounting Regulation*, *23*(1), 20–33.

Higgins, C., & Larrinaga, C. (2014). Sustainability reporting: Insights from institutional theory. In J. Unerman, J. Bebbington, & B. O'Dwyer (Eds.), *Sustainability accounting and accountability* (2nd ed., pp. 273–285). London: Routledge.

Higgins, C., Stubbs, W., & Love, T. (2014). Walking the talk(s): Organisational narratives of integrated reporting. *Accounting, Auditing & Accountability Journal*, *27*(7), 1090–1119.

Hopwood, A. (2009). Accounting and the environment. *Accounting, Organisations and Society*, *34*(3–4), 433–439.

IIRC. (2013). *The international IR framework*. International Integrated Reporting Council. Retrieved from www.theiirc.org/wp-content/uploads/2013/12/13-12-08-THE-INTERNATIONAL-IR-FRAMEWORK-2-1.pdf. Accessed on June 1, 2018.

Incollingo, A., & Bianchi, M. (2016). The connectivity of information in integrated reporting. Empirical evidence from international context. *Financial Reporting*, *2*, 55–78.

Integrated Reporting Committee (IIRC) (2011), Towards Integrated Reporting. Comunicating value in the 21th Century, disponibile sul sito: http://www.theiirc.org

Ioana, D., & Adriana, T. T. (2014). Research agenda on in integrated reporting: New emergent theory and practice. *Procedia-Economics and Finance*, *15*, 221–227.

IoDSA and King III. (2009). *King code of governance for South Africa 2009*. Institute of Directors in Southern Africa and the King Committee on Governance. Retrieved from http://african.ipapercms.dk/IOD/KINGIII/kingiiireport/. Accessed on June 1, 2018.

Jensen, J., & Berg, N. (2012). Determinants of traditional sustainability reporting versus integrated reporting. An institutionalist approach. *Business Strategy and the Environment*, *21*(5), 299–316.

Kilic, M., & Kuzey, C. (2018). Determinants of forward-looking disclosures in integrated reporting. *Managerial Auditing Journal*, *33*(1), 115–144.

Kolk, A. (2004). More than words? Analysis of sustainability reports. *New Academy Review*, *3*(1), 59–75.

Kolk, A., & Pinkse, J. (2010). The integration of corporate governance in corporate social responsibility disclosures. *Corporate Social Responsibility and Environmental Management*, *17*(1), 15–26.

Krippendorff, K. (2004). *Content analysis: An introduction to its methodology*. Thousand Oaks, CA: Sage Publications Inc.

Kytle, B., & Ruggie, J. G. (2005). *Corporate social responsibility as risk management. A model for multinationals. Corporate social responsibility initiative*. Working Paper No.10. Harvard University, Cambridge, MA, USA.

Lai, A., Melloni, G., & Stacchezzini, R. (2017). What does materiality mean to integrated reporting preparers? An empirical exploration. *Meditari Accountancy Research*, *25*(4), 533–552.

Larrinaga-Gonzales, C. (2007). Sustainability reporting: Insights from neoinstitutional theory. In J. Unerman, J. Bebbington, & B. O'Dwyer (Eds.), *Sustainability accounting and accountability* (pp. 150–167). London: Routledge.

Lee, K., & Yeo, G. (2016). The association between integrated reporting and firm valuation. *Review of Quantitative Finance and Accounting*, *47*(4), 1221–1250.

Leech, N., & Onwuegbuzie, A. (2008). A typology of mixed methods research designs. *Quality and Quantity*, *43*(2), 265–275.

Lev, B. (2001). *Intangibles: Management, measurement, and reporting*. Washington, DC: Brookings Institution Press.

Lodhia, S. (2015). Exploring the transition to integrated reporting through a practice lens: An Australian customer owned bank perspective. *Journal of Business Ethics*, *129*, 585–598.

Macias, H., & Farfan Lievano, A. (2017). Integrated reporting as a strategy for firm growth: Multiple case study in Colombia. *Meditari Accountancy Research*, *25*(4), 605–628.

Maniora, J. (2017). Is integrated reporting really the superior mechanism for the integration of ethics into the core business model? An empirical analysis. *Journal of Business Ethics*, *140*(4), 755–786.

Marquis, C., Glynn, M., & Davis, G. (2007). Community isomorphism and corporate social action. *Academy of Management Review*, *32*(3), 925–945.

Mason, J. (2006). *Six strategies for mixing methods and linking data in social science research*. National Centre for Research Methods Working Papers Series 4/06, pp. 1–12.

McNally, M., Cerbone, D., & Maroun, W. (2017). Exploring the challenges of preparing an integrated report. *Meditari Accountancy Research*, *25*(4), 481–504.

Melloni, G. (2015). Intellectual capital disclosure in integrated reporting: an impression management analysis, *Journal of Intellectual Capital*, *16*(3), 661–680.

Melloni, G., Stacchezzini, R., & Lai, A. (2016). The tone of business model disclosure: An impression management analysis of the integrated reports. *Journal of Management & Governance*, *20*(2), 295–320.

Mervelskemper, L., & Streit, D. (2017). Enhancing market valuation of ESG performance: Is integrated reporting keeping its promise? *Business Strategy and the Environment*, *26*(4), 536–549.

Milne, M., & Gray, R. (2013). W(h)ither ecology? The triple bottom line, the global reporting initiative, and corporate sustainability reporting. *Journal of Business Ethics*, *118*(1), 13–29.

Mio, C., Fasan, M, & Pauluzzo, R. (2016). Internal application of IR principles: Generali's internal integrated reporting. *Journal of Cleaner Production*, *139*, 204–218.

Montecalvo, M., Farneti, F., & de Villiers, C. (2018). The potential of integrated reporting to enhance sustainability reporting in the public sector. *Public Money & Management*, *38*(5), 365–374.

Morros, J. (2016). The integrated reporting: A presentation of the current state of art andaspects of integrated reporting that need further development. *Intangible Capital*, *12*(1), 336–356.

Naynar, N., Ram, A., & Maroun, W. (2018). Expectation gap between preparers and stakeholders in integrated reporting. *Meditari Accountancy Research*, *26*(2), 241–262.

O'Dwyer, B. (2003). Conceptions of corporate social responsibility: The nature of managerial capture. *Accounting, Auditing & Accountability Journal*, *16*(4), 523–557.

O'Dwyer, B., Unerman, J., & Bradley, J. (2005). Perceptions on the emergence and future development of corporate social disclosure in Ireland. Engaging the voices of non-governmental organisations. *Accounting, Auditing and Accountability Journal*, *18*(1), 14–43.

Owen, D. L., Gray, R. H., & Bebbington, J. (1997). Green accounting: Cosmetic irrelevance or radical agenda for change? *Asia Pacific Journal of Accounting*, *4*(2), 175–198.

Owen, D. L., Swift, T., Humphrey, C., & Bowerman, M. (2000). The new social audits: Accountability, managerial capture or the agenda of social champions? *European Accounting Review*, *9*(1), 81–98.

Parker, L. (1986). Polemical themes in social accounting: A scenario for standard setting. *Advances in Public Interest Accounting*, *1*, 67–93.

Parker, L. (2005). Social and environmental accounting research. A view from the commentary box. *Accounting, Auditing & Accountability Journal*, *18*(6), 824–860.

Paternostro, S. (2013). The connectivity of information for the integrated reporting. In C. Busco, M. Frigo, A. Riccaboni, & P. Quattrone (Eds.), *Integrated reporting. Concepts and cases that redefine corporate accountability* (pp. 59–77). Berlin, Germany: Springer.

Pedrini, M. (2007). Human capital convergences in intellectual capital and sustainability reports. *Journal of Intellectual Capital*, *8*(2), 346–366.

Perego, P., Kennedy, S., & Whiteman, G. (2016). A lot of icing but little cake? Taking integrated reporting forward. *Journal of Cleaner Production*, *136*, 53–64.

Perrini, F., & Tencati, A. (2006). Sustainability and stakeholder management: The need for new corporate performance evaluation and reporting systems. *Business Strategy and the Environment*, *15*(5), 296–308.

Porter, M., & Kramer, M. (2011). The big idea: creating shared value. *Harvard Business Review*, *89*(1/2), 62–77.

Potter, B., & Soderstrom, N. (2014). Exploring the challenges of broadening accounting reports: Insights from research. In M. Hitt, S. Jackson, S. Carmona, L. Bierman, C. Shalley, & D. Wright (Eds.), *Oxford handbooks online: The Oxford handbook on strategy implementation*. Retrieved from http://www.oxfordhandbooks.com/view/10.1093/oxfordhb/9780199935406.001.0001/oxfordhb-9780199935406-e-15. Accessed on May 18, 2018.

Rambaud, A., & Richard, J. (2015). The "triple depreciation line" instead of the "triple bottom line": Towards a genuine integrated reporting. *Critical Perspectives on Accounting*, *33*, 92–116.

Reimsbach, D., Hahn, R., & Gürtürk, A. (2017). Integrated reporting and assurance of sustainability information: An experimental study on professional investors' information processing. *European Accounting Review*, *27*(3), 559–581.

Rensburg, R., & Botha, E. (2014). Is integrated reporting the silver bullet of financial communication? A stakeholder perspective from South Africa. *Public Relations Review*, *40*(2), 144–152.

Rivera-Arrubla, Y., Zorio-Grima, A., & García-Benau, M. (2017). Integrated reports: Disclosure level and explanatory factors. *Social Responsibility Journal*, *13*(1), 155–176

Roberts, R. (1992). Determinants of corporate social responsibility disclosures: An application of stakeholder theory. *Accounting, Organizations and Society*, *17*(6), 595–612.

Sethi, S. (1978). Advocacy advertising. The American experience. *California Management Review*, *21*(1), 55–68.

Setia, N., Abhayawansa, S., Joshi, M., & Vu Huynh, A. (2015). Integrated reporting in South Africa: Some initial evidence. *Sustainability Accounting, Management and Policy Journal*, *6*(3), 397–424.

Sierra-García, L., Zorio-Grima, A., & García-Benau, M. A. (2015). Stakeholder engagement, corporate social responsibility and integrated reporting: An exploratory study. *Corporate Social Responsibility and Environmental Management*, *22*, 286–304.

Silvestri, A., Veltri, S., Venturelli, A., & Petruzelli, S. (2017). A research template to evaluate the degree of accountability of integrated reporting: A case study. *Meditari Accountancy Research*, *25*(4), 675–704.

Simnett, R., Vanstraelen, A., & Chua, W. F. (2009). Assurance on sustainability reports: An international comparison. *The Accounting Review*, *84*(3), 937–968.

Stacchezzini, R., Melloni, G., & Lai, A. (2016). Sustainability management and reporting: The role of integrated reporting for communicating corporate sustainability management. *Journal of Cleaner Production*, *136*, 102–110.

Stubbs, W., & Higgins, C. (2014). Integrated reporting and internal mechanisms of change. *Accounting, Auditing & Accountability Journal*, *27*(7), 1068–1089.

Stubbs, W., & Higgins, C. (2018). Stakeholders' perspectives on the role of regulatory reform in integrated reporting. *Journal of Business Ethics*, *147*(3), 489–508.

Thomson, I. (2015). But does sustainability need capitalism or an integrated report. A commentary on 'The International Integrated Reporting Council: A story of failure' by Flower, J.. *Critical Perspectives on Accounting*, *27*, 18–22.

Van Bommel, K. (2014). Towards a legitimate compromise? An exploration of integrated reporting in the Netherlands. *Accounting, Auditing & Accountability Journal*, *27*(7), 1157–1189.

Van Der Laan, S. (2009). The role of theory in explaining motivation for corporate social disclosures: Voluntary disclosures vs 'Solicited' disclosures. *Australasian Accounting Business and Finance Journal*, *3*(4), 15–29.

Van Zyl, A. (2013). Sustainability and integrated reporting in the South African corporate sector. *International Business & Economics Research Journal*, *12*(8), 903–926.

Vaz, N., Fernandez-Feijoo, B., & Ruiz, S. (2016). Integrated reporting: An international overview. *Business Ethics a European Review*, *25*(4), 577–591.

Veltri, S., & Silvestri, A. (2015). The Free State University integrated reporting: A critical consideration. *Journal of Intellectual Capital*, *16*(2), 443–462.

Visser, W. (2011). The age of responsibility: CSR 2.0 and the new DNA of business. *Journal of Business Systems, Governance and Ethics*, *5*(3), 7–22.

Yin, R. (2014). *Case study research. Design and methods*. Thousand Oaks, CA: Sage Publications.

CHAPTER 6

TONE AT TOP IN INTEGRATED REPORTING: THE ROLE OF NON-FINANCIAL PERFORMANCE

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ABSTRACT

Voluntary non-financial reporting aims at fairly reporting a firm's non-financial performance. In particular, integrated reporting (IR) displays in a single report the contribution of different forms of capital to the firm's value creation. Drawing on both legitimacy and voluntary disclosure theory, the main purpose of this study is to examine the extent to which a company's environmental, social, and governance (ESG) performance affects the content and semantic properties of intellectual capital disclosure (ICD) found in IRs.

To test theoretical hypotheses, content and tone analysis is used to assess the disclosure strategy associated with ICD, whereas a regression analysis tests the variation in semantic properties of ICD according to firms' ESG performance. A total of 79 reports by European listed firms from 2011 to 2016 were downloaded via the Integrated Reporting Emerging Practice Examples Database and analyzed.

Results show that ESG performance contributing more to optimistic ICD tone is governance, although in mixed ways. Integrating vision and strategy positively contributes to ICD tone, whereas information on poor treatment of shareholders' rights tends to be manipulated and associated with an optimistic tone of the ICD. Moreover, eco-efficient product innovation and healthy and safe job conditions play a positive role in enhancing optimistic ICD tone.

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This chapter contributes to the current literature on voluntary disclosure by introducing new evidence on the disclosure strategy in IR. By analyzing the effect of the single dimensions of ESG performance on ICD tone, this study extends respectively ESG literature.

Keywords: ESG performance; intellectual capital disclosure; integrated reporting; content analysis; tone analysis; voluntary disclosure

1. INTRODUCTION

Recently, the accounting literature and practitioners have pointed out the growing interest to content analysis of narrative disclosures in order to verify how firms report their performance (Beattie, McInnes, & Fearnley, 2004; Li, 2010). With this regard, narrative statements in annual reports, analyst reports and recommendations, management speech, corporate social responsibility (CSR) reports, intellectual capital statements, and environmental reports are the most analyzed types of documents (Abhayawansa & Guthrie, 2016a, 2016b; Adams, 2015; Druz, Petzev, Wagner, & Zeckhauser, 2017; Hummel, Mittelbach-Hoermanseder, Cho, & Matten, 2017; Merkley, 2014). External stakeholders make relevant and strategic decisions by using information contained in these reports and the tone of narrative disclosure (Arena, Bozzolan, & Michelon, 2015; Druz et al., 2017; Hummel et al., 2017; IIRC, 2013; Li, 2010; Merkley, 2014). Thus, the reliability and verifiability of this kind of non-financial disclosures are pivotal for increasing the accuracy of analysts' forecasts about firms' future performance (Hussainey & Walker, 2009).

A stream of literature tested the relationship between the tone of voluntary disclosures and the non-financial performance (Beretta, Demartini, & Trucco, 2018; Casonato et al., 2019; Melloni, Caglio, & Perego, 2017). In particular, some scholars studied the link between a weak non-financial performance in terms of environmental, social, and governance (ESG) topics and an optimistic disclosure tone in integrated reports (IR) by finding mixed results about it (Melloni et al., 2017). Furthermore, Arena et al. (2015) found that the tone of environmental disclosures is related to future environmental performance. Hummel et al. (2017) found that social performance positively affects the tone of non-financial disclosures in the UK and the US. Previous literature let emerge a call for more research on this topic in order to better highlight the value relevance of non-financial voluntary disclosures (e.g., Cahan et al., 2016; Hummel et al., 2017). Furthermore, there is a room for future research with regard to the tone at the top in IR (Beattie et al., 2004; Li, 2010) and to test the relationship between the ESG performance and the tone at the top. More specifically, although the literature discussing "tone at the top" in IR with both a qualitative (Beck, Dumay, & Frost, 2017; Dumay & Dai, 2017; Lodhia, 2015) and a quantitative approach is flourishing (e.g., Beretta et al., 2019; Melloni, 2015; Melloni, Stacchezzini, & Lai, 2016) Stacchezzini et al., 2016), there is a paucity of literature addressing how

ESG performance is independently affecting the disclosure offered by IR. Prior research indeed explicitly argued that:

> the International IR Framework does not openly address ecological sustainability and social justice and future research should identify whether it should, if so how and what implications it has for IC accounting. (Abhayawansa, Guthrie, & Bernardi, 2019, p. 7)

In so doing, this study aims at identifying those determinants of ESG performance that primarily affect the corporate disclosure strategy, and in particular its tone. Drawing on both legitimacy and voluntary disclosure theory, the main purpose of this study is to examine the extent to which a company's ESG performance affects the content and semantic properties of intellectual capital disclosure (ICD) found in IRs. This study aims to answer the following research question: Does ESG performance independently affect the tone at the top in IRs, with particular regard to ICD? To answer the research question, the IRs related to European listed companies for the years from 2011 to 2016 have been downloaded from the IIRC's Integrated Reporting Emerging Practice Examples Database ($n = 79$). To test the research hypotheses, a content and tone analysis on ICD included into IRs were carried out. Finally, a set of regressions was applied. This study focused on ICD, within the IR, because it provides a ground for comparison of disclosure strategies beyond the adoption of the IR framework. As clearly stated by de Villiers and Sharma (2017) "IC does not compete with [different] forms of reporting forms, but forms an essential part of each" (p. 1), hence the analysis of ICD within IRs is consistent with and builds upon prior studies on non-financial voluntary disclosure (e.g., Abeysekera, 2006; Dumay & Garanina, 2013) while extending this research stream to the IR framework.

Contributions of this research are related to different theoretical and practical areas. Findings from this study extend both the voluntary disclosure and the legitimacy theory (Gray, Kouhy, & Lavers, 1995; Verrecchia, 1983). Also, new insights on the role of voluntary disclosure can be drawn from this study (Beattie et al., 2004; Verrecchia, 2001). The analysis on the individual role of dimensions of ESG performance extends the ESG literature, respectively. Consistently, results from this study are aimed at contributing to the stakeholder and legitimacy theories of the firm. Finally, this research enriches the debate on the development and adoption of IR in practice (Dumay, 2016). With regard to practical contributions, sustainable investors could take advantage from this research (Humphrey, Lee, & Shen, 2012). Moreover, corporations and accounting practitioners can benefit from empirical findings of this study by implementing those reporting practices that are more capable of conveying and stimulating ESG performance. The whole society could also draw relevant information from the evidence reported in this research, because it provides a valuable base for customers, employees, suppliers, financial, and regulatory institutions to make their decisions based on their preference toward often competing societal values.

The remainder of this chapter is structured as follows. In the following section the authors review the relevant literature and develop a set of hypotheses on

the link between a non-financial performance and a voluntary disclosure tone. Next, the methodology used to test the research hypotheses is delineated and described before the presentation of the empirical results. Finally, the results are discussed, and conclusions are provided, including suggestions for future research.

2. LITERATURE REVIEW

2.1. The Tone of Corporate Narrative Disclosure

The tone of narrative disclosure refers to the use of a more optimistic, pessimistic, or neutral language when presenting a firm's performance expressing different sentiments (Sydserff & Weetman, 1999). Prior research demonstrated that managers use discretionary disclosure, through a biased tone to show their firm's performance in a more favorable light (Rogers, Van Buskirk, & Zechman, 2011), especially with reference to forward-looking narratives (Schleicher & Walker, 2010), hence relying on impression management practices (Hooghiemstra, 2000; Clatworthy & Jones, 2001; Merkl-Davies & Brennan, 2007). A more favorable, or a less negative, disclosure tone biases the perception of investors and analysts (Lang & Lundholm, 2000; Loughran & McDonald, 2011).

In particular, with regard to the tone of ICD in analyst reports, Abhayawansa (2011) investigated such disclosure based on their format, time orientation, and news tenor and found that the positive tone is prevalent. Moreover, analysts use ICD in their reports to overcome the pessimism associated with an unfavorable recommendation, increase credibility of favorable recommendations, and stress differences between sell and hold recommendations (Abhawayasana & Guthrie, 2016b).

As for ICD in IRs, prior studies highlighted that when companies report a decreasing financial performance, the tone of ICD is more optimistic than it is in other cases, supporting an impression management hypothesis (Melloni, 2015).

2.2. The Tone of Corporate Disclosure and Non-financial Performance

With regard to the tone of disclosure and non-financial performance, Arena et al. (2015) investigated sustainability reports of companies operating in environmental sensitive industries and provided evidence that linguistic characteristics of CSR reports signal future environmental performance. According to Hummel et al. (2017), the economic model in which the company operates discriminates the type of disclosure tone, as a result CSR disclosure reported by companies in liberal market economies, is more positive in tone compared to the disclosure issued by coordinated market economies. Melloni et al. (2017) tested the relationship between the ESG performance and the tone of disclosure in IR and found non-significant results. More recent studies highlighted that the optimistic tone in firms' ICDs in IRs is associated with positive ESG performance, supporting the incremental information approach (Beretta et al., 2019).

2.3 Environmental Performance and Voluntary Disclosure Tone

Some scholars analyzed the relationship between the environmental performance and the tone of voluntary disclosure within two conceptual frameworks, the voluntary disclosure theory (Verrecchia, 1983) and legitimacy theory (Gray et al., 1995). On the one hand, the first approach posits that companies that have good news are more likely to disclose such information in order to avoid the adverse selection problems (Clarkson, Li, Richardson, & Vasvari, 2008). On the other hand, the second theory states that disclosure is useful for firms in order to improve their legitimacy (Gray et al., 1995).

However, researchers found mixed results about this relationship. For example, Arena et al. (2015) found that the tone of environmental disclosures is related to future environmental performance.

Al-Tuwaijri, Christensen, and Hughes Ii (2004) studied the relations among environmental information, environmental performance, and economic performance by finding that firms with a "good" environmental performance tend to have a "good" economic performance and a "good" environmental disclosure.

More specifically, when considering the disclosure tone of environmental performance in the settings of the IR, previous studies found that firms adopt the impression management approach and, therefore, less information related to ESG performance is provided when the environmental performance is worse (Melloni et al., 2017).

Despite these considerations, there is no general consensus on the relationship between the environmental performance and the tone of IRs; therefore, we pose the following research hypothesis:

> *H1a*. There is a positive relationship between the environmental performance and the optimistic tone of IRs.

> *H1b*. There is a negative relationship between the environmental performance and the optimistic tone of IRs.

2.4. Social Performance and Voluntary Disclosure Tone

Several scholars analyzed the relationship between the social performance and the tone of voluntary disclosure, finding mixed results about this topic. Some scholars suggested that companies with low social performance tend to manipulate information disclosed by adopting the impression management strategy (Merkl-Davies, Brennan, & McLeay, 2011).

More recently, Melloni et al. (2017) found a positive relationship between social performance and ESG disclosure, meaning that firms with better social performance tend to disclosure more ESG topics.

More specifically, when considering the disclosure tone of social performance in the settings of the IR, previous studies found that when firms are experiencing worst social performance, they are less concise (Melloni et al., 2017).

Despite these considerations, the relationship between the social performance and the tone of IRs is not deeply investigated; therefore, we pose the following research hypothesis:

H2a. There is a positive relationship between the social performance and the optimistic tone of IRs.

H2b. There is a negative relationship between the social performance and the optimistic tone of IRs.

2.5. Governance and Voluntary Disclosure Tone

A stream of literature analyzed the relationship between the features of corporate governance and the voluntary disclosure. As provided in the definition of the ESG score, the governance performance includes information related to the management, the shareholders and the CSR strategy (Thomson Reuters, 2019).

Some scholars found that a strong corporate governance reduces the content manipulation and improves transparency, thereby reducing the impression management. Authors measure the corporate governance through some features of it such as the number of directors and the number of independent directors on board (Osma & Guillamón-Saorín, 2011).

Others found a positive association between board size and voluntary information and between the number of independent non-executive directors on board and the voluntary disclosure (Akhtaruddin, Hossain, Hossain, & Yao, 2009).

Melloni et al. (2016) found that that board size is able to influence the disclosure tone; as a matter of fact a weak corporate governance is linked to a positive disclosure tone.

However, previous studies did not find any variation of the disclosure tone adopted in the IR as a function of a change in the governance performance (Melloni et al., 2017).

Despite these considerations, the relationship between the governance and the tone of IRs is not deeply investigated yet; therefore, we pose the following research hypothesis:

H3a. There is a positive relationship between the governance and the optimistic tone of IRs.

H3b. There is a negative relationship between the governance and the optimistic tone of IRs.

3. METHODOLOGY

3.1. Sample Selection and Data Collection

In order to test the research hypotheses, the IR related to European-listed companies for the years from 2011 to 2016 has been downloaded from the IIRC's Integrated Reporting Emerging Practice Examples Database on December 15, 2017. This database has been selected because it represents the emerging practices of organizations for reporting concise information about how their external environmental strategies may contribute in the value-creation process of the firm in the short, medium and long term. The resulting sample is unbalanced, because the companies in the sample did not disclose IRs for all the analyzed years.

Additionally, both financial and non-financial data were collected from the Eikon DFO Database (Datastream and Asset4) for the same years.

Table 1 shows the resulting database, which is finally composed of 79 reports, that has been obtained after the exclusion from the research results (163 reports) of IR related to unlisted firms (51 reports) and that could not be complemented with financial or non-financial information (33 reports).

The final database is composed of reports issued by firms located in different European countries, with the prevalence of UK (36 reports over 79). Almost the half of the reports are related to firms operating in the financial services or consumer goods industry. Finally, considering the year of publication, Table 1 clearly shows that the involvement of firms in IR practices is evolving in the last years, because the number of reports increased exponentially from 2014 (with more than two-thirds of reports published in the years 2014, 2015 and 2016).

3.2. Data Analysis

The data analysis is performed in two stages: a content analysis is adopted in order to assess ICD and related linguistic attributes and, subsequently, an inferential regression analysis is adopted to test the research hypothesis.

As for the *content analysis*, ICD are investigated by analyzing their linguistic attributes (Beattie & Thomson, 2007). In this study, it is adopted in order to analyze whether and how non-financial performance affects the optimistic tone use in ICD. In order to answer the study's research question, and consistently with previous studies (e.g., Abhayawansa & Guthrie, 2016b; Melloni, 2015), the text unit, intended as a sentence that includes a single piece of information, is considered the unit of analysis (Beattie & Thomson, 2007; Beattie et al., 2004). The coding technique that is adopted to perform the analysis follows previous studies (Abhayawansa & Guthrie, 2016b; Beretta et al., 2018; Melloni, 2015). The computer-assisted qualitative data analysis software (CAQDAS) NVivo11 Pro was used to perform the coding procedure in order to ensure the accuracy and transparency in the process of the data analysis (Richards & Richards, 1994; Welsh, 2002).

Table 1. Number of IR by Country, Industry, and Year.

Country		Industry		Year	
Variable	No. of IR	Variable	No. of IR	Variable	No. of IR
UK	36	Financial services	21	2011	8
Netherlands	10	Consumer goods	13	2012	4
Italy	8	Consumer services	5	2013	8
Germany	2	Basic materials	9	2014	21
Spain	4	Industrials	9	2015	20
France	3	Utilities	5	2016	18
Switzerland	3	Healthcare	7	*Total*	*79*
Denmark	5	Technology	3		
Greece	2	Oil and gas	3		
Luxembourg	1	Professional services	2		
Sweden	1	Real estate	2		
Total	*79*	*Total*	*79*		

Consistently with previous studies, both the quantity and the quality of the disclosure have been analyzed (Abhayawansa & Guthrie, 2016a; Benevene, Kong, Barbieri, Lucchesi, & Cortini, 2017; Beretta et al., 2018; Bozzolan, Favotto, & Ricceri, 2003; Dumay & Guthrie, 2017).

In terms of quantity, the classical categorization scheme of classes of IC proposed by Abhayawansa and Guthrie (2016a) has been adopted. Three different intellectual capital components are delineated. A text unit is categorized as "Human capital" when it captures the "know-how, education, vocational qualification, work-related knowledge, work-related competences, entrepreneurial spirit" of the firm (Abhayawansa & Guthrie, 2016a, p. 36). A text unit is categorized as "Structural capital" when it refers to the "intellectual property, research & development, corporate governance, business model, organizational and management structure, management philosophy, corporate culture, management processes, policies and practice" of firm (Abhayawansa & Guthrie, 2016a, p. 36). Finally, a text unit is categorized as "Relational capital" when it provides information related to "brands, customers, customer loyalty, company names, distribution channels, business collaborations" (Abhayawansa & Guthrie, 2016a, p. 36).

Additionally, drawing on previous studies, the disclosure quality has been assessed by considering the linguistic attributes of ICD (Beattie et al., 2004; Pistoni, Songini, & Bavagnoli, 2018). The type of evidence, the time orientation and the tone of the disclosure have been investigated (Beattie et al., 2004; Melloni et al., 2016). In fact, according to previous studies, the only investigation of the volume of disclosure is not enough in totally representing the disclosure strategies (Beattie & Thomson, 2007; Toms, 2002). As there is no variation between different categories of IC (Abhayawansa & Guthrie, 2016a), the aggregate IC has been considered for the coding of these additional quality measures.

First, the type of evidence has been investigated in order to differentiate between disclosure communicated discursively or quantitatively (Beattie et al., 2004). More specifically, when a text unit is disclosed in a narrative form and referring to a non-numerical meaning related to IC, this is coded as "Discursive." When a text unit is disclosed in a numerical form related to IC, this is coded as "Numerical."

Second, the time orientation of the disclosure has been investigated to analyze whether disclosure is mainly oriented toward the past or the future. In order to perform the coding procedure, the StopWords in the Loughran and McDonald (2011) dictionary are considered. A text unit is categorized as "Forward-looking" if it refers to the future prospects, strategy and expectations of the firm, or as "Backward-looking" if related to past or present actions of the firm.

Finally, the tone of the disclosure is investigated. The Loughran and McDonald's Financial Sentiment Dictionary (Loughran & McDonald, 2011) is adopted to perform the coding procedure: if the text unit contains one of the positive words listed in the dictionary, this is categorized as "Positive."

As for the *statistical analysis,* three different multiple linear regressions, related to the three different pillars of ESG performance, are used to test the hypotheses.

The dependent variable is represented by the positive tone adopted in ICD (*ICD_TONE*), whereas the independent variables are represented by ESG performance, according to the Categories Scores proposed in the database Asset4 (Thomson Reuters, 2019).

Environmental performance is represented by the following variables, which are explained in detail in Appendix 1:

- *EMISSION_REDUCTION* measures a company's management commitment and effectiveness toward reducing environmental emission in the production and operational processes. It reflects a company's capacity to reduce air emissions (greenhouse gases, F-gases, ozone-depleting substances, NO_x and SO_x, etc.), waste, hazardous waste, water discharges, spills, or its impacts on biodiversity and to partner with environmental organizations to reduce the environmental impact of the company in the local or broader community.
- *PRODUCT_INNOVATION* measures a company's management commitment and effectiveness toward supporting the research and development of eco-efficient products or services. It reflects a company's capacity to reduce the environmental costs and burdens for its customers, and thereby creating new market opportunities through new environmental technologies and processes or eco-designed, dematerialized products with extended durability.
- *RESOURCE_REDUCTION* measures a company's management commitment and effectiveness toward achieving an efficient use of natural resources in the production process. It reflects a company's capacity to reduce the use of materials, energy, or water, and to find more eco-efficient solutions by improving supply chain management.

Social performance is measured by the following variables:

- *PRODUCT_RESPONSIBILITY* represents the company's management commitment and effectiveness toward creating value-added products and services upholding the customer's security.
- *COMMUNITY* the company's management commitment and effectiveness toward maintaining the company's reputation within the general community (local, national and global).
- *HUMAN_RIGHTS* represents the company's management commitment and effectiveness toward respecting the fundamental human rights conventions.
- *DIVERSITY_OPPORTUNITY* represents the company's management commitment and effectiveness toward maintaining diversity and equal opportunities in its workforce.
- *EMPLOYMENT_QUALITY* represents the company's management commitment and effectiveness toward providing high-quality employment benefits and job conditions.
- *HEALTH_SAFETY* represents the company's management commitment and effectiveness toward providing a healthy and safe workplace.

- *TRAINING_DEVELOPMENT* represents the company's management commitment and effectiveness toward providing training and development (education) for its workforce.

Governance performance is measured by the following variables:

- *BOARD_FUNCTIONS* represents the company's management commitment and effectiveness toward following best practice corporate governance principles related to board activities and functions.
- *BOARD_STRUCTURE* represents the company's management commitment and effectiveness toward following best practice corporate governance principles related to a well-balanced membership of the board.
- *COMPENSATION_POLICY* represents the company's management commitment and effectiveness toward following best practice corporate governance principles related to competitive and proportionate management compensation.
- *VISION_STRATEGY* represents the company's management commitment and effectiveness toward the creation of an overarching vision and strategy integrating financial and extra-financial aspects.
- *SHAREHOLDER_RIGHTS* represents the company's management commitment and effectiveness toward following best practice corporate governance principles related to a shareholder policy and equal treatment of shareholders.

Additionally, consistent with previous studies (e.g., An, Davey, Eggleton, & Wang, 2015; Arena et al., 2015; Beretta et al., 2018; Bontis, 2003; Cerbioni & Parbonetti, 2007), control variables are added as well.

First, financial performance is included as a dummy variable equal to 1 if a firm's financial performance is declining, 0 otherwise.

Second, quality measures of ICDs, resulting from the content analysis of the linguistic attributes of ICD performed in the first stage, have been included in order to analyze whether forward-looking and/or backward-looking disclosures (e.g., Hussainey, Schleicher, & Walker, 2003) or discursive and/or numerical disclosures (Arena et al., 2015) are relevant to stakeholders.

Third, the firm size has been included as control variable because it is considered as a potential predictor of the tone of voluntary disclosures (Abhayawansa & Guthrie, 2016a; Hummel et al., 2017; Striukova, Unerman, & Guthrie, 2008). The logarithm of balance sheet total assets has been considered to measure firm size.

Finally, consistently with previous studies (An et al., 2015; Beretta et al., 2018; Bontis, 2003; Cerbioni & Parbonetti, 2007) accounting model (considered as the set of principles upon which the accounting methods are based), year and sector have been introduced in order to test whether or not the tone of ICD is country, time and sector invariant.

A detailed explanation of dependent, independent and control variables' definition and measurement is provided in Appendix 1.

The analyzed equations are the following:

$$\text{ICD_TONE} = \beta_0 + \beta_1 \text{ DECL_FIN_PERF} + \beta_2 \text{ EMISSION_REDUCTION} + \beta_3 \text{ PRODUCT_INNOVATION} + \beta_4 \text{ RESOURCE_REDUCTION} + \beta_5 \text{ SIZE} + \beta_6 \text{ ENV_SENS_IND} + \beta_7 \text{ TIME_FORWARD} + \beta_8 \text{ TIME_BACKWARD} + \beta_9 \text{ EVID_DISCURSIVE} + \beta_{10} \text{ EVID_NUMERICAL} + \beta_{11} \text{ ANGLO_MODEL} + \beta_{12} \text{ YEAR_2012} + \beta_{13} \text{ YEAR_2013} + \beta_{14} \text{ YEAR_2014} + \beta_{15} \text{ YEAR_2015} + \beta_{16} \text{ YEAR_2016} + \varepsilon \quad (1)$$

$$\text{ICD_TONE} = \beta_0 + \beta_1 \text{ DECL_FIN_PERF} + \beta_2 \text{ PRODUCT_RESPONSIBILITY} + \beta_3 \text{ COMMUNITY} + \beta_4 \text{ HUMAN_RIGHTS} + \beta_5 \text{ DIVERSITY_OPPORTUNITY} + \beta_6 \text{ EMPLOYMENT_QUALITY} + \beta_7 \text{ HEALTH_SAFETY} + \beta_8 \text{ TRAINING_DEVELOPMENT} + \beta_9 \text{ SIZE} + \beta_{10} \text{ ENV_SENS_IND} + \beta_{11} \text{ TIME_FORWARD} + \beta_{12} \text{ TIME_BACKWARD} + \beta_{13} \text{ EVID_DISCURSIVE} + \beta_{14} \text{ EVID_NUMERICAL} + \beta_{15} \text{ ANGLO_MODEL} + \beta_{16} \text{ YEAR_2012} + \beta_{17} \text{ YEAR_2013} + \beta_{18} \text{ YEAR_2014} + \beta_{19} \text{ YEAR_2015} + \beta_{20} \text{ YEAR_2016} + \varepsilon \quad (2)$$

$$\text{ICD_TONE} = \beta_0 + \beta_1 \text{ DECL_FIN_PERF} + \beta_2 \text{ BOARD_FUNCTIONS} + \beta_3 \text{ BOARD_STRUCTURE} + \beta_4 \text{ COMPENSATION_POLICY} + \beta_5 \text{ VISION_STRATEGY} + \beta_6 \text{ SHAREHOLDERS_RIGHTS} + \beta_7 \text{ SIZE} + \beta_8 \text{ ENV_SENS_IND} + \beta_9 \text{ TIME_FORWARD} + \beta_{10} \text{ TIME_BACKWARD} + \beta_{11} \text{ EVID_DISCURSIVE} + \beta_{12} \text{ EVID_NUMERICAL} + \beta_{13} \text{ ANGLO_MODEL} + \beta_{14} \text{ YEAR_2012} + \beta_{15} \text{ YEAR_2013} + \beta_{16} \text{ YEAR_2014} + \beta_{17} \text{ YEAR_2015} + \beta_{18} \text{ YEAR_2016} + \varepsilon \quad (3)$$

4. RESULTS

4.1. Content Analysis Results

In the 79 IR analyzed, 84,519 text units are related to ICD. More specifically, human capital is the least represented category of IC (1.66%), whereas structural capital is the most represented category of IC (61.32%). In terms of type of evidence and time orientation, results are quite unbalanced: 86.79% of text units related to ICD are discursive (vs 13.21% are numerical) and 90.58% are backward-looking (vs 9.42% are forward-looking).

4.2. Inferential Results

Table 2 presents the summary statistics of the analyzed variables, whereas Table 3 presents results of the multiple linear regressions.

Table 2. Descriptive Statistics.

Variable	Obs	Mean	Std. Dev.	Min	Max
ICD_TONE	79	925.684	432.506	261	2,174
EMISSION_REDUCTION	79	87.733	13.254	20.320	96.010
PRODUCT_INNOVATION	79	74.104	27.275	14.490	97.960
RESOURCE_REDUCTION	79	85.516	10.408	28.890	94.170
PRODUCT_RESPONSIBILITY	79	71.793	27.747	5.020	97.950
COMMUNITY	79	79.464	17.876	29.180	96.090
HUMAN_RGHTS	79	84.035	19.382	15.390	96.410
DIVERSITY_OPPORTUNITY	79	85.179	19.208	17.480	96.230
EMPLOYMENT_QUALITY	79	79.238	19.466	22.080	97.170
HEALTH_SAFETY	79	74.127	23.390	17.930	97.910
TRAINING_DEVELOPMENT	79	85.418	10.437	48.940	94.680
BOARD_FUNCTIONS	79	69.426	23.612	5.660	94.090
BOARD_STRUCTURE	79	63.574	19.491	26.080	93.020
COMPENSATION_POLICY	79	72.266	17.844	25.210	90.310
VISION_STRATEGY	79	90.424	5.966	55.320	95.220
SHAREHOLDER_RIGHTS	79	58.172	35.350	0.980	98.670
DECL_FIN_PERF	79	0.532	0.502	0	1
EVID_NUMERICAL	79	247.570	183.784	11	691
EVID_DISCURSIVE	79	1,626.608	929.301	274	5,123
TIME_BACKWARD	79	84.684	79.383	4	411
TIME_FORWARD	79	8.810	6.687	0	45
ANGLO_MODEL	79	0.456	0.501	0	1
ENV_SENS_IND	79	0.329	0.473	0	1
YEAR_2012	79	0.051	0.221	0	1
YEAR_2013	79	0.101	0.304	0	1
YEAR_2014	79	0.266	0.445	0	1
YEAR_2015	79	0.253	0.438	0	1
YEAR_2016	79	0.228	0.422	0	1
SIZE	79	7.570	0.821	6.077	8.968

Notes: ICD_TONE: IC disclosure tone; DECL_FIN_PERF: declining financial performance; EMISSION_REDUCTION: emission reduction; PRODUCT_INNOVATION: product innovation; RESOURCE_REDUCTION: resource reduction; PRODUCT_RESPONIBILITY: customer/product responsibility; COMMUNITY: society/community; HUMAN_RIGHTS: society/human rights; DIVERSITY_OPPORTUNITY: workforce/diversity and opportunity; EMPLOYMENT_QUALITY: workforce/employment quality; HEALTH_SAFETY: workforce/health and safety; TRAINING_DEVELOPMENT: workforce/training and development; BOARD_FUNCTIONS: board of directors/board functions; BOARD_STRUCTURE: board of directors/board structure; COMPENSATION_POLICY: board of directors/compensation policy; VISION_STRATEGY: integration/vision and strategy; SHAREHOLDER_RIGHTS: shareholders/shareholder rights; SIZE: Size; ANGLO_MODEL is a variable equal to 1 if the firm adopts the Anglo-American accounting model, 0 otherwise; ENV_SENS_IND: environmental sensitive industry; TIME_FORWARD: forward-looking IC disclosure; TIME_BACKWARD: backward-looking IC disclosure; EVID_DISCURSIVE: discursive IC disclosure; EVID_NUMERICAL: numerical IC disclosure; YEAR_2012 is a dummy variable for year 2012; YEAR_2013 is a dummy variable for year 2013; YEAR_2014 is a dummy variable for year 2014; YEAR_2015 is a dummy variable for year 2015; YEAR_2016 is a dummy variable for year 2016.

One third of the sample is composed of firms from environmentally sensitive industries and almost half of the firms included in the analysis adopt an Anglo-American accounting model.

Table 3. Empirical Results of the Statistical Models.

Statistical Model Dependent Variable: ICD_TONE	Model 1 (ENV)	Model 2 (SOC)	Model 3 (GOV)
EMISSION_REDUCTION	−3.8746 (2.8686)		
PRODUCT_INNOVATION	**2.5150* (1.2743)**		
RESOURCE_REDUCTION	2.9761 (3.4327)		
PRODUCT_RESPONSIBILITY		0.1481 (1.1475)	
COMMUNITY		−0.3325 (1.7281)	
HUMAN_RIGHTS		−0.1371 (1.5021)	
DIVERSITY_OPPORTUNITY		1.1659 (1.7454)	
EMPLOYMENT_QUALITY		−1.9438 (1.9184)	
HEALTH_SAFETY		**3.4521*** (1.2533)**	
TRAINING_DEVELOPMENT		0.6536 (3.9967)	
BOARD_FUNCTIONS			1.8582 (1.3431)
BOARD_STRUCTURE			−2.7560 (1.9746)
COMPENSATION_POLICY			1.7479 (1.5094)
VISION_STRATEGY			**10.7709 ** (4.7057)**
SHAREHOLDER_RIGHTS			**−2.0945 ** (0.8578)**
DECL_FIN_PERF	**−87.9237* (50.4685)**	−55.8917 (55.4275)	**−92.5352* (48.3009)**
SIZE	**−79.1048** (38.7015)**	**−111.1407** (42.5539)**	**−102.2522 *** (37.38)**
ENV_SENS_IND	−27.8916 (69.7303)	−41.7272 (70.8668)	−7.1326 (60.9254)
TIME_FORWARD	−2.9466 (4.0798)	−0.6615 (3.9510)	−1.5431 (3.6523)
TIME_BACKWARD	**1.7116*** (0.4999)**	**1.3744** (0.5954)**	0.8421 (0.5073)
EVID_DISCURSIVE	**0.3243*** (0.036)**	**0.3412*** (0.0360)**	**0.3853*** (0.035)**
EVID_NUMERICAL	−0.1162 (0.1934)	0.0615 (0.2151)	0.0526 (0.1946)
ANGLO_MODEL	29.2526 (72.2570)	−11.0408 (70.3070)	61.7764 (79.2309)
YEAR_2016	104.0982 (94.8018)	87.5081 (97.6230)	126.4796 (93.2539)
YEAR_2015	101.7948 (95.1611)	110.3333 (97.0929)	140.2882 (94.2250)
YEAR_2014	95.2415 (95.7020)	107.633 (95.4387)	**154.8208* (89.9372)**
YEAR_2013	96.9136 (109.0391)	115.7817 (107.4702)	155.3108 (105.7491)
YEAR_2012	32.4723 (133.7357)	113.5926 (135.1354)	95.5791 (130.7241)

Table 3. (*Continued*)

Statistical Model Dependent Variable: ICD_TONE	Model 1 (ENV)	Model 2 (SOC)	Model 3 (GOV)
cons	**762.2012* (407.0838)**	**811.0265* (405.8005)**	−32.6937 (512.9025)
N	79	79	79
***F* (*p*-value)**	16.80	14.18	17.03
R^2	0.8126	0.8302	0.8363
Adj-R^2	0.7642	0.7716	0.7872

Notes: ICD_TONE: IC disclosure tone; DECL_FIN_PERF: declining financial performance; EMISSION_REDUCTION: emission reduction; PRODUCT_INNOVATION: product innovation; RESOURCE_REDUCTION: resource reduction; PRODUCT_RESPONIBILITY: customer/product responsibility; COMMUNITY: society/community; HUMAN_RIGHTS: society/human rights; DIVERSITY_OPPORTUNITY: workforce/diversity and opportunity; EMPLOYMENT_QUALITY: workforce/employment quality; HEALTH_SAFETY: workforce/health and safety; TRAINING_DEVELOPMENT: workforce/training and development; BOARD_FUNCTIONS: board of directors/board functions; BOARD_STRUCTURE: board of directors/board structure; COMPENSATION_POLICY: board of directors/compensation policy; VISION_STRATEGY: integration/vision and strategy; SHAREHOLDER_RIGHTS: shareholders/shareholder rights; SIZE: size; ANGLO_MODEL is a variable equal to 1 if the firm adopts the Anglo-American accounting model, 0 otherwise; ENV_SENS_IND: environmental sensitive industry; TIME_FORWARD: forward-looking IC disclosure; TIME_BACKWARD: backward-looking IC disclosure; EVID_DISCURSIVE: discursive IC disclosure; EVID_NUMERICAL: numerical IC disclosure; YEAR_2012 is a dummy variable for year 2012; YEAR_2013 is a dummy variable for year 2013; YEAR_2014 is a dummy variable for year 2014; YEAR_2015 is a dummy variable for year 2015; YEAR_2016 is a dummy variable for year 2016.
*, **, and *** indicate significance degree between 0.10 and 0.05, 0.05 and 0.01, and 0.01 and 0, respectively.
Standard errors are in brackets.

In terms of performance, half of the sample is experiencing declining financial performance, whereas, as for non-financial performance, the highest values are registered for VISION_STRATEGY, and the SHAREHOLDER_RIGHTS shows the highest variation.

For what it concerns disclosure trends, results of the descriptive statistics show a strong predominance of discursive and backward-looking text units. The adoption of a positive tone in the ICD shows high variation, moving from 261 as minimum value to 2,174 text units as maximum value.

A good performance has been detected for all the models, with an adjusted R^2 that varies between 76.42% and 78.72%.

For what it concerns environmental performance, a positive statistically significant correlation between PRODUCT_INNOVATION and the optimistic tone of ICD has been detected. As such, *H1a* is supported, at least with reference to PRODUCT_INNOVATION, whereas *H1b* is not supported.

In terms of social performance, HEALTH_SAFETY shows a positive and statistically significant coefficient. Therefore, *H2a* is supported, whereas *H2b* is not supported.

Governance performance shows controversial results: although VISION_STRATEGY is positively and significantly associated with the optimistic tone of ICD, a negative statistically significant association between SHAREHOLDER_RIGHTS and optimistic tone of ICD has been registered. This implies that both *H3a* and *H3b* are supported.

Additionally, interesting results with respect to the control variables have been detected, as well. Results show that, at the coefficient level, there is a statistically significant relationship between the firm's declining financial performance and the use of positive tone in ICD only when considering environmental and governance performance. This study, therefore, demonstrates that a poor financial performance is associated with less optimistic tone in ICD. Results show that smaller firms are associated with a more optimistic tone. Also the disclosure of a greater amount of text related to voluntary information is associated with a more optimistic tone in all the analyzed models. A more positive tone is associated also with firms disclosing more backward-looking information when environmental and/or social performance is considered. Finally, sector, country and year are not statistically significant. The only exception is provided for the governance performance analyzed in Model 3, where YEAR_2014 exhibits a positive statistically significant relationship with positive disclosure tone.

In order to ensure that the parametric assumptions can be uphold, tests for multicollinearity and heteroskedasticity are performed.

The variance inflation factors (VIFs) were calculated in order to test the presence of multicollinearity between the analyzed variables. According to previous studies, a VIF higher than 10 may be a signal for biased coefficient standard errors (Gujarati & Porter, 2003). As all the VIFs of the analyzed variables are lower than 10 (Appendix 2), results of the test do not provide evidence for the existence of multicollinearity.

Additionally, a Breusch-Pagan has been calculated in order to test for the presence of heteroscedasticity (Solon, Haider, & Wooldridge, 2015; Wooldridge,

2015). As the *p*-values for the all the models are not statistically significant, results of the test do not provide evidence for the presence of heteroscedasticity (Appendix 2).

5. DISCUSSION

The aim of this study was to analyze the relationship between the non-financial performance and the use of an optimistic tone in the ICD in IR. Results from this study demonstrate that both positive and negative associations can be detected. This provides support for the voluntary disclosure theory, according to which the disclosure of non-financial information is adopted in order to reduce information asymmetries between managers and investors (Guidry & Patten, 2012). Support for the informativeness of IRs has been obtained, as well. Thus, results demonstrate that the integration of different types of capital in a single report is more informative than the partial reporting activities (Beretta et al., 2018; Perego, Kennedy, & Whiteman, 2016), providing evidence for the relevance of ICDs in IR (Adams, 2015; Haller & van Staden, 2014). However, for specific areas of non-financial disclosure, a negative association with the use of an optimistic tone of ICD has been detected. This provides support for the stream of the literature according to which manipulation of voluntary disclosure can occur (Melloni et al., 2016).

More specifically, different variables have been studied in order to detect ESG performance of firms. Empirical results are discussed in the following sub-sections.

5.1. Environmental Performance and ICD Tone in IRs

This study advances some knowledge on the relationship between the environmental performance and the tone of voluntary disclosure. Results of this study provide support for the voluntary disclosure theory (Verrecchia, 1983), according to which firms with good news are more likely to disclose information (Clarkson et al., 2008). Results of this study are aligned with that part of the literature according to which good environmental performance is associated with positive disclosure tone (Clarkson, Overell, & Chapple, 2011). Support is also provided for the legitimacy theory, according to which additional disclosures of firms are useful to improve their legitimacy (Gray et al., 1995).

This study supports that stream of the literature according to which firms with better environmental performance tend to show good non-financial disclosures (Al-Tuwaijri et al., 2004; Clarkson et al., 2011).

5.2. Social Performance and ICD Tone in IRs

Results of this study provide insights on the relationship between the social performance and the use of optimistic tone in the disclosure of voluntary information. This study is opposed to the part of the literature that found low levels of social performance associated with a more optimistic tone in the disclosure of

information (Merkl-Davies et al., 2011). On the other hand, support is provided for that stream of the literature according to which positive correlations between social performance and voluntary disclosure are detected (Melloni et al., 2017; Ullmann, 1985).

5.3. Governance Performance and ICD Tone in IRs

This study advances some knowledge also on the relationship between the governance performance and the tone adopted in ICD. Controversial results are found for the different aspects of governance performance. More specifically, results of this study support that stream of the literature according to which a good performance in terms of the commitment of the firm for the creation of an overarching vision and strategy integrating financial and non-financial aspects is associated with a more optimistic tone of ICD, whereas managers tend to manipulate the tone of ICD in case of poor governance performance in terms of the commitment of firm in following best practice corporate governance principles related to a shareholder policy and equal treatment of shareholders. Hence, evidence for both voluntary disclosure theory and impression management approach is provided (Akhtaruddin et al., 2009; Melloni et al., 2016; Osma & Guillamón-Saorín, 2011).

5.4. Additional Findings

Results of this study show that a negative financial performance is associated with a less optimistic tone in ICD. Thus, findings do no support that stream of the literature according to which manipulation of the ICD tone can be performed in case of poor financial performance (Clatworthy & Jones, 2001; Desai, Hogan, & Wilkins, 2006; Graham et al., 2005; Holder-Webb & Cohen, 2007; Kothari, Shu, & Wysocki, 2009), but, instead, they are aligned with that part of the literature according to which managers do not perform unethical behaviors in disclosing additional information and they do not manipulate voluntary disclosures, especially when the firm is facing financial difficulties (Beretta et al., 2018; Clatworthy & Jones, 2001).

Additionally, findings are aligned with that part of the literature showing a negative association between firm size and disclosure tone (Beretta et al., 2018; Hummel et al., 2017). Thus, size has been confirmed to be a pivotal predictor of ICD tone (Abhayawansa & Guthrie, 2016a, 2016b; Beretta et al., 2018).

Evidence is also provided for the relevance of backward-looking disclosure (Abhayawansa & Guthrie, 2012). Empirical findings are opposed to that stream of the literature according to which the tone of ICDs is related to forward-looking information (Arena et al., 2015; Baginski, Hassell, & Kimbrough, 2004; Hussainey et al., 2003).

Consistently with previous studies, the relevance of discursive disclosure is supported as well (Abhayawansa & Guthrie, 2016a; Asquith, Pathak, & Ritter, 2005; Beretta et al., 2018; Twedt & Rees, 2012). Evidence for the signaling theory is provided by results, because a positive association between the amount of discursive ICD and the use of an optimistic tone of disclosure has been detected (Arena et al., 2015).

In addition, results of this study are opposed to that stream of the literature according to which ICD are function of their sector of operation (Bozzolan et al., 2003; Depoers, 2000; Veltri & Silvestri, 2015), providing evidence for the invariance of this relationship (Beretta et al., 2018).

Finally, according to the results, differences in the accounting models that are adopted by firms do not influence the choice of the tone to be adopted in ICD. Thus, results are opposed to that part of the literature according to which different geographical contexts may have an impact on the ICD tone (Abhayawansa & Abeysekera, 2009; Baginski, Hassell, & Kimbrough, 2002; Melloni, 2015).

Finally, despite any salient temporalities have been detected in the analyzed sampling frame when considering the environmental and social performance, differences can be detected for the governance performance (Ahmed Haji & Mohd Ghazali, 2012).

6. CONCLUSIONS

This chapter sought to analyze the effect of some dimensions of ESG performance on the disclosure strategy adopted in IR. More specifically, this study investigated the extent to which the optimistic tone of ICD is independently affected by ESG performance, respectively. Research hypotheses on the "tone at the top" were conceptually developed and empirically tested through a content and tone analysis on IR. By relying on the IR published on the IIRC's Integrated Reporting Emerging Practice Examples Database, the analysis focused on 79 reports issued in the period 2011–2016 by listed firms operating in the European Union. ESG dimensions of performance were drawn from Asset4 data set. Different regression models on the dimensions associated with the three pillars of ESG performance led to a set of relevant results.

Empirical evidence from the content analysis highlighted that, among the three main performance pillars, the performance dimension that primarily contributes to optimistic tone in ICD belongs to governance and is related to the integration between vision and strategy. This performance is followed by a dimension pertaining to the social performance, namely the workforce health and safety and finally eco-efficient product innovation with regard to the environmental performance. Interestingly, within the governance performance, information on poor treatment of shareholders' rights tended to be manipulated and associated with an optimistic tone of the ICD. However, this study did not manually check the linguistic patterns in the analyzed text units. Therefore, future studies could disentangle the understanding of this result by adopting a more in-depth analysis of the disclosure behavior associated with this link. Other analyzed dimensions of performance did not achieve conventional levels of statistical significance. However, some of those are worth of further discussion. Results show that environmental performance is positively associated with ICD tone. With regard to social performance, a modest performance in terms of the company's effectiveness in getting a positive social reputation (community), respecting fundamental human rights conventions (human rights), as well as providing a high-quality set of job conditions (employment quality) produces optimistic tone in ICD. Such evidence is consistent with

prior research arguing that information on poor social performance is manipulated in reported disclosures (Merkl-Davies et al., 2011). Moreover, as for the governance performance, a poor performance in terms of balanced board composition is mitigated by optimistic ICD tone. Similar results were found in prior studies (Melloni et al., 2016). However, as these findings are not significant from a statistical viewpoint, it is not possible to generalize them. Nonetheless, they can be used as a starting point to develop further theoretical assumptions and provide additional empirical evidence to enrich the knowledge in this field.

6.1. Implications

Hence, this study contributes to the literature in several ways. First, this research extends extant knowledge on the role of ICDs in fairly reporting the attainment of non-financial performance (Abhayawansa, 2011; Abhayawansa & Guthrie, 2016a, 2016b). Notably, by analyzing different dimensions of ESG performance, it provides a reply to that part of the literature arguing that an overall index of corporate social performance might not be reflective of the complexity which occurs in practice (Mattingly, 2017; Mattingly & Berman, 2006). Second, new insights on the role of voluntary disclosure can be drawn from this study. In particular, the effect of different dimensions or corporate performance on ICD tone will inform that part of the literature investigating determinants and consequences of voluntary disclosure (Beattie et al., 2004; Verrecchia, 2001). This topic will become even more relevant in the coming future due to the implementation of the 2014/95 EU Directive on mandatory non-financial disclosure (EU, 2014). Third, results from this study are aimed at contributing to the stakeholder and legitimacy theories of the firm. On the one hand, by testing the relationship between a variety of dimension of ESG performance and the tone of ICD, this study enriches the role of the firm in the fulfillment of a wide range of stakeholders' needs. On the other hand, the analysis of the different dimensions of ESG performance, and the related values, will extend the understanding of what type of legitimation, whether institutional or strategic (Chen & Roberts, 2010), the firm will gain from ICD. Finally, this research contributes to the debate concerning the preparation and configuration of IR and the exploitation of integrating thinking, with specific reference to ICD (de Villiers & Sharma, 2017). ICD indeed is prevailing in the IR framework (Dumay, 2016). Thus, this study aims at extending knowledge on the extent to which the preparation and the ESG performance affects the tone used in ICD, hence fostering the debate on role of IR in reflecting underlying corporate practices (Flower, 2015). This research has also some practical implications for several stakeholders. Sustainable investors could take advantage from this research by grounding their investment decisions on disclosure that fairly reflects firms' ESG engagement (Humphrey et al., 2012). Corporations and accounting practitioners can benefit from empirical findings from this study by implementing those reporting practices that are more capable of conveying and stimulating ESG performance. Society as a whole could draw relevant information from the evidence reported in the following sections, because it provides a valuable base for customers, employees, suppliers, financial and regulatory institutions to make their decisions based on their preference toward often competing societal values.

6.2. Limitations and Future Research Avenues

This study is not without its limitations. First, by relying on a single data set, results could be biased from the peculiar measurement model adopted from Asset4 methodology to assess ESG performance (de Villiers et al., 2017). Hence, future research could look for either alternative public or hand-collected data sets to corroborate results from this study. Moreover, more sophisticated econometric models could be used to analyze the individual effect of pillars of ESG performance. Additionally, the analysis did not differentiate results from different sections of the IR, which might provide further insightful information. Therefore, we encourage additional research to take different methodological approaches for the analysis of ICD tone in IR. Moreover, the sample is restricted to listed companies operating in the EU setting, which could foster more research in different settings. Finally, we acknowledge that the information reported in IR is voluntary; therefore, there could be a bias in self-selection of high-performing companies. Hence, future research could compare the effect of ESG performance on ICD tone in both voluntary and mandatory settings.

REFERENCES

Abeysekera, I. (2006). The project of intellectual capital disclosure: Researching the research. *Journal of Intellectual Capital*, *7*(1), 61–77.

Abhayawansa, S. (2011). A methodology for investigating intellectual capital information in analyst reports. *Journal of Intellectual Capital*, *12*(3), 446–476.

Abhayawansa, S., & Abeysekera, I. (2009). Intellectual capital disclosure from sell-side analyst perspective. *Journal of Intellectual Capital*, *10*(2), 294–306.

Abhayawansa, S., & Guthrie, J. (2012). Intellectual capital information and stock recommendations: Impression management? *Journal of Intellectual Capital*, *13*(3), 398–415. https://doi.org/10.1108/14691931211248945

Abhayawansa, S., & Guthrie, J. (2016a). Does intellectual capital disclosure in analysts' reports vary by firm characteristics? *Advances in Accounting*, *35*, 26–38. https://doi.org/10.1016/j.adiac.2016.04.002

Abhayawansa, S., & Guthrie, J. (2016b). Drivers and semantic properties of intellectual capital information in sell-side analysts' reports. *Journal of Accounting & Organizational Change*, *12*(4), 434–471. https://doi.org/10.1108/JAOC-05-2014-0027

Abhayawansa, S., Guthrie, J., & Bernardi, C. (2019). Intellectual capital accounting in the age of integrated reporting: A commentary. *Journal of Intellectual Capital*, *20*(1), 2–10.

Adams, C. A. (2015). The international integrated reporting council: A call to action. *Critical Perspectives on Accounting*, *27*, 23–28. https://doi.org/10.1016/j.cpa.2014.07.001

Ahmed Haji, A., & Mohd Ghazali, N. A. (2012). Intellectual capital disclosure trends: Some Malaysian evidence. *Journal of Intellectual Capital*, *13*(3), 377–397.

Akhtaruddin, M., Hossain, M. A., Hossain, M., & Yao, L. (2009). Corporate governance and voluntary disclosure in corporate annual reports of Malaysian listed firms. *Journal of Applied Management Accounting Research*, *7*(1), 1.

Al-Tuwaijri, S. A., Christensen, T. E., & Hughes Ii, K. E. (2004). The relations among environmental disclosure, environmental performance, and economic performance: A simultaneous equations approach. *Accounting, Organizations and Society*, *29*(5–6), 447–471.

An, Y., Davey, H., Eggleton, I. R. C., & Wang, Z. (2015). Intellectual capital disclosure and the information gap: Evidence from China. *Advances in Accounting*, *31*(2), 179–187. https://doi.org/10.1016/j.adiac.2015.09.001

Arena, C., Bozzolan, S., & Michelon, G. (2015). Environmental reporting: Transparency to stakeholders or stakeholder manipulation? An analysis of disclosure tone and the role of the board of directors. *Corporate Social Responsibility and Environmental Management*, *22*(6), 346–361. https://doi.org/10.1002/csr.1350

Asquith, P., Pathak, P. A., & Ritter, J. R. (2005). Short interest, institutional ownership, and stock returns. *Journal of Financial Economics*, *78*(2), 243–276. https://doi.org/10.1016/j.jfineco.2005.01.001

Baginski, S. P., Hassell, J. M., & Kimbrough, M. D. (2002). The effect of legal environment on voluntary disclosure: Evidence from management earnings forecasts issued in US and Canadian markets. *The Accounting Review*, *77*(1), 25–50.

Baginski, S. P., Hassell, J. M., & Kimbrough, M. D. (2004). Why do managers explain their earnings forecasts? *Journal of Accounting Research*, *42*(1), 1–29.

Beattie, V., McInnes, B., & Fearnley, S. A. (2004). Methodology for analysing and evaluating narratives in annual reports: A comprehensive descriptive profile and metrics for disclosure quality attributes. *Accounting Forum*, *28*(3), 205–236. https://doi.org/10.1016/j.accfor.2004.07.001

Beattie, V., & Thomson, S. J. (2007). Lifting the lid on the use of content analysis to investigate intellectual capital disclosures. *Accounting Forum*, *31*(2), 129–163. https://doi.org/10.1016/j.accfor.2007.02.001

Beck, C., Dumay, J., & Frost, G. (2017). In pursuit of a 'single source of truth': From threatened legitimacy to integrated reporting. *Journal of Business Ethics*, *141*(1), 191–205.

Benevene, P., Kong, E., Barbieri, B., Lucchesi, M., & Cortini, M. (2017). Representation of intellectual capital's components amongst Italian social enterprises. *Journal of Intellectual Capital*, *18*(3), 564–587.

Beretta, V., Demartini, C., & Trucco, S. (2018). Does environmental, social and governance performance influence intellectual capital disclosure tone in integrated reporting? *Journal of Intellectual Capital*, *20*(1), 100–124. https://doi.org/10.1108/JIC-02-2018-0049

Beretta, V., Demartini, C., & Trucco, S. (2019). Does environmental, social and governance performance influence intellectual capital disclosure tone in integrated reporting?. *Journal of Intellectual Capital*, *20*(1), 100–124.

Bontis, N. (2003). Intellectual capital disclosure in Canadian corporations. *Journal of Human Resource Costing & Accounting*, *7*(1/2), 9–20. https://doi.org/10.1108/eb029076

Bozzolan, S., Favotto, F., & Ricceri, F. (2003). Italian annual intellectual capital disclosure: An empirical analysis. *Journal of Intellectual Capital*, *4*(4), 543–558. https://doi.org/10.1108/14691930310504554

Cahan, S. F., Villiers, C. De, Jeter, D. C., Naiker, V., & Staden, C. J. Van. (2016). Are CSR disclosures value relevant? Cross-country evidence. *European Accounting Review*, *25*(3), 579–611. https://doi.org/10.1080/09638180.2015.1064009

Casonato, F., Farneti, F., & Dumay, J. (2019). Social capital and integrated reporting: Losing legitimacy when reporting talk is not supported by actions. *Journal of Intellectual Capital*. DOI: 10.1108/JIC-08-2018-0132.

Cerbioni, F., & Parbonetti, A. (2007). Exploring the effects of corporate governance on intellectual capital disclosure: An analysis of European biotechnology companies. *European Accounting Review*, *16*(4), 791–826. https://doi.org/10.1080/09638180701707011

Chen, J. C., & Roberts, R. W. (2010). Toward a more coherent understanding of the organization–society relationship: A theoretical consideration for social and environmental accounting research. *Journal of Business Ethics*, *97*(4), 651–665. https://doi.org/10.1007/s10551-010-0531-0

Clarkson, P. M., Li, Y., Richardson, G. D., & Vasvari, F. P. (2008). Revisiting the relation between environmental performance and environmental disclosure: An empirical analysis. *Accounting, Organizations and Society*, *33*(4), 303–327. https://doi.org/10.1016/j.aos.2007.05.003

Clarkson, P. M., Overell, M. B., & Chapple, L. (2011). Environmental reporting and its relation to corporate environmental performance. *Abacus*, *47*(1), 27–60.

Clatworthy, M., & Jones, M. J. (2001). The effect of thematic structure on the variability of annual report readability. *Accounting, Auditing & Accountability Journal*, *14*(3), 311–326. https://doi.org/10.1108/09513570110399890

de Villiers, C., Venter, E. R., & Hsiao, P. C. K. (2017). Integrated reporting: background, measurement issues, approaches and an agenda for future research. *Accounting & Finance*, *57*(4), 937–959.

de Villiers, C., & Sharma, U. (2017). A critical reflection on the future of financial, intellectual capital, sustainability and integrated reporting. *Critical Perspectives on Accounting*. https://doi.org/10.1016/J.CPA.2017.05.003

Depoers, F. (2000). A cost benefit study of voluntary disclosure: Some empirical evidence from French listed companies. *European Accounting Review*, *9*(2), 245–263.

Desai, H., Hogan, C. E., & Wilkins, M. S. (2006). The reputational penalty for aggressive accounting: Earnings restatements and management turnover. *The Accounting Review*, *81*(1), 83–112.

Druz, M., Petzev, I., Wagner, A. F., & Zeckhauser, R. J. (2017). *When managers change their tone, analysts and investors change their tune*. SSRN Scholarly Paper No. ID 2559157. Social Science Research Network, Rochester, NY, USA.

Dumay, J. (2016). A critical reflection on the future of intellectual capital: From reporting to disclosure. *Journal of Intellectual Capital*, *17*(1), 168–184. https://doi.org/10.1108/JIC-08-2015-0072
Dumay, J., & Dai, T. (2017). Integrated thinking as a cultural control? *Meditari Accountancy Research*, *25*(4), 574–604.
Dumay, J., & Garanina, T. (2013). Intellectual capital research: A critical examination of the third stage. *Journal of Intellectual Capital*, *14*(1), 10–25.
Dumay, J., & Guthrie, J. (2017). Involuntary disclosure of intellectual capital: Is it relevant? *Journal of Intellectual Capital*, *18*(1), 29–44.
EU. (2014). Directive 2014/95/EU.
Flower, J. (2015). The international integrated reporting council: a story of failure. *Critical Perspectives on Accounting*, *27*, 1–17.
European Union. (2014). *Directive 2014/95/EU of the European Parliament*. Retrieved from https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32014L0095
Graham, R. E., Ahn, A. C., Davis, R. B., O'Connor, B. B., Eisenberg, D. M., & Phillips, R. S. (2005). Use of complementary and alternative medical therapies among racial and ethnic minority adults: Results from the 2002 National Health Interview Survey. *Journal of the National Medical Association*, *97*(4), 535–545.
Gray, R., Kouhy, R., & Lavers, S. (1995). Corporate social and environmental reporting: A review of the literature and a longitudinal study of UK disclosure. *Accounting, Auditing & Accountability Journal*, *8*(2), 47–77.
Guidry, R. P., & Patten, D. M. (2012). Voluntary disclosure theory and financial control variables: An assessment of recent environmental disclosure research. *Accounting Forum*, *36*, 81–90. https://doi.org/10.1016/j.accfor.2012.03.002
Gujarati, D., & Porter, D. (2003). Multicollinearity: What happens if the regressors are correlated. In *Basic econometrics* (pp. 363–363). New York, NY: McGraw-Hill.
Haller, A., & van Staden, C. (2014). The value added statement – An appropriate instrument for integrated reporting. *Accounting, Auditing & Accountability Journal*, *27*(7), 1190–1216. https://doi.org/10.1108/AAAJ-04-2013-1307
Holder-Webb, L., & Cohen, J. R. (2007). The association between disclosure, distress, and failure. *Journal of Business Ethics*, *75*(3), 301–314.
Hooghiemstra, R. (2000). Corporate communication and impression management–new perspectives why companies engage in corporate social reporting. *Journal of Business Ethics*, 27(1–2), 55–68.
Hummel, K., Mittelbach-Hoermanseder, S., Cho, C. H., & Matten, D. (2017). *Implicit versus explicit corporate social responsibility disclosure: A textual analysis*. SSRN Scholarly Paper No. ID 3090976. Social Science Research Network, Rochester, NY, USA.
Humphrey, J. E., Lee, D. D., & Shen, Y. (2012). Does it cost to be sustainable? *Journal of Corporate Finance*, *18*(3), 626–639. https://doi.org/10.1016/J.JCORPFIN.2012.03.002
Hussainey, K., Schleicher, T., & Walker, M. (2003). Undertaking large-scale disclosure studies when AIMR-FAF ratings are not available: The case of prices leading earnings. *Accounting and Business Research*, *33*(4), 275–294. https://doi.org/10.1080/00014788.2003.9729654
Hussainey, K., & Walker, M. (2009). The effects of voluntary disclosure and dividend propensity on prices leading earnings. *Accounting and Business Research*, *39*(1), 37–55. https://doi.org/10.1080/00014788.2009.9663348
IIRC. (2013). *International <IR> framework*. London: IIRC
Kothari, S. P., Shu, S., & Wysocki, P. D. (2009). Do managers withhold bad news? *Journal of Accounting Research*, *47*(1), 241–276. https://doi.org/10.1111/j.1475-679X.2008.00318.x
Lang, M. H., & Lundholm, R. J. (2000). Voluntary disclosure and equity offerings: Reducing information asymmetry or hyping the stock?. *Contemporary Accounting Research*, *17*(4), 623–662.
Li, F. (2010). Textual analysis of corporate disclosures: A survey of the literature. *Journal of Accounting Literature*, *29*, 143.
Lodhia, S. (2015). Exploring the transition to integrated reporting through a practice lens: An Australian customer owned bank perspective. *Journal of Business Ethics*, *129*(3), 585–598.
Loughran, T., & McDonald, B. (2011). When is a liability not a liability? Textual analysis, dictionaries, and 10-Ks. *The Journal of Finance*, *66*(1), 35–65.
Mattingly, J. E. (2017). Corporate social performance: A review of empirical research examining the corporation–society relationship using Kinder, Lydenberg, Domini Social Ratings Data. *Business & Society*, *56*(6), 796–839. https://doi.org/10.1177/0007650315585761

Mattingly, J. E., & Berman, S. L. (2006). Measurement of corporate social action. *Business & Society*, *45*(1), 20–46. https://doi.org/10.1177/0007650305281939

Melloni, G. (2015). Intellectual capital disclosure in integrated reporting: An impression management analysis. *Journal of Intellectual Capital*, *16*(3), 661–680. https://doi.org/10.1108/JIC-11-2014-0121

Melloni, G., Caglio, A., & Perego, P. (2017). Saying more with less? Disclosure conciseness, completeness and balance in Integrated Reports. *Journal of Accounting and Public Policy*, *36*(3), 220–238. https://doi.org/10.1016/j.jaccpubpol.2017.03.001

Melloni, G., Stacchezzini, R., & Lai, A. (2016). The tone of business model disclosure: An impression management analysis of the integrated reports. *Journal of Management & Governance*, *20*(2), 295–320. https://doi.org/10.1007/s10997-015-9319-z

Merkl-Davies, D. M., & Brennan, N. M. (2007). Discretionary disclosure strategies in corporate narratives: incremental information or impression management?. *Journal of Accounting Literature*, *27*, 116–196.

Merkl-Davies, D. M., Brennan, N. M., & McLeay, S. J. (2011). Impression management and retrospective sense-making in corporate narratives: A social psychology perspective. *Accounting, Auditing & Accountability Journal*, *24*(3), 315–344.

Merkley, K. J. (2014). Narrative disclosure and earnings performance: Evidence from R&D disclosures. *Accounting Review*, *89*(2), 725–757. https://doi.org/10.2308/accr-50649

Osma, B. G., & Guillamón-Saorín, E. (2011). Corporate governance and impression management in annual results press releases. *Accounting, Organizations and Society*, *36*(4–5), 187–208.

Perego, P., Kennedy, S., & Whiteman, G. (2016). A lot of icing but little cake? Taking integrated reporting forward. *Journal of Cleaner Production*, *136*, 53–64. https://doi.org/10.1016/j.jclepro.2016.01.106

Pistoni, A., Songini, L., & Bavagnoli, F. (2018). Integrated reporting quality: An empirical analysis. *Corporate Social Responsibility and Environmental Management*, *25*(4), 489–507. https://doi.org/10.1002/csr.1474

Richards, T., & Richards, L. (1994). Using computers in qualitative research. In N. K. Denzin, Y. S. Lincoln (Eds.). *Handbook of qualitative research* (pp. 445–462). Thousand Oaks, CA: Sage Publications, Inc.

Rogers, J. L., Van Buskirk, A., & Zechman, S. L. (2011). Disclosure tone and shareholder litigation. *The Accounting Review*, *86*(6), 2155–2183.

Schleicher, T., & Walker, M. (2010). Bias in the tone of forward-looking narratives. *Accounting and Business Research*, *40*(4), 371–390.

Solon, G., Haider, S. J., & Wooldridge, J. M. (2015). What are we weighting for? *Journal of Human Resources*, *50*(2), 301–316.

Striukova, L., Unerman, J., & Guthrie, J. (2008). Corporate reporting of intellectual capital: Evidence from UK companies. *The British Accounting Review*, *40*(4), 297–313. https://doi.org/10.1016/j.bar.2008.06.001

Sydserff, R., & Weetman, P. (1999). A texture index for evaluating accounting narratives: An alternative to readability formulas. *Accounting, Auditing & Accountability Journal*, *12*(4), 459–488.

Thomson Reuters. (2019, June). Environmental, Social and Governance (ESG) Scores from Refinitiv. https://www.refinitiv.com/content/dam/marketing/en_us/documents/methodology/esg-scores-methodology.pdf

Toms, J. S. (2002). Firm resources, quality signals and the determinants of corporate environmental reputation: Some UK evidence. *British Accounting Review*. https://doi.org/10.1006/bare.2002.0211

Twedt, B., & Rees, L. (2012). Reading between the lines: An empirical examination of qualitative attributes of financial analysts' reports. *Journal of Accounting and Public Policy*, *31*(1), 1–21. https://doi.org/10.1016/j.jaccpubpol.2011.10.010

Ullmann, A. A. (1985). Data in search of a theory: A critical examination of the relationships among social performance, social disclosure, and economic performance of US firms. *Academy of Management Review*, *10*(3), 540–557.

Veltri, S., & Silvestri, A. (2015). The Free State University integrated reporting: A critical consideration. *Journal of Intellectual Capital*, *16*(2), 443–462.

Verrecchia, R. E. (1983). Discretionary disclosure. *Journal of Accounting and Economics*, *5*, 179–194.

Verrecchia, R. E. (2001). Essays on disclosure. *Journal of Accounting and Economics*, *32*(1–3), 97–180. https://doi.org/10.1016/S0165-4101(01)00025-8

Welsh, E. (2002). Dealing with data: Using NVivo in the qualitative data analysis process. *Forum Qualitative Sozialforschung/Forum: Qualitative Social Research*, *3*, 1–7. Retrieved from http://www.qualitative-research.net/index.php/fqs/article/view/865/1880

Wooldridge, J. M. (2015). *Introductory econometrics: A modern approach*. Ontario, Canada: Nelson Education.

APPENDIX 1: VARIABLES DEFINITION AND MEASUREMENT

Variable Acronym	Variable Definition	Variable Measurement
Dependent variable		
ICD_TONE	IC disclosure tone	IC positive text units.
Independent variables		
Environmental performance		
EMISSION_REDUCTION	Emission reduction	The emission reduction category measures a company's management commitment and effectiveness toward reducing environmental emission in the production and operational processes. It reflects a company's capacity to reduce air emissions (greenhouse gases, F-gases, ozone-depleting substances, NO_x and SO_x, etc.), waste, hazardous waste, water discharges, spills or its impacts on biodiversity and to partner with environmental organizations to reduce the environmental impact of the company in the local or broader community. *Source*: Thomson Reuters Asset4
PRODUCT_INNOVATION	Product innovation	The product innovation category measures a company's management commitment and effectiveness toward supporting the research and development of eco-efficient products or services. It reflects a company's capacity to reduce the environmental costs and burdens for its customers, and thereby creating new market opportunities through new environmental technologies and processes or eco-designed, dematerialized products with extended durability. *Source*: Thomson Reuters Asset4
RESOURCE_REDUCTION	Resource reduction	The resource reduction category measures a company's management commitment and effectiveness toward achieving an efficient use of natural resources in the production process. It reflects a company's capacity to reduce the use of materials, energy, or water, and to find more eco-efficient solutions by improving supply chain management. *Source*: Thomson Reuters Asset4
Social performance		
PRODUCT_RESPONIBILITY	Customer/product responsibility	Company's management commitment and effectiveness toward creating value-added products and services upholding the customer's security. *Source*: Thomson Reuters Asset4
COMMUNITY	Society/community	Company's management commitment and effectiveness toward maintaining the company's reputation within the general community (local, national and global). *Source*: Thomson Reuters Asset4

HUMAN_RIGHTS	Society/human rights	Company's management commitment and effectiveness toward respecting the fundamental human rights conventions. *Source*: Thomson Reuters Asset4
DIVERSITY_OPPORTUNITY	Workforce/diversity and opportunity	Company's management commitment and effectiveness toward maintaining diversity and equal opportunities in its workforce. *Source*: Thomson Reuters Asset4
EMPLOYMENT_QUALITY	Workforce/employment quality	Company's management commitment and effectiveness toward providing high-quality employment benefits and job conditions. *Source*: Thomson Reuters Asset4
HEALTH_SAFETY	Workforce/health and safety	Company's management commitment and effectiveness toward providing a healthy and safe workplace. *Source:* Thomson Reuters Asset4
TRAINING_DEVELOPMENT	Workforce/training and development	Company's management commitment and effectiveness toward providing training and development (education) for its workforce. *Source*: Thomson Reuters Asset4
Governance performance		
BOARD_FUNCTIONS	Board of directors/board functions	Company's management commitment and effectiveness toward following best practice corporate governance principles related to board activities and functions. *Source*: Thomson Reuters Asset4
BOARD_STRUCTURE	Board of directors/board structure	Company's management commitment and effectiveness toward following best practice corporate governance principles related to a well-balanced membership of the board. *Source*: Thomson Reuters Asset4
COMPENSATION_POLICY	Board of directors/compensation policy	Company's management commitment and effectiveness toward following best practice corporate governance principles related to competitive and proportionate management compensation. *Source*: Thomson Reuters Asset4
VISION_STRATEGY	Integration/vision and strategy	Company's management commitment and effectiveness toward the creation of an overarching vision and strategy integrating financial and extra-financial aspects. *Source*: Thomson Reuters Asset4
SHAREHOLDER_RIGHTS	Shareholders/shareholder rights	Company's management commitment and effectiveness toward following best practice corporate governance principles related to a shareholder policy and equal treatment of shareholders. *Source*: Thomson Reuters Asset4

(*Continued*)

Variable Acronym	Variable Definition	Variable Measurement
Control Variables		
DECL_FIN_PERF	Declining financial performance	Dummy variable equal to 1 if the firm's ROE is decreasing, 0 otherwise. *Source*: Datastream
SIZE	Size	Logarithm of balance sheet total assets. *Source*: Datastream
ENV_SENS_IND	Environmental sensitive industry	Dummy variable equal to 1 if the industry is member of oil and gas, basic materials, industrials or utilities, 0 otherwise
TIME_FORWARD	Forward-looking IC disclosure	IC forward-looking text units
TIME_BACKWARD	Backward-looking IC Disclosure	IC backward-looking text units
EVID_DISCURSIVE	Discursive IC disclosure	IC discursive text units
EVID_NUMERICAL	Numerical IC disclosure	IC numerical text units
ANGLO_MODEL	Country	Dummy variable equal to 1 if the firm adopts the Anglo-American accounting model, 0 otherwise
YEAR_2011	Year	Dummy variable equal to 1 for year 2011, 0 otherwise
YEAR_2012	Year	Dummy variable equal to 1 for year 2012, 0 otherwise
YEAR_2013	Year	Dummy variable equal to 1 for year 2013, 0 otherwise
YEAR_2014	Year	Dummy variable equal to 1 for year 2014, 0 otherwise
YEAR_2015	Year	Dummy variable equal to 1 for year 2015, 0 otherwise
YEAR_2016	Year	Dummy variable equal to 1 for year 2016, 0 otherwise

APPENDIX 2: VARIANCE INFLATION FACTOR (VIF) AND BREUSCH-PAGAN TEST

Variable	Model 1		Model 2		Model 3	
	VIF	1/VIF	VIF	1/VIF	VIF	1/VIF
DECL_FIN_PERF	1.14	0.8802	1.41	0.7846	1.15	0.8676
EMISSION_REDUCTION	2.56	0.3911				
PRODUCT_INNOVATION	2.14	0.4680				
RESOURCE_REDUCTION	2.26	0.4430				
PRODUCT_RESPONSIBILITY			1.85	0.5403		
COMMUNITY			1.74	0.5740		
HUMAN_RGHTS			1.55	0.6461		
DIVERSITY_OPPORTUNITY			2.05	0.4873		
EMPLOYMENT_QUALITY			2.55	0.3927		
HEALTH_SAFETY			1.57	0.6374		
TRAINING_DEVELOPMENT			3.18	0.3148		
BOARD_FUNCTIONS					1.97	0.5076
BOARD_STRUCTURE					2.90	0.3446
COMPENSATION_POLICY					1.42	0.7036
VISION_STRATEGY					1.54	0.6477
SHAREHOLDER_RIGHTS					1.80	0.5551
SIZE	1.79	0.5598	2.23	0.4485	1.85	0.5417
ENV_SENS_IND	1.92	0.5200	2.05	0.4877	1.63	0.6135
TIME_FORWARD	1.32	0.7596	1.27	0.7846	1.17	0.8557
TIME_BACKWARD	2.79	0.3589	4.08	0.2451	3.18	0.3147
EVID_DISCURSIVE	1.98	0.5055	2.05	0.4885	2.11	0.4730
EVID_NUMERICAL	2.23	0.4475	2.85	0.3506	2.51	0.3990
ANGLO_MODEL	2.32	0.4311	2.27	0.4411	3.09	0.3237
YEAR_2016	2.83	0.3531	3.10	0.3225	3.04	0.3294
YEAR_2015	3.07	0.3261	3.30	0.3034	3.33	0.3002
YEAR_2014	3.20	0.3123	3.29	0.3042	3.13	0.3192

(*Continued*)

Variable	Model 1		Model 2		Model 3	
	VIF	1/VIF	VIF	1/VIF	VIF	1/VIF
YEAR_2013	1.94	0.5159	1.94	0.5145	2.02	0.4952
YEAR_2012	1.54	0.6493	1.62	0.6061	1.63	0.6135
Mean VIF	2.19		2.30		2.19	
Breusch-Pagan – Chi2 (*p*-value)	1.40 (0.2374)		2.09 (0.1478)		0.18 (0.6698)	

Notes: ICD_TONE: IC disclosure tone; DECL_FIN_PERF: declining financial performance; EMISSION_REDUCTION: emission reduction; PRODUCT_INNOVATION: product innovation; RESOURCE_REDUCTION: resource reduction; PRODUCT_RESPONIBILITY: customer/product responsibility; COMMUNITY: society/community; HUMAN_RIGHTS: society/human rights; DIVERSITY_OPPORTUNITY: workforce/diversity and opportunity; EMPLOYMENT_QUALITY: workforce/employment quality; HEALTH_SAFETY: workforce/health and safety; TRAINING_DEVELOPMENT: workforce/training and development; BOARD_FUNCTIONS: board of directors/board functions; BOARD_STRUCTURE: board of directors/board structure; COMPENSATION_POLICY: board of directors/compensation policy; VISION_STRATEGY: integration/vision and strategy; SHAREHOLDER_RIGHTS: shareholders/shareholder rights; SIZE: size; ANGLO_MODEL is a variable equal to 1 if the firm adopts the Anglo-American accounting model, 0 otherwise; ENV_SENS_IND: environmental sensitive industry; TIME_FORWARD: forward-looking IC disclosure; TIME_BACKWARD: backward-looking IC disclosure; EVID_DISCURSIVE: discursive IC disclosure; EVID_NUMERICAL: numerical IC disclosure; YEAR_2012 is a dummy variable for year 2012; YEAR_2013 is a dummy variable for year 2013; YEAR_2014 is a dummy variable for year 2014; YEAR_2015 is a dummy variable for year 2015; YEAR_2016 is a dummy variable for year 2016.

CHAPTER 7

INTEGRATED REPORTING QUALITY: AN ANALYSIS OF KEY DETERMINANTS

Lucrezia Songini, Anna Pistoni, Francesco Bavagnoli and Valentina Minutiello

ABSTRACT

Despite the expected benefits to stakeholders, as well as the number of contributes aiming at identifying and proposing best practices on the integrated reporting (IR) adoption, it seems that the IR struggles to be diffused in companies. Several are the reasons explaining this evidence. It could mainly be the consequence of some critical issues underlying IR implementation, such as difficulties in the complete application of the IR framework.

Strictly related to this last aspect is the topic of the IR quality that recently has begun to gain interest both in the literature and in the empirical research. Particularly, the issues of IR quality and its determinants now appear to be more important than the IR quantity.

Starting from these premises, this chapter aims to identify the determinants of IR quality. The authors have identified main drivers of IR quality, considering previous studies on voluntary disclosure and in particular on corporate social responsibility (CSR) and sustainability disclosure while with reference to the quality assessment of IR, the authors have used the Integrated Reporting Scoreboard, recently proposed in the literature.

After developing the research hypothesis, an empirical analysis has been carried out on a sample of IRs issued by 55 companies in a three-year period.

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The main research results highlight, on the one hand, that the main determinants of IR quality are the country where the company operates, in particular European ones and mandatory IR countries; on the other hand, industry and firm's size don't seem to have a positive impact on IR quality.

Keywords: Integrated reporting; quality; determinants; integrated reporting scoreboard; empirical analysis; content analysis

1. INTRODUCTION

The integrated reporting (IR) is generally considered an evolution of the corporate reporting movement, aimed at supporting the implementation of a sustainable strategy by an integrated thinking as well as to highlight the main levers of the firm's value-creation process. This should allow stakeholders to assess more effectively a firm's capability to generate both present and future value. Moreover, the IR should outline a firm's use of and dependence on different kinds of resources and capitals, in order to enable stakeholders assess long-term perspectives of business and take decisions on resource allocation more effectively (Verschoor, 2011).

Notwithstanding the benefits to stakeholders and the growing literature on the IR adoption, the diffusion of IR among firms is still limited. This could be mainly the consequence of some critical issues underlying the IR implementation, such as difficulties in the complete application of the IR framework.

Strictly related to this last aspect is the topic of the IR quality that recently has begun to gain interest both in the literature and in the empirical research. Particularly, the issues of IR quality and its determinants appear now to be more important than the IR quantity.

Regarding the IR quality literature and practice outline the following main critical issues (Eccles & Serafeim, 2017; Pistoni & Songini, 2015): absence of connectivity among strategy, business model, performance and future outlook, due to the limited narrative flow and use of diagrams and maps; presence of informative gap in areas, such as governance, stakeholder engagement, and materiality process; inadequate description of the business model; and lack of completeness of information and limited practice of a third-party verification of the IR.

In 2012, Ernst & Young launched the Excellence in Integrated Report Awards, with the aim of favoring an increase of IR quality as well as diffusion of best practices in IR implementation. In 2014, the IIRC's report on "Assurance on IR: an exploration of issues" was published, aimed at generating interest on these issues.

The IIRC itself highlighted that communicating the firm's strategy and business model, as well the process of value creation, can represent one of the most relevant difficulty for enterprises in IR implementation (IIRC, 2014).

Some authors have focused on the IR quality and the assessment of the degree of implementation of the IR framework as well as the type of disclosed information (Eccles & Krzus, 2014; Pistoni & Songini, 2015).

Recently, Pistoni et al. (2018) have developed an Integrated Reporting Scoreboard (IRS) to assess the quality of IR. On the basis of the IRS, they found that, in most cases, the quality of IR is quite low. A limited depth of analysis characterizes all sections of the IR. Generally, firms apply the IR framework, but scarce detail is provided on relevant aspects such as capitals, business model, strategic priorities and outlook information. Substantially, more attention is given to the form than to the content of the IR.

However, there is still a lack of empirical evidence on the IR quality and in particular on its determinants. This is a quite underdeveloped topic in the literature specifically focused on IR. Whereas, some relevant contributes may be found in studies on the determinants of voluntary disclosure, corporate social responsibility (CSR) and sustainability disclosure.

Moving on from these premises, this chapter aims to identify the drivers of the IR quality.

Consistently with theories and previous studies on voluntary disclosure, CSR and sustainability disclosure, IR, and quality of disclosure, we focused on three main determinants of the IR quality: firm size, industry, and national context. The quality of IR was assessed referring to the IRS developed by Pistoni et al. (2018).

The research sample consisted of 165 IRs issued by 55 companies in a three years period (2013–2014).

The chapter is articulated into four sections. Firstly, main literature is discussed. Secondly, the research methodology is presented. Thirdly, research findings are discussed, and finally concluding remarks are presented.

2. LITERATURE REVIEW

Previous literature on the variables that may have an impact on the adoption of IR and, more in particular, on a better quality of IR is quite scarce; whereas some studies have dealt with the determinants of the sustainability disclosure, more specifically. However, among these literature streams, only few studies focused on the determinants of the disclosure quality. Starting from these premises, in this paragraph main literature on the determinants of sustainability disclosure, and of IR, in particular, as well on the quality of disclosure is presented.

2.1. Studies on the Determinants of CSR Disclosure and Its Quality

As stated by Van Staden and Hooks (2007), much has been written about what motivates organizations to disclose information about their interactions with environment and society (Deegan, 2002; Mathews, 2003). Beyond the descriptive analysis, studies have begun to extend the empirical CSR disclosure literature by focusing on a number of firm's characteristics, which are potential determinants of CSR disclosure practices and mechanisms used, among which a relevant role is played by the Sustainability Report.

According to Reverte (2009) three types of studies have been produced on this topic: (i) "descriptive studies" that analyze the nature and extent of CSR

disclosure and make comparison among different countries and time periods; (ii) "explicative studies" that pay attention to the determinants of CSR disclosure; and (iii) studies on the "impact of social and environmental information" on various users, mainly on market reaction.

Our research falls within the second group, as it aims at analyzing the variables explaining a particular disclosure tool, the IR, even though our focus is on the quality of IR, instead of its adoption.

More in depth, in the research field dealing with the determinants of CSR, two main types of studies can be found: those studies adopting multiple theoretical perspectives and those focused on the empirical analysis of the determinants of CSR disclosure (Gangi & Trotta, 2013).

Referring to the first kind of studies, Gray, Kouhy, and Lavers (1995) argued that the determinants of CSR reporting may be explained through three broad groups of theories, focused on organization–society information flows: decision – usefulness theory, economic theory, and social and political theory.

Holder-Webb, Cohen, Nath, and Wood (2009) suggested four main theoretical streams as reference frameworks to understand the why of CSR activity and CSR disclosures, such as neo-classical economics, studies on marketing strategy, political economy, and institutional theory.

Pistoni and Songini (2013), distinguishing between internal and external determinants of CSR and CSR disclosure, proposed that stakeholder theory and proprietary cost theory have highlighted mainly the internal drivers of CSR and its disclosure, whereas institutional theory, positive accounting theory and decision usefulness studies mainly focused on external determinants. Legitimacy theory has showed both external determinants of CSR, when a reactive approach is carried out, and the internal ones, when a proactive approach is pursued. According to the authors Pistoni & Songini (2013) and Pistoni, Songini, and Perrone (2016), internal determinants refer to intrinsic firm's characteristics such as company values and objectives, top management's values, commitment, and personal features (gender, age, professional experience, etc.), ownership (family firms, public companies, state-owned companies, cooperatives, etc.), governance system, firm size (large enterprises, small and medium-sized enterprises – SMEs), industry, span of activities (national, regional, international), and past financial performance. External determinants comprise, instead, practices followed by competitors in the same industry, presence and role of codes of conduct in the related industry, legislative recommendations, the legal and regulatory framework of the country, the national business system, pressures from secondary stakeholders (financial markets, socially responsible investors (SRIs), opinion groups/special interest, the media, etc.), and also internal stakeholders. Pistoni and Songini (2013) found that in companies giving importance to CSR disclosure, internal determinants of CSR have a greater importance than external drivers. Among the latter, the impact of legislative recommendations is not relevant, although financial markets exert a great pressure. Among the internal determinants, drivers related to company and management values and ethics are relevant. It is quite clear that notwithstanding numerous recommendations by International, European and national institutional bodies regarding CSR disclosure, internal determinants are

the most important for CSR disclosure, especially those related to company's values and to the width of the stakeholder group. Moreover, firms report on CSR activities mainly to build or sustain corporate legitimacy.

Similarly, Adams (2002) argued that previous literature on the factors influencing CSR disclosure focused on three main aspects: corporate characteristics (including size, industry, financial/economic performance, share trading volume, price, and risk), general contextual factors (such as country of origin, time, specific events, media pressures, stakeholders, social, political, cultural, and economic context), and internal context (including the identity of company chair and the existence of a social reporting committee).

Moving on to the studies focused on empirical evidences, authors highlighted multiple and different variables that show a role in the CSR disclosure. The main recurring aspects are: firm's proximity to the social issue in question (Pedersen & Neergaard, 2008), company's economic and organizational resources and skills, competitive environment and competitors' strategy (Wokutch & Shepard, 1999), national cultural values and context (Matten & Moon, 2008), self-enlightened motivation of management and owners, legal compliance (Moon, 2004), image creation, and improvement of future profits and goodwill (McWilliams & Siegel, 2001).

In reviewing studies on the determinants of CSR disclosure, Gray et al. (1995) noted that a number of empirical studies have shown strong associations between disclosure practices and firm size, financial performance and type of industry. Company size seems to have a positive effect on the adoption and extent of sustainability reporting, assuming that greater companies face greater stakeholder pressures and support smaller costs of disclosure (Gallo & Jones Christensen, 2011). With reference to financial performance, empirical studies focus particularly on the company's financial structure. Results show how a high level of leverage determines a lower propensity to disclose information (Cormier & Magnan, 2003; Haniffa & Cooke, 2005; Stanny & Ely, 2008) as well as, on the contrary, more profitable companies disclose more information to distinguish themselves from less successful companies and reduce their cost of capital (Frías-Aceituno, Rodríguez-Ariza, & García-Sánchez, 2014).

Other empirical research focuses on several ownership variables such as company listing on the stock market, government ownership, concentrated, or dispersed ownership.

Publicly listed companies are more actively engaged in sustainability reporting and they disclose a higher level of sustainability information (Gamerschlag, Möller, & Verbeeten, 2011), whereas state-owned companies are less active on this issue (Amran & Haniffa, 2011; Gallo & Jones Christensen, 2011). Concentrated ownership seems to reduce the importance and quality of CSR disclosure because dominant shareholders are supposed to have access to relevant information, whereas dispersed ownership can favor it (Brammer & Pavelin, 2008; Cormier & Magnan, 2003; Gamerschlag et al., 2011).

Moreover, the corporate governance mechanisms and their characteristics, particularly the board of directors' ones, can improve the extent of CSR disclosure. Some studies highlight how board size and its composition, represented by the

percentage of independent members, enhance company disclosure and its quality (Akhtaruddin, Hossain, Hossain, & Yao, 2009; Qu, Ee, Liu, Wise, & Carey, 2015). Moreover, board gender diversity has a positive impact on disclosure of holistic information (Frías-Aceituno, Rodríguez-Ariza, & García-Sánchez, 2013a).

Gangi and Trotta's (2013) study aimed to analyze the determinants of the breadth and of the concentration of the CSR disclosure. They found that the country of origin is an important driver of the quality of CSR disclosure that was assessed considering themes represented in the CSR reports. In particular, operating in a market economy less polarized on the shareholders groups causes a wider breadth of disclosure. Moreover, they did not find any evidence that worst reputation can be counterbalanced by a greater propensity to disclosure, but they found that enterprises that are weak in one or more areas tend to limit disclosure about these issues and to focus on other aspects (i.e., donations). Gangi and Trotta (2013) found that firm size is one of the main drivers of the amplitude of the CSR disclosure. Their findings showed also that the activism of SRIs is a predictor of CSR disclosure: when the number of SRIs that participate to the ownership structure of the target company increases, the breadth of voluntary social disclosure also increases. Then they found that the membership to the United Nation Global Compact assumes a lower weight if compared with other determinants of CSR disclosure. Finally, the authors demonstrated that companies with a greater commitment to sustainable policies repaid by higher social results are encouraged to report their CSR performance.

Gamerschlag et al. (2011) analyzed the determinants of CSR disclosure activities in Germany adopting a CSR disclosure index developed consistently with Global Reporting Initiative (GRI) guidelines. Their findings are consistent with the political cost theory. Actually, main drivers of CSR and environmental disclosure in German companies are firm visibility, shareholder structure, relationship with American stakeholders, and profitability.

Empirical studies focused on external determinants of CSR disclosure show that the most addressed aspects are industry, country of origin as well as legal requirements.

Industry appears to affect CSR disclosure because companies operating in sectors with high social and environmental impacts face the need to engage in sustainability reporting in order to answer to stakeholder pressures (Sotorrío, & Sánchez, 2010). Moreover, different sectors are characterized by mimetic tendencies that drive the competitor behaviors (Aerts, Cormier, & Magnan, 2006, Husillos-Carqués, Gonzalez, & Alvarez Gil, 2011).

In addition, the country in which the company reports and the country of company ownership appear related to CSR disclosure due to different cultural and social norms or governmental regulations (Chen & Bouvain, 2009; Cox, Friedman, & Tribunella, 2011; Golob & Bartlett, 2007, Luo & Tang, 2013; Parboteeah, Addae, & Cullen, 2012; Park, Russel, & Lee, 2007; Vachon, 2010).

Coulmont, Loomis, Berthelot and Gangi (2015) focused on the impact of some cultural dimensions of the country on GRI application levels. As reference framework they adopted Hofstede's dimensions (Hofstede, Hofstede, & Minkov, 2010): power distance, individualism (vs collectivism), masculinity (vs femininity),

uncertainty avoidance, long-term (vs short-term) orientation, and indulgence (vs restraint). Coulmont et al. (2015) found a negative relationship between the level of GRI implementation and operating in individualistic countries, with higher power distance and indulgence scores. Instead, they did not find any significant relation with GRI application and masculinity, uncertainty avoidance, and long-term orientation. On the contrary, a positive relationship was found between GRI application scores and the level of economic development of the country and firm size. With regard to external assurance on GRI reports, their research findings showed that external assurance is negatively related with the context of countries with higher degrees of power distance and high indulgence scores, whereas the other cultural dimensions are not significant. Moreover, other variables are found to be positively and significantly related to external assurance on sustainability reporting, such as the country's gross domestic product per capita, the size of the firm, and the renewal of the firm's assets. Instead, a common law-based legal system is negatively related. Their findings are consistent with previous studies, with the exception of individualism, which has an inverse relationship with the high application-level score or seeking external assurance.

Moreover, Luo and Tang (2013) have analyzed the impact of national culture on sustainability reporting, with particular regard to voluntary carbon disclosure as measured by the Carbon Disclosure Project participation. To measure the culture, they used Hofstede's national culture dimensions, but adding a fifth dimension: long-term orientation, which refers to individuals oriented toward future rewards – in particular, perseverance and thrift (Hofstede et al., 2010). They found that the relationship between voluntary carbon disclosure and long-term orientation is statistically significant. They proposed that firms in countries characterized by individualism and uncertainty avoidance are more likely to disclose carbon information, whereas masculinity and power distance are likely to have the opposite effect on disclosure.

2.2. Studies on the Determinants of IR

If the literature on the quality of IR, and the determinants of its adoption is scarce, the issue of the determinants of IR quality is a very underdeveloped research stream.

Previous studies analyzed the relations between IR adoption and some variables, such as institutional factors (Jensen & Berg, 2012), industry concentration (Frías-Aceituno et al., 2014), and governance characteristics (Frías-Aceituno et al., 2013a).

Some authors (Frías-Aceituno et al., 2014; Sierra-García, Zorio-Grima, & García-Benau, 2015) found that the larger the firm size, the higher the adoption of IR as a reporting strategy, although they did not find a statistical significant relationship between profitability and IR adoption, and only a limited effect of the industry.

Lai, Melloni, and Stacchezzini (2016) argued whether the IR adoption represents a legitimation strategy aimed at coping with a negative public perception of firm commitment toward sustainability. Their findings "support previous studies

claiming that disclosure on sustainability is not driven by the need of corporate legitimacy (i.e. Clarkson, Li, Richardson, & Vasvari, 2008; Mahoney, Thorne, Cecil, & LaGore, 2013)" (Lai et al., 2016, p. 175). Surprisingly they found a relationship between IR adoption and sustainability rating, that is opposite than that suggested by legitimacy theory. In fact, they found that the higher is the ESG score, the higher is the probability to adopt the IR. Consistently with Mahoney et al. (2013) they did not find a relationship between leverage and IR adoption, as well negative profitability and IR adoption. Moreover, they supported an industry effect only with regard to basic materials, industrials and financials, but not oil and gas, thus rejecting the hypothesis that environmental sensitive industries are more likely to adopt IR. Besides, Lai et al. (2016) rejected the positive relation between firm size and IR adoption, as well an effect of the firm region.

Stacchezzini, Melloni, and Lai (2016, p. 7) found that "firms with weak social and environmental records use IR disclosure to detract attention from these results" supporting the role of IR as a mean to "opportunistically manage public impression on corporate behavior." Their findings also support the role of some external pressures on reporting practices, such as weak governance (less independent board) and belonging to an environmental sensitive industry, which lead to a more emphasis on sustainability action disclosure (more focused on resources or action taken, less verifiable by stakeholders) than on sustainability performance disclosure (focused on outcomes of the firm value-creation process).

Kilic and Kuzey (2018), studying the determinants of forward-looking disclosure in IR, found a positive and statistically significant relationship between gender diversity and forward-looking disclosure as well as firm size and leverage.

Another body of research showed a significant role of the institutional characteristics of the country in the IR adoption (Frías-Aceituno et al., 2014; Jensen & Berg, 2012).

Frías-Aceituno, Rodríguez-Ariza, and García-Sánchez (2013b), for example, have analyzed the impact of country's legal system on IR. Their results show that companies located in countries with a legal system oriented toward the protection of different stakeholders, and where legal enforcement mechanisms are strong, are more likely to publish a broad range of IRs than companies located in Anglo-Saxon contexts. Therefore, firms located in civil law countries have a higher level of interest in disclosing integrated information than are those based in common law countries.

The reason for this is that civil law system addresses the question of management responsibilities, encouraging firms to act honestly and within the law; these characteristics promote higher values of social responsibility, favor transparency, and enhance stakeholder engagement.

Similarly, Jensen and Berg (2012), realizing a comparison between sustainability reporting and IR, found that there are differences in country-level determinants: investor and employment protection laws, the intensity of market coordination and ownership concentration, the level of economic, environmental, and social development, the degree of national corporate responsibility, and the value system of the country. Companies issuing an IR are more likely to originate from countries with high investor protection, where private expenditures for

tertiary education are substantial and the labor system is characterized by high trade union density.

Moreover, a higher national corporate responsibility within a country enhances the likelihood of IR. They found also a positive relation between the economic development of a country and the likelihood that corporations will opt for IR.

3. RESEARCH FRAMEWORK AND DESIGN

3.1. Hypotheses

As shown in the above paragraph, previous literature highlighted several variables, which may explain the adoption and the characteristics of CSR disclosure and IR. Instead, fewer studies dealt with the determinants of sustainability disclosure and IR quality. Moreover, a consensus about the most significant determinants and the sign of the relations has not yet been reached, even though some variables are recurrent in most studies, such as firm size, industry, national context, firm performance (profitability and leverage), assurance, and corporate governance.

Starting from these premises, this chapter aims to identify the variables that may have an impact on the IR quality.

We considered the following ones as main determinants of IR quality: industry type, region (a group of similar countries), firm size, and operating in a country where IR is mandatory.

Previous studies underlined that companies in the same industry will adopt similar behaviors in terms of voluntary disclosure (Watts & Zimmerman, 1978), because different sectors are characterized by mimetic tendencies that drive the competitor behaviors (Aerts et al., 2006, Husillos-Carqués et al., 2011). Some studies found a relation between environmentally sensitive industries and voluntary disclosure (Cho & Patten, 2007; Cho, Freedman, & Patten, 2012; Patten, 2002). However, literature on this relationship is controversial: although for some studies the industry has a positive impact on the amount of information voluntarily disclosed (Bonsón & Escobar, 2004; Gul & Leung, 2004; Oyelere, Laswad, & Fisher, 2003), for others it does not have any statistically significant relation (Giner, 1997; Jeewantha, Dissa, & Ajward, 2015; Larrán & Giner, 2002). With specific reference to CSR disclosure, as shown before, industry appears to affect CSR disclosure because companies operating in sectors with high social and environmental impacts are engaged in sustainability reporting in order to answer to stakeholder pressures (Sotorrío & Sánchez, 2010).

Consistent with this literature stream, showing a relevant role of the industry in influencing CSR disclosure and IR, we would propose the following hypothesis:

H1. Operating in environmental and social sensitive industries is positively associated with IR quality.

The literature examined country-level determinants of CSR and CSR disclosure, such as investor and employment protection laws, intensity of market coordination and ownership concentration, level of economic, environmental

and social development, degree of national corporate responsibility, and value system of the country. With particular reference to the Matten and Moon's (2008) study, the authors proposed that national business systems, which are characterized by specific and different political, financial, education, and labor systems, together with cultural systems, may explain differences among CSR definitions and initiatives and practices adopted by companies of different countries. In particular, they conceptualized differences between CSR in USA and Europe. Referring in particular to IR, some authors found a positive relationship between the IR adoption and a country context characterized by higher investor protection, private expenditures for tertiary education, and trade union density in labor systems, and by a civil law (Frías-Aceituno et al., 2013b, 2014; Jensen & Berg, 2012). Another factor positively correlated with IR is the economic development status of a country (Jensen & Berg, 2012).

Consistent with previous literature that highlights many differences between the European and Anglo-Saxon contexts, we would propose the following hypothesis:

H2. Firms operating in Europe and civil law countries are characterized by higher IR quality than firms operating in Anglo-Saxon and common law contexts.

A number of studies analyzed the relation between disclosure and firm size, showing generally a strong association (Belkaoui & Karpik, 1989; Boesso & Kumar, 2007; Gray et al., 1995; Gray, Javad, Power, & Sinclair, 2001; Naser, Al-Hussaini, Al-Kwari, & Nuseibah, 2006). According to Gangi and Trotta (2013) firm size has a positive relation with the amplitude of the disclosure. Frías-Aceituno et al. (2014) found that in larger enterprises the probability of conflicts of interest among different stakeholders (shareholders, creditors, and managers) increases due to the greater need for external funds. As a consequence, an increase of agency costs occurs, which can be decreased by voluntary disclosure. Elfeky's (2017) study showed a positive significant correlation between firm size and corporate governance voluntary disclosure. With specific regard to IR, some authors (Frías-Aceituno et al., 2014; Sierra-García et al., 2015) found that larger companies are more likely to choose IR as a reporting strategy.

Accordingly, we propose the following hypothesis:

H3. Firm's size is positively associated with IR quality.

Finally, some authors suggested that the institutional characteristics of the country may have a significant impact on the IR adoption (Frías-Aceituno et al., 2014; Jensen & Berg, 2012), with particular regard to cultural and social norms, and governmental regulations (Chen & Bouvain, 2009; Cox et al., 2011; Luo & Tang, 2013; Parboteeah et al., 2012; Park et al., 2007; Vachon, 2010). Among institutional characteristics, it is noteworthy that IR is a mandatory requirement in countries, such as South Africa and Brazil. So we propose our last hypothesis:

H4. Firms operating in countries where IR is mandatory are characterized by better IR quality.

3.2. Variables

3.2.1. Dependent Variable

The IIRC (2013a, p. 2) stated that IR aims to:

> improve the quality of information available to providers of financial capital to enable a more efficient and productive allocation of capital, ,, [and] support integrated thinking, decision making and actions that focus on the creation of value over the short, medium and long term.

In 2014, the Financial Reporting Council (FRC, 2014) issued the "Guidance on the Strategic Report," which highlighted the quality of corporate reporting, in terms of its capacity to consider strategic issues that impact on firm performance and value creation. Pistoni et al. (2018) defined quality as the attitude of IR to present strategic elements that describe firm performance and value creation.

Thus we may propose that IR quality refers to the level of compliance of the IR content with the IR framework developed by the IIRC.

Consistently, to define and measure the IR quality (the dependent variable of the analysis) we referred to the IRS (Pistoni et al., 2018), and in particular to its Content area that evaluates the consistency of the IR document with the IR framework, with particular regard to its eight elements (organizational overview and external environment, business model, risks and opportunities, strategy and resource allocation, governance, performance, outlook, and basis of presentation) and two key concepts (capitals and value-creation process).

Namely, we focused on the content area as long as it comprises the key distinctive characteristics of IR that distinguish it from other kinds of voluntary disclosure (i.e., sustainability reporting).

Thus, in this study we chose the content area disclosure score as the dependent variable.

Following the scoring system proposed by Pistoni et al. (2018), to assess the content area, we used a quantitative scale, where each variable has a score between 0 (absence) and 5 (very high quality). This classification considers how the topic is presented, whether its description is exhaustive and whether it refers explicitly to the IR guiding principles (strategic focus and future orientation, connectivity, stakeholder relationships, materiality, reliability and completeness, consistency, and comparability). The maximum score achievable is 50.

Scoring systems have been used in both CSR and sustainability fields, with specific regard to social and environmental reporting (Gray, Owen, & Adams, 1996; Romolini, Fissi, & Gori, 2014), as well in the accounting field to assess the quality of disclosure in financial reports (Botosan, 1997).

Data were gathered and then codified with visual content analysis (Weber, 1990) applied to all the 165 IRs of the 55 sample companies. Each document was evaluated and scored by two researchers, who were trained on the scoring protocol to get reliability and consistency of the analysis (Krippendorf, 1980). An inter-rater reliability check (intra-class correlation calculation) was then performed with good results.

The content disclosure score index was measured by the average content scores given by the two researchers for each of the three years (2013–2015) considered.

3.2.2. Independent Variables

The independent variables have been defined and measured as follows.

3.2.2.1. Industry. Three industries have been identified: (1) high impact industries (environmental and social sensitive industries), which comprise manufacturing and other industrial activities (industrials, basic materials, healthcare, and oil and gas); (2) social sensitive industries, such as financial services; and (3) other service industries (consumer services, professional services, utilities, public sector, telecommunications, and real estate).

3.2.2.2. Region. Region identifies the location where the company is established. Three main regions, characterized by different national business systems (Whitley, 1997), have been identified: Anglo-Saxon (UK, USA, Australia, New Zealand, and Canada), Europe (Netherlands, Italy, Switzerland, Germany, and Denmark), and other countries (China, Singapore, Japan, Sri Lanka, South Africa, Brazil, Russia, and South Korea).

3.2.2.3. Firm Size. The number of employees for each of the three years considered is the proxy indicator of firm size (Boesso & Kumar, 2007). The average number of employees was log transformed and the natural logarithm was used as independent variable to address potential issues regarding heteroscedasticity and outliers.

3.2.2.4.IR Mandatory. As in some countries, such as South Africa and Brazil, IR represents a compulsory disclosure tool; we considered two group of countries, that is, countries where IR is mandatory (South Africa and Brazil) and the not mandatory countries.

3.3. Sample and Data Collection

The initial research sample consisted of 222 IRs downloaded in December 2016 and January 2017 from the IR examples website, in particular the "Getting Started" section (http://examples.integratedreporting.org/getting_started). For the year 2013 63 reports were available, for 2014 65 reports, and for 2015 94 reports. In order to create a balanced panel of firms with reports available for all three years (2013–2015), 57 reports have been excluded (7 firms published a report only in year 2014, 5 only in year 2013, 3 only in 2013 and 2014, and 39 only in year 2015).

Our final sample comprises 165 reports (55 reports for each year).

We have chosen the "Getting Started" section of the IIRC website as it comprises IRs that are considered by IIRC benchmarks for the adoption of the IR framework.

Being our research was carried out during 2016 and early 2017, we have focused on years 2013–2015. Moreover, it is noteworthy that in 2013 both the "Consultation draft on the International <IR> framework" (April; IIRC, 2013b)

and the "International <IR> framework" (December; IIRC, 2013a) were published, so we may expect that reports issued after 2013 are more consistent with the IR framework than in the past.

Main characteristics of the 55 analyzed companies are outlined in Table 1.

3.4. Methodology

After inspecting the data and confirming enough variability of the dependent variable and a trend of improvement in the disclosure through the years 2013–2015, first we performed a simple OLS multivariate regression to test the relationship between the independent variables and the content disclosure score dependent variable.

The regression equation is the following:

$$\text{Content Dscore}_{it} = \alpha + \beta_1 \text{ LnNempl}_{it} + \beta_2 \text{ Europe}_i + \beta_3 \text{ AngloSaxon}_i + \beta_4 \text{ ManInd}_i + \beta_5 \text{ Financial}_i + \beta_6 \text{ Mandatory}_i + \beta_7 \text{ Year2014} + \beta_8 \text{ Year2015} + \varepsilon_{it}$$

where:

Content Dscore_{it} content disclosure score for firm *i* in year *t;*

LnNempl_{it} natural logarithm of employees for firm *i* in year *t*;

Europe_i dummy variable that takes on the value of 1 if the firm is located in Europe and 0 otherwise;

AngloSaxon_i dummy variable that takes on the value of 1 if the firm is located in an Anglo-Saxon country and 0 otherwise;

ManInd_i dummy variable that takes on the value of 1 if the firm is a Manufacturer or performs other Industrial activities and 0 otherwise;

Financial_i dummy variable that takes on the value of 1 if the firm operates in the Finance sector and 0 otherwise;

Mandatory_i dummy variable that takes on the value of 1 if the firm is located in a country where IR is mandatory and 0 otherwise; and

Year 2014 and 2015 Year dummies to control for year effect adopting Year 2013 as the base case.

Two dummy variables account for the industry classification (as long as there are three categories) and two dummies account for the country system (as long as we identified three groups).

As the panel structure of the data set is perfectly balanced, a more punctual analysis is possible with panel regression techniques such as fixed effects (FE) or random effects (RE) regression.

The FE regression allows in principle to control for unobservable characteristics of the individual firms, which may have an impact on the quality of IR.

This approach is of no particular utility for our study, because it wipes out (for collinearity reasons) all the time invariant characteristics included in the model (e.g., industry, country system, and mandatory adoption of IR), which are of particular interest for this study.

Table 1. Sample Description.

Number of reports		222
Less:		
reports not available for all the years		57
Total		165
Industry distribution		
Industry sector	No. of Firms	Percent
Manufacturing/Industrials	25	45.45
Financial services	13	23.64
Other services	17	30.91
Total	55	100
Country system		
Category	No. of Firms	Percent
Anglo Saxon	30	54.55
Europe	11	20.00
Other	14	25.45
Total	55	100.00
Mandatory		
Firms operating in countries where IR is mandatory	9	16.36
Other	46	83.64
Total	55	100

It is noteworthy that the RE model can be an alternative approach, consistent with the aim of our research and a multivariate regression of panel data. Actually, an RE model considers the individual specific coefficient B_{1i} to be a random variable with a mean value of B_1; the intercept of each cross-section unit is expressed as

$$B_{1i} = B_1 + \varepsilon_i$$

where ε_i is a random error term with mean 0 and variance σ_ε^2.

This approach has the benefit to test the effect of individual time invariant characteristics that are omitted in the FE model.

We confirm that the RE model is better than a simple OLS model (or in other terms that there are some significant panel effects) with the Breusch-Pagan Lagrange multiplier test, which allowed to reject the null hypothesis of absence of significant panel effects.

The final tool used to analyze and interpret the 165-year-firm observations is the following RE regression equation with robust standard errors.

$$\text{Content Dscore}_{it} = \alpha + \beta_1 \text{ LnNempl}_{it} + \beta_2 \text{ Europe}_i + \beta_3 \text{ AngloSaxon}_i + \beta_4 \text{ ManInd}_i + \beta_5 \text{ Financial}_i + \beta_6 \text{ Mandatory}_i + \beta_7 \text{ Year2014} + \beta_8 \text{ Year2015} + w_{it} \quad \text{(Model 1)}$$

4. RESEARCH FINDINGS

4.1. Descriptive Statistics

Table 2 presents the descriptive statistics for the variables used in this study.

The average disclosure content score is 27.3 out of 50, pointing out that sample companies do not present an outstanding quality of IRs.

The average number of employees is 37,763, confirming that IR is still diffused mainly in large enterprises.

The trend in the disclosure quality (Dscore) over the three-year period is depicted in Table 3.

The quality improves from 2013 to 2014 and then decreases from 2014 to 2015.

4.2. Univariate Analysis

Multicollinearity diagnostics confirm that correlations among independent variables are not high. In fact, the VIF in the multivariate simple OLS regression analysis run on the whole data set and year by year is never higher than 1.6 (well below the commonly accepted threshold of 10).

4.3. Multivariate Analysis

The findings of multivariate panel regression (Model 1) are presented in Table 4.

We can find the following findings related to the research hypotheses:

> *H1*. Operating in environmental and social sensitive industries is positively associated with IR quality.

We observe a positive and not significant coefficient for manufacturing and industrial ($z = 0.27$, sig = 0.784) and a negative and not significant coefficient for financial services ($z = –0.07$, sig = 0.943).

Thus, we cannot confirm or disconfirm *H1*.

Table 2. Descriptive Statistics.

	N	Minimum	Maximum	Mean	Std. Dev.
Content Dscore	165	11.0	41.5	27.3	6.0
Number of employees	165	76	268,795	37,763	57,746

Table 3. Content Score Descriptives by Year.

	N	Minimum	Maximum	Mean	Std. Dev.
Content Dscore Year 2015	55	11.0	41.5	27.3	6.7
Content Dscore Year 2014	55	12.0	39.5	29.1	5.2
Content Dscore Year 2013	55	16.0	38.5	25.5	5.4

Table 4. Panel Random Effects Regression Using Content Dscore as Dependent Variable.

Model 1: Content $\text{Dscore}_{it} = \alpha + \beta_1 \text{ LnNempl}_{it} + \beta_2 \text{ Europe}_i + \beta_3 \text{ AngloSaxon}_i + \beta_4 \text{ ManInd}_i + \beta_5 \text{ Financial}_i + \beta_6 \text{ Mandatory}_i + \beta_7 \text{ Year2014} + \beta_8 \text{ Year2015} + w_{it}$

Variable	Expected sign	Coefficient	Robust Std. Err.	z	$P>\|z\|$
Constant		22.818	3.472	6.57	0.000
LnNempl	+	0.088	0.275	0.32	0.749
Europe	+	5.151	1.599	3.22	0.001
AngloSaxon	−	0.305	1.472	0.21	0.836
ManInd	+	0.391	1.425	0.27	0.784
Financial	+	−0.101	1.42	−0.07	0.943
Mandatory	+	3.162	1.424	2.22	0.026
Year 2014	+/−	3.581	0.748	4.79	0.000
Year 2015	+/−	1.78	0.99	1.8	0.072

Random effect GLS regression run with Stata 12.0
(robust standard errors adjusted for 55 clusters in entity)

R^2 within	*0.1305*
R^2 between	*0.2291*
R^2 overall	*0.1833*

H2. Firms operating in Europe and civil law countries are characterized by higher IR quality than firms operating in Anglo-Saxon and common law contexts.

We find a positive and significant (at the 1% level) coefficient (z = 3.22, sig = 0.001) for Europe and a positive but not significant coefficient for Anglo-Saxon countries (z = 0.21, sig = 0.836).

Thus we can confirm *H2* only partially with regard to operating in European countries – which follow generally a civil law system – where a possible explanation of the higher quality could be an embedded tradition of attention to the stakeholders and to CSR.

H3. Firm's size is positively associated to IR quality.

We find a positive coefficient for the natural logarithm of the number of employees (consistently with previous studies and with the expectations) but it is far from statistical significance (z = 0.32, sig = 0.749). So we cannot confirm or disconfirm *H3*.

H4. Firms operating in countries where IR is mandatory are characterized by better IR quality.

As expected, we note a positive and significant (at the 5% level) coefficient (z = 2.22, sig = 0.026) for the mandatory adoption of IR. Thus, we can confirm *H4*.

The year effects are significant (at 0.1% year 2014 and at 10% year 2015) and the portion of the variation in the dependent variable explained by the independent variables (overall R^2 square) is 18.3% (R^2 within 13%, R^2 between 22.9%).

5. DISCUSSION AND CONCLUSIONS

In the light of the research gaps highlighted by literature (de Villiers, Venter, & Hsiao, 2017; Eccles & Serafeim, 2017), the objective of this chapter has been to analyze and discuss the determinants of the IR quality.

A framework for IR quality assessment has been used, referring to Pistoni et al. (2018). Particularly, we claimed that the IR quality concerns the level of compliance of the IRs' content with the framework proposed by the IIRC. In order to define and measure the IR quality we used the IRS, proposed by Pistoni et al. (2018), with specific reference to its content area. Our research findings show that the quality of disclosure of the analyzed IRs shows considerable room for improvement. In fact, even though an increase in the IR quality from 2013 to 2015 can be seen, the overall quality of documents is still quite low with respect to content area.

With regard to the determinants of IR quality, we identified four recurring main determinants proposed by the literature: industry, region, size, and mandatory adoption of IR. Consistently we developed four hypotheses regarding the association between these determinants and IR quality.

We found that the quality of IRs is positively associated with the localization in Europe and in countries where IR is mandatory. This suggests that an institutional mandatory provision (as in South Africa or Brazil) may have an influence on the IR quality, consistently with previous studies that found a positive relation between environmental reporting and regulation (Alciatore, Callaway Dee, & Easton, 2004; Criado-Jimenez, Fernandez-Chulia, Husillos-Carque, & Larrinaga-Gonzalez, 2008). The relevance of Europe may be explained by the increased importance that in this context has been given to stakeholders and CSR, as well as by diffusion of a civil law system. These findings are consistent with Gangi and Trotta's results (2013), which showed that belonging to a market economy less polarized on the shareholders groups determines a greater breadth of disclosure. Furthermore, this finding is aligned with the results of Frias-Acetuno et al.'s research (2013b). They argued that firms located in civil law contexts show more propensity to disclose integrated information than those located in common law countries. The positive association between IR quality and firm location in Europe is also consistent with Jensen and Berg (2012) who suggested that a higher national corporate responsibility within a country increases the likelihood of IR.

On the contrary, our findings are not consistent with Lai et al.'s ones (2016), which rejected an effect of the region on the IR adoption.

Instead our findings do not support relevant associations between IR quality and industry and firm size. They are not consistent with Gray et al. (1995) who stated that many studies found strong associations between disclosure and firm size. They do not support also Hahn and Kuhnen (2013), who suggested a positive effect of corporate size on the adoption and extent of sustainability reporting. Furthermore, our findings are not consistent with Kilic and Kuzey's (2018) results, which highlighted a positive and statistically significant relationship between forward-looking disclosure and firm size. Moreover, they do not confirm the significant association with industry (Hahn & Kuhnen, 2013).

Our results are different from those of Lai et al. (2016), who suggested an industry effect (with regard to basic materials, industrials, and financials), although they did not support a positive relation between firm size and IR adoption.

To conclude, our research findings are consistent with previous literature, whereby the characteristics of the different countries have been found to be relevant in explaining different attitudes toward CSR (Matten & Moon, 2008).

However, consistent with some studies, which did not support any relation or find a sign of the association against the expectations, such as in the case of leverage (Muttakin & Khan, 2014), our findings do not support relations found by previous literature, such as the positive relations between the quality of the disclosure and size and industry. These findings may ask for both a revisiting of theories that supported research hypotheses and the analysis of a bigger sample to eliminate the noise, combined with the consideration of all the relevant variables.

This chapter provides some contributes to theoretical advancement. Actually, our research findings support institutional theory, as they show a positive association with regional and country context, whereas they are not consistent with agency theory.

Limitations of this study concern mainly methodology, in particular content analysis, which is characterized by an unavoidable subjectivity of the evaluation process (de Villiers et al., 2017; Hammond & Miles, 2004; Krippendorf, 1980) and difficulties in generalizing the results.

Furthermore, we have analyzed only documents available on the "Getting Started" section of the IR examples website, but other companies could have disclosed an IR even though this is not published in the IIRC website. Besides, we have focused on a specific period of time (2013–2015). A larger data set, in terms of both analyzed reports and considered years, could allow further analysis and generate different findings.

Finally, we have considered only four independent variables, even though many other determinants are proposed by the literature such as profitability (Elfeki, 2017), leverage (Lai et al., 2016), growth opportunities (Frías-Aceituno et al., 2014), industry concentration (Frías-Aceituno et al., 2014), financial system (Jensen & Berg, 2012), corporate governance (Frías-Aceituno et al., 2013a), and assurance (Sierra-Garcia et al., 2015).

REFERENCES

Adams, C. A. (2002). Internal organisational factors influencing corporate social and ethical reporting: Beyond current theorising. *Accounting, Auditing and Accountability Journal*, *15*(2), 223–250.

Aerts, W., Cormier, D., & Magnan, M. (2006). Intra-industry imitation in corporate environmental reporting: An international perspective. *Journal of Accounting and Public Policy*, *25*(3), 299–331.

Akhtaruddin, M., Hossain, M. A., Hossain, M., & Yao, L. (2009). Corporate governance and voluntary disclosure in corporate annual reports of Malaysian listed firms. *Journal of Applied Management Accounting Research*, *7*(1), 1–19.

Alciatore, M., Callaway Dee, C., & Easton, P. (2004). Changes in environmental regulation and reporting: The case of the petroleum industry from 1989 to 1998. *Journal of Accounting and Public Policy*, *23*(4), 295–304.

Amran, A., & Haniffa, R. (2011). Evidence in development of sustainability reporting: A case of a developing country. *Business Strategy and the Environment*, *20*, 141–156.

Belkaoui, A., & Karpik, P. G. (1989). Determinants of the corporate decision to disclose social information. *Accounting, Auditing & Accountability Journal*, *2*(1), 36–51.
Boesso, G., & Kumar, K. (2007). Drivers of corporate voluntary disclosure: A framework and empirical evidence from Italy and the United States. *Accounting, Auditing & Accountability Journal*, *20*(2), 269–296.
Bonsón, E., & Escobar, T. (2004). La difusión voluntaria de información financiera en Internet. Un análisis comparativo entre Estados Unidos, Europa del Este y la Unión Europea. *Spanish Journal of Finance and Accounting/Revista Española de Financiación y Contabilidad*, *33*(123), 1063–1101.
Botosan, C. (1997). Disclosure level and the cost of equity capital. *The Accounting Review*, *72*, 323–349.
Brammer, S., & Pavelin, S. (2008). Factors influencing the quality of corporate environmental disclosure. *Business Strategy and the Environment*, *17*(2), 120–136.
Chen, S., & Bouvain, P. (2009). Is corporate responsibility converging? A comparison of corporate responsibility reporting in the USA, UK, Australia, and Germany. *Journal of Business Ethics*, *87*, 299–317.
Cho, C. H., Freedman, M., & Patten, D. M. (2012). Corporate disclosure of environmental capital expenditure: A test of alternative theories. *Accounting, Auditing and Accountability Journal*, *25*(3), 486–507.
Cho, C. H., & Patten, D. M. (2007). The role of environmental disclosures as tools of legitimacy: A research note. *Accounting, Organizations and Society*, *32*(7/8), 639–647.
Clarkson, P. M., Li, Y., Richardson, G. D., & Vasvari, F. P. (2008). Revisiting the relation between environmental performance and environmental disclosure: An empirical analysis, *Accounting, Organizations and Society*, *33*(4/5), 303–327.
Cormier, D., & Magnan, M. (2003). Environmental reporting management: A continental European perspective. *Journal of Accounting and Public Policy*, *22*(1), 43–62.
Coulmont, M., Loomis, S., Berthelot, S., & Gangi, F. (2015). Determinants and impacts of sustainability disclosure. In *Sustainability Disclosure: State of the Art and New Directions* (pp. 25–79). Bingley: Emerald Publishing Limited.
Cox, P. L., Friedman, B. A., & Tribunella, T. (2011). Relationships among cultural dimensions, natural domestic product, and environmental sustainability. *Journal of Applied Business and Economics*, *12*(6), 46–56.
Criado-Jimenez, I., Fernandez-Chulia, M., Husillos-Carque, F. J., & Larrinaga-Gonzalez, C. (2008). Compliance with mandatory environmental reporting in financial statements: The case of Spain (2001–2003). *Journal of Business Ethics*, *79*, 245–262.
Deegan, C. (2002). The legitimizing effect of social and environmental disclosures: A theoretical foundation. *Accounting, Auditing, & Accountability*, *15*(3), 282–312.
de Villiers, C., Venter, E. R., & Hsiao, P. K. (2017). Integrated reporting: Background, measurement issues, approaches and an agenda for future research. *Accounting & Finance*, *57*, 937–959.
Eccles, R. G., & Krzus, M. P. (2014). *The integrated reporting movement: Meaning, momentum, motives, and materiality*. Hoboken, NJ: John Wiley & Sons.
Eccles, R. G., & Serafeim, G. (2017). Corporate and integrated reporting: A functional perspective. In E. Lawler, S. Mohrman, & J. O'Toole (Eds.), *Corporate stewardship: Organizing for sustainable effectiveness* (pp. 156–171). Sheffield: Greenleaf.
Elfeky, M. I. (2017). The extent of voluntary disclosure and its determinants in emerging markets: Evidence from Egypt. *The Journal of Finance and Data Science*, *3*(1–4), 45–59. Retrieved from: http://www.keaipublishing.com/en/journals/the-journal-of-finance-and-data-science/
Financial Reporting Council (FRC). (2014). *Guidance on the strategic report*. London: The Financial Reporting Council Limited. Retrieved from http://integratedreportingsa.org/ircsa/wp-content/uploads/2017/05/Guidance-on-the-Strategic-Report.pdf
Frías-Aceituno, J. V., Rodríguez-Ariza, L., & García-Sánchez, I. M. (2013a). The role of the board in the dissemination of integrated corporate social reporting. *Corporate Social Responsibility and Environmental Management*, *20*(4), 219–233.
Frías-Aceituno, J. V., Rodríguez-Ariza, L., & García-Sánchez, I. M. (2013b). Is integrated reporting determined by a country's legal system? An exploratory study. *Journal of Cleaner Production*, *44*, 45–55.
Frías-Aceituno, J. V., Rodríguez-Ariza, L., & García-Sánchez, I. M. (2014). Explanatory factors of integrated sustainability and financial reporting, *Business Strategy and the Environment*, *23*(1), 56–72.

Gallo, P. J., & Jones Christensen, L. (2011). Firm size matters: An empirical investigation of organizational size and ownership on sustainability-related behaviors. *Business & Society*, *50*(2), 315–349.

Gamerschlag, R., Möller, K., & Verbeeten, F. (2011). Determinants of voluntary CSR disclosure: Empirical evidence from Germany. *Review of Managerial Science*, *5*, 233–262.

Gangi, F., & Trotta, C. (2013). Determinants of corporate social disclosure through an approach multi-perspective: Evidences form the target companies of socially responsible funds. In L. Songini, A. Pistoni, & C. Herzig (Eds.), *Accounting and control for sustainability* (pp. 33–75). Bingley: Emerald Publishing Limited.

Giner, B. (1997). The influence of company characteristics and accounting regulation on information disclosed by Spanish firms. *European Accounting Review*, *6*(1), 45–68.

Golob, U., & Bartlett, J. (2007). Communicating about corporate social responsibility: A comparative study of CSR reporting in Australia and Slovenia. *Public Relations Review*, *33*, 1–9.

Gray, R., Javad, M., Power, D. M., & Sinclair, C. D. (2001). Social and environmental disclosure and corporate characteristics: A research note and extension. *Journal of Business Finance and Accounting*, *28*(4), 327–356.

Gray, R., Kouhy, R., and Lavers, S. (1995). Corporate social and environmental reporting: A review of the literature and a longitudinal study of UK disclosure. *Accounting, Auditing & Accountability Journal*, *8*(2), 47–77.

Gray, R. H., Owen, D. L., & Adams, C. (1996). *Accounting and accountability, changes and challenges in corporate social and environmental reporting*. Hemel Hempstead: Prentice Hall.

Gul, F. A., & Leung, S. (2004). Board leadership, outside directors' expertise and voluntary corporate disclosures. *Journal of Accounting and Public Policy*, *23*(5), 351–379.

Hahn, R., & Kuhnen, M. (2013). Determinants of sustainability reporting: A review of results, trends, theory, and opportunities in an expanding field of research. *Journal of Cleaner Production*, *59*, 5–21.

Hammond, K., & Miles, S. (2004). Assessing quality assessment of corporate social reporting: UK perspectives. *Accounting Forum*, *28*(1), 61–79.

Haniffa, R. M., & Cooke, T. E. (2005). The impact of culture and governance on corporate social reporting. *Journal of Accounting and Public Policy*, *24*(5), 391–430.

Hofstede, G., Hofstede, G. J., & Minkov, M. (2010). *Cultures and organizations: Software of the mind: Intercultural operation and its importance for survival* (3rd ed.). New York, NY: McGraw-Hill.

Holder-Webb, L., Cohen, J. R., Nath, L., & Wood, D. (2009). The supply of corporate social responsibility disclosures among U.S. firms. *Journal of Business Ethics*, *84*(4), 497–527.

Husillos-Carqués, F. J., Gonzalez, C. L., & Alvarez Gil, M. J. (2011). The emergence of triple bottom line reporting in Spain. *Revista Espanola de Financiacion y Contabilidad*. [*Spanish Journal of Finance and Accounting*.], *40*, 195–219.

IIRC. (2013a). The international <IR> framework. Retrieved from http://integratedreporting.org/

IIRC. (2013b). Consultation draft of the international <IR> framework. Retrieved from http://integratedreporting.org/

IIRC. (2014). Assurance on <IR>. An exploration of issues. Retrieved from http://www.theiirc.org/wp-content/uploads/2014/07/Assurance-on-IR-an-exploration-of-issues.pdf

Jeewantha, G. K. C., Dissa, B., & Ajward, R. (2015). Drivers of corporate voluntary disclosures: Empirical evidence from Sri Lankan listed companies. In *Proceedings of 12th international conference on business management*. Retrieved from http://ssrn.com/link/12th-ICBM-2015.html

Jensen, J. C., & Berg, N. (2012). Determinants of traditional sustainability reporting versus integrated reporting. An institutionalist approach. *Business Strategy and the Environment*, *21*, 299–316.

Kilic, M., & Kuzey, C. (2018). Determinants of forward-looking disclosures in integrated reporting. *Managerial Auditing Journal*, *33*(1), 115–144.

Krippendorf, K. (1980). *Content analysis: An introduction to its methodology*. Beverly Hills, CA: Sage Publications.

Lai, A., Melloni, G., & Stacchezzini, R. (2016). Corporate sustainable development: Is 'integrated reporting' a legitimation strategy? *Business Strategy and the Environment*, *25*, 165–177.

Larrán, M., & Giner, B. (2002). The use of Internet for corporate reporting by Spanish companies. *International Journal of Digital Accounting*, *2*(3), 53–82.

Luo, L., & Tang, Q. (2013). The impact on national culture on voluntary carbon disclosure: Evidence from Carbon Disclosure Project (CDP) 2011. Paper presented at the 36th annual Congress European Accounting Association, May 2–5, Paris, France.

Mahoney, L. S., Thorne, L., Cecil, L, & LaGore, V. (2013). A research note on standalone corporate social responsibility reports: Signaling or greenwashing? *Critical Perspectives on Accounting*, *24*(4/5), 350–359.

Mathews, J. A. (2003). Competitive dynamics and economic learning: An extended resource-based view. *Industrial and Corporate Change*, *12*(1), 115–145.

Matten, D., & Moon, J. (2008). Implicit and explicit CSR: A conceptual framework for a comparative understanding of corporate social responsibility. *Academy of Management Review*, *33*(2), 404–424.

McWilliams, A., & Siegel, D. (2001). Corporate social responsibility: A theory of the firm perspective. *Academy of Management Review*, *26*(1), 117–127.

Moon, J. (2004). CSR in the UK: An explicit model of business — Society relations. In A. Habisch, J. Jonker, M. Wegner, & R. Schmidpeter (Eds.), *CSR across Europe* (pp. 51–65). Berlin: Springer.

Muttakin, M. B., & Khan, A. (2014). Determinants of corporate social disclosure: Empirical evidence from Bangladesh. *Advances in Accounting*, *30*(1), 168–175.

Naser, K., Al-Hussaini, A., Al-Kwari, D., & Nuseibah, R. (2006). Determinants of corporate social disclosure in developing countries: The case of Qatar. *Advances in International Accounting*, *19*, 1–23.

Oyelere, P., Laswad, F., & Fisher, R. (2003). Determinants of internet financial reporting by New Zealand companies. *Journal of International Financial Management and Accounting*, *14*, 26–63.

Parboteeah, K. P., Addae, H. M., & Cullen, J. B. (2012). Propensity to support sustainability initiatives: A cross-national model. *Journal of Business Ethics*, *10*(3), 403–413.

Park, H., Russel, C., & Lee, J. (2007). National culture and environmental sustainability: A cross-national analysis. *Journal of Economics and Finance*, *31*(1), 104–121.

Patten, D. M. (2002). The relation between environmental performance and environmental disclosure: A research note. *Accounting, Organizations and Society*, *27*(8), 763–773.

Pedersen E. R., & Neergaard, P. (2008). From periphery to center: How CSR is integrated in mainstream performance management frameworks. *Measuring Business Excellence*, *12*(1), 4–12.

Pistoni, A., & Songini, L. (2013). Corporate social responsibility determinants: The relation with CSR disclosure. In L. Songini, A. Pistoni, & C. Herzig (Eds.), *Accounting and control for sustainability* (pp. 3–32). Bingley: Emerald Publishing Limited.

Pistoni, A., & Songini, L. (2015). New trends and directions in CSD: The integrated reporting. In A. Pistoni & L. Songini (Eds.), *Sustainability disclosure: State of the art and new directions* (pp. 81–105). Bingley: Emerald Publishing Limited.

Pistoni, A., Songini, L., Bavagnoli, F. (2018). Integrated Reporting Quality: An Empirical Analysis. *Corporate Social Responsibility and Environmental Management*, *25*(4), 489–507.

Pistoni, A., Songini, L., & Perrone, O. (2016). The how and why of a firm's approach to CSR and sustainability: A case study of a large European company. *Journal of Management and Governance*, *20*(3), 655–685.

Qu, W., Ee, M., Liu, L., Wise, V., & Carey, P. (2015). Corporate governance and quality of forward-looking information: Evidence from the Chinese stock market. *Asian Review of Accounting*, *23*(1), 39–67.

Reverte, C. (2009). Determinants of corporate social responsibility disclosure ratings by Spanish listed firms. *Journal of Business Ethics*, *88*, 351–366.

Romolini, A., Fissi, S., & Gori, E. (2014). Scoring CSR reporting in listed companies–Evidence from Italian best practices. *Corporate Social Responsibility and Environmental Management*, *21*, 65–81.

Sierra-García, L., Zorio-Grima, A., & García-Benau, M. A. (2015). Stakeholder engagement, corporate social responsibility and integrated reporting: An exploratory study. *Corporate Social Responsibility and Environmental Management*, *22*(5), 286–304.

Sotorrío, L. L., & Sánchez, J. L. F. (2010). Corporate social reporting for different audiences: The case of multinational corporations in Spain. *Corporate Social Responsibility and Environmental Management*, *17*(5), 247–310.

Stacchezzini, R., Melloni, G., & Lai, A. (2016). Sustainability management and reporting: The role of integrated reporting for communicating corporate sustainability management. *Journal of Cleaner Production*, *136*, 102–110.

Stanny, E., & Ely, K. (2008). Corporate environmental disclosures about the effects of climate change. *Corporate Social Responsibility and Environmental Management*, *15*(6), 338–348.

Vachon, S. (2010). International operations and sustainable development: Should national culture matter? *Sustainable Development*, *18*, 350–361.

Van Staden, C. J., & Hooks, J. (2007). A comprehensive comparison of corporate environmental reporting and responsiveness. *The British Accounting Review*, *39*, 197–210.

Verschoor, C. C. (2011). Should sustainability reporting be integrated. *Strategic Finance*, *93*(6), 12–14.

Watts, R. L., & Zimmerman, J. L. (1978). Towards a positive theory of the determination of accounting standards. *The Accounting Review*, *53*(1), 112–134.

Weber, R. P. (1990). *Basic content analysis* (2nd ed.). Thousand Oaks, CA: Sage.

Whitley, R. (1997). Business systems. In A. Sorge & M. Warner (Eds.), *The IEBM handbook of organizational behavior* (pp. 173–186). London: International Thomson Business Press.

Wokutch, R. E., & Shepard, J. M. (1999). The maturing of the Japanese economy: Corporate social responsibility implications. *Business Ethics Quarterly*, *9*(3), 527–540.

CONCLUSION

Lucrezia Songini, Anna Pistoni, Pierre Baret and Martin H. Kunc

The present book is written in a context where firms are facing three major issues. The first issue is a legitimacy crisis since stakeholders are increasingly aware of, due to the development of information technology, corporate malpractice. Non-financial disclosure and integrated reporting (IR) appears to be a relevant way to reduce information asymmetry with stakeholders. The expectation is that non-financial disclosure/reporting and IR can generate trust between stakeholders and firms. It is clear that the chapters in the book offer various perspectives for the use of non-financial disclosure/reporting and IR to reduce this legitimacy crisis.

The second major issue is the rapid evolution of regulations and standards at national, European, or international levels. As a result, companies must constantly adapt and evolve their non-financial reporting. In order to comply with legal requirements, reporting must be increasingly accurate and reliable while allowing comparability over time. At the same time, reporting must be adapted to the specific characteristics of the firms while being easily understandable for its stakeholders. Various chapters of this book propose operational and/or theoretical solutions for researchers and managers to increase accuracy and reliability in reporting. One of the strengths of this book is to offer the insights from different European countries: France, Germany, Italy, Spain, United Kingdom, etc.

The third major issue is a corollary of the second one. The issue facing firms is the profusion of non-financial reporting frameworks over the past two decades. Indeed, one of the major challenges for companies that want to be socially responsible is to go beyond the mandatory legal minimums. However, the abundance of reports constitutes a real "Pandora's box" for firms. The risk is to select erroneous reporting frameworks from the multitude of reporting opportunities available. One of the contributions of this book is to offer a critical perspective on the advantages and limitations of different forms of non-financial reporting (including IR).

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We hope that the book meets the expectations of the readers by providing a critical analysis of the theoretical and empirical developments in academic research on non-financial disclosure/reporting and IR. Our aim is to help the readers (managers, consultants, practitioners, academics, and corporate social responsibility [CSR] analysts) to identify new trends in company disclosure. As highlighted in the introduction, our aim is to bridge the outlined gaps in the recent literature and practice by focusing on the effectiveness, quality, and practical issues in non-financial disclosure and IR. In this sense, we feel confident the new insights provided such as a standard metric for CSR; avoiding the pitfalls of non-financial reporting; identifying the effect of mandatory publication on the sustainable development report; using dynamic resource-based perspective to improve IR; comparing the traditional social disclosure – separate from the financial one – with the IR; the impact of environmental, social, and governance performance on the intellectual capital disclosure; and using the IR scoreboard to improve the IR quality will be useful and spark new research avenues to answer questions that may remain unanswered.

As highlighted in the last chapter, this book emphasizes the potential of IR. However, it is not a question of being naive. The main interest of IR is to provide an alternative to the traditional separation between financial and non-financial reporting so companies should no longer separate CSR issues from financial ones. At the same time, IR has a number of limitations. Like any management tool, it has a performative dimension and induces a simplified vision of reality, for example, that social and environmental factors are resources that can always be financially compensated if the company damages them.

This book not only provides a current and diversified perspective on non-financial reporting issues, but it also intends to be a starting point for future research aimed at helping companies move toward more responsible practices.

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