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Non-financial information disclosure in Italy: compliance levels and reporting traits

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To whoever joins my path, nurtures my why,

or simply believes in me,

I just want to say: "Thank you."

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Table of Contents

Introduction **1**

Chapter 1 .... **5**

Underlying framework of non-financial information disclosure: antecedents and premises **5**

1.1. Evolution of disclosures in corporate reporting *6*
1.1.1. Patterns of corporate reporting 6
1.1.2. Traits of disclosures in corporate reporting 13

1.2. Meanings of non-financial information (NFI) disclosure *16*

1.3. International standards frameworks building up voluntary NFI disclosure *25*

1.4. Regulatory reforms forcing into mandatory NFI disclosure *29*

1.5. From voluntary to mandatory NFI disclosure in the Italian context *32*

Chapter 2 .... **36**

Literature review of non-financial information disclosure: determinants and effects **36**

2.1. Assessments of non-financial information disclosure *37*
2.1.1. Content and quality of information 38
2.1.2. Techniques of assessments 42

2.2. Determinants of non-financial information disclosure *49*
2.2.1. Internal determinants 52
2.2.2. External determinants 64

2.3. Effects of NFI disclosure *66*

Chapter 3 .... **82**

Compliance and determinants of non-financial information disclosure: evidence from Italy **82**

3.1. Development of research questions *83*

3.2. Sample of investigation *86*

3.3. Research method *88*
3.3.1. Configurations of disclosure scores 89
3.3.2. Identification of independent variables 97

3.4. Descriptive statistics *99*
3.4.1. Analysis of compliance levels 99
3.2.1. Analysis of independent variables 119

3.5. Regression models *127*

3.6. Discussion of findings *130*

Conclusions **132**

References **136**

Appendix A: Disclosure checklist **152**

Nomenclature and Glossary **162**

Introduction

Let me introduce the anecdote I read in the book "The shareholder value myth: how putting shareholders first harms investors, corporations and the public" by Lynn A. Stout (2012) since I do believe it gives an ethical explanation to the reason why non-financial information disclosure has become extremely relevant within the reporting system nearby financial disclosure, and therefore it enacted the development of this work.

"Imagine what you might find if you did an empirical test of the best method for catching fish. On first inspection, one reasonable approach might be to do a statistical analysis of all the individual fishermen who fish in a particular lake, and compare their techniques with the amount of fish they catch. You might find that fishermen who use worms as bait get more fish than those who use minnows and conclude fishing with worms is more efficient.

But what if some fishermen start using dynamite in the lake and simply gather up all the dead fish that float to the surface after a blast? Your statistical analysis would show that individuals who fish with dynamite catch far more fish than those who use either worms or minnows and also that fishermen who switch from baited hooks to dynamite see an initial dramatic improvement in their fishing "performance." But as many real-world cases illustrate, communities that fish with dynamite typically see long-run declines in the size of the average haul and, eventually, a total collapse of the fish population. Fishing with dynamite is a good strategy for an individual fisherman, for a while. But in the long run, it is very bad for fish and for fishermen collectively. Fishing with dynamite poses the classic conflict between individual greed and group welfare that economists call the "Tragedy of the Commons." (Stout, 2012; p. 51).

The famous "tragedy of the commons" demonstrates how entities within a community, which act independently for their own self-interests, are individually beneficial but collectively unsustainable (Hardin, 1998; Ostrom,

2015). Such an approach has the following implication: companies need to embrace the business continuity logic over the long term, and act in pursuit of profit without jeopardizing stakeholders' interests.
Under this logic, companies are call for the pursue of social, environmental and economic objectives through responsible business behaviors with commitment to stakeholders at the core of their business actions (Harrison & Freeman, 1999; Freeman, 1984), and disclosure has become an essential means to convey to stakeholders how companies engage with socially responsible initiatives. In keeping with this, the reporting system plays a crucial role towards the business conduct since it keeps track of targets, actions, and performance achieved that might be of interests for and of other stakeholders engaged with the company. Consequently, both financial and non-financial disclosure can tackle stakeholders' needs and interests, thus they both are paramount of importance.

In such vein, non-financial information acquired a progressive attention nearby the financial information: on the one hand, companies have started to implement and report their sustainable practices to explain how they respond to stakeholders' expectations, on the other hand accounting scholars started to debate on the emerging issues of sustainability performance, and disclosures of sustainability information (Brockett & Rezaee, 2012). Similarly, both regulators and setters of international standards have recently drawn attention to disclosures of socially responsible practices (European Commission, 2017; Global Reporting Initiative, 2016; Rezaee & Tuo, 2017b). Setters of international standards have ameliorated guidelines for reporting binding sustainability in order to increase transparency and comparability among data and schemes (Global Reporting Initiative, 2017). Regulators have forced companies to disclose their sustainable actions in order to enhance sustainability in the interest of both enterprises and society as a whole (European Commission, 2011). In this regard, the recent Italian Legislative Decree No. 254/2016, which transposes the Directive 2014/95/EU of the European Parliament on the disclosure of non-financial and diversity information, requires Italian listed companies to disclose

their business model, policies, and outcomes, as well as risks and opportunities, related to, at a minimum, environmental, social, employee matters and regarding human rights, anti-corruption, and bribery issues (European Parliament and the Council, 2013). Specifically, Italian listed companies that exceed the criterion of the average number of 500 employees and meet one of the following bounds: a) total assets of 20,000,000 euros or b) total revenue of 40,000,000 euros are required to prepare the nonfinancial statement in accordance with the law and apply to all those undertakings for the 2017 financial year. With adequacy regulations changing from a voluntary-based approach toward a mandatory-based approach to disclose, it is of interest understanding the license to operate of companies, which constitutes the communication about their actions (Schoeneborn, 2011).

In this context, the aim of the thesis is twofold: first, to determine compliance levels of non-financial information disclosure, and second, to define which are the determinants that lead to higher levels of disclosure.

To these ends, the research assesses the level of compliance with the construction of a disclosure score of 165 items and then, it performs the OLS (Ordinary Least Squared) regression analysis to identify the determinants that affect disclosures on a sample of 50 Italian listed companies which are under this regulatory change.

The structure of the thesis proceeds as follows.

Chapter 1 frames peculiarities of disclosure within corporate reporting addressing the patterns underlying the growing consideration of non-financial information nearby the traditional financial information which primarily come from international standards setters and regulators. Hence, the chapter portrays the meanings of non-financial information (NFI) disclosure (Erkens, Paugam, & Stolowy, 2015; Haller, Link, & Groß, 2017), and the voluntary-based and mandatory-based approaches to disclosure (Devalle & Rizzato, 2013), respectively enacted by international standards frameworks and law regulations.

Chapter 2 reviews the literature regards NFI which mostly relies on voluntary-based approaches to understand the disparate assessment configurations of disclosures (Melloni, Caglio, & Perego, 2017; Michelon, Pilonato, & Ricceri, 2015); the determinants that favor non-financial information disclosure (Bini, Dainelli, & Giunta, 2017; Ioannou & Serafeim, 2017; Rezaee & Tuo, 2017b), and the effects of such implementation (Bini *et al.*, 2017; Dhaliwal, Radhakrishnan, Tsang, & Yang, 2012; Lu & Abeysekera, 2017).

Chapter 3 investigates the level of NFI disclosure under the mandatory-based regime of the EU Directive and identifies the determinants that lead to higher levels of disclosures. The empirical analysis is based on a sample of 50 Italian companies which have to be compliant with Decree No. 254/2016, transposing the EU Directive 95/2014.

Conclusions enlighten the findings coming up from the empirical analysis, and further developments are discussed accordingly.

Keeping this into practice, the research contributes to the literature both theoretically and practically. First, the study is one of the first attempt in advancing the literature on non-financial information mandatory disclosure. Second it addresses how and to what extent companies deal with the law enforcement identifying compliance levels and the determinants leading to the completeness of disclosure.

Chapter 1

Underlying framework of non-financial information disclosure: antecedents and premises

This chapter outlines peculiar traits of disclosure within corporate reporting and portray the reasons underlying the growing consideration of non-financial information nearby the traditional financial information within companies' reports.

Whereas corporate financial reporting and financial disclosure has a narrow consolidation among accountants, corporate social reporting and non-financial disclosure developed slowly and sporadic (Hackston, J, & Milne, 1996). Academics started to debate on corporate social accounting in consequence of the understanding of ethical responsibility into the decision-making process and in response to corporate scandals, awareness on depletion of natural resources and risky contingencies on sustainable development. Therefore, during the last two decades, corporate reporting has undergone progressive changes toward the inclusion of sustainability issues into sustainability reports and CSR (Corporate Social Responsibility) reports and recently against the holist view of the integrated reporting (Girella, Abela, & Ferrari, 2018; Zambon & Di Pietra, 2015).

Such an increasing consideration of non-financial information can be circumscribed to the following reasons. First, accounting scholars have emphasized a progressive awareness around the deficiencies of the financial reporting exclusively relying on financial information just for investors ignoring a broader range of stakeholders' interests as well as "the fact that surplus could potentially derive from social and environmental externalities" (Gray, 2006, p. 798). Moreover, academics empirically demonstrate that up to 80 per cent of a company's market value may not be reflected in its financial statements (Arvidsson, 2011; Lev, 2000).

Second, a growing consciousness toward ethical, social, and environmental practices has increased among companies being at the core of their managerial and strategic objectives to provide more useful information for stakeholders and to respond at sustainability challenges (Brooks & Oikonomou, 2018). Third, both regulators and international standard setters are progressively recognizing socially responsible practices fundamental elements of the reporting system (European Commission, 2017; Global Reporting Initiative, 2016; Rezaee & Tuo, 2017b). International standards setters are ameliorating binding disclosure standards guidelines to increase transparency and comparability among sustainability reporting schemes (Global Reporting Initiative, 2017), whereas regulators are forcing companies into the disclosure of their socially responsible practices to address corporate responsibility in the interests of both enterprises and society as a whole (European Commission, 2011).

Following these patterns and recent changes, the chapter delineates the disclosure approaches within the accounting and reporting system for first (Paragraph 1) and then it goes in depth into the analysis of the non-financial information disclosure (Paragraph 2), which represents the core of this argumentation. Afterwards, the chapter follows with the illustration of the main international standard frameworks regards sustainability reporting which enhance voluntary NFI disclosure (Paragraph 3), the governments' reforms towards mandatory disclosure (Paragraph 4), and it ends with a focus on the Italian context (Paragraph 5).

1.1. Evolution of disclosures in corporate reporting

1.1.1. Patterns of corporate reporting

Corporate reporting is "an essential means by which companies communicate with stakeholders as part of their accountability and stewardship obligations" (Federation of European Accountants, 2015), and explain their business decisions, financial and non-financial targets, processes and results which in turn

have consequences on a variety of constitutes. Corporate reporting represents the communication process between managers and stakeholders (Allegrini, 2003; Greco, 2010) and its term is sometimes interchanged with the term "financial reporting" which includes the mandatory documents the companies have to present (Trucco, 2015). In this chapter, the contemporary classification of the Federation of European Accountants (2015) regards corporate reporting is adopted as anchored point, because of its wider definition of corporate reporting including two main strands: financial and non-financial reporting. The former encompasses information regards business activities, net income, net asset referring at a distinct accounting period within the financial statements companies have to deal with. The latter, also termed CRS reporting or sustainability reporting[1], is defined as the "process of communicating the social and environmental effects of organizations' economic actions to particular interest groups within society and to society at large" (Gray, Owen, & Adams, 1996, p. 3). Corporate reporting regimes are mostly affected by different jurisdictions; in essence there are two main configurations: the Anglo-American model and the Continental-European. Anglo-Saxon model relies on fair market value, meaning that the current market prices are adopted as metrics of evaluations, consequently leading to much more volatility in assets' evaluation. Conversely, the continental European regime evaluates balance sheet's assets through the historical costs, which captures the "prudence" principle, with a conservative perspective (Cantino & Devalle, 2011; Devalle, Rizzato, & Busso, 2016). It is much more likely to reflect the going-concern value of the company which is partially undermined in the Anglo-American accounting model as it primarily bases on market prices. Another difference can be circumscribed to the ways of reporting; for examples different reporting ways emerge if we take into consideration the U.S. against the EU regimes. The former forces companies to respect the quarterly reporting, thus encouraging short-term performances

[1] Non-financial reporting, CSR reporting and sustainability reporting are considered synonyms, so they are interchangeably adopted with equal meanings

tracking; whereas the latter let companies to produce annual reports, so in turn, saving costly constantly reporting and projecting longer investments (Kraakman & Armour, 2017).

Turning into the primary scope of financial reporting, it is initially designed to provide information on past and current financial position within an accounting period. On this regard, the IASB set forth that "the objective of financial statements is to provide information about the financial position, performance and changes in financial position of an entity that is useful to a wide range of users in making economic decisions" (IASB, 2010a). The Comprehensive business Reporting Model: Financial Reporting for Investors, discusses the role of financial statements and disclosure emphasizing this concept: "Corporate financial statements and their related disclosures are fundamental to sound investment decision making. The well-being of the world's financial markets, and of the millions of investors who entrust their financial present and future to those markets, depends directly on the information financial statements and disclosures provided. Consequently, the quality of the information drives global financial markets. The quality, in turn, depends directly on the principles and standards managers apply when recognizing and measuring economic activities and events affecting their companies' operations. Financial statements should serve the needs of those who provide capital to a company and bearers in a company. Hence, we believe that one of primary objectives of financial reporting and disclosure must be to provide all of the information that the owners of common equity require to evaluate their investments. Common shareowners use of information to make forecasts of future cash flows, evaluate the sustainability of the company's business model, and assess its cash-generating ability. This information is used to estimate the investment's value and its future value"[2].

Financial reporting has a long history, and among others, salient facts which generate radical changes in financial reporting can be delineated through the

[2] CFA Institute Center for Financial Market Integrity, A Comprehensive Business Reporting Model: Financial Reporting for Investors, July 2007 www.cfapubs.org

increasingly necessity to ensure transparency among information and establish comparability of data which lead to the harmonization process of financial reporting internationally with the application of the International Accounting Standards (IAS) and International Financial Reporting Standard (IFRS) since 2005 (Cantino & Devalle, 2005; Alain Devalle, Onali, & Magarini, 2010). In such vein, academics devoted intensively effort to investigate the effects of the adoption of the International Reporting Standards (IFRS) in different countries in order to capture the effect of IAS/IFRS disclosure on "the relationship between accounting data and stock prices" (Devalle *et al.*, 2010; p. 93), also known as value relevance[3]. It is clearly evident that the primary aim of such convergence was to promote a common language in companies' accounts, and to enhance cross-border comparability and to satisfy investors' and market's aims (Trucco, 2015). With this view, capital providers –shareholder, stock-holders first – have been at the center for such a long-time and managers focused primarily on short-term results to reward shareholders' claims, by giving residual attention to other groups with other interests within the company (we can think at employees, customers to cite few examples).

Toe tip evolution in favor of a broaden inclusion of a variety of interests led to the development of non-financial reporting nearby the traditional financial reporting. Such a change began over two decades ago and can be ascribed to some circumstances and contingences which has both positive and negative consequences. Among threats, we can include the financial crisis of 2008, and corporate scandals such as the one of Enron or Parmalat which dramatically lead to deficiency of trust and in turn, jeopardize asymmetric information. Furthermore, environmental disasters undermine biosphere and biodiversity, so the increasingly necessity to drive companies toward awareness on the surrounding environment becomes a central point. Considering positive

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[3] Value relevance can be described as ''[. . .] the ability of financial statement information to capture or summarize information that affects share values'' (Hellstro¨m, 2006, p. 325), cited from Devalle (2010)

influences driving such development, we can cite the progressive awareness on scarcity of natural resources, the evolutionary technology which drives new vehicles to gather, manage and disclose information, as well as the increasingly recognition of human wellbeing and the protection of human rights.

To cope such concerns, regulators and policy makers set forth standards frameworks and regulatory reforms to achieve greater transparency in the information, to establish comparability of data, and to ensure integrity in corporate reporting as well. Such frameworks worked as guidance toward the reporting of financial and non-financial interests, aims, actions, and outcomes, in other words, with this viewpoint, the primary objective was to track arena of actions and go beyond the mere policies adoption (Zadek, 1998). Among the launch of dedicate standards related to sustainability, in 2010, the IASB started to recognize increasing interest to forward-looking information and qualitative characteristics (IASB, 2010b)[4]. Others well recognized standard frameworks were developed by the Global Reporting Initiative (GRI) and the International Integrated Reporting Council.

Moreover, academics started debating around the reconfiguration of multifaced values, targets, and cooperative actions, without focusing primarily on profit maximization. This does not mean a totally denial of profit targets which fundamentally ensure business survival, but it means restoring business activities toward business continuity, therefore maintaining the reasonable balance among different stakeholders' interests. As matter of fact, it is paramount of importance taking care of stakeholder relationships which "work at three levels of analysis: the rational, or "organization as a whole"; the process, or standard operating procedures; and the transactional, or day-to-day bargaining" (Freeman, Harrison, Wicks, Parmar, & Colle, 2010) to manage business effectively with the aim to "create as much value as possible (p. 9). Freeman

[4] The Management Commentary include forward-looking information and information that possesses the qualitative characteristics described in the Conceptual Framework for Financial Reporting (IFRS practice Statement Management Commentary) (IASB, 2010b).

(2017) intends business "as a set of relationships – which are not reducible to transactions – among groups which have a stake in the activities that make up the business" and executive should see business "as fully situated in the realm of humanity", take care of stakeholders, "people with names and faces and children" (p. 4). Following the discourse, stakeholder theory is juxtaposed to shareholder capitalism[5], because it "focuses on the jointness of stakeholder interests rather than solely on the trade-offs that sometimes have to be made. It does not deny that such trade-offs are necessary but suggests that they also represent opportunities to think beyond trade-offs to a question of value" (p. 15). The aim is to reconcile the simultaneously consideration of different values against the maximization of a single value (Van Der Linden & Edward Freeman, 2017). In other word, polarizing set of decisions in favor of an exaggeration of mere profits could not be long-term sustainable, because it undermines the indirect consequences of such preferences they may take place and threatens growth and prosperity. That said, it seems that diverging philosophies among the purpose of business further vivid debates with the focal point to shareholder versus stakeholder value, and this especially occurred in the American capitalism. Milton Friedman (1970) said that: "there is one and only one social responsibility of business--to use its resources and engage in activities designed to increase its profits so long as it stays within the rules of the game, which is to say, engages in open and free competition without deception or fraud". Other economist such as Michael Jensen embraced a similar idea about business, by theorizing that the firm is a set of relationship, and one relationship is much more important in comparison with others and that is the one between principals – the owners of firms – and agents – the managers. Jensen' theory of the firms (1976) gives birth to the shareholder value theory: managers should be more efficient

[5] Milton Friedman, the father of shareholder capitalism said: "Business is about making sure that products and services actually do what you say they are going to do, doing business with suppliers who want to make you better, having employees who are engaged in their work, and being good citizens in the community, all of which may well be in the long-run (or even possibly the short-run) interest of a corporation. Stakeholder management is just good management and will lead to maximizing profits"

and act only in the best interest of the owners of the corporations – meaning the stockholders – to compete and be efficient in the global economy.

Conversely, Freeman and Parmar gave this sense: "the purpose of business to only maximize profits is one way to get business people to narrow their focus back into being efficient and competitive". Thus "business can be understood as a set of relationships among groups that have a stake in the activities that make up the business. Business is about how customers, suppliers, employees, financiers (stockholders, bondholders, banks, and so on), communities, and managers interact and create value. To understand a business is to know how these relationships work. And the executive's or entrepreneur's job is to manage and shape these relationships; hence the term "managing for stakeholders." (Freeman *et al.*, 2010; p. 24). Business is likely to be a set of relations, which are what truly matters because the relational approach influences the economic structure and these patterns transform attitudes of various social agents (Albareda, Lozano, Tencati, Midttun, & Perrini, 2008).

In such vein, the Italian context, and specifically the academic doctrine of the traditional *Italian Economia Aziendale* has some precursory ideas of stakeholder theory (Signori, Rusconi, 2009) for its traits and aims at pursuing the *"congrua remunerazione dei fattori produttivi"* (Ferrero, 1968; Ferrero, 1987; Zappa 1962, Signori & Rusconi, 2009). In more details, Signori e Rusconi (2009) identify similar patterns and interconnections with the Stakeholder Management Theory through the holistic view of "*azienda*" that harmonizes stakeholder interests and rejects the dichotomy of business and ethics similarly with stakeholder theory. As a matter of facts, "each organization is a human instrument to operate in economic activities" (Ferrero, 1968). The term *"Economia Aziendale"* was coined by Gino Zappa in 1927, during an official speech, in which he defined *Economia Aziendale* as the science which focuses on the conditions of existence and the manifestations of the life of firms. Thus, it is the science of the business administration (Zappa 1927: translated from the original) and the *azienda* is intended as "an economic coordination established to satisfy human needs"

(Zappa, 1950; p. 54) and seen as "an economic system of forces in continuous adaptation to the composite economic system of which it is a complementary part, in order to carry out a production process or a distribution process or, at the same time, a production and distribution process [...] for the satisfaction of human needs" (Amaduzzi, 1936, p. 19). Under this holistic view of the concept of "*azienda*", the purpose of business is to ensure the business continuity over year with the residual distribution of dividends to shareholders after an equal compensation of all stakeholders.

Nowadays, society calls for the changing needs to restore confidence and trust in business operations therefore, corporate reporting – meaning both financial and non-financial reporting – aims at taking accounting of and disclosing information on financial and non-financial targets, actions and performances at the core of their business activities towards stakeholder responsiveness and inclusiveness. Moreover, the debate on further improvements of corporate reporting is recently and surprisingly enlighten by the pivotal role new technologies play on corporate reporting and information disclosure. The Federation of European Accountants (2015) identifies 4 main dynamic traits: companies' stakeholders regards the audience to which this information is communicated, the content of reporting related to a wider range of topics, the corporate reporting process itself, and finally ways to enhance innovation in the current legislative environment (p. 3). It is interesting to mention the new approach for corporate reporting, so-called Core & More, through which information are disclosed to "a wider range of stakeholders with a diverging interest in corporate affairs: a CORE report provides an overview of corporate affairs accompanied by MORE reports(s) which provide detailed information complementing the CORE report" (p. 55).

1.1.2. Traits of disclosure in corporate reporting

Disclosure is the vehicle to communicate information about how the company operates transactions and relationships and describes the nature of business and the company's identity; this can help both managers to support accurate business

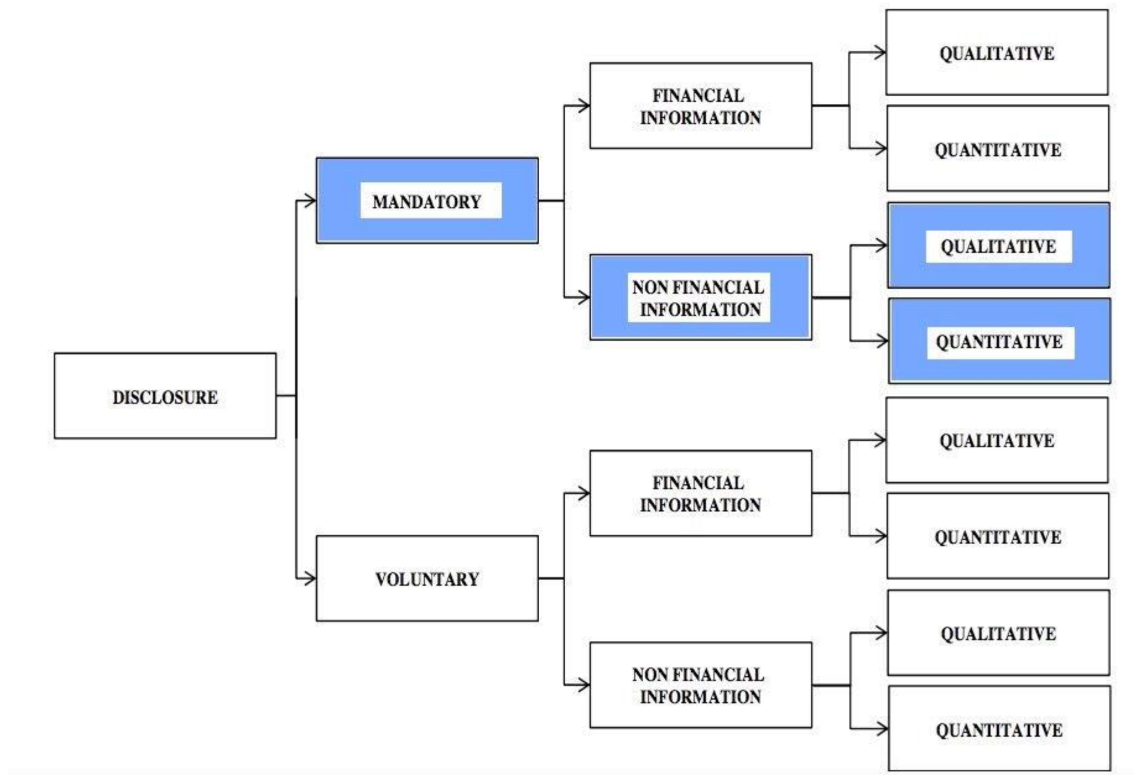
decisions and stakeholders to target what they care foremost. Remarkable benefits of disclosing broader and deeper ranges of information should be highlighted as for example the accuracy of price informativeness, which in turn reduce the information asymmetry among parties, the enhancement of reputation, and a virtuous cycle of tracking targets, process, and results in order to drive the decision-making criteria (Cantino, 2005, 2007).

Academics from several disciplines provide pretty similar classifications on disclosure within corporate reporting. Among others, Devalle & Rizzato (2013) categorize the quality of disclosure in three ways, "depending on the obligation to disclose information, the type of information disclosed and on the way it is reported"(p. 91). Information can be disclosed voluntarily, but also regulation may force disclosure of information. Voluntary disclosure relies on the self-disclosure of information and it is related to events which could be of interest of parties but are not required by laws (Graham J. R. *et al.*, 2005). Conversely, mandatory disclosure requires companies certain determined information, in order to advance sufficient comparable information, smooths the agency problems within large public companies, can enact the standardization process of disclosure. Regards the type of information, we can have financial information and non-financial information, and finally, considering the way it is reported we can find quantitative information with indexes and numbers, and qualitative information with a narrative discourse. With a similar logic adopted by Devalle & Rizzato (2013), Trucco (2015) identifies three levels of analysis which are dependent with each other: mandatory versus voluntary disclosure, financial versus non-financial, and finally, forward-looking and historical information in case disclosures refer to future strategies and actions plans or refer to past conducts and operations. Finally, considering a law perspective, classifications of disclosures do not differ substantially; in fact Kraakman & Armour (2017) categorize mandatory disclosure under the following: 1) disclosure regards "benchmark data" 2) disclosure relates "soft", "projective" or "forward-looking" information 3) disclosure including governance issues and agency problems and

finally 4) the "event-related" disclosure as for "price sensitive" information which is willing to affect market prices.

Based on those classifications, the present research centers the theoretical argumentation and the empirical analysis on non-financial information disclosure. In more details, the study frames voluntary-based approaches and mandatory-based approaches for first, and then it analyzes the corpus of the scholarly researches under non-financial information disclosure, which primarily focuses on a voluntary approach. The empirical analysis is related to the recent shift from a voluntary regime of non-financial information disclosure to the mandatory regime enforced by the EU Directive 95/2014. Figure 1 reports the different disclosure typologies portrayed by Devalle and Rizzato (2013) and highlighting which is the one of our interest in the empirical research of this work.

Figure 1.1. Configuration of disclosure approaches



Source: Devalle, Rizzato (2013)

1.2. Meanings of non-financial information (NFI) disclosure

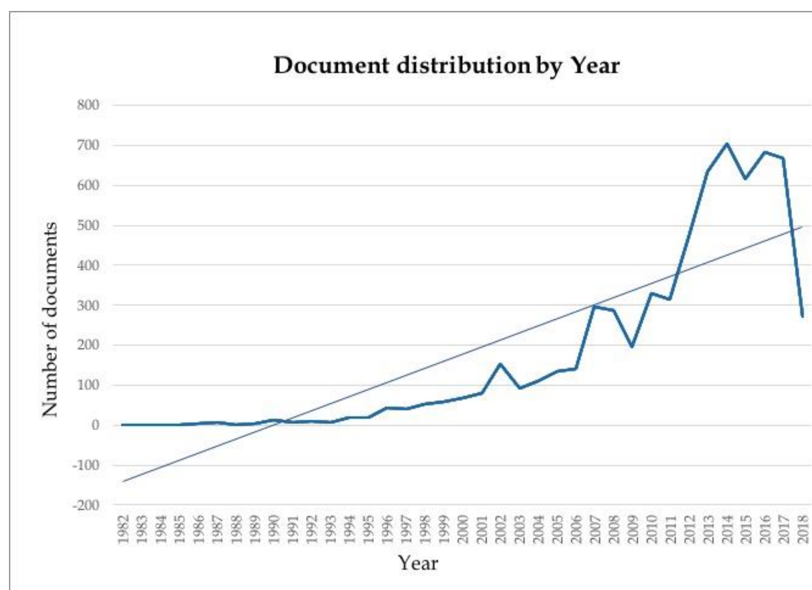
The growth of CSR and sustainability issues calls the disclosure of non-financial information to communicate socially responsible practices (Camilleri, 2015). In fact, origins of non-financial information can be track back in response to sustainability issues and CRS practices, therefore, nowadays, terms of non-financial disclosure, sustainability disclosure, CSR disclosure, as well as social environmental disclosure are used interchangeably with each other. Thus, these terms are not mutually exclusive but soft boundaries can be drawn considering the diverse disciplines which deal with this argument. In the management literature, terms like sustainability and corporate social responsibility are commonly used[6]; whereas the accounting lexicon is inclined to adopt the "non-financial" term opposed to the "financial" one.

This argumentation is centered on the specific term of non-financial information disclosure following prior accounting studies. With a broader perspective, if we look at the evolution of the term over years, it is possible to acknowledge an animate attention starting from 2010, after the financial crisis (Figure 1.2). 6551 documents were released from 01/01/1980 to 31/05/2018 regards non-financial information disclosure and 79,08% of them belong to the last ten years.

NFI is understood as fitting within the mainstreams of "sustainability accounting" and the recent "integrated reporting" movement (Cantino & Cortese, 2017). Both academic and practitioners have tracked several definitions of NFI disclosure so far, enriching the accounting and reporting lexicon with a broader range of information, including intangible assets, intellectual properties, environmental and social responsible practices, as well as corporate governance.

[6] The World Business Council for Sustainable Development (WBCSD) defines CSR as ''the commitment of business to contribute to sustainable economic development, working with employees, their families and the local communities'' (WBCSD, 2001). See Mosca & Civera (2017) for a deep understanding of the evolution of CSR regards different paradigms and interpretations

Figure 1.2. Yearly world count for the use of the term "Non-financial information"



Source: Dow Jones Factiva database, all publications within have been considered

The flourishing of non-financial information disclosure in the accounting and reporting system has its roots among practitioners in the report of the 'Jenkins Committee', published in the USA in 1994 (AICPA, 1994; Haller, Link, & Groß, 2017). Within this report, NFI appear for the first time by defining non-financial information as non-financial measures with historical and forward-looking view in order to address company's managerial and strategical practices as regard the environment and the society surrounding the company itself (Haller *et al.*, 2017; Rezaee & Tuo, 2017). The Non-financial Business Reporting Subcommittee defines NFI "all the information about the business of the reporting entity other than financial measurements of the entity's past, present, and future resources and obligations and the results of its operations or cash flows. The subcommittee considered information about economic, social, and technological trends; industry structure and outlook; and the company's mission and objectives and its success in meeting those objectives as indicated by various performance measures" (p. 36). The need to include such information can be circumscribed to the increasingly necessity to meet several interests under changing as well as to address the interface between company's business and users' needs for

information. To this end, the 'Jenkins Committee' identified 10 elements to business reporting, grouped into 5 sections:

1) Financial and non-financial data
   a. Financial statements and related disclosures
   b. High-level operating data and performance measurements that management uses to manage the business
2) Management's analysis of the financial and non-financial data
   a. Reasons for changes in the financial, operating, and performance-related data and the identity and past effect of key trends
3) Forward-looking information
   a. Opportunities and risks, including those resulting from key trends
   b. Management's plans, including critical success factors
   c. Comparison of actual business performance to previously disclosed opportunities, risks, and management's plans
4) Information about management and shareholders
   a. Directors, management, compensation, major shareholders, and transactions and relationships among related parties
5) Background about the company
   a. Broad objectives and strategies
   b. Scope and description of business and properties
   c. Impact of industry structure on the company

At first sight, NFI within the reporting boundaries was conceptualized with a strong business focus and, at that time, practitioners did not see NFI with the lens of accountability and responsibility of the business itself toward a conscious understanding of multiple-faced interests. In other words, NFI was conceived as a standalone communication without links to corporate social responsibility issues.

The academic literature encountered NFI disclosure in the later 80s, by providing new perspectives to enlarge the traditional financial accounting and reporting

toward an inclusion of sustainability issues and corporate social responsibility practices, so, at that time, sustainability accounting and reporting come up as useful tools to embrace environmental and social issues. Todays, several academics arose the debate around NFI's terminology because there was neither a commonly understanding nor a unanimous consensus on this regard so far (Eccles & Krzus, 2010; Haller *et al.*, 2017). For example, the Director of Responsible Investment at AXA argues that: "…having found 16 different phrases to describe the kind of sustainability data that managers say they are now integrated into their mainstream analysis, it's hard surprising people are confused, and that integration is not moving as quickly as it could!" (cited from One Report, Eccles & Krzus, 2010). Therefore, the adoption of different terminologies urgently undermines the fully integration and the universal conceptualization of NFI, putting together different "ingredients" in the same "melting pot" without a good "cooking receipt". Consequently, to go forward, what needs to be better understand is the appropriate conceptualization of NFI meanings and definitions. In other words, a clarification of academics' and practitioners' views on NFI gives a broader picture and a holistic comprehension of how NFI is conceptualized, conceived and implemented within corporate reporting.

One of the first definitions of NFI was postulated by Gray, Owen, & Maunders, (1987) as "the process of communicating the social and environmental effects of organizations (particularly companies) beyond the traditional role of providing a financial account to the owners of capital, in particular shareholders" (p. 9). With this definition two main characteristics of NFI came up: the first relates to the topics, meaning that "the social and environmental effects of organizations" are the primary issues addressed, the second refers to the users of such information, that is "beyond…a financial account to the owners of capital". On the one hand, NFI relates to measures regard CSR practices which constitute the narrative of such information and come to exist nearby the traditional financial performances. On the other hand, NFI is released out of the traditional financial

statements to serve all stakeholders with, at least, one stake jointly related to the company's business and not only for the common shareholders and investors.

A similar view was embraced by Eccles & Krzus (2010) by address NFI as "a broad term that applies to all information reported to shareholders and other stakeholders that is not defined by an accounting standard or a calculation of a measure based on an accounting standard, such as revenue growth, which we refer to as 'financial information'. Thus, nonfinancial can include economic information (e.g. market size in dollars), ratios that use accounting information (e.g. sales per square foot), and accounting-type measures for which no formal standard exists (e.g. core earnings)" (p.84). So, it is clearly evident that this definition combines both the content of such information and the users to which this information may be of interest. The study of Eccles & Krzus (2010) was one of the first at recognizing the fuzzy terminology around NFI, thus they group NFI into three main subcategories: 1) intangible assets (including intellectual capital and other intangibles); 2) KPIs addressed as quantitative measures of results, achieved using tangible and intangible assets and related to some financial performance indicators, and 3) ESG metrics, which can be both intangible asset and KPI and explain Environmental, Social and Governance performances. Other scholars outlined NFI by considering the reporting boundary outlined around this disclosure, that means the inward or outward location of such information referring at the traditional annual report (Amir, Lev, & Sougiannis, 2003; Robb, Single, & Zarzeski, 2001) or other channels of communication. Accordingly, NFI disclosure can be exhibited within the financial statements or on other routes such as press-releases, websites, surveys toward an extension of a qualitative disclosure assessment. To give an example, Barker and Imam (2008, p. 313) intended NFI as "information drawn from outside the financial statements" (cited from (Erkens *et al.*, 2015).

Several surveys as well as literature reviews were conducted by academics and practitioners to investigate how NFI is postulated. In 2008, AXA Investment Managers and AQ Research submitted a questionnaire to investment

professionals to classify the NFI terminology and to understand which topics are interlinked with their decision-making criteria. 16 diverse topics were addressed, and respondents were required to rank accordingly the meaningful relevance using an ordinal scale. The question was: "I now take (…) factors into account much more than I used to". The factors related to sustainability information which respondents associate with environmental, social and governance issues (3,35 the highest mark), followed by sustainability (3,23), and third responsible investment (3,05). We do not acknowledge astonishing results, since the questionnaire was primary focused on the term used for sustainability information (Eccles *et al.*, 2010). The contemporary researches of Erkens *et al.* (2015) organizes meanings and definitions around NFI in a bibliometric study. In the similar logic of the topics and reporting boundary classification aforementioned, two main streams can be outlined: on the one hand, NFI relates to several topics outside the traditional financial performance measures such as management quality, strategy, intellectual capital, and corporate social responsibility (CSR) approach as different measures compared to the traditional financial performance ones. So, these studies intertwine measures of "non-financial" performance with traditional financial measures and understand such a linkage. (Erkens *et al.*, 2015). On the other hand, NFI is conceived as the non-traditional channel of communication provided on websites, press releases, including the narrative of the business itself and a proliferation of qualitative information. The former definition seems to be the most accepted from academics because an emphasis on measurement is extremely recognized within the accounting system. Obviously, this raise the question of "what it is measuring?", so the classification on the topic around NFI could be the most significant. This is even confirmed by the recent work of Haller *et al.* (2017). Precisely, the study inquires whether NFI has a common understanding or whether there is still fuzzy framing through a questionnaire submitted to both academics and practitioners. In essence, academics define NFI as "all quantitative and qualitative data on the policy pursued, the business operations, and the results

of this policy in terms of output or outcome, without a direct link with a financial registration system" (Haller *et al.*, 2017; pag. 418) by supporting Erkens's bibliometry study (2015). Hence, Haller *et al.* (2017) acknowledge a common understanding of such NFI around academics, but some lacks of an unanimous consensus around practitioners are still present. This consequently might cause miscommunication harms in the implementation of mandatory disclosure adoption and it undermines, in turn, comparability of data, measures, and definitions. Table 1 provides a summary NFI definitions grouped according the content and the reporting boundary classification. Such controversial definitions lead to diverse assessments of NFI disclosure in terms the content of information and we will discuss such different approaches at the beginning of Chapter 2.

Table 1. Meanings on NFI disclosure

Related Literature	Definition	Content	Reporting Boundary	Measurement
European Commission (2013b)	'Non-financial information is generally considered as environmental, social and governance information. This includes information concerning diversity.'	X		
Eccles *et al.* (2010)	'…a broad term that applies to all information reported to shareholders and other stakeholders that is not defined by an accounting standard…'	X		
Robb *et al.* (2001)	'…qualitative information included in company annual reports, but outside of the four financial statements and related footnotes'		X	
Financial Times Lexicon (2015)	'Any quantitative measure of either an individual's or an entity's performance that is not expressed in monetary units.'	X		X
Gray et al, (1987)	'…the process of communicating the social and environmental effects of organizations (particularly companies) beyond the traditional role of providing a financial account to the owners of capital, in particular shareholders.'	X	X	
Meek *et al.* (1995)	'Non-financial information is directed more towards a company's social accountability and is aimed at a broader group of stakeholders than the owners/investors'.	X		
Admirall, Nivra, and Turksema (2009)	'Nonfinancial information comprises all quantitative and qualitative data on the policy pursued, the business operations, and the result of this policy in terms of output or outcome, without a direct link with a financial registration system.'	X		

INTOSAI Working Group on Environmental Auditing (2013)	'Non-financial information means that it is not represented in monetary terms and is not based on an accounting standard. Non-financial information ca be both quantitative […] or qualitative […].'		X	X
Flostrand and Strom (2006)	'…information may be considered non-financial even though they are dollar denominated I that information is not included in any of the four financial statements'.			X
Upton (2001)	'Nonfinancial disclosures and metrics include index, scores, ratios, counts, and other information not presented in the basic financial statements' (p. 5).		X	X
Amir *et al.* (2003)	'Beyond-financial-report information: information outside financial reports'.		X	
Walden and Stagliano (2003)	'Environmental disclosure in the non-financial section of the annual report'.		X	
Barker and Iman (2008)	'Information drawn from outside the financial statements' (p. 313).		X	
Cinquini *et al.* (2012)	'Facts and claims presented in non-monetary number/form (e.g. time, quality, per cent, quantity) (p. 560)			X
Chen and Bouvain (2009)	Implicit definition: 'some companies (…) have a long-standing tradition in reporting nonfinancial information and report all facets of their corporate responsibility and sustainability' (p. 300).	X		

Source: Adapted from Haller *et al.* (2017) and Erkens *et al.* (2015)

1.3. International standards frameworks building up voluntary NFI disclosure

The corporate reporting system encounters a myriad of international standards frameworks which stimulate disclosures of financial and non-financial information. On the financial reporting side, the mains are IASB (International Accounting Standards Board), FASB (Financial Accounting Standards Board), IFAC (International Federation of Accountants) and ICAEW (Institute of Chartered Accountants in England and Wales) whereas on the non-financial reporting side, there are the GRI (Global Reporting Initiative), AA1000 (AccountAbility 1000, for social and ethical accounting, auditing and reporting, CDSB (Climate Disclosure Standards Board) Framework, CDP (Carbon Disclosure Project), the Eco-Management and Audit Scheme (EMAS), the Guiding Principles Reporting Framework on Business and Human Rights, ISO 26000 of the International Organization for Standardization and the recent IR – Integrated Reporting Framework. Going in depth into the analysis of international standards schemes, one of their primary aim is to provide stimuli to drive companies towards responsible actions, disclose business results as for both financial and non-financial performance and to set up a homogenous language in favor of sustainable development. The report named "Carrots & Sticks - Global trends in sustainability reporting, regulations and policy" (2015) identifies a list of international sustainability guidance as groundwork and it furthers the analysis with a classification of frameworks among normative, management and reporting guidelines (first level of analysis) and considering comprehensive and specific sectors guidelines (second level of analysis). In more details, the first level of analysis encounters the UN Global Compact principles and the OECD Guidelines for multinational enterprise which are classified as normative because they give insights in light of the sustainability vision. The UN Global Compact addresses the 10 fundamental principles within the area of

human-rights, labor, environmental, anti-corruption issues [7], whereas the OECD Guidelines for multinational enterprises provides policies and actions plans for responsible business conduct. On the other hand, the ISO 26000 is classified as managerial framework because it addresses seven core subjects of social responsibility with a holistic approach[8] (Bartels, Fogelberg, Hoballah, & van der Lugt, 2016). Finally, with regard to reporting clusters, noteworthy examples are the AA1000 Accountability, the GRI (Global Reporting Initiative) and the recent IR – Integrated Reporting – Framework. The AA1000 was developed in 2000 by the Institute of Social and Ethical AccountAbility (ISEA) based on the governing principle of accountability, which means "that the organization must be able to explain or justify what it does or does not do, and the consequences for which it is responsible, to people with a legitimate interest" (Colle & Gonella, 2002). Following the three different areas of the SEAAR (social and ethical accounting, auditing and reporting) process, de Colle & Gonella (2002) categorized its principles into the scope and the nature of the process, the valuable and credible process and the on-going process. The first category addresses the completeness of the assessment, the regularity and timeliness of the process and finally the materiality of the information which needs to be significant for all stakeholders. The second group includes principles relating to credibility of information, so quality assurance, accessibility, and quality of information in terms of comparability, reliability, and usefulness of information. Finally, the third group of information points out how the management process should look like, considering the embeddedness as for the fully integration of information along with policy and actions and the continuous improvement based on reconfiguration of processes with a learning logic (de Colle & Gonella, 2002). The first reporting guidelines on social and environmental issues namely Global Reporting Initiative (GRI) come up to exist in 2000, and nowadays it gathers

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[7] See https://www.unglobalcompact.org/what-is-gc/mission/principles for further details.

[8] ISO 26000 outlines as 7 principles of social responsibility: accountability, transparency, ethical behavior, respect for stakeholder interests, respect for the rule of law, respect for international norms of behavior, respect for human rights

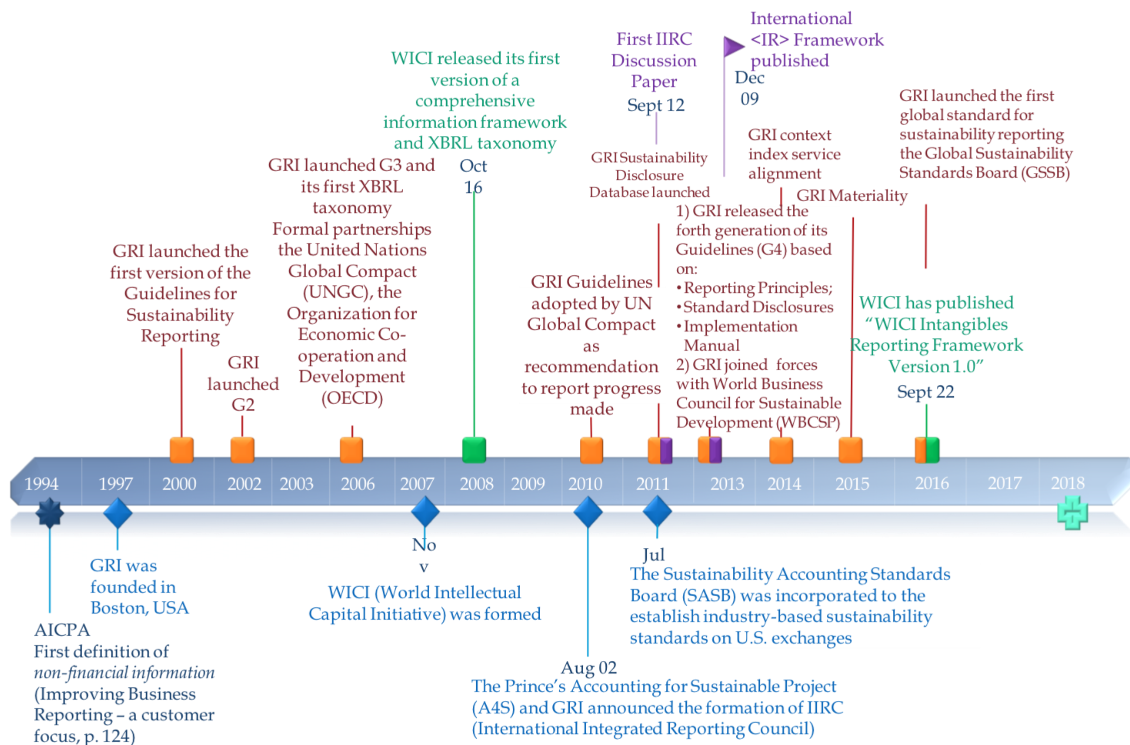
unanimous consensus internationally, by being the most adopted framework (Crowther, 2015). The GRI was founded in Boston in 1997 as NGO and the first reporting guideline was realized in 2000. The GRI reporting guideline and its on-going updating (G2, G3, G4 versions) embraces a multi-stakeholder perspective, covering a full range of topics going from economic, social, environmental, governance, ethical dimension. The GRI Guidelines are divided into two main parts: Universal Standards and Topic-specific Standards. The former outlines the general disclosures (organizational profile, strategy, ethics, corporate governance, stakeholder engagement and reporting process) and the management approach (how the organization manages the material topics). The latter describes information on the organization's impacts related to the economic, environmental, and social topic. Todays, the GRI reporting guidelines acquire consensus among scholars to be "the global benchmark for standardized ESG [environmental, social and governance]/nonfinancial reporting" and "to be comparable to generally accepted accounting principles for financial reporting" (Waddock, 2008; p. 93). Finally, the recent International <IR> Framework aims at illustrating to providers of financial capital how an organization creates value over time and prepares of an integrated report[9] should follow both guiding principles and content elements in an integrated view (The International Integrated Reporting Council, 2013).

Moving to the second level of analysis, the classification of the variety of standards framework faces the way the information could be disclosed, whether in a comprehensive or specific sector group. An example dedicated to specific sector group is the Sustainability Accounting Standards Board (SASB) because it defines the disclosure of material sustainability information among 78 industries for 10 countries.

[9] In more details, an integrated report is "a concise communication about how an organization's strategy governance, performance and prospects, in the context of its external environment, lead to the creation of value over the short, medium and long term.

Figure 1.3 provides the salient facts regards the developments of the main international standards frameworks of the GRI guidelines, the IR Framework, and the WICI (World Intellectual Capital Initiative).

Figure 1.3. Development paths of international standards frameworks



Source: own elaboration

It is clearly evident that nowadays non-financial reporting faces with a variety of standard frameworks and norms which advance CSR toward a more pragmatic connotation (Mosca & Civera, 2017). de Colle, Henriques, & Sarasvathy (2014) argues positive and negative sides of CSR standards arising a constructive criticism underlining the problem of deceptive measurements, responsibility erosions, and blinkered culture. Such concerns may occur in case companies exaggerate inertly following of international standards (e.g., the GRI standards) by just ticking a box and forgetting about material issues necessarily to scale in favor of changing direction and large-scale outcomes (de Colle *et al.*, 2014, p. 184).

Moreover, in many cases, these guidelines have been taken up voluntarily (Camilleri, 2015) and furthermore, such a huge number of guidelines may justify partial implementation or even more, fully inactions especially in case of voluntary disclosure, leading to murky and biased information – especially in favor of disclosing exclusively positive signaling – threaten real effective results. In a similar logic, scholarly academics have developed and proposed a huge number of creative implementations of social impact metrics and social accounting schemes; among other we can cite Social Return on Investment (SROI), Social Costs-Benefit Analysis (SCBA), various balanced scorecards (BSc), Stakeholder Value Added (SVA), Blended and Shared Value, Triple-Bottom Line Accounting. However, do you think this could be the right way to approach at impact evaluations? Probably, not. Elkington (2018) argues that "we have conspicuously failed to benchmark progress across these options, on the basis of their real-world impact and performance" and, in certain cases, some concepts were misunderstood and misinterpreted. This is the case of the Triple-Bottom Line, which some scholars generally intend as an accounting tool, however, the primary postulation of Elkington dated in 1994 was oriented toward a strategic logic in order to "track and manage economic (not just financial), social, and environmental value added — or destroyed" (Elkington, 2018).

1.4. Regulatory reforms forcing into mandatory NFI disclosure

A mandatory approach to disclosure provides more comparability of data, more standardized and transparent ways about companies' social and environmental impacts. This coercive regime allows investors to keep up to date information for their investments decisions (Overland, 2007) and avoid misleading behaviors since there is a uniform process. Hess (2008) argues that the voluntary approach neglects transparency and stakeholder engagement and, since the aim of social reporting is to contribute to an ongoing stakeholder dialogue, "social reporting must have top-down mandates for disclosure" for ensuring benchmarking and ultimately leading to "a balance benefits-to-costs ratios of both users and

disclosures of social and environmental information" (p. 471). However, mandatory requirements can produce a counterproductive effect. This is demonstrated in the study Bini *et al.* (2017) which argues that "an inadequate specification with few details leads to the failure of regulatory intervention" (p. 66) and under a sample of 75 Italian companies finds a greater level of compliance with the Modernization Directive (2003/51/EC) underperformance indicator disclosure due to an increase in the number of indicators. However, the study reflects on the mandatory approach that does not "guarantee high-quality disclosure practices" (p. 63) since there is a loose specification in the regulatory intervention.

The increase of non-financial information disclosure in corporate reporting raised numerous calls for mandatory reporting standards guidelines and regulatory reforms (Beck, Dumay, & Frost, 2017), and nowadays companies are facing with such compliance. This adequacy implies high costs which can cause an inverse effect toward the mere "tick the box" approach, and thereof the decreasing of the level of disclosure. As a matter of fact, the cost of monitoring and reporting of such practices may be higher than the expected benefits and eventually even higher than in a voluntary regime. However, positive findings sort out from the study of Ioannou & Serafeim (2017) which is one of the first at investigating the regulatory change. In more details, this study seeks to understand whether mandatory disclosure exerts transparency on sustainability disclosure and whether regulation affects firm valuations and organizational practices through assurance among 4 countries: China, Denmark, Malaysia and South Africa. Findings suggest a great disclosure after the mandated regulation and even more an increased level of credibility of such information through assurance; in other words, after regulatory changes, disclosure increases, and companies are more likely to seek assurance on their ESG disclosure.

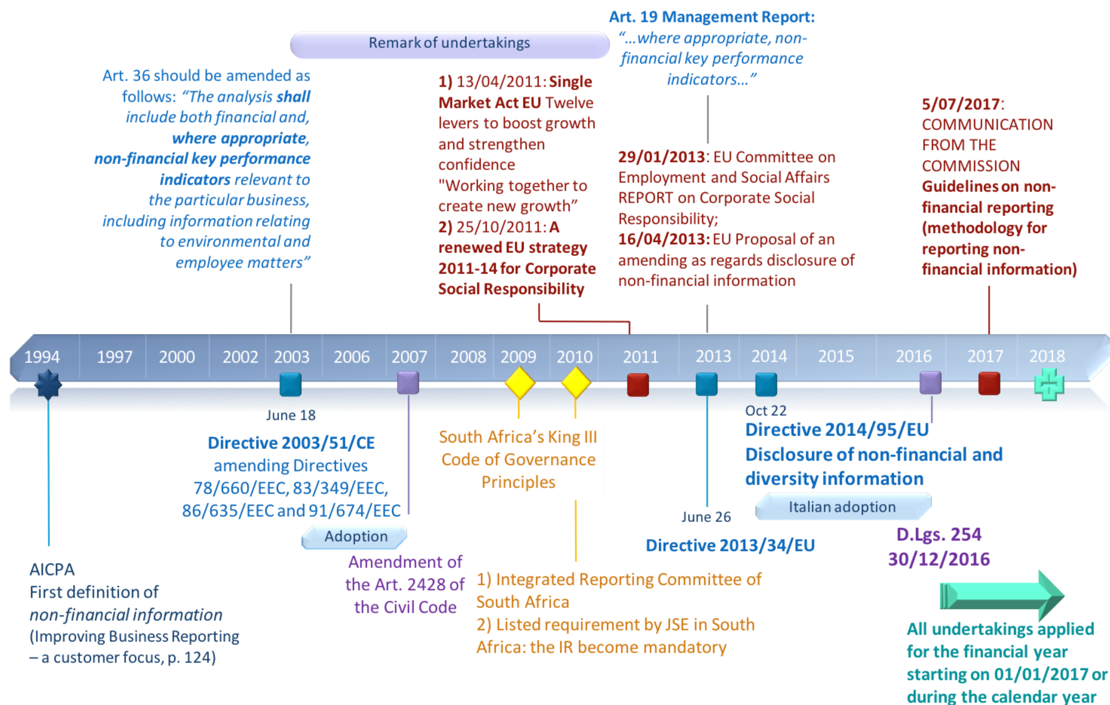
In contrast, disclosure against the mandatory approach is the voluntary regime which gives a credible signal to the markets to explain how companies proactively act toward socially responsible practices to stakeholders (Malsch,

2013). Prior studies on voluntary disclosure empirically demonstrate that the self-regulation on non-financial information disclosure improves stock liquidity, reduces the cost of capital, and enhances earnings quality (Dhaliwal, Li, Tsang, & Yang, 2011; Dhaliwal, Radhakrishnan, Tsang, & Yang, 2012; Rezaee & Tuo, 2017). Stubbs & Higgins (2018) explore practitioners' preferences between mandatory and voluntary approaches for the integrated reporting and findings demonstrate that the self-regulation (on the integrated reporting) is greatly accepted since it is more effective in the early-stage of the implementation. The reason underlying could be ascribed to the strong intrinsic intentions to address such responsibilities. However, it is also true that it might address misleading evaluation from stakeholders (Cho, Laine, Roberts, & Rodrigue, 2015), and exponentially enhance greenwashing behavior which occurs when companies engage with CSR practices improving their corporate image just rhetorically and not in practice at all (Mahoney, Thorne, Cecil, & LaGore, 2013).

All previous things considered, on the one hand, mandatory disclosure may help stakeholders to better understand how companies perform in terms of long-term sustainability, on the other hand, may lead companies to a mere duty without purpose-ends, but whatever are the terms, it is clearly evident that law regulations it is an antecedent of non-financial disclosure.

The primarily regulatory requirements on non-financial information disclosure dates back to 1995, when Denmark mandated a public environmental reporting, covering a range of 3000 companies (Tschopp & Huefner, 2015), then progressive improvements come out in South Africa, where the IR Framework was mandated as compulsory by the JSE Stock Exchange (Camilleri, 2015, 2017). Hereafter, Figure 1.4 presents the main regulatory reforms, with a particular detail on the European context. The next section deeply focuses on the Italian context.

Figure 1.4. Development paths of regulatory reforms



Source: own elaboration

1.5. From voluntary to mandatory NFI disclosure in the Italian context

The Italian regulatory development of NFI has a quite long history tracked since the adoption of the Directive 2003/51/EC of the European Parliament, also known as the Modernization Directive with an amendment of the Article 2428 of the Civil Code in 2007. In this Directive, NFI, and precisely non-financial key performance indicators, appears for the first time. Article 14 enacts European companies to address and explain in their annual reports – within the management report – "both financial and, where appropriate, non-financial key performance indicators relevant to the particular business, including information relating to environmental and employee matters" (European Parliament, 2003). After the amendment of the Article 2428 of the Civil Code, one year later, the Italian National Council of Chartered Accountants [NCCA, Consiglio Nazionale dei Dottori Commercialisti e degli Esperti Contabili (CNDCEC)] explicitly

recommends the inclusion of such "soft information" in case it has strategic implication for the business itself. In its report, namely *La relazione sulla gestione - Alcune considerazioni* (2008) the relevance of such information has been recognized suggesting that such information could affect operating activities and providing an example on a gas and oil company whose policies on environmental concerns could potentially allow stakeholders to proper evaluate the company in terms of its risk exposure (p. 24).

A further attempt to enhance the disclosure of NFI information come out with the Directive 2013/34/EU of the European Parliament of June 26, 2013 on the annual financial statements, consolidated statements and related reports of certain types of undertaking in which the Article 19 dictate the inclusion of "undertaking's likely future development and activities in the field of research and development" confirming the need to explain the analysis of "both financial and, where appropriate, non-financial key performance indicators relevant to the particular business, including information relating to environmental and employees matters" (European Parliament and the Council, 2013; emphasis added). With the Directive 2003/51/EC and the Directive 2013/34/EU, the regulator leaves a broad margin of discretion in such implementation because they specify neither which are the boundaries to disclosure such information nor what kind of specific information is needed to report, and consequently it contributes to the loose specification with counterproductive effects (Bini *et al.*, 2017).

After the EU Report on Corporate Social Responsibility and a preliminary EU proposal of an amending as regards disclosure of non-financial information (European Commission, 2013) which recognize the importance of NFI, the Directive 2014/95/EU of the European Parliament dictates the mandatory disclosure on non-financial and diversity information[10]. The Italian legislator brings into force this Directive with the Legislative Decree No. 254/16 forcing

[10] Article 1 Directive 2014/95/EU: Amendment to Directive 2013/34/EU adding "Article 19a: Non-financial statement"

public-interest entities exceeding on their balance sheet the criterion of the average number of 500 employees during the financial year and at the end of the financial year and covering one of the following bounds: a) total assets: 20.000.000 Euro b) total revenues: 40.000.000 Euro, to prepare the non-financial statement in the management report.

Precisely, Article 5 dictates the boundaries among the non-financial statement giving the possibility 1) to present a distinctive section within the management report or 2) to present a separate report specifying this choice in the management report and including a reference to where this report can be found in the company's website. In other words, two alternatives of such boundaries are outlined: 1) companies can include the non-financial statement within the management report; 2) companies can prepare a separated document (namely as "non-financial statement" or "CSR report", eventually "Sustainability Report") with the obligation to place it on their website.

In providing NFI and diversity information, companies have to rely on international standards frameworks such as the United Nation (UN) Global Compact, the Guiding Principles on Business and Human Right, the International Organization for Standardization's ISO 26000, the Global Reporting Initiative (to cite some example), Union-based framework such as the Eco-Management and Audit Scheme (EMAS) or other recognized international frameworks listed in the Directive 2014/95/EU. Eventually, companies can implement self-reporting schemes by adopting more than one international frameworks, and if this occurs, they have to clearly explain the reference at each standard guideline.

Ultimately, with the Guidelines on non-financial reporting (Methodology for reporting non-financial information), the EU Commission gives further non-binding guidelines with the aim to help companies in drawing up "relevant, useful concise non-financial statements according to the requirements of the Directive" and facilitate comparability of results. As a matter of fact, the voluntary guidelines suggest how to include non-financial information within

reports by following the approaches of conciseness, consistency and coherence as well as the stakeholder orientation and the strategic and forward-looking view.

Chapter 2

Literature review of non-financial information disclosure: determinants and effects

This chapter centers the development paths of NFI disclosure in order to understand how the academic literature is developing for inquiring NFI disclosure.

As a matter of fact, academics scholars have devoted an intensify scrutiny under non-financial information (NFI) by contributing to the debate around the meanings (Erkens *et al.*, 2015; Haller *et al.*, 2017), the determinants that favor non-financial information disclosure (Bini *et al.*, 2017; Ioannou & Serafeim, 2017; Rezaee & Tuo, 2017b), and the effects of such implementation (Bini *et al.*, 2017; Dhaliwal *et al.*, 2012; Lu & Abeysekera, 2017) that eventually can constitute the reasons underpinning such disclosures. Accounting studies attempted to figure out which are the determinants of such disclosure, as for example economic performance (Hackston *et al.*, 1996), stakeholder pressure (Roberts, 1992), and to understand the consequences of different levels or types of non-financial disclosure including low information asymmetry (De Klerk, de Villiers, & van Staden, 2015), corporate reputation (Kansal, Joshi, & Batra, 2014) and firm value (Cahan, De Villiers, Jeter, Naiker, & Van Staden, 2016; De Villiers & Marques, 2016; Marcia, Maroun, & Callaghan, 2015).

Since this stream of research is still evolving and in progress so far, the aim of this chapter is to outline a framework which serves as a road map for our empirical investigation and future research. First, this review will be a useful research agenda for scholarly researches which will engage with the assessment of the level of non-financial disclosure and the understanding of the determinants that guide the relationship (Chapter 3). Second, it may be a

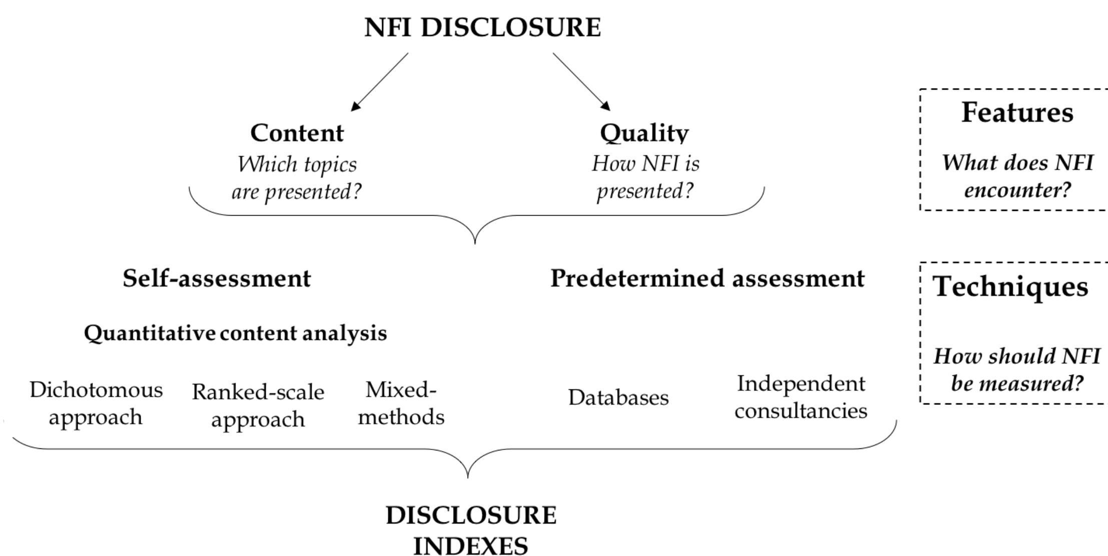
roadmap for further theoretical considerations under the effects of non-financial disclosure interlinked with corporate responsibility.

To these ends, the chapter addresses two main research questions aimed to understand the ways to assess NFI and to set up the determinants that favor NFI, as well as the effect of such disclosures. After a review of how scholarly researchers assesses NFI disclosure (Paragraph 2), the chapter analyzes prior research referring at the determinants as internal and external factors that drive NFI (Paragraph 3) and the effects as internal and external influences of such disclosures (Paragraph 4).

2.1. Assessments of non-financial information disclosure

Academic scholars develop various assessments of NFI disclosure addressing disparate spheres of NFI, in other terms how NFI has been evaluated. They engage with several research methods in order to construct indexes that describe the content and/or the quality disclosures. Figure 1 illustrates a synthesis of such approaches and a detailed analysis of each categories is furthered below considering NFI features (content and quality) for first and NFI techniques (self-assessment or predetermined assessment).

Figure 2.1. Configuration of NFI disclosure assessments



Source: own elaboration

2.1.1. *Content and quality of information*

Accounting studies struggled for providing reliable disclosures in terms of content and quality of NFI. The content refers to the topics addressed for environmental issues, social and employees' matter, as well as human rights and anti-corruption concerns, intangibles and intellectual capital, to cite few examples. We provide as follows brief definitions for the most adopted themes, even if this cannot be considered as an exhaustive list.

- The environmental dimension deals with the shrinkage of natural resources such as energy depletion and deforestation, therefore recycled materials, effluents, and waste, energy, emissions, biodiversity issues as well as environmental compliance and environmental assessments were taken into account;
- The social dimension carries out supply chain assessments and practices which acknowledge costumers' interests and enhance local community engagement, thus screeners to suppliers, customer privacy, marketing and labeling matters and programs devoted to locals were bringing into focus;
- The employees' dimension refers to the workforce protection as for health and safety and its enhancement in terms of training and education, employees and management relation;
- The human right dimension deals with each right which belongs to individuals like liberty respect, equality, but even importantly, the right to life. So, operations at significant risk for incidents of child labor, compulsory labor, proactive actions to cover and prevent human rights constraints are included;
- The anti-corruption dimension combines policies and procedures aiming at training management and employees against corruption, as well as the assessment of operations related to corruption and eventually, prior incidents and legal actions are taken to overcome such unpleasant facts.

- The intellectual capital deals with research and development programs, innovation assessment the company carries out.

Some studies narrow the investigation on just one area of expertise, such as environmental (Andrikopoulos & Kriklani, 2013; Brammer & Pavelin, 2006; Cormier, Lapointe-Antunes, & Magnan, 2015; Kansal *et al.*, 2014; Thijssens, Bollen, & Hassink, 2015) or intellectual capital (Mangena, Li, & Tauringana, 2016), meanwhile others give a broader picture encountering with environmental, employee, and customer/community information, generally considered as sustainability issues (Adhikari, Emerson, Gouldman, & Tondkar, 2015; Rezaee & Tuo, 2017a).

The content of NFI is mostly grouped into categories like historical information and forward-looking information, including industry environment, market competition, company strategy, production, and customer (Rezaee & Tuo, 2017a) or considering themes, evidence (monetary and non-monetary quantification). Such contents are often linked with the amount of words or sentences (Hackston & Milne, 1996) and are derived from own elaboration of checklists (Mangena *et al.*, 2016; Thijssens *et al.*, 2015), from the adoption of referred international guidelines frameworks such as the Global Reporting Initiative (GRI) (Hummel & Schlick, 2016; Mallin, Michelon, & Raggi, 2013; Martínez-ferrero & Frías-aceituno, 2015; Martínez-Ferrero, Garcia-Sanchez, & Cuadrado-Ballesteros, 2015) interlinked with other international standards guidelines (ISO 26000, UN Global Compact) or eventually from list of others authorities, like the one of AICPA (Rezaee & Tuo, 2017a; Robb *et al.*, 2001). Even if the GRI has been criticized in several studies to emphasize the "tick GRI box" (Michelon *et al.*, 2015) and to provide vague sustainability principles (Moneva, Archel, & Correa, 2006), it provides standardization of metrics and supports reliability of disclosure measurement (Lu & Abeysekera, 2017). The reason why GRI gets unanimity over years can be ascribed to the consolidated acceptance of the GRI as the trusted

reference for policymakers and regulators worldwide, leading to higher comparability among non-financial reporting.

More recently, academic scholars have criticized prior studies which investigate solely the quantity of items disclosed or the amount of space allocated to such disclosure or even the mere presence of some kind of information (Cho *et al.*, 2015; Michelon *et al.*, 2015). Both the amount ("how much") and the content ("what") of NFI do not comprehensively portray companies' CSR disclosures, because they miss other qualitative dimensions that shape the ways of disclosures, such as materiality, conciseness as well as connectivity of information. In other words, the extent of information disclosed does not necessarily mean better quality of companies' sustainability approach.

Therefore, studies have furthered disclosure indexes considering the quality of information, meaning that how NFI is disclosed. In such vein, contemporary studies aim at looking at the presence of performance disclosure (Patten and Zhao, 2014), the relevance, comparability, clarity and neutrality of NFI disclosed (Chauvey *et al.*, 2013). Combination of contents (to assess the types) and principles (to assess the ways) turns up to be addressed. For example the disclosure index of Eccles, Krzus, & Ribot (2015), which assess the level of disclosure within the integrated reports (IR), settle up with 7 content elements (Organizational overview and external environment, Governance, Business model , Risks and opportunities, Strategy and resource allocation, Performance, Outlook); 6 capitals deriving from the Consultation Draft of the <IR> Framework (financial, manufactured, natural, intellectual, human, and social and relationship), and ultimately 7 special factors. Those 7 factors aim at picking up the quality of disclosure within IR, so they identified 1) material risks, 2) how material risks are handled/mitigated, 3) the presence of "materiality matrix" to present the risks 4) stakeholder engagement 5) connectivity of information 6) website content supports/communicates integrated report content 7) letter from Chief Executive Officier o Chief Sustainability Officer address organization's sustainability. Michelon *et al.* (2015) frame NFI disclosure in "three different

complementary spheres: the content of the information disclosed (what and how much is disclosed), the type of measures used to describe and discuss CSR activities (how it is disclosed) and the managerial orientation (the corporate approach to CSR)." They first measure the content with the adoption of the G3 guidelines (GRI, 2006) and then, acknowledge the accuracy of information as regard to qualified and quantified CSR activities grouping into qualitative, quantitative or monetary terms to investigate the quality of CSR disclosure. Furthermore, the quality has been assessed considering the managerial orientation postulated by Beretta and Bozzolan (2014) which recognized both the time orientation and the boilerplate vs committed approach to CSR[11]. Other studies (Melloni *et al.*, 2017; Melloni, Stacchezzini, & Lai, 2016) enriched the way to explore NFI disclosure considering the tone of disclosure, conciseness, completeness and balance . In more details, (Melloni *et al.*, 2016) address the tone of disclosure in terms of positive or non-positive connation of sentences examining the type of measure (quantitative or non-quantitative) and the time orientation (forward-looking or non-forward looking) and the "Business Model" category according to the IIRF guidelines. (Melloni *et al.*, 2017) focus on the amount of disclosure defined with length measured respectevely with the natural logaritmic number of pages and the scope, addressing the Fog Index[12] to measure the readability.

The existing literature tends mainly focusing on a combination of both the quantity considering the amount of information, and the quality that deals with

[11] Michelon *et al.* (2015) intend time orientation as forward or backward looking, whereas boilerplate vs. committed approach to CSR is intended as the general information that does not help readers understand the impact of corporate activities (boilerplate), conversely the information provide to the reader specific information about objective and results, giving insights on the commitment of the organization.

[12] "Fog index combines the number of words per sentence and the number of syllables per word to mea- sure reports' readability under the assumption that more words per sentence or more syllables per word make a document harder to read. It is calculated as follows: Fog = (words_per_sentence + percent_of_complex_words) / 0.4 […] the relation between the Fog and reading ease is as follows: Fog ! 18 (unreadable); 14–18 (difficult); 12–14 (ideal); 10–12 (acceptable); and 8–10 (childish)". (Melloni *et al.*, 2017; p. 226)

linguistic features (Melloni *et al.*, 2017; Li, 2008) of textual information which are increasingly under scrutiny along with number data.

2.1.2. Techniques of assessments

NFI disclosure techniques can be grouped into two main macro-areas: the self-assessment of NFI disclosure and the predetermined assessment of NFI disclosure. The self-assessment of NFI disclosure gathers data on several NFI dimensions and combines diverse research approaches like content analysis, scoring or, even more often, there is the common use of mixed-methods which join prior approaches together with questionnaires, surveys and/or interviews. Content analysis and scoring are based on secondary data because they investigate CSR Reports, websites, press releases generally publicity available, whereas mixed-methods rely on primary data because they aim at capturing intrinsic and/or extrinsic perceptions, opinions on certain issues coming up from various categories of stakeholders to enrich the quality of disclosure (Lu & Abeysekera, 2017). In accounting studies, all these techniques are broadly combined with each other to sort out an index that synthetize the level of disclosure regards to the content and the quality of such information. Conversely, other academics rely on predetermined indexes from databases like Bloomberg, KLD or DataStream (Gao, Dong, Ni, & Fu, 2016; Li, Gong, Zhang, & Koh, 2018; Qiu, Shaukat, & Tharyan, 2016) or relying on proprietary data from rating agency and national/international authorities (Brammer & Pavelin, 2006; Cahan *et al.*, 2016). In the following sub-paragraphs, we describe the research methods providing examples of application coming from prior studies.

Content analysis, scoring, and mixed-methods

NFI disclosure can be viewed with the idea of communication as a fundament of ethical business conduct to respond at the public's desire for higher levels of transparency (Lock & Seele, 2015). Non-financial information is characterized for

its traits to disclose mostly qualitative information, so the content of such information is of paramount importance for analysis. In such vein, the technique of the content analysis fits properly to assess disclosure levels because it is "a tool for the interpretation of usually written (corporate) communication […] and may help understand and interpret the manifest as well as latent content of communication regarding a corporation's ethical understanding, conduct, and behavior" (Lock & Seele, 2015). Content analysis "a research technique for making replicable and valid inferences from texts (or other meaningful matter) to the contexts of their use" (Krippendorff, 2004; p. 18). It "views data as representations not of physical events but of texts, images, and expressions that are created to be seen, read, interpreted, and acted on for their meanings, and must therefore be analyzed with such uses in mind. Analyzing texts in the contexts of their uses distinguishes content analysis from other methods of inquiry" (Krippendorff, 2013; p.xvii). Lock & Seele (2015) synthetize in four point the power of quantitative content analysis as a method 1) to reduce the respondent's bias, 2) to easily check for validity and reliability of collected data 3) to properly strengthen triangulation in case if such method is intertwined with interviews or questionnaires 4) to understand company's CSR communication, ethical behavior, or standard of conduct. As Lock & Seele (2015) underline, content analysis can be carried out both with a quantitative and qualitative level of analysis, and the boundaries among such modes are controversial and this is the reason why sometimes overlapping among discourse analysis and qualitative content analysis may occur. In whatever way the content analysis is conducted contextualization on the circumstances surrounding the texts should be considered (Krippendorff, 2013). The difference among those two modes can be circumscribed to the sample of investigation and to the examination of symbols of communication. Qualitative levels of content analysis rely on case studies or small sample of units, but they should not to be confused with discourse analysis which is conversely a "purely qualitative approach that focuses on the meaning

of a text with respect to its semantic, linguistic, and argumentative dimension (Gee, 2010 quoted from Lock & Seele, 2015; p. 158).

Conversely, the quantitative mode entails larger samples and involves "statistical methods, in order to describe the communication, draw inferences about its meaning, or infer from the communication to its context, both of production and consumption" (Riffe *et al.*, 1998; p. 20). We adopt the definition of quantitative content analysis portraited by Riffe *et al.* (1998) as anchor point: "Quantitative content analysis is the systematic and replicable explanation of symbols of communication, which have been assigned numeric values according to valid measurement rules, and the analysis of relationships involving those values using statistical methods" (p. 20)

Therefore, quantitative content analysis is carried out to construct disclosure indexes with the adoption of weighted or unweighted method criteria, also known respectively as dichotomous or ranked scoring, and this approach is especially developed and still prevails in accounting studies (Huang & Watson, 2015). As a matter of facts, accounting researches have extensively developed disclosure indexes to assess non-financial information, and in doing this, they first employed content analysis to discover NFI throughout CSR reports and annual reports, second, they generally assign scoring with weighted or unweighted criteria to such information. Scoring can be clustered into dichotomous approaches or ranked scales in a similar logic of the financial disclosure. Dichotomous procedures refers to the unweighted methods of disclosures because of the assumption on the equal relevance for each items (Devalle, Rizzato, & Busso, 2016). They generally rely on checklists of items and they aim at assessing the presence or the absence of that information by assigning 1 if the information is disclosed and 0 otherwise, according to prior research (Devalle & Rizzato, 2013). This approach undermines non-material information, in other words information with unnecessarily scope to be disclosed. Therefore, the method of Cooke (1989a) overcomes this issue, since it evaluates material items which are present, not present and not-material. With such an approach

non-material items are not taken into account and are treated as non-applicable. The formula for the index calculation with the unweighted dichotomous method is below presented:

$$DScore_{unweighted_j} = \frac{\sum_{i=1}^{n} d_i}{\sum_{i=1}^{n} x_i}$$

Where:

j=the company;

i=the item;

d=the item presented, that is with 1 coding

Studies on NFI disclosure using dichotomous procedures are used to adopt GRI schemes or to build own checklists. For example, the research of Muttakin & Khan (2014) assesses the extent of CSR disclosure in annual reports with the construction of a checklist containing 20 items, without penalizing a firm for non-disclosure if the item is not relevant to the firm (Cooke, 1992). Similarly, Dias (2017) calculates the additive and equally weighted scoring for the CSRD (Corporate Social Responsibility Disclosure) adopting 40 indicators from the GRI Guidelines without imputing negative marks in case an item was expressly considered irrelevant by the company.

Conversely, the ranked scale approaches, also known as the weighted method, determines indexes which assess the degree of fulfilment of the NFI disclosure by assigning increasingly importance to disclosure items. In other words, firms under evaluation get more points in case they respect pre-determined criteria selected by the researcher as for example completeness, truthfulness. The result is a kind of disclosure index with the following formula:

$$DScore_{weighted_w} = \sum_{1}^{j} \sum_{i=1}^{n} d_{ij}$$

Where:

dij = item disclosed according to a rating scale;

n= maximum number of items a company is expected to disclose

A huge number of academic works follow such research method (Kansal *et al.*, 2014; Martínez-Ferrero *et al.*, 2015; Rezaee & Tuo, 2017a; Skouloudis, Jones, Malesios, & Evangelinos, 2014).

Among others, the research of Rezaee (2017) sets up a two-scale method and gives one point if the firm disclose the item according to the list of the Jenkins Committee (AICPA, 1994), two points if the firm provides further and detailed explanations, whereas zero whether there is no information on that regards. (Kansal *et al.*, 2014) develop their CSEEE (Corporate Social Environmental Energy Emissions) Score by weighting disclosures with a 0-5 rating scale[13], whereas Martínez-Ferrero *et al.* (2015) determine the GRI value, meaning the level of standardization of CSR information disclosed, with a 4 points scale[14]. The coding procedure is undoubtedly affected by subjectivity, leading to unbiased disclosure scores. Therefore, to overcome such concerns, researchers always assess reliability of codes and they calculate the Krippendorff's alpha to measure the agreement among observers, coders, and test the reliability of data gathered. Finally, indexes resulting from mixed method approaches are the most adopted by academic scholars since they comprehensively capture better non-financial disclosure.

[13] 0 if the itemhas not been disclosed;
1 if one or less than one sentence has been disclosed; 2 ifmore than one sentence has been disclosed; 3 if only one quantitative figure is found;
4 if the disclosure is non-monetary and comprises more than one figure;
5 if the disclosure is expressed inmonetary terms; and
the maximum number of items a company is expected to disclose (96 items).

[14] GRI =0 GRI = 1 GRI = 2 GRI = 3
Companies that do not disclose CSR information or companies that disclose CSR information which does not comply with GRI guidelines.
Companies that disclose CSR information following the C level of the GRI guidelines, i.e. their reports are very basic. Companies that disclose CSR information following the B level of GRI guidelines, i.e. their reports are complete. Companies that disclose CSR information following the A level of GRI guidelines, i.e. their reports are very advanced.

One is the already mentioned study of Michelon *et al.* (2015) because merges the quantity of disclosure with the accuracy of information, and among other, the Social Environmental Disclosure (SEDI) Index is worth of deep investigation, since it joint content analysis, scoring criteria, and questionnaire to combine stakeholders' perceptions of the quality and quantity of corporate social and environmental disclosure (Lu & Abeysekera, 2014, 2017). The SEDI Index is codified as follows: first 121 reporting items from GRI (G3) has been considered to address social and environmental disclosure (quantity of disclosure). Second, a questionnaire has been developed to understand perceptions among stakeholders regards the disclosure type quality, and ultimately, a panel consultation of stakeholders to ascertain their perceptions of the relative importance of 121 GRI reporting items (disclosure item quality) has been approached. With such an approach, disclosure on non-financial information and sustainability issues is enriched because researchers can provide hand-collected data (from reports) and primary data – so unique data – (from surveys and questionnaires) and the combination of objective and subjective aspects of disclosure both from the company perspective and the stakeholders' viewpoint highly refines the evaluation.

Databases and consulting checklists

Academic researchers deal with NFI disclosure acknowledging pre-existing checklists or scores framed by databases, rating agencies and consulting companies. Taken into consideration databases, scholars are unanimous with the adoption of DataStream, KLD Domini and Bloomberg, which essentially provide data on Environmental, Social, and Governance issues.

DataStream, also known as Thomson Reuters Asset4, shows the company's ESG commitment across three dimensions: environmental performance (emissions reduction, resource reduction, product innovation), social performance (employment quality, health and safety, training and development, diversity,

human rights, community, product responsibility), and corporate governance structure (management) and provide such information in a dichotomous way and in a score going from 0 to 100; when the information is not present neither in reports, nor in website or press releases, the code is NA, not available. Similarly, KLD Stats (Statistical Tool for Analyzing Trends in Social and Environmental Performance) is a data set with annual snap-shots of environmental, social, and governance performance of companies assessed by KLD Research & Analytics. It present binary data rated respectively 1 (if the information is available) and 0 (if the information is not), over a sample of 3.000 publicly traded U.S. companies. Finally, Bloomberg addresses similar metrics and gives an overview of the company's support to sustainability affairs with a ranking comparison to industry peers. Studies of (Li *et al.*, 2018) and (Qiu *et al.*, 2016) address their index based on the score provided by Bloomberg and DataStream to respectively investigate the role of CEO power to influence the impact of ESG disclosure on firm value (Li *et al.*, 2018) and whether there is a linkage between voluntary disclosures and profitability Qui *et al.*, 2016).

Some studies take into consideration programs dictated by regulators to investigate particular context as for example the research of (Roberts, 1992), which use the rating of the Council on Economic Priorities (CEP) for the level of disclosure of social responsibility activities[15]. The more recent work of Gao *et al.*, (2016) is one of the first study to examine determinants and economic consequences of mandatory non-financial disclosure in the Netherlands context, and to this aim, the multiple rating score provide by the Ministry of Economic Affairs is used[16].

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[15] This extensive search by the CEP involved:(1) direct communication with each company, (2) a review of corporate annual reports, 10K reports, and proxy statements, (3) an in-depth study of newspapers, magazines, and other publications, and (4) an analysis of secondary information sources such as The Taft Corporate Giving Directory, the National Directory of Corporate Charity, and the National Data Book.

[16] The CSR disclosure score is composed of multiple rating scores within each of two frameworks: the Content-oriented Framework of Standards (following (1) Company and Business Model, (2) Policy and Results, and (3) Management Approach) and the Quality-oriented Framework of

Finally, another stream of research relies on proprietary data from consulting agency (Cahan *et al.*, 2016) like KPMG's disclosure or other specific independent research consultancy like PIRC due to the context of investigation (Brammer & Pavelin, 2006). For example, KPMG focuses much more on policies rather than performance, therefore themes like environmental strategy, stakeholder engagement, corporate management systems, reporting, climate change, supply chain, responsible investment, and assurance are likely to be covered (KPMG, 2008).

2.2. Determinants of non-financial information disclosure

A large body of research attempts at identifying which are the determinants, that drive NFI disclosure, and, in a broad perspective, sustainability disclosure and reporting (De Villiers & Maroun, 2017). Accordingly, this paragraph aims at summarizing prior studies which identify a causal connection in the interplay between NFI disclosure and the determinants.

The research of de Villiers & Maroun (2017) represents a good starting point, since it portrays the determinates such as company-specific features (e.g. size, strategic attitude, organizational culture, and financial performance), external factors (e.g. industry characteristics and country level governance and culture) and stakeholder pressures, that impact on sustainability proactivity, accounting systems and stakeholder engagement processes. This work discusses the determinates as leading forces to achieve higher levels of disclosures.

Based on this research, the study addresses the following determinants and effects, that were classified respectively in internal and external. On the one hand the internal determinants are derived from features and aspects that characterize the company, and its business. On the other side, the external determinants

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Standards covers the following five criteria: (1) Relevance, (2) Clearness, (3) Reliability, (4) Responsiveness, and (5) Coherence

depend on external contingences that shape company’s business decisions and strategies. Then, the effects are classified into internal and external all together.

The internal determinants are listed as follows:

- Financial performance;
- Corporate governance;
- Strategic posture and stakeholder culture;
- Reporting features and assurance;

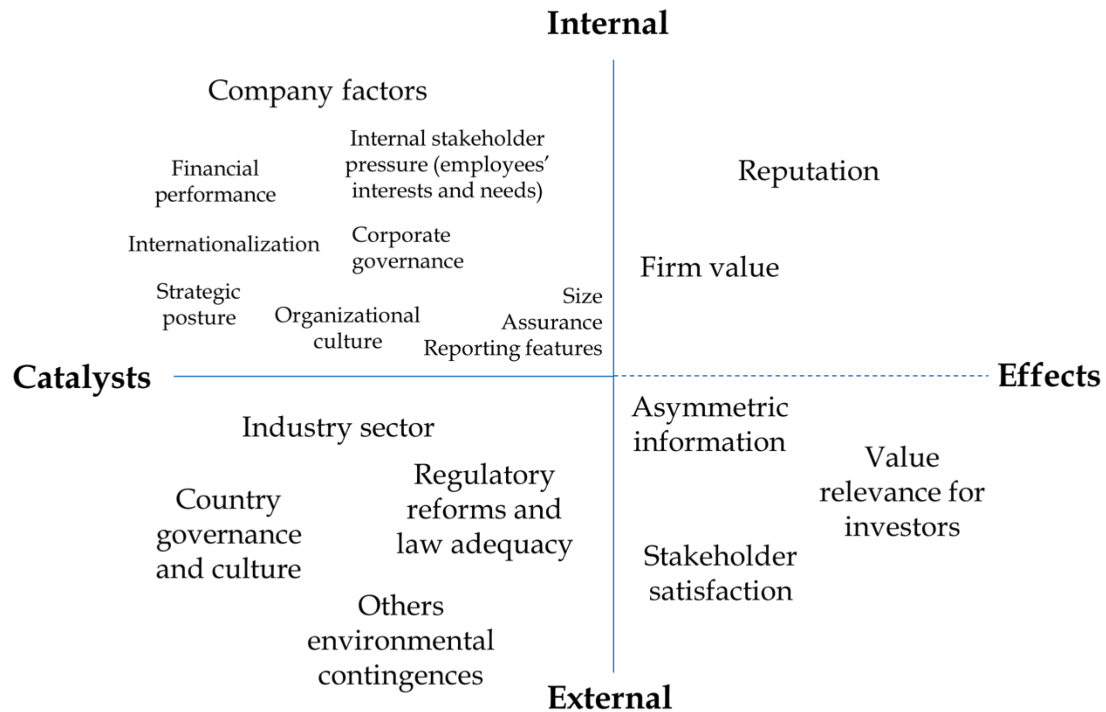
The external determinants are tracked as follows:

- Industry and country traits;
- Regulatory reforms and laws adequacy;
- Others environmental contingences (media)

The internal and external effects are listed as follows:

- Reputation
- Firm value
- Asymmetry information
- Value relevance for investors
- Stakeholders’ interests

Figure 2.2. Theoretical framework of non-financial information disclosure



Source: Own elaboration

On the left-hand side, the research addresses the determinants as factors that can constitute the antecedents to enhance NFI disclosure. On the right-hand side, the research points the effects of NFI disclosure, which have been categorized into in external and internal effects, depending on the targets and the objectives of the prior studies on this regard. With this classification, the literature was reviewed accordingly, respectively discussing: 1) financial performance 2) corporate governance, 4) assurance and reporting features 3) strategic posture and stakeholder culture regards the internal determinants and we outline 1) industry and country traits 2) regulatory reforms and laws adequacy for the external determinants, and then the chapter reviews the effects of such disclosures.

2.2.1. *Internal determinants*

Financial performance[17]

Financial performance takes a central part in the explanation of NFI disclosure, and scholars extensively addressed both accounting-based metrics and market-based metric as determinates to figure out levels and/or relationships with NFI disclosure or even more as controls fixed to understand other linkages. As accounting-based measures, studies typically encounter Returns of Equity (ROE), Return on Asset (ROA), Return on Investment (ROI), whereas TobinQ and Beta are generally addressed as market-based measures.

The understanding of the linkage between NFI disclosure (sustainability disclosure, and CSR disclosure) can be tracked back to the lately 1970s when early research attempted to empirically verified the relationship between social disclosure and economic performance (Belkaoui; 1976, Ingram; 1978, Mahapatra, 1984; McGuire *et al.*; 1988).

Roberts (1992) is one of the first studies to introduce a comprehensive social disclosure framework and in that sense, he verifies whether economic performance (both accounting-based measure and a stock-market-based measure) can explain the company's level of corporate social responsibility disclosure. In line with Ullmann (1985) he argues that economic performance affects the financial capability to engage in social programs and to commit future social responsibility activities. This premises is recently addressed by Lu & Abeysekera (2014) arguing that the more profitable the firm is, the more credibility the firm achieves, and in turn the firm will be quicker in solving social and environmental issues (Cormier and Magnan, 1999). Findings show that

[17] Parts of the following sub-sections "Financial performance" and "Corporate governance" are taken from: Fiandrino S., Devalle A., Cantino V. (forthcoming) Corporate governance and financial performance for engaging socially and environmentally responsible practices. *Social Responsibility Journal* DOI: 10.1108/SRJ-12-2017-0276

strong lagged performances (measured with the growth in return on equity), are more likely to have high levels of social disclosure, and highly risky companies (with high beta), are less likely to carry out social and environmental programs. Following Bowman and Haire (1976), Hackston *et al.*, (1996) argue that "social responsiveness requires the same managerial style as that necessary to make a firm profitable", and corporate social disclosure is seen as a proactive way to acknowledge and respond at social and environmental needs. Such a trait is highly required to handle social pressures, and, in that sense, profitability is a determinant that commit social programs. However, the linkage between NFI disclosure and financial performance is still unclear and controversial (Maroun, 2018). On the one hand, some empirical researches demonstrate positive and strong results in favor of this relationship, on the other hand others finds difficult to support certain connection between higher profitability and higher social disclosures Patten (1991), Belkaoui and Karpik's (1989) Cowen *et al.* (1987)

Within specific context of investigation, positive relation between disclosure and profitability are confirmed: examples are provided by the work of (Skouloudis *et al.*, 2014) and the (Kansal *et al.*, 2014). The former investigates the Greek context and, measuring profitability with the return on equity (ROE) and the return on assets (ROA), finds higher level of social and environmental disclosures. The latter focuses on the Indian context and adopt several measures to assess profitability. The study encounters the return on sales, return on assets and return on equity to discover possible measurable improvements. Moreover, it adds market-based metrics of systematic risk relating to stocks (beta), the market rate of return, measured with the average of the closing market price for the last 365 days and the natural log of total assets, total sales as a proxy for the size of the company, in accordance to prior research (Eng & Mak, 2003; Hackston &Milne, 1996; Haniffa & Cooke, 2005; Said *et al.*, 2009). As a matter of fact, the company's size constitutes another power variable to considerations, that affects the level of lower/higher levels of disclosures

Interestingly to mentioned, the recent work of (Rezaee & Tuo, 2017b) adds to this stream of research a measures the financial strategy considering the sum of long-term debt issuance and equity issuance in year t+1 scaled by total assets. They argue that "firms planning to issue more new debt/equity in the future tend to disclose more non-financial information in their annual reports to reduce information asymmetry (Lang&Lundholm, 1993)"(Rezaee & Tuo, 2017b; p. 52)

Financial performances and profitability are taken into consideration as controls (Muttakin & Khan, 2014) (Gao *et al.*, 2016). (Muttakin & Khan, 2014) introduce financial variables (leverage and profitability measured with ROA) as controls because, in line with (Haniffa & Cooke, 2005) and Purushothaman, Tower, Hancock, and Taplin (2000) they argue that firms with higher leverage, respond for their actions to both shareholders and creditors, and in turn, companies with higher leverage have strength ties with creditors and CSR disclosure is addressed with other means. (Gao *et al.*, 2016) add financial performance (leverage, profitability, fundamental volatility) and firm size as controls because they investigate whether CSR performance, firms' external financing needs and firm's corporate governance quality affect CSR Disclosure Quality.

Furthermore, a large body of researches addresses the relationship between CFP and CSR. Scholars have questioned whether CSR leads to increased results in CFP or whether CFP leads to better CSR (S. A. Waddock & Graves, 1997). To fill this gap, several empirical studies attempt at answering at this questions, even proving meta-analyses on this regard (Friede, Busch, & Bassen, 2015; Margolis, Elfenbein, & Walsh, 2009; Revelli & Viviani, 2015). For instance, Reverte *et al.*, (2016) considers corporate reputation, increased employee motivation, and customer satisfaction as non-financial outcomes of CSR and go further to examine the mediating effect of innovation in the explanation of a CSR–CFP relation. The literature acknowledges controversial and mixed results, and the debate is still opened (Nollet, Filis, & Mitrokostas, 2016). Some previous research identifies CSR as having a positive association with CFP (Galbreath, 2006; Martínez-Ferrero and Frías-Aceituno, 2015; Reverte *et al.*, 2016; Wang and Sarkis,

2017), whereas others show the opposite, highlighting a weak or insignificant relation among variables (Barnett and Salomon, 2012; Brammer and Pavelin, 2006; Mittal *et al.*, 2008; Turban and Greening, 1997). The meta-analyses conducted by Friede *et al.* (2015), and Revelli and Viviani (2015) support a positive relationship, suggesting that CSR generates high CFP and also that high CFP contributes to high levels of CSR. Hence, social issues are profitable, and CSR investments lead to improved financial returns, too. The work of (Margolis & Walsh, 2003) reviews 120 studies: a positive correlation between financial and social performance was been outlined over 70 studies, 30 researches defined a negative correlation and the rest of the sample highlight unclear results.

Among all of them, for instance, Nollet *et al.* (2016) outline how linear specification models do not necessarily provide positive and significant results. Specifically, the authors demonstrate insignificancy between CSR and CFP with the linear model, while findings on quadratic models describe a significant U-shaped CSR–CFP relationship considering accounting-based measures (RoC – return on capital, and RoA – return on assets). However, the U-shaped model is inconsistent with adopting financial-based measures such as excess stock market return; therefore, in the last case, the results suggest that CSR investments do not pay off immediately. These misalignments may be attributed to a shortfall in the adoption of a rigorous method of analysis. For instance, some empirical studies in the past did not address the reverse causality problem, missed the consideration of moderating and mediating influences, or omitted significant latent variables, and consequently they provided deviating results (Margolis *et al.*, 2009; Reverte, 2012; Reverte *et al.*, 2016). Generally, academics employ empirical analysis in investing disparate sample groups that differ, for example, in terms of governance structure and company size, and thus, results reflect those different inclusions. Moreover, various metrics of CFP have been taken into consideration and are basically divided into two main groups: accounting-based measures and market-based measures. Some studies have taken into consideration just accounting performance, such as return on assets, return on

equity, and return on capital, whereas others have considered financial market metrics like Tobin's Q and excess stock market return. Eventually, such controversial results are due to different levels of stakeholder engagement within the decision-making process, leading to different ways that firms trade off financial, social, and environmental choices (Barnett, 2007). As regards to stakeholder engagement, the study of Banks and Vera[18] examines the strategy orientation to figure out whether there is a linkage with financial performance as well as stakeholder environment and results show that stakeholder management positively affect firm's financial performance. Consequently, companies able to adapt their strategies to balance stakeholder relations succeed both in financial and social ways. Recently, Chan *et al.* (2017), Rodriguez-Fernandez (2016), and Wang and Sarkis (2017) advanced debate on this stream of research. Starting from the assumption that performing CSR requires an injection of financial capital, Chan *et al.* (2017) investigated whether different states of cash flow liquidity impact the extent of CSR practices. The authors point out that firms in financial distress do not engage in any CSR activities, confirming a negative association between the level of CSR practices and the degree of financial constraints. Rodriguez-Fernandez (2016) and Wang and Sarkis (2017) addressed the mediating role of CG, respectively analyzing the Spanish context and the US one. Rodriguez-Fernandez (2016) considers the level of "compliance with the recommendations of Good Corporate Governance (a task of the board of directors)" (Rodriguez-Fernandez, 2016, p. 142) as a further element of CSR in disentangling the CSR–CFP relation, and the study discovered that social policies increment financial resources, and vice versa, increased CFP leads to greater social benefits in the Spanish case. Finally, Wang and Sarkis (2017) based their study on the assumption that CSR performance mediates the relationship between CSR governance and CFP, and they essentially pointed out that "companies will benefit from implementing CSR governance only when they can

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[18] Banks, M., & Vera, D. (2007). Towards a Typology of Stakeholder Management Strategies. Paper presented at the Academy of Management, Philadelphia

'walk the talk' by seriously implementing CSR governance to achieve superior CSR outcomes" (p. 1615).

Corporate governance

The concept of CG has its core essence in the "structure of rights and responsibilities among the parties with a stake in the firm" (Aoki, 2000, p. 11). The term has a proliferation of meanings coming from several viewpoints – ranging from the configuration of organizational processes to a broader concept that includes the "complex set of constraints that shape the ex post bargaining over the quasi-rents generated by the firm" (Rajan & Zingales, 1998). From this wider perspective, in other words, CG can be seen as the "set of relationships between a company's management, its board, its shareholders and other stakeholders" (OECD, 2015). Thus, CG mechanisms encompass rules, relationships, systems, and processes by which companies are held to account and in which compliance, accountability, and transparency are leading peculiarities (Jamali, 2008). This means that CG drives "the tone for the organizations" (Jamali *et al.*, 2008, p. 444) and "deals with the forces that influence how firms and their managers behave in the execution of their responsibilities" (Freeman *et al.*, 2010, p. 110). A company's board of directors establishes proper decision-making processes to responsibly govern the company's activities. Hence, management's attention represents a peculiar element in defining the CG structure because its organizational attention defines the power of corporate strategic choices and decisions and plays a crucial role in driving CSR choices, as the behavioral theory of firms suggests (Cyert & March, 1963). In this sense, senior managers are responsible for guiding the companies toward the business continuity, and this implies, as a consequence, proper strategic decisions, as well as monitoring performances and long-term sustainability plans (Maroun, 2018). As a consequence, CG is strictly and tightly linked with how sustainable practices are conceived, implemented within business processes and disclosed and this is

due to the management attention that can powerfully drive social and environmental issues (Jain and Jamali, 2016).

In this vein, the nexus between CG and CSR has attracted growing interest from scholars because of these interlinked similarities, mostly due to the fiduciary and moral responsibilities of companies toward sustainability. This is the reason why corporate governance's effects have been investigated in relation to the ability of the corporate governance structure to enhance NFI (CSR) disclosures. (Gao *et al.*, 2016) hypothesize the better corporate governance indirectly leads to better CSR disclosure, given prior researches which investigate the positive relation between corporate governance and better CSR performances. As a matter of fact, the connection between corporate governance and CSR activities is well documented by scholars suggesting that the quality of corporate governance can explain the engagement in CSR practices. Jamali *et al.* (2008) identify three relational models deriving from previous studies: CG as a pillar of CSR (Ho, 2005), CSR as a dimension of CG (Ho, 2005), and CG as a part of a continuum (Bhimani & Soonawalla, 2005). More specifically, CG can be viewed as an instrument for accomplishing sustainable CSR (Elkington, 2006); alternatively, CG can be addressed as the core of CSR enhancement because the more stewardship from directors and the more strategic processes are applied, the higher the level of CSR commitment achieved. Ultimately, CG and CSR are complementary because they can simultaneously focus on stakeholder value creation with an integrated framework as continuum (Bhimani & Soonawalla, 2005). They serve to delineate corporate accountability because, on the one hand, CG can lead to more attention to voluntary CSR performance, and on the other hand, CSR achieves social and environmental outcomes (Bhimani & Soonawalla, 2005). As a consequence, three main streams of research should be acknowledged: the first considers CG as a driver for enhancing the CSR approach; the second views CSR as a method for CG; and the third addresses both CSR and CG as manifestations of firms' fiduciary and moral responsibilities to stakeholders (Aguilera *et al.*, 2007; Jensen, 2002).

Considering the first stream of research, a prominent number of studies have addressed the role of CG in CSR by verifying the potential influences of the CG structure on environmental and social practices (Ducassy & Montandrau, 2015; Jo & Harjoto, 2012; Tuan, 2012). Among others, Jain and Jamali (2016) reviewed previous studies identifying that CG mechanisms (analyzed on four levels: institutional, firm, group, and individual) shape CSR outcomes independently and interactively by demonstrating that CG is an antecedent of CSR. The authors invite reflection on the multiple configurations of CG mechanisms that forge and impact a firm's CSR behavior and explain how the different CG mechanisms are combined with each other to create CSR outcomes (Jain and Jamali, 2016). Walls *et al.* (2012) provided a detailed literature review on the same stream of research in order to better understand the underlying theories, sets of variables, and clarification of relationship findings among the variables. They then investigated how relationships between and among firm owners, managers, and boards of directors affect environmental performance by highlighting, as a result, a positive and strong association. Recently, Hong *et al.* (2016) addressed how CG can explain the existence of incentives for CSR. They identify predictions on the link between CG and the existence of executive compensation incentives for CSR, demonstrating that CSR executive compensation constitutes an effective tool for CSR implementation. Considering the second stream of research, CSR is viewed as a process rather than a "winning flag" through which firms legitimize their commitments. Thus, CSR represents a method for CG to prevent management control pitfalls (Jones, 1980) through which managers acknowledge fiduciary duties for both owners and stakeholders (Sacconi, 2006). Finally, the third stream of research aims at investigating the causality among CG mechanisms and CSR practices as well as the lag of both CSR and CG. For instance, a study conducted by Jo and Harjoto (2012) examined the association of CSR and CG, and it essentially discovered that the lag of CSR does not affect CG variables, whereas the lag of CG variables positively affect a firm's CSR engagement. To summarize, it seems that the model of the positive relation between CG and CSR prevails

among academic studies, and in turn, CG constitutes a powerful catalyst to enhance disclosure.

Family involvement

Family involvement is known as the presence of family in the business context, and it is present at various levels of the firm as for family ownership, family members on board or both of them. The family involvement in management influences business success, failure, strategy, and operations, as well as the impact on the long-term survival of the business through different generations (Lumpkin *et al.*, 2010). It is expected to be positive with regard to reducing the risk of business failure (Revilla, Pérez-Luño, & Nieto, 2016) and influencing business performance (Sciascia, Mazzola, Astrachan, & Pieper, 2012), but controversial argumentations are present regards how family involvement affects sustainability.

On the one side, some studies argues that family-oriented companies tend to disclose less information on CSR initiatives in the sense that accountabily and organizational legitimacy are not paramount of importance because stakeholder's external interests are likely to be small (Muttakin & Khan, 2014) (Block & Wagner in press; Ghazali, 2007). In turn, the management board can be less interested in engaging with socially responsible practices because the benefits could be lower that the related initial costs. Among other the study of (Chau & Gray, 2002) empirically demonstrate a negative relation between family ownership and voluntary disclosure, arguing that "nonfinancial information is directed more toward a corporation's social accountability and targeted at a wider spectrum of stakeholders than the owners/ investors" (p.251). The study assesses strategic information, nonfinancial information and financial information, and, for the nonfinancial information section, it takes into consideration (1) information about directors, (2) employee information, (3) social policy and value-added information. Finding confirm hypothesis in favor of a negative and statistically significant relation between disclosure and family

ownership which remains valid for each disclosure sub-section. Similarly the more recent work of Muttakin & Khan (2014) address the determinants to CSR disclosure on a sample of bangladeshi listed companies during the period 2005-2009 and they confirm the negative association among the extent of CSR disclosure and family ownership underlied in prior research. This leads the authors to consider that "family owners are less concerned about public accountability and organizational legitimacy" (p. 172).

On the other side, the research of Laguir, Laguir, & Elbaz (2016) embraces the stewardship theory and sustains the idea "family firms are more likely than nonfamily firms to see their stakeholders as partners" (p. 389), because are much more likely to see long-term orientation challenges to sustain future generations. With this view, CSR activities are more developed in family firms of second and following generations instead of the family firms in their first generation.

All prior things considered, future researches are needed to understand which role family firms plays in engaging CSR disclosure and to figure out whether they are more trade-off-oriented meaning that merely focused on the benefits-and-costs analysis or whether they are more stakeholders-oriented to perceive, and act in favor of a plurality of interests.

Reporting quality and assurance

CSR reporting features can constitute a determinant to ameliorate NFI disclosure, in a similar logic of the nexus between financial disclosure and financial reporting.

At a first glance, the cost of monitoring and reporting of such practices may be higher than the expected benefits, so companies could have less advantage in advancing NFI disclosure. Moreover, as (Michelon *et al.*, 2015) argue, following CSR reporting guidelines does not necessarily means that companies understand, implement and report accountability processes to include stakeholders' interests. Ultimately, even with the adoption of the GRI

framework, companies might disclose information in a generic way, and consequently, jeopardize transparency for all stakeholders (Nielsen & Madsen, 2009). Therefore, in this regard, Michelon *et al.* (2015) try to figure out the linkage between the GRI framework (used as a metric for assessing CSR reporting) and levels of disclosures. In essence, they find a (weak) significant and positive relation between the use of the GRI guidelines and CSR disclosure which is measured combining balance, comparability and precision of information on results. Those companies follow the reporting principles recommended by the guidelines, and therefore are much more inclined to provide higher levels of disclosure and complete information in accordance with the guidelines. They argue that "these companies appear not to be simply ticking boxes but rather approaching CSR reporting in a substantive way, which is supporting the focus on performance related disclosure that we put in our quality measure" (p. 74).

In a similar logic Martínez-Ferrero *et al.* (2015) investigate the effect of the quality of financial reporting on sustainability information disclosure and findings suggest that good relations. In more detail, the quality of financial reporting has addressed with the conservative accounting, the accruals quality, and earnings measurement measures (see Martínez-Ferrero *et al.*, 2015 for more details), so "high quality financial information tend to publish a high quality sustainability report" (p. 59).

Considering the role of the assurance, studies confirm that the use of such services enhance compliance of disclosures and quality of non-financial reporting (Jones and Solomon, 2010; Farooq and De Villiers, 2017). For example, the study of Ioannou & Serafeim (2017) seeks to understand whether mandatory disclosure exerts transparency on sustainability disclosure and whether regulation affects firm valuations and organizational practices through assurance among 4 countries: China, Denmark, Malaysia and South Africa. Findings suggest a great disclosure after the mandated regulation and even more an increased level of credibility of such information through assurance; in other

words, after regulatory changes, disclosure increases, and companies are more likely to seek assurance on their ESG disclosure.

Strategic posture and stakeholder culture

The strategic posture to manage stakeholder relationship is the postulation of Freeman's Strategic Management: A Stakeholder Approach (1984). Stakeholder theory "provides a new way of thinking about strategic management – that is, how a corporation can and should set and implement direction" (p. vi). "Managers must develop relationships, inspire their stakeholders, and create communities where everyone strives to give their best to deliver the value the firm promises" (p. 364). The primary aim was to articulate the stakeholder approach *in practical terms* as Freeman said, "My focus is on how executives can use the concept, framework, philosophy and processes of the stakeholder approach to manage their organizations more effectively". In other words, the basic idea was to bridge the gap between value creation and trade-offs and to give some clarity in seeing strategy with a stakeholder approach so, "creating as much value as possible for stakeholders, without resorting to trade-offs" (p. 28). According to Walsh (2005), the message of stakeholder theory as corporate strategy was misunderstood at that time and many scholars cited the book (1984); he told that "the idea of a stakeholder manager running a profit center is perfectly consistent with the business orientation of the book, but the idea of a stakeholder manager justifying her existence on the basis of a positive cash flow is not at all consistent with how so many have reconstructed this book over the past twenty years". Moreover, "Neo-classical economists sometimes overlook the importance of the verb "to manage," along with such attendant verbs as "to develop," "to inspire," and "to create." Stakeholder theory brings these ideas and practices to the fore" (Walsh 2005: 437). Thus, the idea was to go beyond the mere intent of strategy as the formula to implement and evaluate processes, and develop the stakeholder relationship approach as a key strategy to harmonize a plurality of stakeholders' interests, which in turn, minimize trade-offs (Freeman *et al.*, 2010).

As a matter of fact, according to (Freeman *et al.*, 2010), the initial focal point of strategy primarily tackled the setting of resources and capabilities within an organization in relation to external environmental opportunities and threats. Then, there was a progressive consideration of adequate information on the environmental, which was paramount of importance to drive effective strategies and improve the decision-making process. So, they argue that the information system plays a crucial role in understanding "measures of satisfaction" and "measures of needs" of all groups, and then in recording and checking stakeholders' responses to challenge adjustments in corporate strategy. According to this view, a proper disclosure on information (financial and non-financial) is extremely needed for a deeper understanding of how stakeholders feel, need and in turn are able to give back to companies. More interestingly, and conversely, the alignment between disclosure and strategy goes also vice versa, in the sense that if CSR is viewed as a strategy, it means that companies are likely to disclose their CSR practices explaining how they implement sustainable programs at the core of their business with a partnership-cooperative perspective with their stakeholders.

(Jones, Felps, & Bigley, 2007) define stakeholder culture "as the beliefs, values, and practices that have evolved for solving stakeholder-related problems and otherwise managing relationships with stakeholders" (p. 142) so it runs from a self-regarding to other-regarding approach. For this reason, it is a compelling part of the organizational culture of the company because it functions as a guide toward the balance of a plurality of interests. As closely intertwined with ethics and social responsibility, stakeholder culture may positively influence how companies deal with socially responsible initiative, and therefore, the way they disclosure, and the way they practice.

2.2.2. *External determinants*

The external determinants are the external determinants that may force companies into a greater attention to stakeholders' interests, sustainability

practices which turn in higher quality NFI disclosure and more actively sustainability performances (Maroun, 2017). Such forces can be group into country and industry traits, regulatory reforms and law adequacy and others environmental contingencies, such as media, or time crisis period.

The context underlying a sample of investigation is worthy because it contradistinguishes unique traits and highlight characteristic peculiarities against others. With a broader view, one example could be the comparison between the code law countries and the common law countries. According to Simnett *et al.* (2009) code law countries are considered as a stakeholder-oriented system of corporate governance are likely to disclose more transparent and reliable information and assure their CSR reports, conversely, common law countries are classified as shareholder-oriented system and generally provide less information than the previous one.

Similarly, as postulated by Maroun (2017), the industry sector is another relevant adding factor linked to how a company provide non-financial information; it can be pointed at a macro and micro level of analysis. At a macro-level of analysis, the level of disclosure depends on the exposure to public pressure in the social/political/legislative/cultural context. Patten (2002) investigates differences in the impact of the TRI (Toxics Release Inventory) variable across a sample of 131 US companies, distinguishing between environmental sensitive and non-environmentally sensitive industries, and findings show that environmental disclosure is associate with environmental disclosure and that environmentally sensitive industries are less inclined to release environmental aspect than environmental sensitive industries do.

Considering a microlevel analysis, certain industry sectors can privilege a disclosure of specific topic against others. For example, the bank industry can provide less information regards environmental practices and biodiversity issues since the core business is not primarily focus on the protection and the conservation of the environment. However, they may address environmental

practices in an indirect way meaning banks can be more inclined to reporting the environmental devotion to channel funding for green projects, which aim at impacting on biodiversity, and advance circular economy of recycled products.

Finally, regulatory laws impact on non-financial disclosure and in turn companies are forcing into such adequacy accordingly, moving from a voluntary-based approach to a mandatory-based approach, as previously discussed.

2.3. Effects of NFI disclosure

A huge amount of scholarly studies struggles to identify the effects of NFI disclosure in terms of economic consequences (Gao *et al.*, 2016), earning quality (Rezaee & Tuo, 2017a), firm value (Brooks & Oikonomou, 2018; Ng & Rezaee, 2015), and business benefits as for example transparency, reputation, employees' satisfaction (Hahn and Kühnen; 2013) which in turn can be considered as clarification for the reasonings and the organizational rationale underlying NFI disclosure (Brooks & Oikonomou, 2018; Hummel & Schlick, 2016).

Several studies test and confirm the positive relation between cost of equity and NFI/sustainability disclosure, meaning that a higher level of disclosures on sustainability aspects leads to lower cost of equity and such a reduction can be explained by the decrease of asymmetric information among parties (Ferris, Javakhadze, & Rajkovic, 2017; M.-L. Matthiesen & Salzmann, 2015; Ng & Rezaee, 2015). This argumentation is extensively discussed by both practitioners and academics. A survey conducted by PWC (2014) claims that one of the first positive aspect in adopting ESG criteria is its potential to mitigate risk through the cost of equity reduction. Moreover, a survey conducted among financial directors shows that the more disclosure, as a result of greater transparency, reduces the risk and consequently the cost of equity (Armitage & Marston, 2007). From the academics' point of view, the discourse is pretty much similar. Cuadrado- Ballesteros, Garcia-Sanchez, & Martinez Ferrero (2016) and Hung,

Shi, & Wang (2013) confirm that the reduction of asymmetry information plays a crucial role, in sense that non-financial disclosure quality reduces the cost of capital by decreasing of information asymmetry, so firms which promote ESG disclosure for an information asymmetry reduction objective, achieve lower cost of capital (Botosan, 2006; El Ghoul *et al.*, 2011; Francis, LaFond, Olsson, & Schipper, 2004; Reverte, 2012). Borghesi, Houston, & Naranjo (2014); Crifo & Forget (2015); Dhaliwal, Li, Tsang, &Yang (2011); El Ghoul, Guedhami, Kwok, & Mishra (2011) and Reverte (2012) show the negative association between sustainable business practices and the cost of equity, so that an increase of societal responsible actions implies a decrease of the cost of equity. In a similar way, Ng & Rezaee (2015) investigates how sustainability disclosure and ESG sustainable performance affects the cost of equity and a positive relationship among them is still confirmed. Furthermore, NFI disclosure impact on the cost of debt. Sengupta (1998) argues that higher quality disclosure reduces the uncertainty of the borrower and hence its default risk, which leads to a lower cost of debt. Ge & Lui (2015) find that "a higher CSR strength score is associated with lower yield spreads in new corporate bond issue and better credit ratings", that means an appreciation from bondholders of CSR activities adopted by borrowers. Their analysis covers 4,260 new public bond issues in the U.S. market in the period 1992– 2009. Cooper & Uzur (2015) suggest that CSR practices are crucial in "determine the cost of debt" a strategic management perspective by reducing the cost of debt financing, the enhancement of CSR activities is beneficial (Cooper & Uzur, 2015). Similarly, Anis & Utama (2016) suggest that "both lenders and borrowers take advantage from the CSR disclosure", as well as ESG disclosure. Nandy & Lodh (2012) use 3,000 lending transactions by banks in the U.S. and find that companies adopting the ESG metrics can negotiate advantageous loan contracts with banks. Borrowing costs can be lower if social connections among counterparties, especially between banks and borrower, become stronger (Engelberg, Gao, & Parsons; 2012). There are empirical linkages between economic and financial consequences and CSR and NFI disclosure and

such effects explain the organizational rationale and the reasons that shape companies' sustainable approach towards NFI disclosure and engagement with socially responsible practices.

Literature seems to be still divergent regards the theories that properly explain why companies act in a sustainable way leaving the postulation of two arguments – the profit-seeking and legitimacy-seeking view (Schaltegger & Hörisch, 2017).

The profit-seeking view is mainly anchored to "influence perceptions regarding the future financial prospects of the firm in the minds of external, primarily financial, stakeholders' rather than to genuinely attempt to reduce environmental or social damage" (Brammer and Pavelin; 2006, p.1169; cited from Li *et al.* 2018) as focal point. Consequently, "this stream of research posits a positive relationship between sustainability performance and the quantity of sustainability disclosure (i.e., superior sustainability performers disclose more)" (Brooks & Oikonomou, 2018) and thus, it seems that disclosure is employed to increase market value. The legitimacy-seeking view argues that companies employ sustainability disclosure to react on societal pressure, meet or exceed stakeholder explanations, to the end at improving the public perception of their sustainability performance (Deegan, 2002; Schaltegger & Hörisch, 2017). Legitimacy is "a generalized perception or assumption that the actions of an entity are desirable, proper, or appropriate within some socially constructed system of norms, values, beliefs, and definitions" (Suchman; 1995, p. 574) so, it is related to congruence between corporate and societal goals. Those two positions lead to several skeptical discussions comparing greenwashing behaviors, which occurs when companies disclose NFI to enhance reputation and show-off laudable intentions, versus aligned behaviors which occur when companies do the right thing for the right reason (Schaltegger & Burritt, 2010, p. 378; Brooks & Oikonomou, 2018).

To sum up, non-financial information disclosure has been added to the reporting lexicons as motif to explain how companies respond to stakeholders' interests and perform against social, ethical and environmental practices. Thus, it might be argued that NFI deserves a broader stakeholders' attention because it gives insights toward the inner working of the business in taking care of consequences and repercussions on the surrounding environment. For example, stakeholders need the guarantee on how the decision-making process as regard to managerial and strategic actions is placed "to anticipate and prevent potential long-term problems" (Hess, 2008; p. 470). In such vein, the purposes underpinning the adoption of disclosure strategies can be attributed to three mains underlying reasonings. First, companies can deal with sustainability for a profit-seeking logic (Schaltegger & Hörisch, 2017), second disclosure constructs a legitimate image to decrease information asymmetry (Hopwood, 2009; Michelon *et al.*, 2015; Schaltegger & Hörisch, 2017) and gather consensus among stakeholders (Moratis & Brandt, 2017). Third, and even importantly, disclosure builds on the conscious acknowledgment on the linkage between non-financial disclosure and socially responsible practices as a strategic logic to serve the enduring of the business continuum and to respond with accountability (Haslam, Tsitsianis, Andersson, & Gleadle, 2015; Zadek, 1998).

Lock & Seele (2015) underline that "the notion of CSR is inherently tied to business ethics with the mere terminology; the term responsibility within itself alludes to and implies 'response'" (p.156). Heidbrink & Seele (2007) further explain, "We understand responsibility as communication (literally to respond) of entities within a mutual relationship of obligation and governance. Responsibility is about not being indifferent or resigned. Responsibility is about caring and being accountable". Keeping this in mind, the implementation and disclosure of sustainable practices and depend greatly on how the companies view the CR notion. CSR studies outline essentially two main frames (Mosca & Civera, 2017). First, companies can adopt sustainability policies for reputation reasons (Bansal & Roth, 2000) as a response to regulatory reforms by the "ticking

the box" approach. Second, companies see CR as "the integration of social, ethical, and environmental concerns into the management criteria for corporate strategy" (Freeman, Harrison, Wicks, Parmar, & Colle, 2010: 259). In a similar logic, accounting studies still investigate how non-financial information disclosure and CSR practices estimate future cash flows, explain firm value and predict stock prices (Baboukardos, 2018; Cahan *et al.*, 2016; Mervelskemper & Streit, 2017; Sutopo, Kot, Kusumaningdyah Adiati, & Nur Ardila, 2008). However, this approach seems to favor an instrumental view of non-financial disclosure since non-financial disclosure is justified as a means to only and primarily maximize profit, exclusively for the audience of shareholders. Conversely, non-financial disclosure includes a broader range of information reported to all stakeholders have interest on such information. Therefore, the concept of value relevance – defined in accounting studies as the ''[. . .] the ability of financial statement information to capture or summarize information that affects share values'' (Hellstrom, 2006, p. 325) – should be reconsidered in terms of the ability of financial and non-financial information to affects a plurality of values that embraces stakeholders' interests, not only shareholder value.

Future researches can contribute to this field of research under the following points: first, to understand which internal determinants, also known as company factors, determine higher and/or better level of NFI disclosure (measured in terms of both contents and quality); second to figure out whether regulatory changes (e.g. the recent Italian Legislative Decree No. 254/2016, which transposes the Directive 2014/95/EU of the European Parliament on the disclosure of non-financial and diversity information) constitute value-enhancing factors to levels of disclosures or conversely, there are no considerable and remarkable changes after regulatory reforms.

Table 2.1. Literature review on NFI disclosure

Paper	Journal	Google Scholar Citation	Country	Disclosure approach
Michelon *et al.* (2015)	Critical Perspective on Accounting	106	UK	Voluntary disclosure
Muttakin, Khan (2014)	Advances in Accounting	47	Bangladesh	Voluntary disclosure
Skouloudis *et al.* (2014)	Journal of Cleaner Production	27	Greece	Voluntary disclosure
Gao *et al.* (2015)	European Accounting Review	18	Netherlands	Mandatory disclosure
Hackston and Milne, (1996)	Accounting, Auditing and Accountability Journal	2192	New Zealand	Voluntary disclosure
Roberts (1992)	Accounting, Organization and Society	2055	US	Voluntary disclosure
Kansal *et al.* (2014)	Advances in Accounting	68	India	Voluntary disclosure
Cahan *et al.* (2015)	European Accounting Review	53	Cross-country analysis (21 countries)	Voluntary disclosure
Martinez-Ferrero *et al.* (2015)	Corporate Social Responsibility and Environmental Management	50	Cross-country analysis (25 countries)	Voluntary disclosure
Brammer and Pavelin (2006)	Journal of Business Finance and Accounting	487		Voluntary disclosure
Cormier *et al.* (2015)	Journal of Management and Governance	5	Canada	Mandatory disclosure

Lu and Abeysekera (2015)	Journal of Cleaner Production	92	China	Voluntary disclosure
Lui (2015)	Journal of International Accounting, Auditing and Taxation	8	China	Voluntary disclosure
Mangena *et al*. (2016)	Journal of Accounting, Auditing and Finance	10	UK	Voluntary disclosure
Thijssens (2015)	Journal of Business Ethics	37	Cross-country	Voluntary disclosure
Rezaee and Tuo (2017)	Advances in Accounting	3	US	Voluntary disclosure
Qiu *et al*. (2016)	The British Accounting Review	76	FTSE350 index	Voluntary disclosure
Mallin *et al*. (2013)	Journal of Business Ethics	88	US	Voluntary disclosure
Andrikopoulos (2013)	Corporate Social Responsibility and Environmental Management	61	Denmark	Voluntary disclosure
Hummel and Schlick (2016)	J. Account. Public Policy	20	Cross-country	Voluntary disclosure
Li *et al*. (2017)	The British Accounting Revie	2	Cross-country	Voluntary disclosure
Adhikari *et al*. (2015)	Advances in Accounting	4	Cross-country	Voluntary disclosure
Martinez-Ferrero, Ruiz-Cano and García-Sánchez (2016)	Corporate Social Responsibility and Environmental Management	23	Cross-country	Voluntary disclosure

Source: own elaboration

Table 2.2. Literature review on NFI disclosure and company factors

Paper	Years obs.	Sample size	Disclosure method	Research method	Determinants and controls	Findings derived from abstract
Michelon *et al.* (2015)	2005-2007	112 firms listed on the London Stock Exchange	Disclosure Index based on quantitative content analysis	OLS regression with year fixed effects	CSR Report, Assurance, GRI, size, CSP, sensitive industries	'We find that, on average, companies that use these practices do not provide a higher quality of information, which we interpret as evidence of a symbolic use of these practices'
Muttakin, Khan (2014)	2005-2009	580 firms listed on the Dhaka Stock Exchange	Corporate social responsibility disclosure score index based on 20 items with dichotomous procedure	Multiple regression	Family ownership, profitability, leverage, size, age, industries	'The overall findings of our study provide empirical evidence which suggests that a number of firm and industry characteristics are important determinants of the extent of CSR disclosures in a developing country like Bangladesh. Our findings can help the policy makers to adopt necessary regulatory reform to improve the CSR practices and enhance organizational legitimacy'
Skouloudis *et al.* (2014)	2007	100 largest companies operating in Greece (based on annual revenues)	NFD index based on quantitative content analysis with weighted scoring criteria (0,1,2)	OLS regression	Size; sector; ownership identity; profitability; internationalization; subscription to CSR initiatives	'The analysis suggests that only a small group of leading Greek firms appears to endorse a meaningful business-and- society dialogue as an instrument for stakeholder communication and the discharging of organizational accountability. Most other corporations still tend to treat such practices superficially and in an imprecise manner'.

Gao *et al.* (2015)	2004-2012	491	CSR disclosure quality score provided by the Ministry of Economic Affairs in the Netherlands	Multiple regression	CSR performance, external financing needs, corporate governance quality, cost of capital, Interplay between financial and non-financial disclosure	'We find that firms with better CSR performance, greater external financing needs, and stronger corporate governance tend to provide higher quality CSR disclosures. In return, these firms gain greater analyst coverage, higher levels of institutional ownership, greater stock liquidity, higher valuations in SEOs, and lower yields to maturity in bond issuances'.
Hackston and Milne, (1996)	1992	47 firms listed on the New Zealand Stock Exchange	CSR disclosure with a content analysis based on themes (e.g. env.), evidence (monetary and non-monetary quantification), new type (good, bad, neutral), amount (number of sentences)	OLS regression	Size, corporate profitability (ROE, ROA), industry type	'Results […] show both size and industry are significantly associated with amount of disclosure, while profitability is not. The results indicate that size-disclosure relationship is much stronger for the high-profile industry companies than for the low-profile industry companies'

Roberts (1992)	1984-1986	130 large Fortune 500 companies	Social disclosure based on ordinary scale adapted from the Council on Economic Priorities (CEP) rating	Logistic Regression	Stakeholder power (ownership, governmental risks, creditor influences) strategic posture towards CSR activities (public affairs staff, philanthropy activities) and economic performance (ROE and systematic risks measured by Beta), age, industry, company size	'This study empirically tests the ability of stakeholder theory to explain one specific corporate social responsibility activity -- social responsibility disclosure. Results support this application, finding that measures of stakeholder power, strategic posture, and economic performance are significantly related to levels of corporate social disclosure'
Kansal *et al*. (2014)	2009-2010	80 Indian companies	Weighted corporate social, environment, energy and emissions (CSEEE) scores (measured on a six-point scale)	Univariate and multiple regression models	Size, profitability, risk of the company, age, industry corporate reputation	'corporate size and industry category are found to correlate with the corporate social disclosures of the companies and the corporate reputation as recognised through awards and social ratings has also been observed to be a significant factor that influences the social disclosures made'
Cahan *et al*. (2015)	2007-2008	676 companies	CSR disclosure computed from the KPMG ratings	Regression	National-level measures, size, profitability, capital expenditure, industry	'We observe a positive relation between unexpected CSR disclosure and firm value measured by Tobin's Q. We also find that, while countries with strong nation-level institutions promote more CSR disclosures, the valuation of a unit increase in unexpected CSR disclosures is

						higher when nation-level institutions are weak'.
Martinez-Ferrero *et al*. (2015)	2002-2010	747 international listed non-financial companies	GRI sustainability information with an ordinal scale from 0 to 3	Regression	Financial reporting quality (earning management through accuracy, accounting conservatism, accruals quality), size, profitability, growth opportunity, sales effects, leverage, industry	'The results obtained from a Tobit method for panel data show that conservative companies, with a high level of accruals quality and/or those that carry out earnings management practices to a lesser extent, report high quality financial information and, moreover, high quality CSR information'
Brammer and Pavelin (2006)	1999-2002	447 companies belong to the FTSE All-Share Index	Disclosure from the PIRC Environmental Reporting 2000' survey with a dichotomous approach	Probit model	Ownership, environmental performance, organizational visibility (number of annual news) size, industry	'We find that larger, less indebted companies with dispersed ownership characteristics are significantly more likely to make voluntary environmental disclosures, and that the quality of disclosures is positively associated with firm size and corporate environmental impact. We find significant cross- sector variation in the determinants of both the participation and quality decisions'.

Cormier *et al.* (2015)	2008	172 non-financial firm	Environmental disclosure based on coding scale from 1 to 3	2SLS regression	Analysts' forecast properties, corporate governance, environmental performance	'Results show that mandated disclosure enhances financial analysts' information set, as proxied by their forecast consensus and overall uncertainty. Analysts seem able to assess if there are inconsistencies between a firm's disclosure and its environmental impact'.
Lu and Abeyseke ra (2015)	2008		SEDI with three dimensions: the quantity measure (121 GRI items), quality measure (questionnaire to stakeholders), and item quality measure (stakeholders' perceptions of the relative importance of 121 GRI reporting items).	Regression	Stakeholder power, size, financial performance, industry, overseas listing	'Findings indicate that corporate social and environmental dis-closures have significant and positive associations with firm size, profitability, and industry classification. The roles of various powerful stakeholders in influencing corporate social and environmental disclosures are found to be generally weak in China, except that shareholders have influenced corporate social and environmental disclosures and creditors have influenced corporate disclosures related to firms' environmental performance'.

Mangena (2016)	2008	125 firms listed on the London Stock Exchange	Intellectual capital information disclosure (66 items, clustered in structural capital, relational capital, and human capital) and financial information disclosure (35 items clustered in financial analysis, forecast information and capital market data)	Multivariate Regression	Implied cost of equity capital for the firm (dependent variable), dislosures, size, financial leverage, market risk, book-to-market-ratio	'we find that the relationship between financial disclosure and the cost of equity capital is magnified when combined with IC disclosure. In addition, we find that IC and financial disclosures interact in shaping their effects on the cost of equity capital. Further analyses suggest that the effect of financial disclosure on the cost of equity capital is augmented for firms characterized by a medium level of IC disclosure
Thijssens (2015)	2002-2004	199 companies (101 from shareholder and 98 from stakeholder-oriented countries)	Environmental disclosure clustered in three categories: principles and policies, management systems, and performance	OLS regression	Stakeholder Influence (power, urgency and legitimacy), company characteristics (size, profitability, capital structure, cost of capital, institutional ownership, and management style), country, industry affiliation	This study improves our understanding of CSR disclosure by demonstrating that, next to the well- documented effect of company characteristics, stakeholder characteristics are also important. Besides, it provides scarce empirical evidence that not only primary stake- holders, but also secondary stakeholders are influential with regards to management decision-making

Rezaee and Tuo (2017)	2010	2525 firms	Non-financial disclosure (forward-looking and historical non-financial information), technology and innovation information, production, company trend, company competitiveness, and customer information	Multivariate regression	Earnings quality, corporate governance sustainability performance, CSR performance, sustainability strengths and concerns and controls (financial strategy, book-to-market ratio, institutional ownership, information asymmetry, size, leverage and ROA	'we find a two-directional association between non-financial disclosures and sustainability performance. Specifically, forward-looking non-financial disclosures are associated with a one-year lead in sustainability performance, whereas current year sustainability performance is linked to more disclosures of historical non-financial information in the year-end annual filings.
Qui *et al.* (2016)	2005-2009	629 FTSE350 index	Environmental score (60 environmental data points adjusted by industry and weighted by importance) ranges from 0 to 100 as percentage from Bloomerg	Multivariate regression	Environment and social performance, profitability (ROE, ROA, ROS), firm size, media exposure (news), number of analysts issuing earnings forecasts for the firm	'We find that firms that make higher social disclosures have higher market values. Further analysis reveals that this link is driven by higher expected growth rates in the cash flows of such companies.

Mallin *et al*. (2013)	2005-2007	100 U.S. Best Corporate Citizens	Social and Environmental Disclosure: 1) adoption of GRI 2) content analysis of quantitative, qualitative, generic information	Structural Equation Model	Monitoring governance (board independence, ownership concentration), stakeholder orientation, CSP	'Our empirical evidence shows that the stakeholders' orientation of corporate governance is positively associated with CSP and SED'.
Andrikopoulos (2013)	2009	136 Danish companies	Environmental Disclosure Index (8 items)	OLS regression	Company size, market-to-book value, leverage, profitability	Firm size, financial leverage, the market-to-book ratio, and profitability are significantly associated with the breadth environmental disclosure.
Hummel and Schlick (2016)	2011	195 European companies	Corporate sustainability disclosure quality based on GRI with a ranked scale	Multivariate regression	Corporate sustainability performance	Our results reveal that – consistent with voluntary disclosure theory – superior sustainability performers choose high-quality sustainability disclosure to signal their superior performance to the market. In addition, based on legitimacy theory, poor sustainability performers prefer low-quality sustainability disclosure to disguise their true performance and to simultaneously protect their legitimacy

Li *et al.* (2017)	2004-2013	367 FTSE 350 listed firms	ESG Disclosure score from Bloomberg	Regression with fixed effects	CEO Power, Firm value, firm characteristics	We find a positive association between ESG disclosure level and firm value, suggesting that improved transparency and accountability and enhanced stakeholder trust play a role in boosting firm value. We also report that higher CEO power enhances the ESG disclosure effect on firm value, indicating that stakeholders associate ESG disclosure from firms with higher CEO power with greater commitment to ESG practice
Adhikari *et al.* (2015)	2009	136 companies from US, Continental Europe, and Scandinavia	Disclosures related to environmental, employee, and customer/community information (35 items)	Regression	Business culture (independent), environmentally sensitive, profitability, leverage, globalization, size (controls)	We find that CSD varies systematically across business cultures. Additionally, CSD is higher in business cultures that are more stakeholder rather than stockholder-oriented. Our findings pro- vide support for business culture as an important influencing factor on the disclosure of corporate social information for multinational corporations
Martinez-Ferrero and Cuadrado-Ballesteros (2015)	2003-2009	575 international listed non-financial companies	Voluntary disclosure of information is defined as GRI, an ordinal variable that takes values between 0 and 100 (0, 25, 50, 75 and 100),	Regression	Information asymmetry (independent), financial reporting quality, firms characteristics (controls)	The greater asymmetric information leads to higher voluntary information disclosure practices, which are able to reduce the agency problem in environments characterized by strong socially responsible commitment

Chapter 3

Compliance and determinants of non-financial information disclosure: evidence from Italy

This chapter delineates the level of NFI disclosure and identifies the determinants which might favor higher levels of disclosure in the Italian context. The empirical analysis is based on a sample of 50 Italian companies which have to be compliant with Decree No. 254/2016, transposing the EU Directive 95/2014. As a matter of fact, starting from the fiscal year 2017, companies have to report NFI according to the Directive and following at least one international standard framework. Thus, the first research question is as follows: are Italian listed companies compliant with this regulatory adequacy? The second research question is as follows: Which are the determinants which lead to higher levels of NFI disclosure? Based on the prior research of Venturelli, Caputo, Cosma, Leopizzi, & Pizzi (2017) which investigate the readiness of the voluntary-based compliance on the annual reports of 2016, this study extends the literature on non-financial information disclosure by analyzing the mandatory-based disclosure on the non-financial statements of 2017 in accordance with the Italian Legislative Decree No. 254/2016. In such vein, the research enriches the academic literature providing both practical and theoretical implications for further investigations. From a theoretical perspective, it seeks to understand whether mandatory requirements are value-enhancing for a proper non-financial information disclosure, whereas from a practical viewpoint, it captures how companies respond to the non-financial information disclosure adequacy and which traits acts as determinants to explain disclosures. To these ends, the rest of the study proceeds as follows. First, the research formulates the research questions considering which company factors are likely to affect higher levels of NFI disclosure, according to prior scholarly studies. Second, it presents the

sample of investigation and then the work moves to the third section to describe the research method for defining NFI disclosures and for articulating the disclosure score, and the measurement of the independent variables. Then, the research presents the descriptive statistics grouping respectively into the level of NFI disclosures and the company factors. Finally, it provides the regression analysis and formulates discussions accordingly.

3.1. Development of research questions

The research approach of the present research is deductive because it mainly relies on theories and prior scholarly research (1) to develop hypotheses accordingly and (2) to empirically tests them on the data sample under investigation. Conversely, the inductive approach bases on direct observations (1) to establish linkages among data and (2) to theorize new constructs. In other words, the deductive research functions with a "top-down" approach, meaning that it starts from a theory and it moves to the construction of hypotheses/research questions with the aim at verifying or rejecting them, whereas the inductive research works from the "bottom-up" to generate theoretical formulation by linking interconnected patterns (Creswell and Plano Clark; 2007).

As shown in Chapter 2, the literature on disclosure overwhelmingly identifies disclosure levels regards NFI and sustainability practices, however, most of the studies primarily investigate voluntary disclosure, fewer concentrate on mandatory regimes (Chelli, Durocher & Fortin, 2018) and therefore, the aim of this research is to advance the literature on mandatory disclosure with the analysis of 50 Italian companies. Since companies are required to be compliant with the Italian Decree, which transposes the EU Directive, understanding how companies deal with this enforcement is value of interest, therefore the first research question unfolds hereafter:

RQ1: Which is the level of compliance of non-financial information under the mandatory regime of the EU Directive 95/2014?

First recent insights come up from the Italian authority CONSOB (June, 2018) which provides preliminary results regard the way companies report NFI. 5 ways to disclose NFI were essentially derived: 1) non-financial statements constitute stand-alone reports apart from the annual report, publicly available on companies' website; 2) non-financial statements are part of the annual report 3) non-financial statements are part of the Integrated Report 4) non-financial statements represents the CSR report, also known as Sustainability Report [19] and finally 5) non-financial statements are nearby other CSR reports (Consob, 2018). Moreover, the authority shows preliminary results up to May 31, 2018 regards how many companies have already provided the non-financial statement, in which way they report such NFI, which international standards framework they rely on, and which is their track record of prior sustainability report.
Over a sample of 230 Italian listed companies which have to be compliant with the Directive, 86 companies do not provide their financial statements, 6 have already disclosed NFI within the Integrated Report, but overall few non-financial statements are ready to be analyzed (Consob, 2018). Consob gives preliminary evidence on the content of such information considering a sub-sample of 12 companies listed at FTSE Mib. In essence, all the content has been reported following the GRI International Standard, and these preliminary results are confirmatory of the well-established authority the GRI acquired during the last decade. As a matter of fact, such an international standard framework that is considered the leader of the international standard framework for sustainability reporting (English & Schooley, 2014; Michelon *et al.*, 2015; Moneva *et al.*, 2006; Moratis & Brandt, 2017), even if academics extensively debate against such an international standard framework as it undermines transparency (Nielsen &

[19] CSR Report and Sustainability Report are commonly used with interchangeable meanings

Madsen, 2009; Etzion & Ferraro, 2010). By contrast, GRI could be a useful tool to ensure normativity, meaning the state of compliance with rules (Bebbington *et al.*, 2012). In applying the GRI guidelines, companies can report NFI in accordance with one of the following option: the GRI-referenced, the GRI-core, and ultimately the GRI-comprehensive. Therefore, it might be of interest comparing the official requirements of the legislator with the well-diffuse structure of the GRI guidelines, which is still voluntary in its nature to understand which regimes lead higher levels of normativity. Consequently, the second research question is derived as follow:

RQ2: Are Italian companies likely to be compliant with the GRI guidelines against the EU Directive, or vice versa?

The research will answer to RQ1 and RQ2 by developing a configuration of disclosure scores, which is detailed in Section 3.3.1 (Configurations of disclosure scores), as it is strictly related to the research method.

Moving to the identification of determinants that can enhance disclosure for structuring research questions accordingly, the literature extensively debates on this regard to understand which factors lead to higher levels of NFI disclosure in terms quantity and quality (Gao *et al.*, 2016; Halkos & Skouloudis, 2016; Muttakin & Khan, 2014; Skouloudis *et al.*, 2014) and which factors can favor the choice of issuing a CSR/sustainability report (J. C. Jensen & Berg, 2012; Michelon *et al.*, 2015). As pointed out in the literature review (Chapter 2), internal determinants, namely also as company factors are vast, and depend on external factors, as for the context of investigation, and regulatory changes. For this reason, the empirical research also tests for financial performance and corporate governance as traditional company factors which may provide higher levels of disclosure. Moreover, it aims at identifying whether the family influence, in terms of both ownership and board membership affect NFI disclosure, since there are diverging views coming from the literature (Chapter 2, paragraph 2.2.1.), Finally, to further the analysis, the present research centers on the reporting traits as a focal point for the following reasons. First, the preliminary results revealed by

the Consob suggests that companies differ substantially regards reporting boundaries and year of experience in disclosing CSR practices. Second, as companies mostly rely on the GRI, the adoption of an option (referenced, core, comprehensive) instead of another might influence disclosure levels significantly according to the option adopted. Therefore, the third research is presented as follow:

RQ3: Which are the determinates that can favor higher levels of NFI disclosure?

To further the analysis, the empirical research also tests for financial performance and corporate governance as traditional company factors which may provide higher levels of disclosure.

3.2. Sample of investigation

We collected the sample from DataStream for all 394 listed companies with headquarter in Italy. To capture the Italian firms which have to be compliant with the EU Directive, first we filtered by number of employees, and second, we adopted a twofold screening procedure. We considered out of our sample 98 companies which have less than 500 employees as they are not obliged to provide non-financial information disclosures, and we excluded 135 companies for which the number of employees was not available at the end of March 31st, 2018. For the remaining 161 companies, we removed 4 companies belonging to Hang Seng Index, S&P 500 Index, CAC 40 Index since they are not subjected to the Directive and furthermore we excluded 9 subsidiary companies given that their Non-financial Statement is included in the Consolidated Non-financial Statement prepared by the group which they belong to. We checked for the 2017 Non-financial Statement publicly available at the end of May 31st and we ended with a sample of 50 Italian listed companies[20]. Table 3.1. provides the summary of the sample selection procedure.

[20] I choose a sample of one-year period (2017) instead of two-years period or a broaden range period, due to hand-collected data

Table 3.1. Sample selection

Summary of the sample selection procedure	Observation
Initial sample from DataStream	394
Sample after screening for number of employees' < 500	296
Sample after screening for employees' missing values	161
Sample after screening for companies out of the FTSE Italia All-Share Index	157
Sample after screening for subsidiary companies whose 2017 Non-financial statement is prepared by the group	148
Final sample considering the 2017 Non-financial statement publicly available at the end of May 31st, 2018	50

Source: own elaboration

The sample of 50 Italian listed companies is composed by companies belonging to the following sectors: Consumer discretionary (26%), Consumer staples (6%), Energy (8%), Financials (24%), Health Care (4%), Industrials (14%), Information technology (2%), Materials (2%), Telecommunication services (2%) and Utilities (12%). For each sector, Table 4.2. provides the average of number of employees, total assets and market capitalization. Considering the FTSE Italia All-Share index, 66% of the sample is listed at FTSE Mib, the other belongs to the FTSE 100.

Table 3.2. Sample description

Sector	Percentage	Mean		
		N. of Employees	Total Assets	Market Cap
Consumer Discretionary	0,26	16.586	3.163.708.243	5.485.978.951
Consumer Staples	0,06	10.357	3.538.848.000	3.952.496.311
Energy	0,08	24.799	40.516.978.500	27.410.003.211
Financials	0,24	41.224	244.112.047.500	9.761.167.903
Health Care	0,04	6.154	1.760.913.000	4.056.345.019

Industrials	0,14	19.523	29.739.598.429	4.204.953.361
IT, materials and telecommunication	0,06	25.437	25.145.782.667	5.653.589.799
Utilities	0,12	15.936	34.080.310.667	11.019.719.101

3.3. Research method

The research is designed around two main methods: first, to assess the level of compliance of NFI under mandatory disclosure (thereafter disclosure score) a quantitative content analysis was adopted; second, to determine which company factors act as determinants to higher level of disclosure, an empirical analysis with the OLS (Ordinary Least Squares) regression was performed. A premise on casual effect should be done because during the last decade, casual effects were under doubt since they aim at predicting certain circumstances and future – for definition – is unpredictable, so at some routes in the past (e.g. none economics was able to predict the financial crisis of 2008) they led to zero or even counterproductive results. Academics have theorized new explanations and theories as for example the effectuation theory of Sarasvathy (2008). In this book, Sarasvathy counterpoises causal logics and effectual logic with this postulation: "Casual logics help us choose; effectual logics help us construct. Causal strategies are useful when the future is predictable, goals are clear, and the environment is independent of our actions; effectual strategies are useful when the future is unpredictable, goals are unclear, and the environment is driven by human actions" (p. 73). This does not constitute a fully neglection of the casual logic, what matters is the contextualization with proper premises. "Causal logic provides useful decision criteria to achieve given goals subject to environmental selection in the face of an uncertain future. Effectual logic provides useful design principles for transforming extant environments into new futures in the face of ambiguous goals." (p. xvii – Introduction).

In this work, the casual logic has been adopted for two main reasons: 1) it provides a decision criterion to achieve a given goal (NFI disclosure); 2) the causal conjunction among factors is still widespread in sustainability accounting.

Hereafter, the study provides how the disclosure score has been constructed, and then it lists the company factors considered for the empirical analysis. Grouping together, the present section ends with the equation of the regression analysis, which in essence is constructed with the disclosure score, as dependent variables, and the determinants, as independents variables.

3.3.1. Configurations of disclosure scores

The analysis of the level of disclosure unfolds with the following steps of development. First, the study provides the overall disclosure score, based on 165 items in total to understand the level of NFI disclosure, second the score is reframed into two distinctive perspectives to understand whether companies are likely to be oriented toward the "GRI compliance" or whether they provide disclosures in accordance with the Directive, following "regulatory compliance". The disclosure score includes non-financial information regards the "content" and the "context" of such an information. The "content" of NFI encounters environmental, social, employees, human rights, anti-corruption mandatory issues whereas the "context" grabs the way under which such topics are treated by companies meaning how the company deals with the business model, undertaking policies, related risks and opportunities, and ultimately non-financial key performance indicators according to the Directive. In other words, to rank the level of compliance, the research constructed the disclosure score determining disclosures of topics in accordance with Article 19 of the EU Directive and Article 3 of the Legislative Decree. For each company, we determine the level of disclosure of non-financial and diversity information of the financial year of 2017, that is the first year of the law adoption. The checklist of items is built upon the following procedure.

First, the research included two main international standard frameworks' guidelines: the Integrated Reporting (IR) and the Guidelines Reporting Initiative (GRI). Precisely, to explain the business model the items considering the Integrated Reporting Framework were added, whereas we referred to the GRI

Sustainability Reporting Guidelines (G4 version) including each Topic-specific Standards (from GRI 201 to GRI 419) and some items of GRI 103 (Management Approach) and of GRI 102 (General Disclosure).

Other academic studies have adopted the GRI Sustainability Reporting Guidelines as coding framework (Hummel & Schlick, 2016; Lu & Abeysekera, 2017; Rezaee & Tuo, 2017a). It is noteworthy to mention the fact that the GRI has been criticized in several studies to emphasize the "tick GRI box" (Michelon *et al.*, 2015) and to provide vague sustainability principles (Moneva *et al.*, 2006). However, according to (Lu & Abeysekera, 2017), it addresses standardization of metrics and supports reliability of disclosure measurement, reasonable accepted for assessing compliance levels, therefore we proceeded accordingly. Second, we double-checked the selected items with others international standard frameworks – AA1000 standard for accountability, ISO 26000 on social responsibility, the Climate Disclosure Standards Board framework and ultimately the United Nation (UN) Global Compact – to cross-check for further inclusions and to develop a comprehensive list. Third, and finally, we included personal items within the checklist, in case of no deep explanation of certain issues.

Following the EU Directive requirements, we have for first the topics which relates environmental, social, employees, human rights, anticorruption issues. In order to capture the content of NFI disclosure according to the directive and the decree, the all Topic-specific Standards (from GRI 201 to GRI 419) were added to the disclosure score The GRI groups them into three main clusters: economic dimension, environment dimension and social dimension. Table 3.3 provides the matching between the GRI topics and the EU Directive requirements.

Table 3.3. Checklist of the topic-specific disclosures

Art. 19 bis EU Directive	Topic-Specific Disclosures	N. of items
Environmental dimension	GRI 301 - Materials	3
	GRI 302 - Energy	5
	GRI 303 - Water	3
	GRI 304 - Biodiversity	4
	GRI 305 - Emissions	7
	GRI 306 – Effluents and Waste	5
	GRI 307 – Environmental compliance	1
	GRI 308 – Supplier environmental assessment	2
Social dimension	GRI 413 – Local communities	2
	GRI 414 – Supplier social assessment	2
	GRI 415 – Public Policy	1
	GRI 416 – Consumer Health and Safety	2
	GRI 417 – Marketing and labelling	3
	GRI 418 – Customer privacy	1
	GRI 419 – Socio-economic compliance	1
Employment	GRI 401 – Employment	3
	GRI 402 – Labor/Management relations	1
	GRI 403 – Occupational health and safety	4
	GRI 404 – Training and education	3
Human rights	GRI 406 – Non-discrimination	1
	GRI 407 – Freedom of association	1
	GRI 408 – Child labor	1
	GRI 409 – Forced labor	1
	GRI 410 – Security practices	1
	GRI 411 – Rights of indigenous people	1
	GRI 412 – Human right assessment	3
Anticorruption	GRI 205 – Anticorruption	2
	GRI 206 – Anticompetitive behavior	1
Diversity	GRI 405 – Diversity and equal opportunity	2

Source: GRI Guidelines

For each of those topics, the EU Directive requires the explanation of the business model, policies, risks and opportunities and key performance indicators. Regarding the business model, we added the IR Framework's items, since it draws in details the business model, including the inputs, the subsequent

business activities, followed by the outputs (the products) and the outcomes (the effects) of the organization' activities. According to the <IR> Framework, the business model is the "system of transforming inputs, through its business activities, into outputs and outcomes that aims to fulfil the organization's strategic purposes and create value over the short, medium and long term". Along this definition, it suggests companies to explain features that (1) can enhance the general description and (2) can identify inputs, activities, outputs and outcomes. Table 3.4 provides the full list regards such section.

Table 3.4. Checklist of business model

EU Directive	Business Model	N. of items
Art. 19 bis 1a	General description	3
	Inputs	1
	Business activities	3
	Outcomes	4

Source: <IR> Framework

Considering the policies which the Directive calls for, we added all the items of GRI 103 – Management approach, going from the explanation of material topics and related boundaries (Disclosure 103-1) to the management approach and its components, as for policies, commitments, responsibility and resources to cite few examples (Disclosure 103-2) and ending with the evaluation of the management approach (Disclosure 103-3). Moreover, we detailed the analysis regards the policies by investigating whether companies provided qualitative information for each material topics according the time framing of such policies (current period, prior period and future period). Table 3.5 provides all the items addressed for the policy section.

Table 3.5. Checklist of policies

EU Directive	Policies	N. of items
ART. 19 BIS 1b	Management approach and materiality	15
ART. 19 BIS 1b	Materiality determination process	1
ART. 19 BIS 1b	Disclosure on material matters (for each topic – 5 –policies regard the current, the prior and the future period)	15

Source: GRI Guidelines and personal elaboration

The fourth dimension the Directive calls for further details refers to risks and opportunities, in more details the Directive forces companies to explain "the principal risks related to those matters linked to the undertaking's operations including, where relevant and proportionate, its business relationships, products or services which are likely to cause adverse impacts in those areas, and how the undertaking manages those risks" (EU Directive 95/2014; p. 5). For this section, we added personal items regards the identification of risks, the explanation of related effects, and the undertaken actions to manage such risks, for each "content" dimension: 15 items are under analysis, as details in Table 3.6.

Table 3.6. Checklist of risk and opportunities

EU Directive	Risks and Opportunities	N. of items
ART. 19 BIS 1d	Identification of risks (for each topic – 5)	5
ART. 19 BIS 1d	Explanation of effects (for each topic – 5)	5
ART. 19 BIS 1d	Undertaking actions to manage risk (for each topic - 5)	5

Source: personal elaboration

Finally, we address the Key Performance Indicators (KPIs) section by checking quantitative indicators according to the time framing (prior, current and future period), related measurement methods and basis for comparison, for each

“content” dimension; we added 25 items in total. Table 3.7. provides the full list for the KPIs section. All things considering, the checklist ends with 150 items.

Table 3.7. Checklist of risk and opportunities

EU Directive	KPIs	N. of items
Art. 19 BIS 1e	Quantitative indicator for the current period (for each topic – 5)	5
	Quantitative indicator for the prior period (for each topic – 5)	5
	Quantitative indicator for the future period (for each topic – 5)	5
	Explanation of the measurement methods (for each topic – 5)	5
	Benchmark and comparison among sectors (for each topic – 5)	5

Source: personal elaboration

To capture a fully disclosure of socially responsible practices we further our checklist with the inclusion of 15 items coming from the GRI 102 – General Disclosure. The disclosure score incorporated Disclosure 102-16, Disclosure 102-17 related to the ethics and integrity section and Disclosure from 102-40 to 102-44 regards the stakeholder engagement section, which are not mandatory requirements but highly recommended within the voluntary guidelines provided by the EU in 2017. Table 3.8 shows the items included for the analysis.

Table 3.8. Checklist of voluntary items

Ref to EU Directive	Topic-Specific Disclosures	GRI	N. of items
Voluntary	Economic Performance	GRI 201	4
	Market Presence	GRI 202	2
	Indirect economic impact	GRI 203	2
	Procurement practices	GRI 204	1
	Ethics and Integrity	GRI 102	2
	Stakeholder engagement	GRI 102	4

Source: GRI guidelines

All the other disclosures[21] of GRI 102 were excluded for three main different reasons. First, some disclosure refers to generic forms, so we intentionally excluded them from the evaluation to avoid overestimations on the disclosure score. Second, other items do not cover a certain degree of specificity, therefore, we go in depth to cover details of information. This is the example of the Disclosure 102-15 – key impact, risks and opportunities – within the strategy section, which does not mention neither the effects, nor the actions to deal with such treats, therefore we overcome such a limitation enlarging disclosures with personal items. Third, both the governance and the reporting section were excluded from the disclosure score, since we acknowledged them as determinants which can favor higher quality of NFI disclosure.

Such disclosure structure aims at understanding the level of disclosure under a mandatory regime in order to respond at RQ1. Subsequently, the disclosure score was divided into two different disclosure scores, respectively called GRI-compliance score and the EU-compliance score with the aim to discern whether

[21] Organizational profile (from 102-1 to 102-13), Strategy (from 102-14 to 102-15), Governance (GRI 102-18 to GRI 102-39) Reporting (from 102-45 to 102-56)

companies are likely to be "GRI-compliant" or "reform-compliant", therefore answering at RQ2.

Appendix A provides the full list of items with law requirements and references to the international standards frameworks for each developed disclosure scores: the general disclosure, the GRI-compliance score, and the EU-compliance score.

To answer the previous research questions, each of that non-financial information was analyzed with a dichotomous approach to identify the presence or absence. The coding of each item was set as follows: 1 if it was present, 0 otherwise, NA in case of a clear explanation of the non-materiality of a particular "content". The binary procedure leads us to capture disclosure with a more rigorous approach rather than with the content analysis approach based on the search of "words", avoiding the bias of interpretations as a consequence (Devalle & Rizzato, 2013). To blind such a binary procedure and avoid subjectivity in determining results, we reviewed the checklist twice. First, we set a double match with others international standard frameworks (AA1000 standard for accountability, ISO 26000 on social responsibility, the Climate Disclosure Standards Board framework and ultimately the United Nation (UN) Global Compact) to overcome overlapping items; second, we conducted an explanatory analysis on a preliminary sample of 10 companies. Then, we refined the checklist erasing duplicates and we ended with 165 items in total.

We calculated the Disclosure Score as follows:

$$Disclosure_score_j = \frac{\sum_{i=1}^{n} d_i}{\sum_{i=1}^{n} x_i}$$

Where:
j=the company;
i=the item;
d=the item presented, that is with 1 coding;
x=the material item, that is without NA coding

A similar formula was adopted respectively for the GRI-compliance score and the EU-compliance score. In essence, the study addresses the scores, which

represent the dependent variables of our models. The next sub-section describes, on the other hand, the independent variables of the model.

3.3.2. Identification of independent variables

This paragraph provides the list of the independent and control variables, as shown in Table 3.9. To qualify reporting traits, the work bases on the three main variables: Annual_Report, GRI_comprehensive, and Reporting_Year. The first and the second are dummy variables, whereas the third is continuous.

Annual_Report discerns NFI disclosed in the annual report, and more precisely in the management report (in this case, the dummy has value of 1), against NFI presented in a stand-alone report (in this case, the dummy has value of 0). GRI_comprehensive captures the GRI accordance option through which companies have to disclose more extensively on their impacts by reporting all the topic specific disclosures for each material topic they value as relevant and the additional disclosures on the organization's strategy, ethics and integrity, and governance. Reporting_Year identify the track record of CSR reports provided by the company in prior years.

Along with the core variables of interest in this study, the following were taken into account to measure respectively financial performance, corporate governance, and family influence. In more details, to explain financial performance both accounting-based measures (ROE) and market-based measures (TobinQ[22]) were considered, in accordance with prior scholarly research (Rodriguez-Fernandez, 2016; Qiu *et al.*, 2016). To understand whether the cost of debt has some kind of influence on disclosure, the analysis addressed the weighted average cost of capital (WACC). Afterwards, the variables board independence and board size synthetize the corporate governance structure and both of them are continuous. Finally, the variable namely

Family_Ownership_Board describes the family influence considering the interaction between the dummies Family_Ownership and Family_Board[23]. Ultimately, the following control variables were included: beta, leverage, size and industries as detailed in Table 3.9.

Table 3.9. Variables overview

Variable	Exp. Sign.	Description	Source
Disclosure_Score	NA	It covers 165 items in total	Manual
EU_compliance_Score	NA	It covers 82 items in total	Manual
GRI_compliance_Score	NA	It covers 100 items in total	Manual
Annual_Report	+/-	It defines whether the NFS is within the annual report (1) or presented as stand-alone (0).	Manual
GRI_comprehensive	+	It captures whether the company is (1) in accordance with the GRI comprehensive option; (0) otherwise	Manual
Reporting_Year	+	Years of CSR/Sustainability reporting under voluntary regime	Manual
Tobin_Q	+	Tobin's Q is a market value metric that measures how the market values a firm's operating efficiency and ability to generate good CFP (Tobin, 1969). It is calculated by the market value of the company's stock divided by its book value (Perfect and Wiles, 1994).	DataStream
WACC	+	Cost of capital	DataStream
ROE	+	Firms' profitability	DataStream
Board_Independence	+	Board_Independence is calculated dividing the number of independent non-executive and the board size	Manual
Board_Size	+	Number of members on boards	Manual
Family_Ownership_Board	+	Intersection between family ownership and family board	Manual

[23] Family ownerships sets at 1 if family members own at least 10 per cent of shares, 0 otherwise.
Family_Board sets at 1 if some family members work as board members, 0 otherwise.

Beta	Proxy of risk	DataStr eam
Leverage	Leverage is measured as the average total debt/ Average total equity	DataStr eam
Size	Size is measured as the log of total employees at the end of fiscal year 2017	DataStr eam
Industries	Industry group dummy variables: financials, health care, consumer discretionary, consumer staples, information technology,	Datastr eam

Source: GRI guidelines

All things considered the regression models are shown hereafter:

$Disclosure_{scoreJ} = B_0 + B_1{*}Reporting\ traits_t + B_2{*}Financial\ performance_t + B_3{*}Governance_t + B_4{*}Family\ Influence_t + B_5{*}Controls_t + B_6{*}Industries_t.$

$EU_Compliance_{_scoreJ} = B_0 + B_1{*}Reporting\ traits_t + B_2{*}Financial\ performance_t + B_3{*}Governance_t + B_4{*}Family\ Influence_t + B_5{*}Controls_t + B_6{*}Industries_t.$

$GRi_Compliance_{scoreJ} = B_0 + B_1{*}Reporting\ traits_t + B_2{*}Financial\ performance_t + B_3{*}Governance_t + B_4{*}Family\ Influence_t + B_5{*}Controls_t + B_6{*}Industries_t.$

with t=2017

3.4. Descriptive statistics

The following section shows descriptive statistics regards our hand-collected data. In more details, the analysis is grouped into two distinctive sections: the former presents data related the level of disclosures of NFI for each mandatory topics and whereas the latter discusses reporting boundaries, the international standards frameworks, financial performance and corporate governance.

3.4.1. Analysis of compliance levels

Table 4.10 shows the level of disclosures of the sample under investigation, clustering companies into two groups: the financial sector and the non-financial

sector. The level of disclosures is 52.259%, suggesting that companies are adequately compliant with regulations, but that they have implemented no substantial changes indicating proactive attitudes toward further developments or deep explanations of CSR practices. Venturelli (2017) found a level of compliance under a voluntary regime of 49.60%, which does not differ considerably from the level found in the present research. At first glance, it seems that companies do not significantly change the methods or contents of their disclosures; therefore, mandatory reforms may not constitute a value-enhancing driver of higher disclosure levels. Compared to companies in the non-financial sector, companies in the financial sector exhibit a lower level of disclosures (45.231%), with a smaller range between minimum and maximum scores (0.53563). By contrast, the non-financial sector disclosure level is 54.478%, above the overall average, and the range between the minimum and maximum disclosure levels is higher (range = 0.62909; standard deviation = 0.14622).

Table 3.10. Descriptive statistics for the Disclosure, GRI, and EU Scores

		Disclosure Score	GRI Score	EU Score
Total sample	N	50	50	50
	Mean	0.52259	0.56106	0.51882
	Std. Deviation	0.15037	0.18268	0.15659
	Minimum	0.21333	0.23913	0.21333
	Maximum	0.84242	0.97647	0.91549
	Range	0.62909	0.73734	0.70215
Non-financial sector	N	38	38	38
	Mean	0.54478	0.58284	0.54235
	Std. Deviation	0.14622	0.18258	0.15218
	Minimum	0.21333	0.23913	0.21333
	Maximum	0.84242	0.97647	0.91549
	Range	0.62909	0.73734	0.70215
Financial sector	N	12	12	12
	Mean	0.45231	0.4921	0.44431
	Std. Deviation	0.14736	0.17234	0.15286
	Minimum	0.28082	0.26984	0.26829
	Maximum	0.81645	0.86021	0.79268
	Range	0.53563	0.59037	0.52439

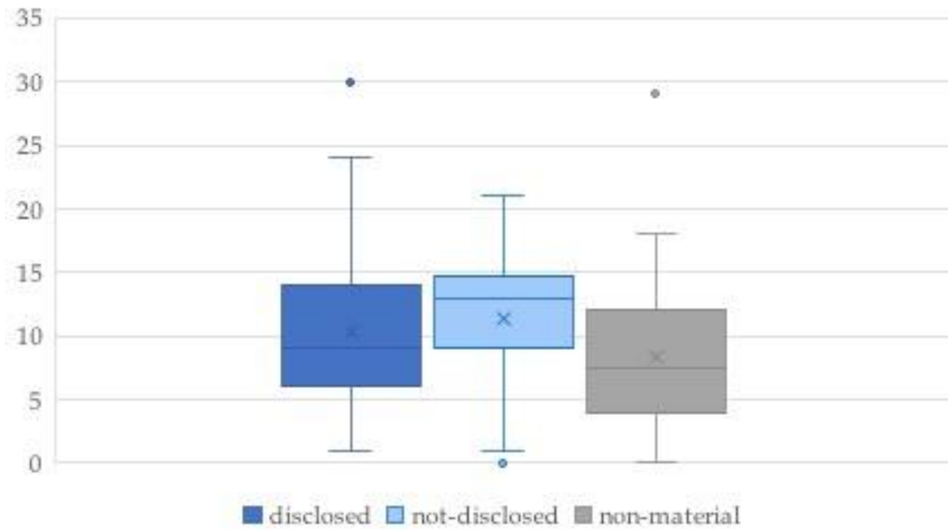
To determine the reasons for these results, the study follows a three-step level of analysis. First, the disclosure score is split to determine whether companies are likely to follow the international standards framework (GRI) or to disclose additional NFI, more in line with EU requirements. Second, disclosures are analyzed in relation to Directive topics. Third, and last, to achieve greater accuracy for each topic, the study investigates the presence/absence of information and whether information is disclosed as non-material.

Environmental dimension

The score for the environmental dimension is slightly below the average, at 0.47651. The non-financial sector score is 0.48327, and the financial sector score is 0.4551. This means that, overall, companies engage with environmental issues and explain their environmental focus to stakeholders in their non-financial statements. There was neither a significant standard deviation (0.2275) nor a large range between minimum and maximum (0.80), indicating that companies behave similarly. Generally, companies broadly address energy, emission, effluents, and waste by explaining at least one of the various indicators proposed by the GRI for each sub-environmental topic. Companies are much more inclined to consider biodiversity a non-material topic than to address other topics as non-material, or a non-core topic not strictly related to business. This is particularly true in the financial sector, in which all companies define biodiversity as non-material. By contrast, banks and financial institutions are much more inclined to report how they deal with environmental issues by explaining how they channel funding to green projects and companies' environmental attention. Another sub-dimension widely considered a non-material topic is materials, especially recycled inputs, products, and packaging materials. This classification is reasonable for the financial sector, since this sub-dimension is not related to the financial sector's core business; however, it is less acceptable for other sectors. Information on ways to advance the circular economy of recycled products is scarce, and recycling approaches are often considered non-material or are not

addressed at all. Surprisingly, companies do not yet assess suppliers or other stakeholders using environmental criteria: Only 16% have adopted environmental screenings, 38% consider this sub-topic non-material, and 46% ultimately address it as non-material. The underlying idea is that companies are not likely to be aware of how their stakeholders deal with environmental issues, which could undermine the companies' performance when suppliers do not appropriately manage environmental protection. Exploring the distribution of information for the environmental sphere in depth, Figure 3 compares disclosed information, not-disclosed information, and non-material information. The distributions are similar, especially with respect to internal shape, with the following distances between Q3 and Q1: 6 for disclosed information, 5.75 for not-disclosed information, and 8 for non-material information. Differences are evident in the boxplots' centers, at 9 for disclosed information, 13 for not-disclosed information, and 7.5 for non-material information. Differences are especially evident in the variations among information types. Few companies offer extensive information on environmental attention. Of 30 items in total, Q3 is below 15 for every method of information disclosure, meaning that companies consider environmental concerns in a broad and generic way, without going into any depth or engaging in full disclosure.

Figure 3.1. Boxplots for the environmental dimension



Source: Own elaboration

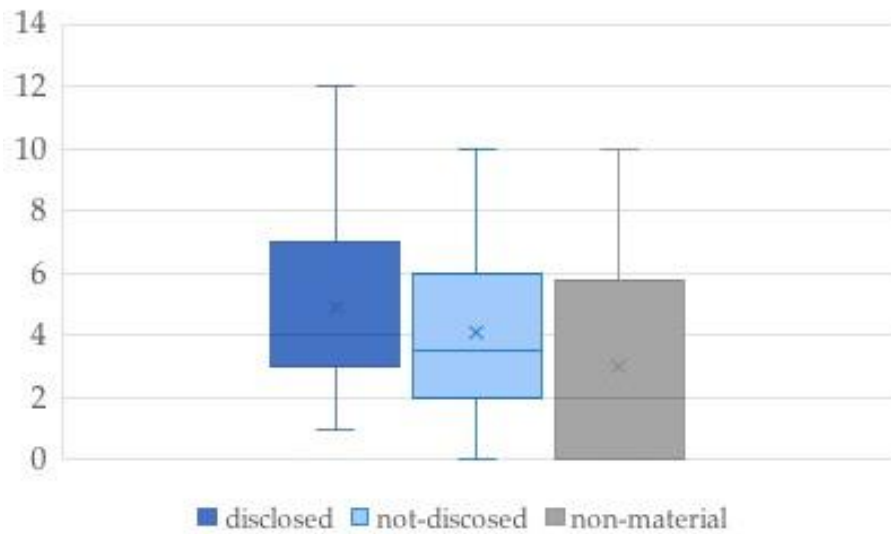
Social dimension

The social dimension is addressed differently in the financial sector and the non-financial sector. Similar data variations are apparent: The standard deviations are 0.22119 and 0.25142 for the financial and non-financial sectors, respectively. However, differences emerge when comparing means, as the mean of the non-financial sector is higher (59.961%) than that of the financial sector (39.953%). This is primarily due to the sub-topics within the social dimension, as marketing and labelling issues and issues related to customer health and product safety are much more likely to be of interest to non-financial companies. Conversely, banks and financial institutions are likely to focus on programs that support financial literacy through face-to-face and digital channels, such as training sessions to facilitate access to credit for low-power stakeholders (e.g. social enterprises and communities) and promote cultural initiatives. Disclosures on social topics refer primarily to consumer privacy (55.10%) and the assessment of the health and safety impacts of product and service categories (44.90%). As for the environmental dimension, the assessment of suppliers' adoption of social criteria

is of little interest: this sub-topic is disclosed in only 9 non-financial statements and is not disclosed in 29 non-financial statements. Social programs for communities are disclosed in broad terms, such that the information focuses first on initiatives. Further developments to enhance social sustainability programs are broadly spread (48.98%), and companies attempt to assess the potential impact. By contrast, information on operations with significant actual impact on local communities is not disclosed in depth (20.41%). This means that companies discuss social programs with communities in terms of future intentions and preliminary assessments, but still lack determinations of actual impact, with 51.02% failing to disclose such information. In other words, an initial decoupling of intentions and actions emerges. On the other hand, a considerable group of companies consider social programs' assessments to be a non-material sub-topic (30.61%) or eventually address this sub-topic as non-material (28.57%). Generally, materiality on social topics is a central point, as shown in Figure 3.2. On average, 3 items out of 12 are acknowledged as non-material, even if 75% of companies place below 6. This implies that "not-disclosed" items are fewer in comparison to items disclosed, but dispersion is wide, suggesting that companies approach materiality differently.

The boxplots representing the presence and absence of information show that the range between minimum and maximum and the distance between Q3 and Q1 are similar. The differences between these two are due to the number of items disclosed, which are less widely spread and less grouped with each other in comparison to non-material information. By contrast, non-material information is widely spread in the distribution; this means that the variation in spread indicates how companies approach non-materiality depending on their sector, as mentioned above.

Table 3.2. Boxplots for the social dimension



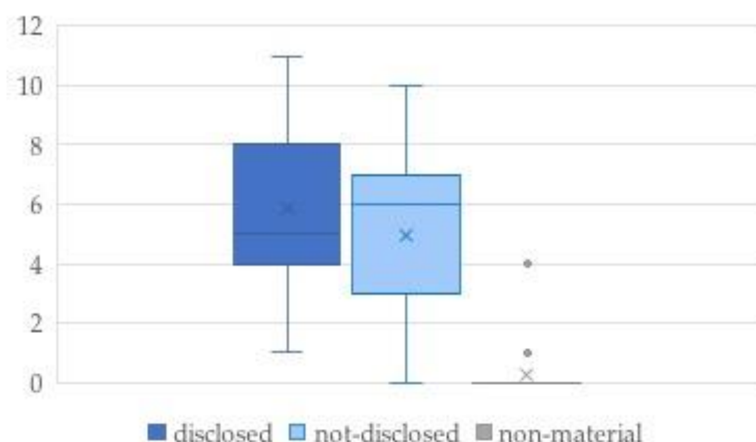
Source: Own elaboration

Employee dimension

The disclosure score for the employee dimension is 54.215%, which is close to the overall disclosure score. Furthermore, the results are similar for both sectors: banks and financial institutions have a disclosure score of 57.11%, and the non-financial sector has a disclosure score of 53.30%. With respect to deviations from the mean, we find no significant difference between sectors. This is confirmed by the standard deviation, which is very similar for both sectors: 0.24432 for the financial sector and 0.23391 for the non-financial sector. This means that the data have similar variations and are somewhat consistent in the two sectors, even if the score for the non-financial sector is lower than that for the financial sector. With respect to the sub-topics, 47 out of 50 companies disclose the number of new employees hired and the employee turnover, and 45 out of 50 disclose the average hours of training per year per employee. These items exhibit the highest disclosure frequencies. Similar results are found for the information related to types of injury, rates of occupational diseases, lost days, and absenteeism (44 out of 50 companies). Companies generally do not provide information on workers with high incidences or high risks of occupation-related diseases (76% did not

disclose) or on health and safety topics covered in formal agreements with trade unions (78% did not disclose). With respect to the numbers of disclosed and not-disclosed items, the boxplots in Figure 3.3. reveal interesting results. We can immediately see that no company completely fails to provide employee disclosures, indicating that, unsurprisingly, all companies agree on the relevance of employee matters. The boxplots showing disclosed and not-disclosed information are similar with respect to shape and spread, with the same range of 10 over a maximum number of 11 items. Slight differences emerge with respect to the center, or median, which is 6 for disclosed information and 5 for not-disclosed information. Interestingly, companies place above the median for disclosed information and below the median for not-disclosed information, meaning that companies generally disclose information in a broad way.

Figure 3.3. Boxplots for the employees' dimension



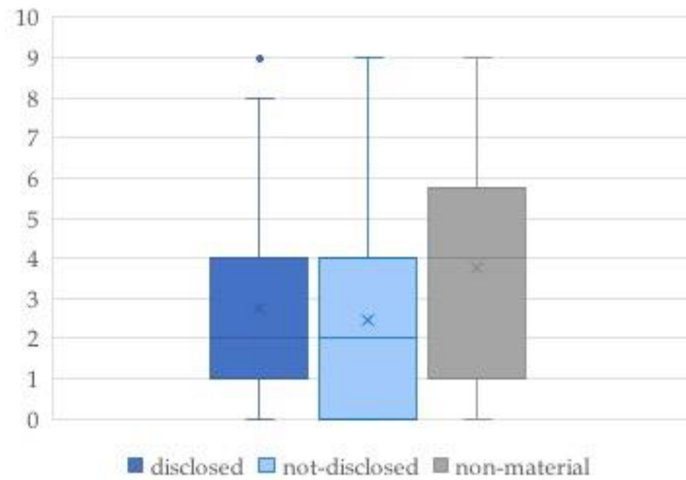
Source: Own elaboration

Human rights

The overall disclosure score for human rights is 45.72%, with considerable discrepancy between the sectors: 31.05% for the financial sector and 49.89% for the non-financial sector. This difference can be explained by the materiality with which companies address human rights. As we can see in Figure 4.4, the human rights dimension is primarily addressed as non-material information. In fact, the

median for non-available information is 4 of 9 items, and the spread from Q1 to Q3 is 4.75, meaning that companies tend to disclose a range of information from 1 to 4.75 items (with the rest as outliers). Conversely, most companies tend to not report between 1 and 4 items, as we can see in the second box plot (Figure 3.4.). This is true for 25 companies. The median for not-disclosed items, which splits our sample into two equal halves, is 2, and the average is close, at 2.76, meaning that, on average, companies do not report 2.76 items out of 9. If we analyze this content in depth, we find that the item companies are most likely to address is the item related to incidents of discrimination and corrective actions taken. Specifically, 60% of the companies disclose this information, 26% classify this information as non-material, and the rest do not disclose this information at all.
Other items for which companies tend to provide more extensive information include those referring to operations strictly connected to human rights reviews or impact assessments, available in 36% of companies, and the freedom of association and collective bargaining, available for 34% of companies. Further developments are needed in terms of employees' training on human rights policies and procedures, as well as investment agreements and contracts that include human rights screening, since information on such items is disclosed in, respectively, only 17 (34%) and 10 (10%) companies, respectively.

Figure 3.4. Boxplots for human rights



Source: Own elaboration

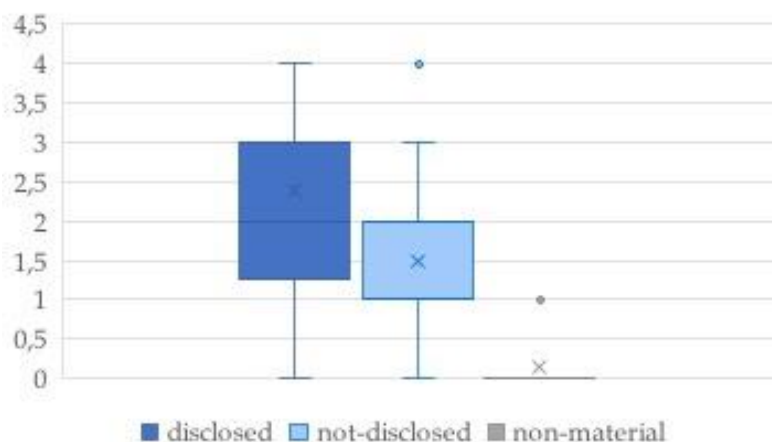
Anticorruption and diversity dimension

Anticorruption and diversity information are discussed together, as these data are very similar. Surprisingly, these dimensions are both considered material topics, since there are no boxplots for items addressed as non-material. For the anticorruption dimension, the only item addressed as non-material by seven companies involved legal actions for anti-competitive behavior and anti-trust and anti-monopoly practices; the rest of the items were generally disclosed or not disclosed. By contrast, only two companies addressed diversity as non-material. This means that companies engaged with both anticorruption and diversity issues and reported their results, and only a few companies did not care about anticorruption or diversity at all; these could be classified as outliers. On the left-hand side, we can see boxplots for anticorruption. On average, companies disclose two items out of four. This is valid for items related to the training sessions on anti-corruption policies and procedures, as well as confirmed incidents of corruption and actions taken. Overall, the disclosure score for the human rights dimension is 61.666%. However, the discrepancy between sectors

needs to be acknowledged: the financial sector has a lower score (54.166%) than the non-financial sector (64.03%).

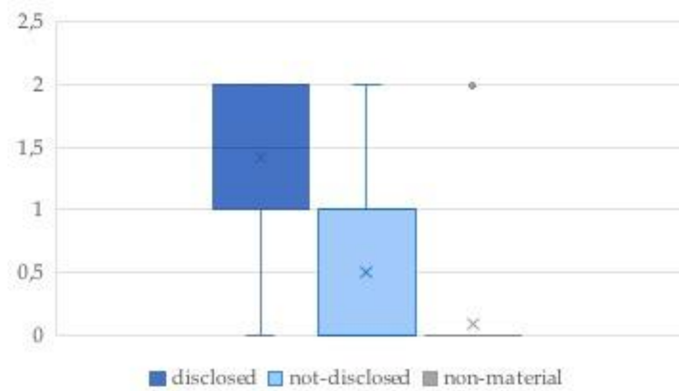
On the right-hand side, we see the boxplot for diversity issues. This boxplot clearly shows that most companies address gender diversity issues. In more detail, the companies are divided into two groups: Some companies are likely to disclose information, while others are not. This can be easily understood by looking at the specific items. This section evaluates two items from the GRI list: the diversity of the board and employees and the basic salary and remuneration ratios for women and men. With respect to the first item, companies are generally in favor of clearly disclosing the ratio of women to men. This information is present in 46 of 50 non-financial statements and is available in other documents for those companies that do not disclose it in their non-financial statements. Salary information is disclosed in 25 non-financial statements, not disclosed in 23 non-financial statements, and considered non-material in 1 non-financial statement. The results show that companies tend not to disclose all items on the disclosure list with respect to diversity issues; however, they do tend to provide general information (i.e. the number of employees and governance board members of each gender).

Figure 3.5. Boxplots for anticorruption



Source: Own elaboration

Figure 3.6. Boxplots for diversity



Source: Own elaboration

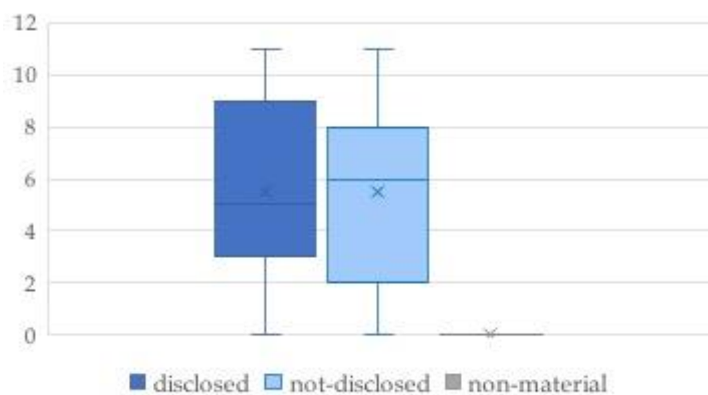
Business model

The disclosure scores for the business model are very similar: the overall score is 49.818%, and there are no significant differences between the financial sector (49.24%) and the non-financial sector (50%). To see the differences and understand whether companies are likely to provide full disclosure, it is necessary to understand how companies disclose their business models. In total, this dimension comprised 11 items divided into three sub-sections. The first set of questions covered a general description or diagram, an explanation of critical stakeholders, and a discussion of linkages with strategy and main KPI indicators. Generally, companies disclose this information (respectively, 38%, 78%, and 58%). The second group of items covered how companies deal with their inputs and how they manage their business activities. Companies are also likely to disclose information for this sub-section: they describe their inputs (48%), their market segmentation (86%), and the revenue generated from the business model (58%). Companies are less likely to disclose long-term successes, such as process improvements, employee training and relationship management: these topics are disclosed in 25 of the 50 non-financial statements. Third, and last, the business model section addressed potential outcomes: inward, outward, positive, and

negative. The results are vague: items are missing for 52%, 54%, 60%, and 94% of the sample, respectively.

By examining Figure 3.7, we can identify differences and similarities in the medians (centers), ranges (shapes), and variations (spreads) of the companies' distributions with respect to disclosing and not disclosing their business models. As expected, the boxplot on the left-hand side showing disclosed information has a range from Q1 (3) to Q3 (8.75), and it is much closer to the total of 11, though its range is narrow (5.75) compared to that of the boxplot for not-disclosed information (on the right-hand side).

Figure 3.7. Boxplots for the business model



Source: Own elaboration

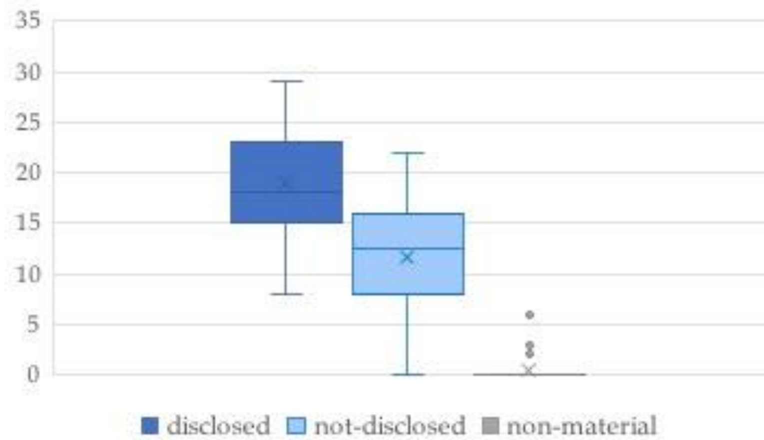
Policies

Disclosure for policies sets at high scores. The overall disclosure score is positive, at 61.70%, meaning that companies provide information on their practices and policies. This section comprised 31 items in two main sections: one concerning the management approach and the materiality determination process, and the other concerning qualitative information grouped according to time frame (past period, current period, future period) for each topic (environmental, social, employee, human rights, anti-corruption) mentioned in the Directive. This approach supports an understanding of the extent to which information is presented. In more detail, analyzing the first group, we can see that nearly all

companies (46 out of 50) provide the materiality matrix, and 26 explain why this topic has been classified as material. However, even those companies that address materiality do not do so properly, instead presenting the information broadly. They also identify their targets and objectives with respect to their management approaches (98%) and commitments (100%). What the statements are most likely to lack are a detailed explanation of the results of an evaluation of the management approach (disclosed in only 20% of the sample) and limitations concerning the management approach and how the companies deal with these limitations through possible adjustments (disclosed in only 16% of the sample).

On the other hand, considering qualitative disclosures for each theme in line with the Directive, companies unanimously present qualitative data for the current period and 58.40% shows a descriptive comparison with the prior period. For each topic explained for previous years, qualitative explanations of social and environmental practices are detailed for at least two years. However, companies rarely provide plans with a forward-looking perspective. More specifically, for each topic, disclosures on future orientation are below average, at 28% for the environmental section, 22% for the social section, 0.14% for the employee section, 0.02% for the human rights section, and 0.1% for anticorruption issues. Overall, the data on policies are well explained. This is confirmed by Figure 3.8, which presents boxplots for disclosed and not-disclosed information. Items disclosed are placed above the average of total items of 30.

Figure 3.8. Boxplots for policies



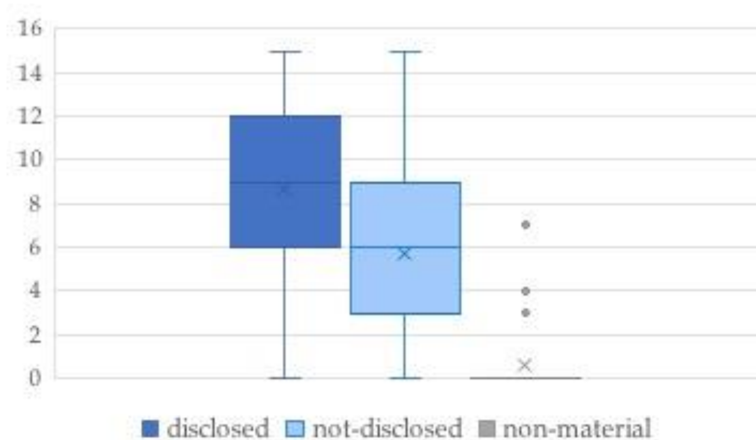
Source: Own elaboration

Risks and opportunities

This section explored whether companies identify risks, how they explain the risks' possible effects, and how they describe their actions in response to the risks. In total, 15 items were examined. Satisfactory results were observed because the overall score was 60.139%: 63.25% for the non-financial sector and 50.58% for the financial sector. Risk identification, therefore, is well addressed by the companies in the sample: 47 out of 50 discuss environmental risks, and 45 discuss social risks. Similar results are found for risks related to corruption (74%), human rights (66%), and employees (82%). Furthermore, similar data are found for actions in response to risks, which are detailed for each topic. Companies generally design their actions to match their policies, so they disclose information related to relevant programs and activities. The sub-dimension with lower scores involves the effects and potential harms of risks, meaning explanations of the boundaries of the impacts. Disclosures for this sub-section are below average, at 46% for the environmental dimension, 46% for the social dimension, 38% for the employee dimension, 20% for the human rights dimension, and 22% for the anti-corruption dimension. This could indicate an area for improvement in future non-financial statements, since, if companies discuss the repercussions of potential harms with

a long-term logic, they could better drive actions in response to identified risks. Finally, looking at the boxplots that illustrate the distribution of information availability (disclosed, not disclosed, and non-material), we can observe the positive results of risk disclosures. The center of the dispersion is 9, meaning that, of the total of 15 items, companies disclose more information than the average. The boxplot representing available information is 5.75 items wide (range: from Q3 at 11.75 to Q1 at 6). This means that the amount of information is centered over the average of items. Analogous results are found for not-disclosed information, though the amount of not-disclosed information is below the average, much closer to 0, meaning that very little information (regarding the effects of each risk) is not disclosed within the non-financial statements.

Figure 3.9. Boxplots for risks and opportunities



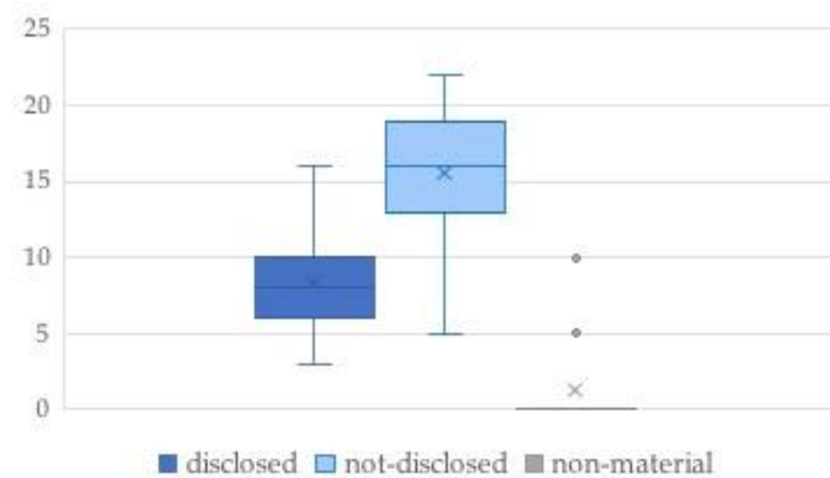
Source: Own elaboration

KPIs

The KPIs section has the lowest disclosure scores, at 35.4% overall and 29.33% and 31.37% for the financial and non-financial sectors, respectively. The range between the minimum and the maximum is 0.40 for banks and financial institutions and 0.63 for the others, meaning that no company gives a full picture of current, past, and expected performance. The data are very close to one

another, as confirmed by the standard deviation, which is 0.26598 for the whole sample; therefore, companies seems to behave similarly. For a better understanding, it is necessarily to analyze each of the sub-sections. A total of 25 items were examined, as we determined whether companies disclose quantitative indicators for each of the five topics (environmental, social, employees, human rights, and anticorruption) with respect to the time period: current, prior and future period. Therefore, we expect to see KPIs for the current year in comparison to prior years. We also expect KPIs suggesting companies' forward-looking goals and quantifying future objectives. We add the measurement methods for each topic and compare the sectors, since such disclosures could indicate full and in-depth explanations. Generally, companies provide quantitative data on the current period and the prior period, yielding a two-year comparison. In more detail, both comparisons and measurement methods are lacking for each sub-topic. In some cases, companies detail both their quantitative indicators and the methodology adopted. This is particularly true for the environmental, social and human rights dimensions, for which there are likely to be more indicators. If we consider, for example, the environmental dimension, we find extraordinary results because 22 companies provide measurement methods to clarify how the quantitative indicators are derived, but only 4 companies enrich the analysis with a comparison to industry or regional benchmarks. Similar results emerge for the social dimension, for which 38% of the sample provide details concerning the measurement method, but only two companies refine the analysis by matching data against other sectors. For all other sub-dimensions, companies offer neither benchmarks to other sectors nor details regarding measurement techniques. Figure 3.10. confirms these findings. The distribution of the boxplot for disclosed information is below the average, and, as we can see, the data are very close together, grouped in the center. On the other hand, the boxplot for not-disclosed information is much more widely spread, with a median (center) at 16 out of 25 items.

Figure 3.10. Boxplots for KPIs



Source: Own elaboration

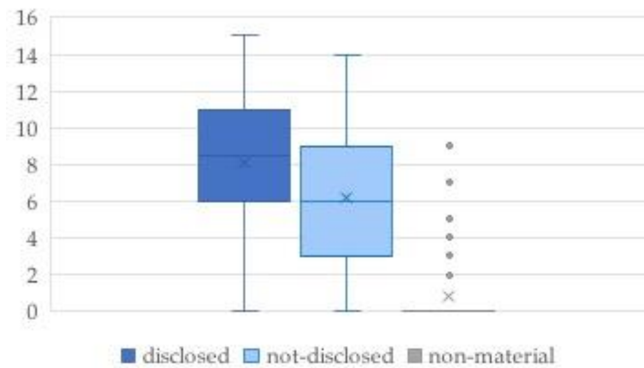
Voluntary items

This section refers to voluntary disclosures not explicitly mentioned in the Directive, but relevant to grab a fully disclosure of non-financial information since all the items are derived from the GRI. for this section, 15 items were under analysis, and, in more details, we can consider the presence/absence of GRI items going from 201 to 204 regards the economic performance, then ethics and integrity dimension, and finally the stakeholder engagement section.

Figure 3.11. shows boxplots regards the availability/absence of information and if we have a look at the left-hand box-plot, it shows that disclosures are higher, data are closer to each other in the range going from Q3-Q1, setting at 5, and the center is higher (8,5) in comparison to the average of the total items under investigation (7,5). Conversely, the boxplot of non-available information has a wide distribution, which is confirmed by the range going from Q3-Q1, which is 6 wide. Boxplot representing the non-available information has a wider shape and the center is below the average, confirming that less information is not available. Going into the analysis of each subsection we can see for example that for the stakeholder engagement sub-section, disclosures are well documented,

this means that companies report how they engage with stakeholders. However, this does not mean that they properly act with an inclusive stakeholder approach, in case they intend stakeholder engagement just as communication with stakeholder, without proactively enact a dual-relationships.

Figure 3.11. Boxplots for voluntary disclosures



Source: Own elaboration

Table 3.11. Disclosures for each content topic

		Envir.	Social	Empl.	Human Right	Anti Corr.	Diversity	Business Model	Policies	Risks	KPIs	Stakeholders
Non-financial sector	N	38	38	38	38	38	38	38	38	38	38	38
	Mean	0,48327	0,59961	0,53301	0,49894	0,64035	0,71100	0,50000	0,64689	0,63157	0,37315	0,57447
	Std. Dev.	0,23052	0,25142	0,23391	0,35472	0,30823	0,32110	0,28728	0,16448	0,26226	0,15334	0,25131
	Min	0,20000	0,10000	0,27272	0,00000	0,00000	0,00000	0,00000	0,29032	0,00000	0,12000	0,00000
	Max	1,00000	1,00000	1,00000	1,00000	1,00000	1,00000	1,00000	1,00000	1,00000	0,75000	1,00000
	Range	0,80000	0,90000	0,72727	1,00000	1,00000	1,00000	1,00000	0,70967	1,00000	0,63000	1,00000
Financial sector	N	12	12	12	12	12	12	12	12	12	12	12
	Mean	0,45510	0,39953	0,57110	0,31051	0,54166	0,70800	0,49242	0,52263	0,50580	0,29333	0,52222
	Std. Dev.	0,22630	0,22119	0,24932	0,31758	0,23435	0,33430	0,30140	0,16555	0,26588	0,12914	0,33973
	Min.	0,20000	0,14285	0,09090	0,00000	0,25000	0,00000	0,09090	0,32000	0,13333	0,12000	0,06666
	Max.	1,00000	0,81818	0,90909	0,88888	1,00000	1,00000	1,00000	0,90322	0,91666	0,52000	1,00000
	Range	0,80000	0,67532	0,81818	0,88888	0,75000	1,00000	0,90909	0,58322	0,78333	0,40000	0,93333
Total sample	N	50	50	50	50	50	50	50	50	50	50	50
	Mean	0,47651	0,55159	0,54215	0,45372	0,61666	0,71000	0,49818	0,61707	0,60139	0,35400	0,56193
	Std. Dev.	0,22753	0,25723	0,23567	0,35251	0,29306	0,32090	0,28762	0,17162	0,26598	0,15061	0,27223
	Min.	0,20000	0,10000	0,09090	0,00000	0,00000	0,00000	0,00000	0,29032	0,00000	0,12000	0,00000
	Max.	1,00000	1,00000	1,00000	1,00000	1,00000	1,00000	1,00000	1,00000	1,00000	0,75000	1,00000
	Range	0,80000	0,90000	0,90909	1,00000	1,00000	1,00000	1,00000	0,70967	1,00000	0,63000	1,00000

Source: Own elaboration

3.2.1. *Analysis of independent variables*

Table 3.12 shows descriptive results for the variable used in the regression analysis. Approximately 34% of the sample disclose NFI in the annual report, just 6 companies of 50 adopt the GRI comprehensive option, as confirmed by the mean and the low standard deviation close to 0.00. The value means of the reporting year sets ad 5.70, meaning that companies have already a good track record regards sustainability reporting and NFI disclosure. Board independents gets 0.6066 as value means, therefore it means that corporate governance is structured in terms independent members who guarantee impartiality on decisions. To grab the family influence, we measure the interaction between family members on boards, and family ownership, and results shows that 34% of 50 companies is family oriented. Finally, market-based measures and accounting-based performance essentially depend on the Italian context and other external environmental contingencies. Moving toward correlations among variables, the analysis of the Pearson correlation reinforces the study with two main evidence. First, the predicted sings of our variables are overall in accordance with the statistical correlations. Second, the matrix correlation serves for the multicollinearity check among variables: data do not show that multicollinearity has compromised the empirical results since VIF (variance inflation factors) are lower than 0.70. Pairwise correlations are presented in Table 3.13.

Table 3.12. Descriptive statistics for regression variables

Variables	N	Min	Max	Mean	Std. Deviation
Annual_Report	50	0	1	.34	.479
GRI_comprehensive	50	.00	1.00	.0000	.00258
Reporting_Year	50	1	18	5.70	5.441
Tobin_Q	50	0,02196	7,44616	1,14673	1,24417
WACC_Debt_Weight	50	.00000	.91915	.3307344	.28402128
ROE	50	-0,4718	0,3508	0,0874	0,1441
Board_Independence	50	.30769	.88889	.6066520	.15564468
Board_Size	50	8	22	11.62	3.219
Family_Ownership_Board	50	.00	1.00	.3400	.47852
Beta	50	0,31387	2,19539	1,01644	0,50727
Leverage	50	0,10079	10,7052	1,6089	1,8263
Ln_Employees	50	2,9117	5,13271	4,06544	0,54601

Table 3.13. Correlation among variables

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
(1) C_Score	1												
(2) Annual_Report	-0,333*	1											
(3) GRI_Comprehens.	0,501**	-0,046	1										
(4) Reporting_Year	0,311*	-0,093	0,108	1									
(5) Wacc	0,303*	-0,189	0,325*	0,248	1								
(6) TobinQ	0,052	-0,127	-0,177	-0,250	0,397**	1							
(7) ROE	-0,029	-0,088	-0,200	-0,078	0,178	0,412**	1						
(8) Family_Influence	-0,190	-0,070	-0,168	-0,227	-0,155	0,178	-0,075	1					
(9) Board_Size	0,159	-0,047	0,338*	0,162	0,058	-0,248	-0,089	-0,179	1				
(10) Board_Independ.	0,147	0,028	0,206	0,429**	0,152	-0,200	-0,159	-0,502**	0,088	1			
(11) Beta	0,028	-0,059	0,184	0,414	0,246	-0,485**	-0,209	-0,218	0,574**	0,051	1		
(12) Leverage	-0,010	0.003	0,098	0,124	0,591**	-0,264	0,011	-0,212	-0,066	0,083	0,187	1	
(13) Ln_Employees	0.081	-0,068	0,133	0,368**	0,165	-0,303*	-0,308*	-0,300*	0,260	0,520**	0,197	-0,030	1

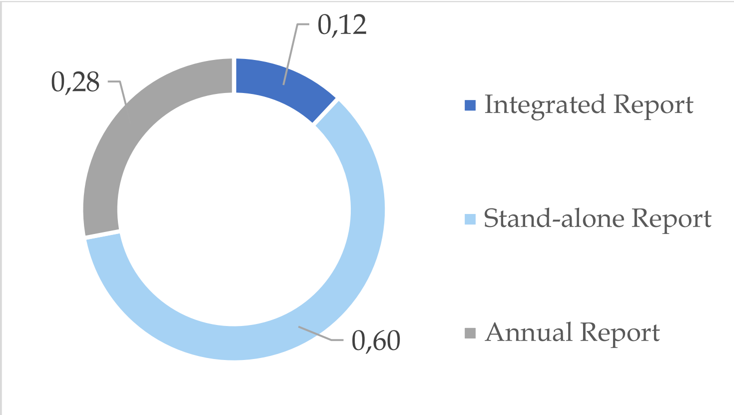
Note: t statistics in parentheses *** p<0,01, ** p<0,05, * p<0,10

The analysis proceeds with the illustration of the reporting boundaries the non-financial statement is presented, and international standards frameworks Italian companies generally adopted as anchor point. The reporting boundaries refers to the type of the documents in which non-financial information are disclosed. Figure 3.12. shows the results. As we can see, 3 options were primarily adopted: (1) the incorporation of the non-financial statement in the management report within the annual report; (2) the adoption of the non-financial statement as standalone report (3) the configuration of an integrated report. In more details, 14 of 50 companies present the non-financial statement within the management report; 30 of 50 companies disclose non-financial information in a stand-alone report namely, CSR Report, Sustainability Report, Sustainability and Innovation Report or eventually, Non-financial disclosure pursuant to Decree 254/2016. Finally, 6 companies of 50 address non-financial information with the adoption of the Integrated Reporting Framework[24], that is confirmatory of the preliminary analysis carried out by the Consob (2018). However, going into the analysis of each of those integrated reports, differences emerge and can be classified in two different approaches. On the one hand, 3 companies of 6 show the integrated report *within* the consolidated financial statement (Unipol's Integrated Consolidated Financial Statement 2017; Generali's Annual Integrated Report and Consolidated Financial Statements 2017; Pirelli Annual Report). For those companies, in some documents the information is grouped into the detailed section (Report on Responsible Management of the Value Chain – Pirelli's Annual Report, 2017), whereas in others, NFI disclosure is diluted in several sections, addressing a summary chart (Unipol's Integrated Consolidated Financial Statement 2017) or adding references to the report (Generali's Annual Integrated Report and Consolidated Financial Statements 2017). On the other hand, 3 companies of 6 show

[24] e.g. "the Annual Report 2017 took into consideration the Integrated Reporting principles contained in the framework of the International Integrated Reporting Council (IIRC), the Financial Statements and Consolidated Financial Statements were drawn up according to IFRS international accounting standards, and the sustainability performance meets the GRI Standards and the provisions of the Legislative Decree of December 30, 2016, no. 254" (Pirelli & C. S.p.A, 2017 Annual Report)

the integrated report *nearby* the consolidated financial statement, meaning that they present two distinctive documents (Unicredit Integrated Report, A2A Integrated Report and Atlantia Integrated Report). Such divergences confirm that there is no unanimous consensus on reporting boundaries, and this can be especially highlighted for those companies which present the integrated reporting, since all of them adopt the <IR> Framework, however, the documentations differ substantially. Such a murky representation of non-financial information is reasonably acceptable since the Directive and the Decree left to the company the possibility to disclose such an information within the management report or in a separated document distinctively referring at such a dedicate document in the management report.

Figure 3.12. Reporting boundaries of non-financial information disclosure

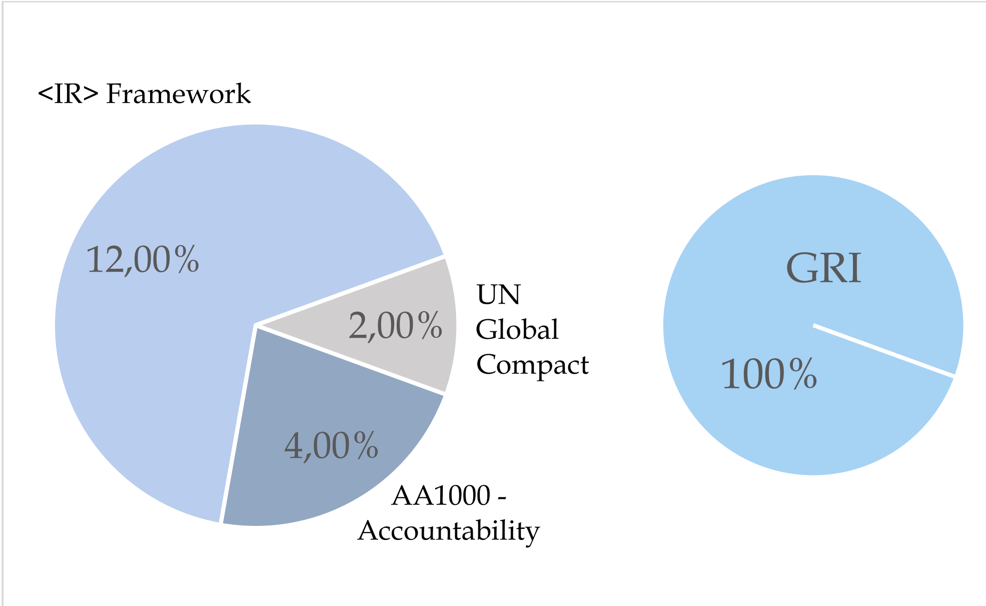


Source: own elaboration

As regard the adoption of the international standards guidelines, there is a unanimous consensus in favor of the Global Reporting Initiative schemes (GRI or G4 adoption). The reason why GRI gets unanimity over years can be ascribed to the consolidated acceptance of the GRI as the trusted reference for policymakers and regulators worldwide, leading to higher comparability among non-financial reporting. As underlined by Waddock (2008), todays, the GRI reporting guidelines acquire consensus among scholars to be "the global benchmark for standardized ESG [environmental, social and governance]/nonfinancial reporting" and "to be comparable to generally accepted accounting principles for financial reporting" (p. 93).

The whole sample declared to prepare the report in accordance with the GRI Standards. 9 companies of 50 in total declared the adoption of another additional international standard framework, to enrich the disclosure nearby the GRI guidelines. In more details, 6 of 9 adopted the <IR> Framework (12%), the 4% followed the AA1000 Accountability Principles Standard 2008 and finally the 2% acknowledged both the UN Global Compact Principles and the GRI Framework as reporting guidelines. Figure 4.13. illustrates the percentages.

Figure 3.13. Percentages of international standard frameworks adoption



Source: Own elaboration

Since there is unanimity in favor of the GRI guidelines it might be of interest understand which reporting options in accordance with GRI Standards companies addressed. In essence, companies can adopt three different methods:

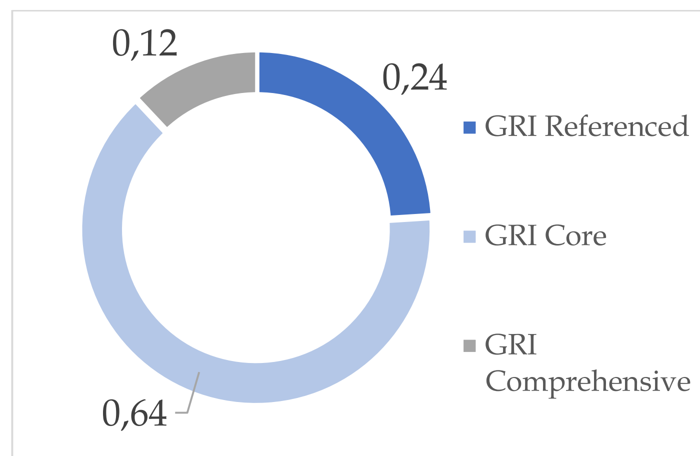
1) GRI-Referenced using selected standards: companies indicate which specific economic, environmental, social content from the standard they applied;
2) GRI in Accordance - Core option: the report needs to contain the minimum information needed to understand the nature of the organization (GRI 102 - General Disclosure), its material topic and how these are managed (GRI 103 – Management Approach. Moreover, for each material topic covered by a topic-

specific GRI Standard the company needs to disclose at least one-topic specific disclosure;

3) GRI in Accordance - Comprehensive option: the report needs to contain all disclosures related GRI 102 – General Disclosure, and similarly and the core option the explanation of the management approach and the topic boundary for all material topic. What differs substantially refers to the topic-specific disclosures: companies have to comply with all reporting requirements for all topic specific disclosures.

Figure 3.14 presents the results. As we can see, 64% of companies declared the adoption of the GRI-core option, meaning that they address the management approach and, at least, one topic-specific disclosures. By contrast, the remaining 36% of companies adopted opposite approaches: respectively, 12% follows the GRI-Referenced and the 24% provide full disclosures with the adoption of the comprehensive option.

Figure 3.14. GRI reporting adoptions



Source: own elaboration

From these descriptive results, we can derive that reporting traits could play a crucial role in the identification of higher levels of disclosures, therefore we intertwine the disclosure score with the reporting boundary for first, and with the GRI reporting option for second, in order to highlight preliminary results for descriptive data. Figure 4.15. shows the distribution of the disclosure score, also known as disclosures levels,

with a comparison between non-financial information disclosed within the annual report, conversely in the separate report. The boxplot on the left-side hand centers at 0.53247 and the range between Q3 and Q1 is wider that the range between Q3 and Q1 of the boxplot on the right-side hand which gets a median of 0.43651. As shown in Figure 3.24 companies with a separate report gets on average higher levels for disclosures that those companies which present non-financial information within the annual report. Similarly, disclosures levels are higher in case of the adoption of the GRI comprehensive option, as shown in Figure 4.16, and this are confirmatory data.

Figure 3.15. Disclosure levels intertwined with reporting boundaries

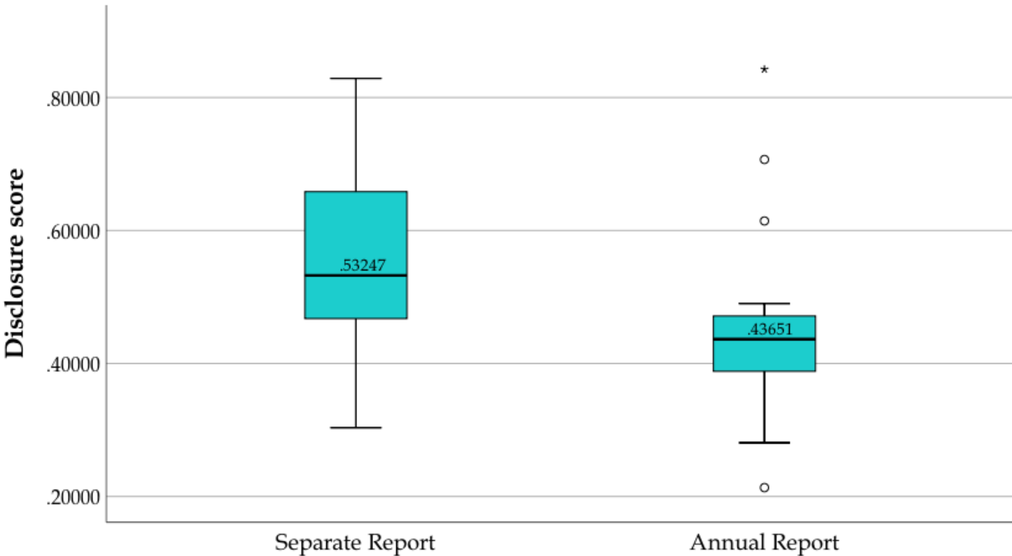
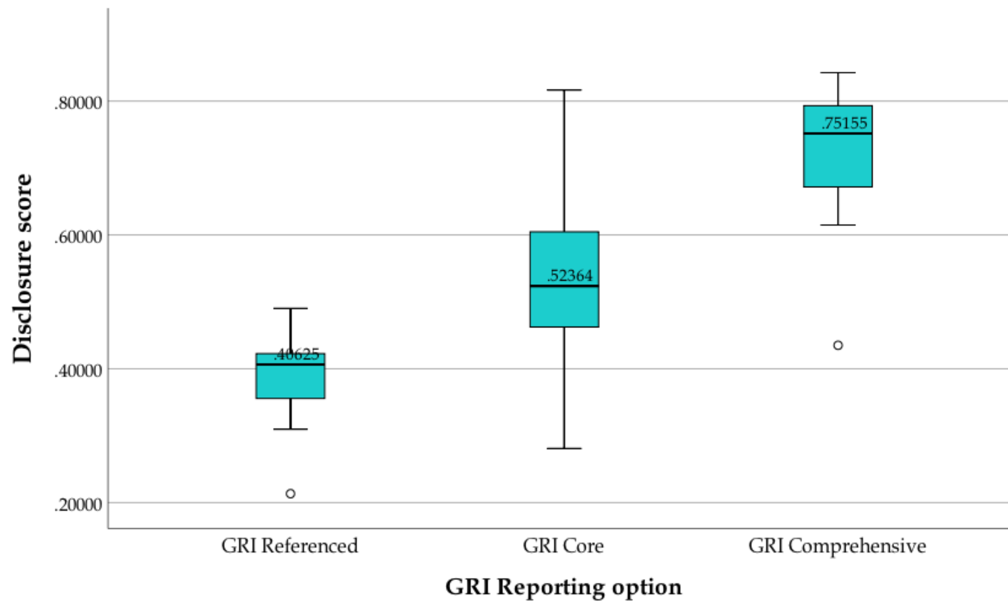


Figure 3.16. Disclosure levels intertwined with reporting boundaries



3.5. Regression models

The results of the OLS regressions are shown in Table 3.14, distinguishing between the different disclosures configurations, respectively the Disclosure score, the EU_Compliance score and the GRI_Compliance score. Regarding reporting traits as determinants to favor higher levels of disclosure, the results are consistent throughout the different disclosure configurations. Annual report is significant at a level of 95% (p value < 0,05) respectively for the disclosure score and the GRI compliance score whereas is significant at a level of 90% (p value < 0,10) for the EU compliance score. such significant levels suggest that the variable Annual Report determines disclosure levels and, to go in depth into the quantification of such effects, the analysis of each Beta coefficient is needed. For the disclosure score the Beta coefficient for Annual_Report sets at -0,281 meaning that companies disclosing NFI within the annual report gets a reduction of their disclosure score equal to 0,281 in mean. In a similar vein, such an effect is significant both for the EU_Compliance Score and the GRI_Compliance Score, meaning that scores decrease respectively of 0,296 and 0,278, in mean, in case of an explanation of such information within the annual report. Such surprising results confirms what comes out from both the pairwise correlation (Table 3.20) and the descriptive results (Figure 3.24). As a matter of fact, the correlation between the Disclosure_Score and the dummy variable Annual_Report sets at -0,333

with a significant level of 90%, meaning that there is a negative correlation among variables. Hence, this suggests that companies which disclose NFI in the stand-alone report (CSR reports, non-financial statements) gets higher disclosure level in comparison with NFI disclosed in the annual report, and this is even confirmed for all the disclosure scores.

Turning into the understanding of the role of the GRI comprehensive option on different disclosures configurations, regressions analyses confirm the insights coming from the descriptive analysis (Figure 3.25) regards low level of disclose in case of an application of the GRI referenced option and high level of disclose when companies adopt the GRI comprehensive option. Moreover, and intuitively, regressions confirm the positive sign which we can derive from the pairwise correlation between the Disclosure_Score and the dummy variable GRI_Comprehensive. The correlation is positive (0,501**) and significant (p value < 0,05) meaning that going from 0 (no application of the GRI_Comprehensive) to 1 (adoption of the GRI_Comprehensive) the variable Disclosure_score is moving accordingly by 0,501. In more details, looking at regressions, the variable GRI_Comprehensive remains significant in 2 out of 3 disclosure configurations (respectively for the Disclosure_Score and the GRI_Compliance_Score) with p value < 0,01. Adopting the GRI comprehensive option against the non-adoption of such an option leads to an increase of the disclosure score equal to 0,514 in mean. The GRI_compliance score gets a positive effect equal to 0,066 in case the GRI comprehensive option is present with p value < 0,000, therefore the significance of such a variable is confirmed, but the effect equal to the value of the beta coefficient (0,066) is lower in comparison to 0,514 (value of the beta coefficient with the disclosure score configuration). The last reporting feature under analysis was the variable Reporting Year, which track the company's history on sustainability reporting. As we can see Reporting_Year is consistent throughout the disclosure configurations and it is significant at p-value < 0,05 for the Disclosure score and it is significant at p-value < 0,10 for the EU_Compliance score and GRI_Compliance score. Precisely, an increasing of one year in reporting, the Disclosure_Score increases of 0,355, the EU_Compliance_Score increases of 0,334 and for the GRI_Compliance_Score

the effect sets at 0,004 which is less in comparison to the other Beta coefficient. With respect to financial performance, we do not find any significant effects, with exception in one case. In more details, TobinQ addresses the level of financial performance with regards to the regression analysis, and it suggests that an increase of one unit of the TobinQ has a positive and significant impact on the GRI_Compliance which respectively increases of 0,019, which is the value of the Beta coefficient. This means that companies with higher levels of this market-based financial measures increase their disclosures of 0,019. However, that positive results cannot be confirmed by the accounting-based financial measures, such as the Return on Equity we included in our model. As a matter of fact, the beta coefficient for the ROE is not significant for all the configurations of the disclosure score, even if the literature generally confirms such a relations (Skouloudis *et al.*, 2014).

Table 3.14. OLS multiple regression

VARIABLES	Disclosure Score	EU_Compliance Score	GRI_Compliance Score
Annual Report	-0,281	-0,296	-0,278
	(0,041***)	(0,067**)	(0,025***)
GRI_Comprehensive	0,514	0,258	0,065
	(0,002***)	(0,152)	(0,000***)
Reporting_Year	0,355	0,334	0,004
	(0,041***)	(0,101*)	0,100*
Wacc	0,190	-0,104	0,082
	(0,298)	(0,629)	(0,055**
TobinQ	0,240	-0,042	0,019
	(0,165)	(0,836)	(0,023***)
ROE	-0,023	-0,041	0,154
	(0,873)	(0,810)	(0,754)
Family_Influence	-0,069	-0,146	0,048
	(0,686)	(0,472)	(0,640)
Board_Size	0,001	-0,10	-
	(0,993)	(0,961)	-
Board_Independ.	-0,135	-0,085	-
	(0,482)	(0,709)	-
Beta	0,019	-0,183	-
	(0,919)	(0,423)	-
Leverage	-0,198	-0,194	-
	(0,222)	(0,310)	-

Size	-0,017	-0,048	0,018
	(0,916)	(0,807)	(0,788)
Industries	0,072	0.075	0,035
	(0,636)	(0,680)	(0756)
Observations	50	50	50
R-squared	0,584	0,445	0,665

Afterward, looking at the family influence, which is the interaction between family board and family ownership, to understand whether families play a road in the management decision regarding NFI disclosures, we did not find significant and relevant results. Therefore, such results do not advance the literature in favor of the research of Muttakin & Khan (2014), which identify family owners not engaged with sustainability disclosure, against the work of (Laguir *et al.*, 2016), which highlight the attitude to see stakeholders as partners, hence leading to an inclined approach to enhance NFI. Similarly, concerning the corporate governance structure, identified with the inclusion of the Board_Size, Board_Independence, regression analysis does not display significant effects on the level of disclosure. Finally, taking a look at our control variable (beta, leverage, size and industry), results are consistent with our expectations, especially regards the pairwise correlations, among others Beta and TobinQ (-0,485) and Leverage and Wacc (0,591) and Roe and Tobin Q (0,412).

3.6. Discussion of findings

The findings from the regression analysis support the position that reporting traits under mandatory disclosure have effect on different disclosure configurations and this is even consistent under all the three variables taken into account to characterize the reporting traits: Annual_Report, GRI_Comprehensive, and Reporting_Year. It is surprisingly noting that the variable Annual_Report is significant in favor of higher disclosures in case of the adopting of a stand-alone report *nearby* the annual report instead of the inclusion of NFI *within* the annual report. GRI_Comprehensive favor higher levels of disclosure and this is especially true for the GRI_Compliance Score which represents disclosures merely and strictly according to GRI Guidelines. Finally,

as expected, we found that companies which have a long history regards sustainability reporting, meaning that they have much more experience in disclosing non-financial information to stakeholders in comparison to the others in the early-stage of such an adoption, gets higher levels of disclosures. Therefore, as expected, reporting traits constitute determinants that are in favor of higher levels of disclosure. This is confirmed by the regression analysis performed in paragraph 3.5, which identifies the GRI_comprehensive option, the Annual Report, and the Reporting Year—explanatory variables for reporting traits—as significant (p value < 0.05) in determining higher levels of NFI disclosure. The results are also consistent with the literature, particularly with the findings of Michelon *et al.* (2015), who found that the amount of information disclosed in stand-alone reports is higher than that disclosed by companies producing a stand-alone sustainability report. The study of Michelon *et al.* (2015) furthers the analysis and addresses information quality and finds that disclosure quality is not associated with stand-alone reports by suggesting, as a consequence, that stand-alone report might incentive a symbolic approach to disclosure rather than substantive. All things considered, reporting traits serve as confirmatory data in favor of higher levels of disclosure. On the other hand, the present study does not find any significant levels for family influence, indicating that divergency coming from the literature (see Section 2.2.1 – Family involvement) is still present.

Conclusions

The thesis aimed to illustrate disclosures of non-financial information (NFI), to identify levels of compliance under mandatory disclosure, and to provide evidence of the determinants that favor higher levels of NFI disclosure.

To achieve these objectives, the study developed the disclosure score by using 165 items in total, and it addressed the main company factors on a sample of 50 Italian listed companies, which are forced into the application of EU Directive 95/2016. The disclosure score is set at 52.259%, meaning that companies seem to be compliant with the Directive.

The level of compliance is backed by another strand of scholarly research that assesses the level of compliance of NFI under a voluntary disclosure (Venturelli *et al.*, 2017). As a matter of fact, the disclosure_score we derived does not differ substantially from that found by Venturelli *et al.* (2017), which is at 49.60% and refers to a voluntary-based disclosure regime. This result does not deviate considerably from the disclosure score we obtained in our research, even if both studies are not comparable to each other because the number of items analyzed diverge consistently for each disclosure score (43 items addressed in the study of Venturelli (2017) against 165 items in this research).

To understand levels of substantial compliance, the research split the disclosure score into two, namely respectively the GRI_compliance_score and the EU_compliance_score. Particularly, the GRI_compliance_score is set at 56.106%, compared with the EU_compliance score set at 51.882%; evidently, the GRI_compliance score is higher than the UE_compliance score. However, if we look at how the data diverge from the medium, the UE_compliance score has lower data dispersion than the GRI_compliance score. Therefore, normativity seems to be ensured primarily by the GRI rather than the Directive.

Such an approach might be explained by two main reasons arising from an outward perspective, namely the normative decoupling – and from an inward perspective, namely the means-end decoupling. The research details these argumentations hereafter.

From an outward perspective, the EU Directive has settled broad requirements, leaving a certain degree of further explanation to companies in addressing which are material topics and in choosing the international standards framework they prefer foremost. In this vein, companies had to rely on one of the reporting boundaries suggested by the Directive, and companies unanimously agreed in favor of the GRI; and to be compliant with GRI means preparing the sustainability report adopting one of the three options detailed in the GRI 101 – General Disclosure: "GRI-Referenced, option core, option comprehensive", which differ substantially in disclosures approaches as regard the explanation of material topics. Therefore, compliance levels are affected by the different disclosure options companies can choose.
Keeping this into practice, particularly, half of the sample agreed on the adoption of the GRI core option (as detailed in paragraph 3.4). Therefore, as expected, reporting traits constitute determinants that are in favor of higher levels of disclosure. This is confirmed by the regression analysis performed in paragraph 3.5, which identifies, in this particular issue, the GRI comprehensive option as significant (p value < 0.05) in determining higher levels of NFI disclosure. That said, it is evident that the manner of reporting might influence the disclosure levels of NFI. In other words, this means that disclosure levels are affected by such a reporting trait, which in turn jeopardize materiality, since it is addressed differently depending on which GRI option companies have chosen.
From an inward perspective, findings regarding disclosures of NFI suggest that companies address NFI broadly without presenting further explanations and details for topics that they consider material. In other words, the range of disclosures – meaning the breadth – is wide, and the details of disclosures – meaning the depth – is narrow.
Our results confirm that companies, in keeping with this practice, respect the minimum adequacy to claim that a report has been prepared in accordance with standards, but we are fairly quite far from a comprehensive disclosure of all requirements for each material topic. For instance, there is a misalignment between intentions and actions resulting from both the manual reading of each NFI under

analysis and the illustration of the descriptive statistics (paragraph 3.4). In more details, non-financial statements are quite overwhelmed by statements of values and intentions and are less enriched by concrete programs and tangible results. Companies are likely to disclose their policies and social initiatives quite well in a qualitative way for the current period compared with the prior one, but few align their actual results (explained in both qualitative and quantitative way) with their sustainability plans. In addition, companies provide a general description of their business model, but very few provide details, such as potential outcomes in the long term. Moreover, with reference to risks and opportunities, they unanimously identify potential risks but rarely disclose the potential dangers of these risks and the boundaries at which these risks may occur, which, in turn, may negatively influence business activities. In this regard, risks and opportunities seem to be disconnected from future planned activities. A similar logic needs to be acknowledged for the KPIs section, which presents the lowest score among the areas considered. KPIs seem to be perceived as stand-alone results without target ends; the study acknowledges the little quantification of future target objectives in comparison to prior and past quantitative results. Ultimately, it is interesting to consider as a divergent issue how companies deal with materiality.

They are very inclined to provide a materiality matrix, and they further explain how material topics are identified; however, when they elucidate each of these material topics, they do not so in a matter that all disclosure requirements/recommendations are presented.

In reference to the academic literature, the means-end decoupling, which is the degree to which policies and the practices necessary to realize firms' commitments are weakly linked with each other (Bromley & Powell, 2012), seems to prevail in these disclosure approaches. In more details, the means-end decoupling occurs when "the link between policies and the practices necessary to realize firms' commitments is ambiguous. In other words, rather than try[ing] to outwit their stakeholders, decision-makers may not know how to keep the promises they make" (Crilly, Hansen, & Zollo, 2016: 707). Such concern therefore arises considering the information disclosed within the report; especially regards what has been addressed and how it has been explained.

Our results suggest that the pathway toward non-financial information disclosure is filled with both opportunities and challenges, especially regarding the deep understanding and concrete implementation of the "materiality concept" which is undermined by both the normative decoupling and the means-end decoupling.
The UE regulatory reform and the subsequent Italian Decree enact non-financial information disclosure from a voluntary regime to a mandatory regulation, and companies are driven toward social responsibility and environmental sensitivity through such a non-financial information disclosure, and therefore such levels of compliance are acknowledged. What comes next is to understand whether companies implement socially responsible practices within their daily activities, and whether they account for and report results and KPIs regards material topics systematically.

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Appendix A: Disclosure checklist

Ref to EU Directive	Topic-Specific Disclosures	Requirements	GRI / IR Disclosure number	GRI/G4
Art. 19 bis	GRI 301 - Materials	Materials used by weight or volume	GRI 301-1	G4-EN1
Art. 19 bis	GRI 301 - Materials	Recycled input materials used	GRI 301-2	G4-EN2
Art. 19 bis	GRI 301 - Materials	Recycled products and their packaging materials	GRI 301-3	G4-EN28
Art. 19 bis	GRI 302 - Energy	Energy consumption **within** the organization	GRI 302-1	G4-EN3
Art. 19 bis	GRI 302 - Energy	Energy consumption **outside** of the organization	GRI 302-2	G4-EN4
Art. 19 bis	GRI 302 - Energy	Energy intensity	GRI 302-3	G4-EN5
Art. 19 bis	GRI 302 - Energy	Reduction of energy consumption	GRI 302-4	G4-EN6
Art. 19 bis	GRI 302 - Energy	Reductions in energy requirements of products and services	GRI 302-5	G4-EN7
Art. 19 bis	GRI 303 - Water	Water withdrawal by source	GRI 303-1	G4-EN8
Art. 19 bis	GRI 303 - Water	Water sources significantly affected by withdrawal of water	GRI 303-2	G4-EN9
Art. 19 bis	GRI 303 - Water	Water recycled and reused	GRI 303-3	G4-EN10
Art. 19 bis	GRI 304 - Biodiversity	Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas	GRI 304-1	G4-EN11
Art. 19 bis	GRI 304 - Biodiversity	Significant impacts of activities, products and services on biodiversity	GRI 304-2	G4-EN12
Art. 19 bis	GRI 304 - Biodiversity	habitats protected or restored	GRI 304-3	G4-EN13
Art. 19 bis	GRI 304 - Biodiversity	IUCN Red list species and national conservation list species with habitants in areas affected by operations	GRI 304-4	G4-EN14
Art. 19 bis	GRI 305 - Emissions	Direct (Scope1) GHG emissions	GRI 305-1	G4-EN15
Art. 19 bis	GRI 305 - Emissions	Energy indirect (Scope 2) GHG emissions	GRI 305-2	G4-EN16
Art. 19 bis	GRI 305 - Emissions	Other indirect (Scope 3) GHG emissions	GRI 305-3	G4-EN17
Art. 19 bis	GRI 305 - Emissions	GHG emissions intensity	GRI 305-4	G4-EN18
Art. 19 bis	GRI 305 - Emissions	Reduction of GHG emissions	GRI 305-5	G4-EN19
Art. 19 bis	GRI 305 - Emissions	Emissions of ozone-depleting substances (ODS)	GRI 305-6	G4-EN20
Art. 19 bis	GRI 305 - Emissions	Nitrogen oxides (Nox) sulfur oxides (Sox), and other significant air emissions	GRI 305-7	G4-EN21
Art. 19 bis	GRI 306 - Effluents and waste	Water discharge by quality and destination	GRI 306-1	G4-EN22

Art. 19 bis	GRI 306 - Effluents and waste	Waste by type and disposal method	GRI 306-2	G4-EN23
Art. 19 bis	GRI 306 - Effluents and waste	Significant spills	GRI 306-3	G4-EN24
Art. 19 bis	GRI 306 - Effluents and waste	Transport of hazardous waste	GRI 306-4	G4-EN25
Art. 19 bis	GRI 306 - Effluents and waste	Water bodies affected by water disharges and or runoff	GRI 306-5	G4-EN26
Art. 19 bis	GRI 307 - Environmental Compliance	Non-compliance with environmental laws and regulations	GRI 307-1	G4-EN29
Art. 19 bis	GRI 308 - Supplier Environmental Assessment	New suppliers that were screened using environmental criteria	GRI 308-1	G4-EN32
Art. 19 bis	GRI 308 - Supplier Environmental Assessment	Negative environmental impacts in the supply chain and action taken	GRI 308-2	G4-EN33
Art. 19 bis	GRI 413 - Local Communities	Operations with local community engagement, impact assessment and development programs	GRI 413-1	G4-SO1
Art. 19 bis	GRI 413 - Local Communities	Operations with significant actual and potential negative impacts on local communities	GRI 413-2	G4-SO2
Art. 19 bis	GRI 414 - Supplier Human Right - Social Assessment	New suppliers that were screened using social criteria	GRI 414-1	G4-HR10
Art. 19 bis	GRI 414 - Supplier Social Assessment	Negative social impacts in the supply chain and actions taken	GRI 414-2	G4-HR11
Art. 19 bis	GRI 415 - Public Policy	Political contributions	GRI 415-1	G4-SO6
Art. 19 bis	GRI 416 - Customer health and safety	Assessment of the health and safety impacts of product and service categories	GRI 416-1	G4-PR1
Art. 19 bis	GRI 416 - Customer health and safety	Incidents of non-compliance concerning the health and safety impacts of products and services	GRI 416-2	G4-PR2
Art. 19 bis	GRI 417 - Marketing and Labeling	Requirements for products and service information and labeling	GRI 417-1	G4-PR3
Art. 19 bis	GRI 417 - Marketing and Labeling	Incidents of non-compliance concerning product and service information and labeling	GRI 417-2	G4-PR4
Art. 19 bis	GRI 417 - Marketing and Labeling	Incidents of non-compliance concerning marketing communications	GRI 417-3	G4-PR7

Art. 19 bis	GRI 418 - Customer Privacy	Substantiated complaints concerning breaches of customer privacy and losses of customer data	GRI 418-1	G4-PR8
Art. 19 bis	GRI 419 - Socioeconomic Compliance	Non-compliance with laws and regulations in the social and economic data	GRI 419-1	G4-PR9
Art. 19 bis	GRI 401 - Employment	New employee hires and employee turnover	GRI 401-1	G4-LA1
Art. 19 bis	GRI 401 - Employment	Benefits provided to full-time employees that are not provided to temporary or part-time employees.	GRI 401-2	G4-LA2
Art. 19 bis	GRI 401 - Employment	Parental leave	GRI 401-3	G4-LA3
Art. 19 bis	GRI 402 - Labor/managem ent relations	Minimum notice periods regarding operational changes	GRI 402-1	G4-LA4
Art. 19 bis	GRI 403 - Occupational health and safety	Workers representation in formal joint management-worker health and safety committees	GRI 403-1	G4-LA5
Art. 19 bis	GRI 403 - Occupational health and safety	Types of injury and rates of injury, occupational diseases, lost days, and absenteesm, and number of work related fatalities	GRI 403-2	G4-LA6
Art. 19 bis	GRI 403 - Occupational health and safety	Workers with high incidence or high risk of diseases related to their occupation	GRI 403-3	G4-LA7
Art. 19 bis	GRI 403 - Occupational health and safety	Health and safety topics covered in formal agreements with trade unions	GRI 403-4	G4-LA8
Art. 19 bis	GRI 404 - Training and education	Average hours of training per year per employee	GRI 404-1	G4-LA9
Art. 19 bis	GRI 404 - Training and education	Programs for upgrading employee skills and transition assistance programs	GRI 404-2	G4-LA10
Art. 19 bis	GRI 404 - Training and education	Percentage of employees receiving regular performance and career development reviews	GRI 404-3	G4-LA11
Art. 19 bis	GRI 406 - Non-discrimination	Incidents of discrimination and corrective actions taken	GRI 406-1	G4-HR3
Art. 19 bis	GRI 407 - Freedom of Association and collective bargaining	Operations and suppliers in which the right to freedom of association and collective bargaining may be at risk	GRI 407-1	G4-HR4
Art. 19 bis	GRI 408 - Child Labor	Operations and suppliers at significant risk for incidents of child labour	GRI 408-1	G4-HR5
Art. 19 bis	GRI 409 - Forced or compulsory Labour	Operations and suppliers at significant risk for incidents forced or compulsory labour	GRI 409-1	G4-HR6
Art. 19 bis	GRI 410 - Security practices	Security personnel trained in human rights policies or procedures	GRI 410-1	G4-HR7

Art. 19 bis	GRI 411 - Rights of indigenous peoples	Incidents of violations involving rights of indigenous peoples	GRI 411-1	G4-HR8
Art. 19 bis	GRI 412 - Human rights assessment	Operations that have been subject to human rights reviews or impact assessments	GRI 412-1	G4-HR9
Art. 19 bis	GRI 412 - Human rights assessment	Employee training on human rights policies or procedures	GRI 412-2	G4-HR2
Art. 19 bis	GRI 412 - Human rights assessment	Significant investment agreements and contracts that include human rights clauses or that underwent human right screening	GRI 412-3	G4-HR1
Art. 19 bis	GRI 205 - Anticorruption	Operations assessed for risks related to corruption	GRI 205-1	G4-SO3
Art. 19 bis	GRI 205 - Anticorruption	Communication and training about anti-corruption policies and procedures	GRI 205-2	G4-SO4
Art. 19 bis	GRI 205 - Anticorruption	Confirmed incidents of corruption and action taken	GRI 205-3	G4-SO5
Art. 19 bis	GRI 206 - Anti-competitive behavior	Legal actions for anti-competitive behavior, anti-trust, and monopoly practices	GRI 206-1	G4-SO7
Art. 20	GRI 405 - Diversity and equal opportunity	Diversity of governance bodies and employees	GRI 405-1	G4-LA12
Art. 20	GRI 405 - Diversity and equal opportunity	Ratio of basic salary and remuneration of women to men	GRI 405-2	G4-LA13

Ref to EU Directive	Section	Item	IR
ART. 19 BIS 1a	BM - general description	A simple diagram highlighting key elements, supported by a clear explanation of the relevance of those elements to the organization	4,13
ART. 19 BIS 1a	BM - general description	Identification of critical stakeholder and other (e.g., raw material) dependencies and important factors affecting the external environment	4,13
ART. 19 BIS 1a	BM - general description	Connection to information covered by other Content Elements, such as strategy, risks and opportunities, and performance (including KPIs and financial considerations, like cost containment and revenues)	4,13
ART. 19 BIS 1a	BM - Inputs	Inputs and extent they are material to understand the robustness and resilience of the business model	4,14
ART. 19 BIS 1a	BM - Business activities	Market place differentiation (e.g., through product differentiation, market segmentation, delivery channels and marketing)	4,16
ART. 19 BIS 1a	BM - Business activities	Revenue generation after the initial point of sale (e.g., extended warranty arrangements or network usage charges) within the business model	4,16
ART. 19 BIS 1a	BM - Business activities	Contribution made to the organization's long term success by initiatives such as process improvement, employee training and relationships management	4,17

ART. 19 BIS 1a	BM - Outcomes	Internal outcomes (e.g. employee morale, organizational reputation, revenue and cash flows)	4,19
ART. 19 BIS 1a	BM - Outcomes	External outcomes (e.g., customer satisfaction, tax payments, brand loyalty, and social and environmental effects)	4,19
ART. 19 BIS 1a	BM - Outcomes	Positive outcomes (i.e., those that result in a net increase and thereby create value)	4,19
ART. 19 BIS 1a	BM - Outcomes	Negative outcomes (i.e., those that result in a net decrease in the capitals and thereby diminish value)	4,19

Ref to EU Directive	**General Disclosure**	**Items**	**Ref.**	
ART. 19 BIS 1b	Management approach	List of the material topic, for each material topic	GRI 103-1	G4-DMA-a
ART. 19 BIS 1b	Management approach	Explanation of why the topic is material	GRI 103-1	G4-DMA-a
ART. 19 BIS 1b	Management approach	Boundary for the material topic, which includes a description of whether the impact occur	GRI 103-1	G4-DMA-a
ART. 19 BIS 1b	Management approach	Boundary for the material topic, which includes a description of the organization's involvement with the impacts.	GRI 103-1	G4-DMA-a
ART. 19 BIS 1b	Management approach	Limitation regarding the topic boundary	GRI 103-1	G4-DMA-a
ART. 19 BIS 1b	Management approach	Statement of the purpose, goals and targets of the management approach	GRI 103-2	G4-DMA-b
ART. 19 BIS 1b	Management approach	Description of policies	GRI 103-2	G4-DMA-b
ART. 19 BIS 1b	Management approach	Description of commitments	GRI 103-2	G4-DMA-b
ART. 19 BIS 1b	Management approach	Description of responsibilities	GRI 103-2	G4-DMA-b
ART. 19 BIS 1b	Management approach	Description of resources	GRI 103-2	G4-DMA-b
ART. 19 BIS 1b	Management approach	Description of grievance mechanisms	GRI 103-2	G4-DMA-b
ART. 19 BIS 1b	Management approach	Specific actions, such as processes, projects, programs and initiatives	GRI 103-2	G4-DMA-b
ART. 19 BIS 1b	Management approach	Mechanisms for evaluating the effectiveness of the management approach	GRI 103-3	G4-DMA-b
ART. 19 BIS 1b	Management approach	Results of the evaluation of the management approach	GRI 103-3	G4-DMA-b
ART. 19 BIS 1b	Management approach	Related adjustments to the management approach	GRI 103-3	G4-DMA-b
ART. 19 BIS 1b	Materiality determination process	Link to where the materiality determination process can be found	Own elaboration	
ART. 19 BIS 1b	Disclosure on material matters	Qualitative disclosures on **ENVIRONMENTAL** material matters on **current period**	Own elaboration	

ART. 19 BIS 1b	Disclosure on material matters	Qualitative disclosures on ENVIRONMENTAL material matters, including comparative information on **prior periods**	Own elaboration
ART. 19 BIS 1b	Disclosure on material matters	Qualitative disclosures on ENVIRONMENTAL material matters, including prospective information on **future periods**	Own elaboration
ART. 19 BIS 1b	Disclosure on material matters	Qualitative disclosures on **SOCIAL** material matters on **current period**	Own elaboration
ART. 19 BIS 1b	Disclosure on material matters	Qualitative disclosures on SOCIAL material matters, including comparative information on **prior periods**	Own elaboration
ART. 19 BIS 1b	Disclosure on material matters	Qualitative disclosures on SOCIAL material matters, including comparative prospective on **future periods**	Own elaboration
ART. 19 BIS 1b	Disclosure on material matters	Qualitative disclosures on **EMPLOYEES** material matters on **current period**	Own elaboration
ART. 19 BIS 1b	Disclosure on material matters	Qualitative disclosures on EMPLOYEES material matters, including comparative information on **prior periods**	Own elaboration
ART. 19 BIS 1b	Disclosure on material matters	Qualitative disclosures on EMPLOYEES material matters, including prospective information on **future periods**	Own elaboration
ART. 19 BIS 1b	Disclosure on material matters	Qualitative disclosures on **HUMAN RIGHTS** material matters on **current period**	Own elaboration
ART. 19 BIS 1b	Disclosure on material matters	Qualitative disclosures on HUMAN RIGHTS material matters, including comparative information on **prior periods**	Own elaboration
ART. 19 BIS 1b	Disclosure on material matters	Qualitative disclosures on HUMAN RIGHTS material matters, including comparative information on **future periods**	Own elaboration
ART. 19 BIS 1b	Disclosure on material matters	Qualitative disclosures on **ANTI-CORRUPTION** material matters on **current period**	Own elaboration
ART. 19 BIS 1b	Disclosure on material matters	Qualitative disclosures on ANTI-CORRUPTION material matters, including comparative information on **prior periods**	Own elaboration
ART. 19 BIS 1b	Disclosure on material matters	Qualitative disclosures on ANTI-CORRUPTION material matters, including comparative information on **future periods**	Own elaboration

Ref to EU Directive	**Topic**	**Items**	**Reference**
ART. 19 BIS 1d	Risk and opportunities	Identification of key risks and opportunities effects on ENVIRONMENTAL matters	Own elaboration

ART. 19 BIS 1d	Risk and opportunities	Risks and opportunities' effects on environmental matters related to business relationships, products or services	Own elaboration
ART. 19 BIS 1d	Risk and opportunities	Undertaking actions to manage risks on environmental matters	Own elaboration
ART. 19 BIS 1d	Risk and opportunities	Identification of key risks and opportunities effects on SOCIAL matters	Own elaboration
ART. 19 BIS 1d	Risk and opportunities	Risks and opportunities' effects on social matters related to business relationships, products or services	Own elaboration
ART. 19 BIS 1d	Risk and opportunities	Undertaking actions to manage risks on social matters	Own elaboration
ART. 19 BIS 1d	Risk and opportunities	Identification of key risks and opportunities effects on EMPLOYEES' matters	Own elaboration
ART. 19 BIS 1d	Risk and opportunities	Risks and opportunities' effects on employees' matters related to business relationships, products or services	Own elaboration
ART. 19 BIS 1d	Risk and opportunities	Undertaking actions to manage risks on employees' matters	Own elaboration
ART. 19 BIS 1d	Risk and opportunities	Identification of key risks and opportunities effects on HUMAN RIGHTS matters	Own elaboration
ART. 19 BIS 1d	Risk and opportunities	Risks and opportunities' effects on human rights matters related to business relationships, products or services	Own elaboration
ART. 19 BIS 1d	Risk and opportunities	Undertaking actions to manage risks on human rights matters	Own elaboration
ART. 19 BIS 1d	Risk and opportunities	Identification of key risks and opportunities effects on ANTI-CORRUPTION matters	Own elaboration
ART. 19 BIS 1d	Risk and opportunities	Risks and opportunities' effects on anti-corruption matters related to business relationships, products or services	Own elaboration
ART. 19 BIS 1d	Risk and opportunities	Undertaking actions to manage risks on anti-corruption matters	Own elaboration

Ref to EU Directive	**Topic**	**Items**	**Reference**
ART. 19 BIS 1e	KPI	Quantitative indicators on ENVIRONMENTAL matters (current period)	Own elaboration
ART. 19 BIS 1e	KPI	Quantitative indicators on ENVIRONMENTAL matters for prior periods (historical frame)	Own elaboration
ART. 19 BIS 1e	KPI	Quantitative indicators on ENVIRONMENTAL matters for future periods, forecasts	Own elaboration
ART. 19 BIS 1e	KPI	Quantitative indicators on ENVIRONMENTAL matters consistent	Own elaboration

		with generally accepted industry or regional benchmarks to provide a basis for comparison	
ART. 19 BIS 1e	KPI	Quantitative indicators presented with qualitative information to provide context and explanation of measurement methods and reason for significant variations from targets, trends or benchmark, if occurred	Own elaboration
ART. 19 BIS 1e	KPI	Quantitative indicators on SOCIAL matters (current period)	Own elaboration
ART. 19 BIS 1e	KPI	Quantitative indicators on SOCIAL matters for prior periods (historical frame)	Own elaboration
	KPI	Quantitative indicators on SOCIAL matters for future periods, forecasts	Own elaboration
ART. 19 BIS 1e	KPI	Quantitative indicators on SOCIAL matters consistent with generally accepted industry or regional benchmarks to provide a basis for comparison	Own elaboration
ART. 19 BIS 1eI	KPI	Quantitative indicators on social matters presented with qualitative information to provide context and explanation of measurement methods and reason for significant variations from targets, trends or benchmark, if occurred	Own elaboration
ART. 19 BIS 1e	KPI	Quantitative indicators on EMPLOYEES' matters (current period)	Own elaboration
ART. 19 BIS 1e	KPI	Quantitative indicators on EMPLOYEES' matters for prior periods (historical frame)	Own elaboration
ART. 19 BIS 1e	KPI	Quantitative indicators on EMPLOYEES' matters for future periods, forecasts	Own elaboration
ART. 19 BIS 1e	KPI	Quantitative indicators on EMPLOYEES' matters consistent with generally accepted industry or regional benchmarks to provide a basis for comparison	Own elaboration
ART. 19 BIS 1e	KPI	Quantitative indicators on EMPLOYEES' matters presented with qualitative information to provide context and explanation of measurement methods and reason for significant variations from targets, trends or benchmark, if occurred	Own elaboration
ART. 19 BIS 1e	KPI	Quantitative indicators on HUMAN RIGHTS matters (current period)	Own elaboration
ART. 19 BIS 1e	KPI	Quantitative indicators on HUMAN RIGHTS matters for prior periods (occurred frame)	Own elaboration

ART. 19 BIS 1e	KPI	Quantitative indicators on HUMAN RIGHTS matters for future periods, forecasts	Own elaboration
ART. 19 BIS 1e	KPI	Quantitative indicators on HUMAN RIGHTS matters consistent with generally accepted industry or regional benchmarks to provide a basis for comparison	Own elaboration
ART. 19 BIS 1e	KPI	Quantitative indicators on HUMAN RIGHTS matters presented with qualitative information to provide context and explanation of measurement methods and reason for significant variations from targets, trends or benchmark, if occurred	Own elaboration
ART. 19 BIS 1e	KPI	Quantitative indicators on ANTI-CORRUPTION matters	Own elaboration
ART. 19 BIS 1e	KPI	Quantitative indicators on ANTI-CORRUPTION matters for prior periods (historical frame)	Own elaboration
ART. 19 BIS 1e	KPI	Quantitative indicators on ANTI-CORRUPTION matters for future periods, forecasts	Own elaboration
ART. 19 BIS 1eI	KPI	Quantitative indicators on ANTI-CORRUPTION matters consistent with generally accepted industry or regional benchmarks to provide a basis for comparison	Own elaboration
ART. 19 BIS 1e	KPI	Quantitative indicators on ANTI-CORRUPTION matters presented with qualitative information to provide context and explanation of measurement methods and reason for significant variations from targets, trends or benchmark, if occurred	Own elaboration

Ref to EU Guidelines	**Topic-Specific Disclosures**	**Requirements**	**GRI / IR Disclosure number**	**GRI/ G4**
Not required but recommended	Economic Performance	Direct economic value generated and distributed	GRI 201-1	G4-EC1
Not required but recommended	Economic Performance	Financial implications and other risks and opportunities due to climate change	GRI 201-2	G4-EC2
Not required but recommended	Economic Performance	Defined benefit plan obligations and other retirement plans	GRI 201-3	G4-EC3
Not required but recommended	Economic Performance	Financial assistance received from government	GRI 201-4	G4-EC4

Not required but recommended	Market Presence	Ratios of standard entry level wage by gender compared to local minimum wage	GRI 202-1	G4-EC5
Not required but recommended	Market Presence	Proportion of senior management hired from the local community	GRI 202-2	G4-EC6
Not required but recommended	Indirect economic impact	Infrastructure investments and services supported	GRI 203-1	G4-EC7
Not required but recommended	Indirect economic impact	Significant indirect economic impacts	GRI 203-2	G4-EC8
Not required but recommended	Indirect economic impact	Proportion of spending on local suppliers	GRI 204-1	G4-EC9
Not required but recommended	Ethics and Integrity	Description of the organization's value, principles, standards and norms of behavior: Internal and external mechanisms for seeking advice about ethical and lawful behavior and internal and external mechanisms for reporting concerns about unethical or unlawful behavior	GRI 102-16	G4-57
Not required but recommended	Ethics and Integrity	Mechanisms for advice and concerns about ethics	GRI 102-17	G4-56
Not required but recommended	Stakeholder engagement	List of stakeholder groups: provide a list of stakeholders engaged	GRI 102-40	G4-24
Not required but recommended	Stakeholder engagement	Basic for identifying and selecting stakeholders with whom to engage, defining its stakeholder groups and determing the groups with which to engage and not to engage	GRI 102-42	G4-25
Not required but recommended	Stakeholder engagement	Approach to stakeholder engagement including frequency of engagement by type and by stakeholder group and an indicator of whether any of the engagement was undertaken specifically as part of the report preparation process	GRI 102-43	G4-26
Not required but recommended	Stakeholder engagement	Key topics and concerns raised from stakeholders, how the organization has responded to those key topics and concerns including though its reporting and stakeholder groups that raised each of the key topics and concerns	GRI 102-44	G4-27

Nomenclature and Glossary

NFI Non-financial information

Non-financial information is "a broad term that applies to all information reported to shareholders and other stakeholders that is not defined by an accounting standard or a calculation of a measure based on an accounting standard, such as revenue growth, which we refer to as 'financial information'" *(Eccles , 2010)*

Disclosure

Disclosure is the vehicle to communicate information about how the company operates transactions and relationships and describes the nature of business and the company's identity

Corporate reporting

Corporate reporting is "an essential means by which companies communicate with stakeholders as part of their accountability and stewardship obligations" *(Federation of European Accountants, 2015)*

CSR Corporate Social Responsibility

CSR is a compelling strategy for dealing with the shrinkage of resources and environmental and social concerns that companies implement to different extents and with various implications, based on the features of specific industries and the size of the business.

Sustainability

Sustainability is the ability to sustain social, environmental and economic objectives, from the protection of biodiversity to the guaranty of world development "without compromising on the wellbeing of the present generations and the capacity of future ones to meet their own needs" *(Bruntland, 1987; p. 8).*