Università
Ca'Foscari
Venezia

Corso di Laurea magistrale (*ordinamento ex D.M. 270/2004*)
in Amministrazione, Finanza e Controllo

Tesi di Laurea

—

Ca' Foscari
Dorsoduro 3246
30123 Venezia

Sustainability Reporting and its Impact on Corporate Financial Performance

Relatore
Ch. Prof. Elisa Cavezzali
Ch. Prof. Ugo Rigoni

Laureando
Enrico Simionato
Matricola 827401

Anno Accademico
2013 / 2014

To my family, my mentor Marco Miglierina and my second family Alessandro, Ana, Giulia and Silvia (CFA Ca' Foscari Team 2014).

Thanks to Professor Elisa Cavezzali and Professor Ugo Rigoni for their time and their advices, as well as Nazim for the six-month work together.

TABLE OF CONTENTS

INTRODUCTION **1**

CHAPTER 1 – SUSTAINABILITY AND SOCIAL INNOVATION **4**

1.1 Introduction 4

1.2 The Concept of Sustainability 4

1.2.1 Three Different Shades of Meaning 6

1.2.2 Definitions by Sectors 11

1.2.3 Several Points of View to Reach a Common Approach 12

1.3 Social Innovation 14

CHAPTER 2 – CORPORATE SOCIAL RESPONSIBILITY **20**

2.1 Introduction 20

2.2 Financial Reporting: Is it Still Adequate Nowadays? 21

2.2.1 Brief Overview on Financial Reporting 21

2.2.2 Issues about Financial Reporting 25

2.2.3 Towards Non-financial Reporting 27

2.2.4 Several Tools for Non-financial Disclosure 30

2.2.5 Opposing Opinions about Non-financial Reporting 33

2.3 Corporate Social Responsibility: Origins and Definitions 35

2.3.1 Notions around CSR 38

2.3.2 International Principles and Guidelines 41

2.4 Importance of Sustainability Information 43

2.5 Sustainability Management Practise 48

2.6 Sustainability Reporting versus Corporate Performance 55

2.7 Country Regulations and Their Impacts 62

CHAPTER 3 – GLOBAL REPORTING INITIATIVE AND INTEGRATED REPORTING **69**

3.1 Introduction 69

3.2 Global Reporting Initiative (GRI) 70

3.3 GRI Different Generation Guidelines 77

3.3.1 G3 Guidelines 79
3.3.2 G3.1 Guidelines 92
3.3.3 G4 Guidelines 95
3.4 More Information about GRI 96
3.5 Towards the Integrated Reporting 100
3.6 Several National Governments' Approaches 106

CHAPTER 4 – CASE STUDY: SUSTAINABILITY REPORTING VERSUS CORPORATE FINANCIAL PERFORMANCE 113
4.1 Introduction 113
4.2 Theoretical Background 115
4.3 Data & Methodology of Report Analysis 116
4.4 Findings 131
4.4.1 Descriptive Analysis 131
4.4.2 Correlation Analysis 145
4.4.3 Panel Regression Analysis 149

CONCLUSIONS 156

REFERENCES 158

CHARTS, FIGURES, AND TABLES

Chart 1: Trends in Mandatory and Voluntary sustainability reporting 107
Chart 2: Number of reports analysed by year 132
Chart 3: Total number of indexes disclosed by year 132
Chart 4: Total number of positive, neutral and negative marks by index category 139

Figure 1: Model of corporate sustainability 50
Figure 2: Environmental Kuznets Curve (EKC) 64
Figure 3: GRI standard level statement 72

Table 1: Summary of the necessary steps to carry out an NPSV analysis 54
Table 2: GRI application level table 73
Table 3: Decision tree for Boundary Setting 81
Table 4: Reporting Principles for defining content (GRI information principles) 82
Table 5: Reporting Principles for defining quality (GRI quality principles) 83
Table 6: G3's Standard Disclosure 85
Table 7: G3.1 new Performance Indicators 92
Table 8: G3.1 More relevant definition variations 93
Table 9: The guiding principles of Integrated Reporting 104
Table 10: Description of GRI index mark definitions 118
Table 11: Description of control variables 129
Table 12: Summary of the companies analysed 133
Table 13: Index completeness table of sustainability reports analysed by year 140
Table 14: Summarising table of index qualitative analysis by year 142
Table 15: Correlation analysis of variables related to ROA 146
Table 16: Correlation analysis of variables related to ROE 146
Table 17: Correlation analysis of variables related to Debt to Equity 147
Table 18: Correlation analysis of variables related to Sales Growth 148
Table 19: Correlation analysis of variables related to Tobin's Q 148
Table 20: Panel regression analysis with ROA as dependent variable 152
Table 21: Panel regression analysis with Sales Growth as dependent variable 154
Table 22: Panel regression analysis with Tobin's Q as dependent variable 155

INTRODUCTION

“We need to defend the interests of those whom we have never met and never will.”
(Jeffrey D. Sachs)

This quotation of J. D. Sachs, who is an American economist, Director of The Earth Institute at Columbia University and one of the youngest professors economics in the history of Harvard University, summarises perfectly the most important current challenge of the society and corporate business models. In the past, the developed and Western countries were concentrated only on their economic development, not considering the environmental and social impacts as significant factors that have to be taken into account for the investment and development planning.

The acceleration of climate changes, which cause frequently exceptional natural disasters all around the world, and the global warming make clear that it is time to change the human concept about development in order to achieve globally a sustainable development. This issue is so important that it has been already arranged a Global Environmental Conference in Paris on the 30th November 2015 when about 195 nations will try to find a common agreement on environmental regulations.

The achievement of a sustainable society and development cannot be led only by national laws and regulations: it has to start from each company as they are at the base of society.

Moreover, this global problem cannot be ignored even by developing countries: around 29 per cent of their population live with less than 1$ a day, thus sustainability performance could not be a relevant business concern. Nevertheless, they have to face the global problem with sustainability if they want to become multinationals’ suppliers and to enlarge their business.

For these reasons, the corporate sustainability reporting has been developed over the last decades. At the beginning, companies disclosed an environmental reporting (the first one was published in the 80s’ by chemical companies as a way to react to their serious image problems) that, by now, it has become a whole reporting, including both financial and non-financial information thanks to the integrated reporting.

Being sustainability and sustainability reporting two significant factors for companies that want to be competitive in the current global market, it is interesting to investigate not only their importance for the planet survival and society development, but also how they could affect the reporting companies and their corporate financial performances.
Publishing a sustainability reporting, it is not a simple disclosure tool or approach but it is a different way to concept corporate business model, structure and the business itself. This fact brings to modify deeply reporting companies and these changes could have positive or negative effects on their economic and financial results.
Over the past years, many scholars and researchers have investigated the possible relationship between non-financial information/data and corporate financial performance through empirical studies. By now, there is not a unique opinion about this controversial issue: some scholars (Cohen et al., 1995; Al-Tuwaijri et al., 2004; Nakao et al., 2007) have found a positive relationship in their empirical studies, while others (Wagner et al., 2002; Wagner, 2005) a negative one, whereas in some cases, the study has not shown a relationship between these two relevant aspects (Gonzalez Benito, 2005).
For this reason, this writing will not simply investigate what sustainability is in business or which international initiatives have been taken to regulate the sustainability reporting companies' approach, but it will expose an empirical research, trying to achieve a solution for one of the most debated question about corporate sustainability. The research involved 44 companies listed in Fortune Global 500 that between 2007 and 2011 published at least one sustainability reporting following the GRI Guideline (G3) and approach: the aim is to understand if the sustainability reporting has any sort of impact on corporate financial performance through a multiple regression model.
In the first chapter, sustainability definitions will be presented since I would like to clarify the concept that it is commonly known by everybody but it is full of shades of meaning according to the field or sector in which it is used.
In the second chapter, there will be a brief description of the corporate reporting evolution (since the financial statement was considered useful) and a deep analysis of the different types of non-financial information reporting (CSR, environmental reporting etc.), as well as a first presentation of sustainability reporting and their characteristics.
Only in the third chapter, there will be a deep explanation of GRI, which is the most widespread sustainability initiative in the world, and its concept of sustainability

reporting since the GRI's sustainability reports will be used in the following study. It will be also presented the future reporting tool for companies: the Integrated Report (IR) is a sort of merge between the ordinary financial statement and the modern sustainability reporting.

Finally, in the last chapter, I will present my empirical research, explaining the methodology utilised and discussing its findings. My conclusions are based on research findings and evidences that have risen during my own empirical study, providing my personal position and contribution to this fundamental issue.

The results of this research point out that there are different impacts of non-financial information included in the GRI sustainability reports according to the corporate financial performance or indicators that are taken in consideration. As explained in the last chapter, the relationship between sustainability non-financial information and corporate financial performance depends on which financial and sustainability indicators are taken in consideration during the analysis.

Nonetheless, thanks to this research, we can state that sustainability and non-financial information has an impact on corporate financial performance of GRI reporting companies.

CHAPTER 1

SUSTAINABILITY AND SOCIAL INNOVATION

1.1 Introduction

Dealing with sustainability and integrated reporting (IR) is not effortless: literature and experts are not completely agreed on its usefulness for enterprise value and on what guidelines they should follow to disclose its information in the best way. Furthermore, this complexity of this argument is also due to the key position that the concept *sustainability* has taken on it: this term has several shades of meaning according as sectors, fields or simply subjects that utilise it.

Thus, before focusing on the core object of this dissertation, it is fundamental, in my opinion, to present the different points of view about sustainability in order to understand better which factors and notions are the basis for a sustainability reporting.

In this first chapter, it is analysed in deep this concept in order to provide to readers with a full view of its evolution over the years, going through each dimension and sector. It is also given a general overview of enterprise approaches to sustainability and in the last paragraph it is pointed out its important role during this period of changes because of its relationship with social innovations and innovations in general. Sustainability, indeed, is the engine that has been moving humans to reconsider their development idea, mindset, structure, and future plans.

1.2 The Concept of Sustainability

Over the last few decades, the widespread of poverty, social problems, environmental issues such as greenhouse gases (GHG) emissions and global warming all over the world has been putting in the international spotlight on the matter of "*sustainable society*" (Dresner , 1974) and, consequently, the concept of sustainability. Living in a sustainable society cannot only be driven by national governments through new laws and regulations but also through a change of behaviour of the biggest economic, social and environmental consumers i.e. corporations as a consequence of a novel stakeholders acknowledgement of the business value. This idea of a society transformation moved by entrepreneurs has already been expressed by one of the most important economist in the history, Adam Smith, who wrote:

> *"Every individual [...] neither intends to promote the public interest, nor knows how much he is promoting it [...] he intends only his own security; and by directing that industry in such a manner as its produce may be of the greatest value, he intends only his own gain, and he is in this, as in many other cases, led by an invisible hand to promote an end which was no part of his intention.".* (Smith, 1776, 477).

As it is underlined in this passage, profit is the principle aim of any entrepreneurs and their initiatives, yet, at the same time, they could have accidentally strong positive effects on the surrounding environment, bringing advantages to collective activities and individuals. Thus, in my opinion, this should be the soul in order to achieve the sustainability aim: getting the sustainability off the ground from each single company has to be the golden rule to follow for a sustainable society.

Although it could seem a quite reasonable deduction and before going in deep into how it could be applied and disclosed in the current business structure, we have to face the matter of the several meanings that the word *sustainability* could have due to the lack of a unique terminology in this economic field, being a quite recent issue.

Since the '70s, with the debates about the limits of growth, the term *sustainability* has been widely used in business, even if only in 1992 the expression gained the global notoriety thanks to the UN Earth Summit in Rio de Janeiro. Even though it has been recognised as the milestone for future development, so far nobody has discussed and analysed in deep its nature and meaning in an explicit way, levelling the specialised literature about this lack of clearness. The ambiguity and omnipresence on the definition of sustainability have certainly influenced its strength and limited the possibility to be implemented successfully in the current business strategies [Dixon and Fallon, 1989], and it has not been seriously taken into consideration by companies, except as a simple statement.

Indeed, the recent situation, summed up with the increase of public opinion interest in sustainability, has allowed the emergence of a sort of *sustainability rhetoric,* as Giovannoni and Fabietti support in their paper:

> *"[...] this rhetoric was used in the attempt to reconstruct the eroded legitimacy of companies and did not necessarily involve the actual implementation of (or participation in) sustainable development. Otherwise, such active implementation and participation would require organisations to alter their existing practises and to allow a concrete strategic move towards sustainability."* (Giovannoni and Fabietti, 2014, 22).

In other words, they state that the dearth of a purpose unity on sustainability definition favours companies to use this term as a trick to regain legitimacy in the public eye at the expense of a real implementation of the sustainable development process that needs a reflection on the entire business structure.

The awareness of this condition has recently driven both scholars and international associations to acknowledge the necessity of overcoming the detachment between the different 'types' of sustainability and the social, environmental and financial concerns of companies, that move towards an integrated concept, approach and disclosure. In order to achieve this target, it is necessary to involve all the institutions that constitute the society such as governments, international associations and managers with their business culture, models and reporting systems, since the companies cannot bear the challenge alone.

1.2.1 Three Different Shades of Meaning

The shortage of a uniform guideline about the term *sustainability* allowed the creation of over a hundred different definitions and metrics, coming from any type of enterprise or institution, which were legitimated to express their own position and approach to this topic, not being any sort of regulation.

As argued by Kidd, these several definitions were affected by "*intellectual and political streams*" that permitted the born of so many sustainability concepts (Kidd, 1992, 3). Nevertheless, throughout the literature, three main discourses about sustainability can be identified to better summarise an overall view of the concept.

The Environmental Dimension

During the nineteenth century, the term *sustainability* in business already existed, yet its meaning was linked with the presence of a stationary economy at that time. As its first notion, *sustainability* was referred to a sort of static equilibrium between company production and natural resources, not including other aspects of the environmental matter.

Only in the century after, the term *sustainability* was firstly associated with broad environmental problems, showing the deep relationship between man and nature, a relationship that has to be considered also in business. This association was exposed for the first time during the UN Conference on Human Environment in 1972 in which the main insight about sustainability was: "*[...] the capacity of the Earth to produce vital*

renewable resources must be maintained and, whatever practicable, restored and improved [...]" (UN, 1972, 4). At the same time, the UN Environment Programme (UNEP) was created to promote the "*[...] eco-development*, *defined as the yield of renewable resources and the simultaneous monitoring of the depletion of non-renewables.*" (Giovannoni and Fabietti, 2014, 24).

The following step along with the concept of sustainability related to the environment was taken by another international plan, the World Conservation Strategy (WCG), in 1980. It stated the idea of sustainability as a conservation issue, which had to look at both the improvement of human being and the safeguard of natural resources.

However, the most known and recognised definition of the sustainable development was elucidated in 1987 into a WCED (World Commission on Environment and Development) report:

> "*[...] Sustainable development is development that meets the needs of the present without compromising the ability of the future generations to meet their own needs [...] a process of change in which the exploitation of resources, the direction of investments, the orientation of technological development, and institutional change are all in harmony and enhance both current and future potential to meet human needs and aspirations.".* (*Our Common Future,* 1987, 45).

This statement of the Brundtland Commission, which is another famous name of WCED, underlines that sustainable development is something more than a simply challenge between conservation of the environment and social progress: it is a struggle to achieve economic and social development, operating in a way that is compatible with the surrounding environment. Thus, there are two main concepts that should be taken in consideration in a sustainable development: the notion of *needs*, which should be satisfied in all their several meanings, and the idea of *limitations*, which are restraints imposed by the capability of the environment to absorb the effect of human activities. Furthermore, this double aspect of the concept is firstly indicated into the term itself, *sustainable development*: indeed, the word *sustainable* is related to natural limitations of the environment itself, while the term *development* is connected to the progress and the wealth people. Therefore, it is not only important the quantity of the wealth driven by growth and real income measurements as in the past, but also the quality, namely how these improvements of life standards are reached and how life is spent.

This concept was at the basis of the later conferences in Rio de Janeiro in 1992 and Kyoto in 1997, launching that idea of integration into the sustainability concept. Although these last definitions seem quite different from the oldest ones, they were the first step towards a continuous progression of the sustainability meaning, maintaining the concept of environmental balance as the basis, evolving from a static approach to a dynamic one. The availability of natural resources for future generations is the pillar of the current environment discourse about the sustainability and only with the awareness of the dynamism of this concept, the economic world has been moving towards an integrated approach.

Generally, over the past decades, companies had a passive behaviour in the face of environmental problems such as pollution. Indeed, they reacted only when an environmental issue arose in order to mitigate its negative effects. This type of approach was probably due to prior regulations and rules, focused on preserving the natural systems simply measuring the external negative impact of activities.

Only recently, they have left their compliance approach towards environmental regulation in order to adopt a proactive mode to face this matter by introducing a new business culture and management system.

The Social Dimension

Despite *social sustainability* being a quite recent concept compared with its environmental and economic dimensions since this aspect was not previously taken in consideration, currently it has been more and more adopted by governments and other institutions associated to urban decisions. However, the spread of this terminology has not been converted into a real practise and policy by countries and governments because of the recent financial crisis, which has stolen public resources and capacity and stopped their social plans in favour of other spending priorities.

Dempsey affirms that it is mainly related to an "*emerging area of urban planning policy and practise in the developed and developing world.*" (Woodcraft, 2012, 29), that is a planning practice focused on the social result of urban development. In particular, Dempsey starts reflecting from the previous WCED definition of sustainability, linking the inter-generational equity to *"the key determinants of social equity, such as social justice, distributive justice and equality of conditions."* (Giovannoni and Fabietti, 2014, 26). This connection has introduced the term into the field of social responsibility

thanks to a close relationship with businessman liability: it is *"the obligations of businessmen to pursue those policies, to make those decisions, or to follow those lines of action which are desirable in terms of the objectives and values of our society."* (Bowen, 1953, 6). Over the years, the concept of CSR has been expanding, yet this topic is going to be faced in the next chapter.

There are other aspects that are included by several subjects in the term *social sustainability* such as social capital, ethics, labour rights etc., depending on the social aspect one wants to emphasise: in other words, the term contributes to place emphasis on the core values of justice and dialogue.

Considering entire aspects, social sustainability, like other dimensions of sustainability, is not an independent practise or discourse from political matter and actions. Mainly for this reason, there have been many debates and different points of view on this terminology and on how sustainability could be measured to be managed: distinct tools or approaches are available to develop separate country frame in a long-term period.

There is really no unique opinion about its conceptual and practical meaning, still being a widespread chaos on this term, but it has attracted interest because of its linkage with sustainable development due to the Triple Bottom Line[1] (TBL) approach [Elkington, 1997].

The Business Dimension

Until the '80s, the term *economic sustainability* was principally related to the capability of an enterprise to make steadily profit throughout years, including the maximisation of company income and consumption, maintaining unchanged the stock of productive assets.

Even though it seems possible, this economic discourse cannot be separated from the two previous ones because it has come from the contrast between modern companies and social/environmental matters. Effectively, *"[...] from a business perspective, sustainability has been referred to as the capability of a corporation to last in time, both in*

[1] It describes "*the separate financial, social and environmental 'bottom lines' of companies. A triple bottom line measures the company's economic value, 'people account' – which measures the company's degree of social responsibility and the company's 'planet account' – which measures the company's environmental responsibility. Elkington argued that companies should prepare three bottom lines – the triple bottom line – instead of focusing solely on its finances, thereby giving consideration to the company's social, economic and environmental impact.*" (Sourced by www.investopedia.com).

terms of profitability, productivity and financial performance, as well as in terms of managing environmental and social assets that compose its capital." (Giovannoni and Fabietti, 2014, 27). In other words, the *business sustainability* is the corporation ability to stay in business, "*meeting the needs of a firm's direct and indirect stakeholders [...] without compromising its ability to meet the needs of future stakeholders as well."* (Dyllick and Hockerts, 2002, 131).

This concept brings a strong ambiguity with itself due to the market connection between corporations and sustainability: indeed, whereas companies are considered as the thrust for the implementation of sustainability thanks to their innovations, they are also institutions that exploit natural resources and produce social disparity, matters that are frightened by a sustainable society.

For all these reasons, the change towards sustainability in the industrial field should be led by a macro level approach, which considers economic efficiency, social equity and environmental accountability.

There are several types of approach that could foster sustainability in corporations but all they have some common points:

a) *Stakeholder engagement*: companies involve consumers, suppliers and the surrounding communities in the decision process, avoiding a simple update of the company situation.
b) *Environmental management system*: it is the structure and process needed to pursuit the environmental efficiency of the corporation.
c) *Reporting and disclosure*: it consists in collecting information on sustainability and making the enterprise transparent to everyone.
d) *Life cycle analysis*: it analyses not only impacts of manufacturing on the environment but also the effects of the use and manufacturing of the company products.

As just underlined, *"[...] a sustainable business"*, according to Rachel England (The Times, 2011), *"involves long-term, strategic planning that allies business growth with positive environmental and societal continuity."*. Sustainability in an enterprise has to take into account every dimension of business environment, such as social, economic, natural and cultural, in order to thrive in the long-term.

Also the Dow Jones Sustainability Index[2] gives a definition of corporate sustainability shared by the previous ones: *"a business approach that creates a long-term stakeholder value by embracing opportunities and managing risks deriving from economic, environmental and social developments."*.

Another aspect related to the business dimension of sustainability is its connection with investments and finance, so-called *sustainable investments* or *sustainable finance*.

There was an evolution of this concept over past years: at the beginning, the term was related to philanthropy, namely giving back to communities from profit; afterwards it was compared with ethical investing, i.e. avoiding to invest in businesses that could have negative impacts on society; finally, it evolved in managing sustainability risks and capturing sustainability opportunities in order to achieve long-term outperformance.

Nowadays, investors and banking professionals have to consider environmental and social issues when they evaluate a business or investment as these matters could return into future costs or losses that will jeopardize the activity or its reputation and consequently its perceived value.

1.2.2 Definitions by Sectors

The term *sustainability* has not only several shades of meaning according to the subject it is associated with (environment, society or economics) but also it follows the context of the sector in which it is mentioned.

As it is shown in the Sustainability Toronto Project in 2001, each sector such as government, industry, civil society and academia has a differ approach to this term.

In the governmental sector, the definition of sustainability is usually very similar to that one provided by the Brundtland Report in 1987, including all three dimensions of its meaning (economic, environmental and social development). As an instance, in 1992 the Australian Government said *"Ecologically sustainable development means using, conserving and enhancing the community's resources so that ecological processes, on which life depends, are maintained, and the total quality of life, now and in the future, can be increased."* (Bell and Schwartzberg, 2000, 39).

[2] Created in 1999, it is the first stock exchange index about sustainability and it includes 2500 companies that are leaders in the sustainability field. It evaluates the financial performance of worldwide companies that follow sustainability principles (sourced by www.borsaItaliana.it).

The business community, instead, uses an optimistic notion of sustainability that is linked to a development that creates a better world for everyone, by utilising terms not used in the other sectors such as eco-efficiency[3]. Firstly, companies saw sustainability development tools only as a way to maximise their profit with, for instance, energy efficiency and not to achieve environmental goals. Only gradually they have adopted an sustainable approach that takes in consideration environmental and social aims of the development from the beginning, moving towards a Triple Bottom Line (BTL) approach: it is defined as *"the central challenge of sustainable development - the global need to simultaneously increase society's economic, social, and natural value."* (Molnar and Morgan, 2001, 16).

In the grass roots, the term sustainability is mainly utilised as a synonym of sustainable community or society: it contains a wide range of definitions yet all of them are strictly related to the quality of life and social aspects. To this end, it is very significant the definition provided by West London Friends of the Earth:

> *"Sustainability means living within the resources of the planet without damaging the environment now or within the future. It also means having an economic system that provides a genuine quality of life, rather than depending on increased consumption."* (Molnar and Morgan, 2001, 21).

In the end, the academy community is the one that has spent more efforts and time to understand the several meanings of sustainability, triggering an enormous debate on it. It contains a summary of all previous definitions, emphasising principally on the temporally dynamic nature of the term, the future and the quality of life. As concern the future, Sudhir and Sen (2000) stated *"[...] sustainable development reflects a basic belief that the interests of future generations should receive the same kind of attention that those in present generation get."* (Sudhir and Sen, 2000, 2030).

1.2.3 Several Points of View to Reach a Common Approach

As the concept of sustainability has different meanings or implications, also companies and their leaders have several approaches to this matter and its adoption. Although there are so many different opinions on sustainability definition, everyone believe that it is one of the main force that has to be reckoned for our future business success.

[3] One of the main tools to foster a sustainable development. Creating more goods and services utilising less resources and causing less pollution is the base of this concept.

The Boston Consulting Group (BCG) conducted a survey in 2009, involving more than 1500 corporate executives and managers, to understand better the frame of sustainability and its state of the art in business. Survey findings show that sustainability is considered as a key driver for future survival and success of the enterprise: indeed, over 92 per cent of the respondents have stated that their company has already active a sort of process to lead the enterprise towards a sustainable structure. Moreover, only 25 per cent of them have declared that the company has reduced its efforts to develop sustainability during the downturn, caused by financial crisis: even automotive sector has increased its commitment in sustainability during the last recession, believing that sustainability is vital as a financial investment.

The BCG survey also underlines a different approach, awareness and aims related to sustainability according to the corporate experience in the field: whereas the majority of novices consider sustainability easily as "*maintaining business viability*", experts base their definition on TBL one, they launch sustainable initiatives for financial returns and they include in this matter also their suppliers, thereby involving the supply chain value.

Thus, experience is a factor that influences the enterprise approach in sustainability: it is also emphasised by leader thoughts that diverge from other members of the company. For instance, more than a half of leaders, interviewed in the BCG survey, believe that sustainability is not driven by government legislation but by enterprise initiatives that shape the regulation instead of reacting to external obligations. In addition, leaders state that the sustainability matters like the climate change are drivers more important for a company than other enterprise drivers like consumer concerns. According to the leaders, the sustainable approach, which an enterprise could undertake, not only gives image and brand benefits, but also rewards related to the enterprise value.

The complexity of this concept is also underlined by another survey result: around 60% of respondents state that their companies create a sustainability agenda. However, the corporate actions are not in accordance with companies' sustainability plans or companies have not a concrete planning of how the agenda should be applied: these unlinked initiatives create confusion inside the company. This issue is caused by some barriers that obstacle the application of sustainability in companies: according to the BCG survey, the lack of information for decisions, the absence of measurement procedure to control progresses and mainly a better framework for sustainability are

principle factors that affect the process of sustainability in a company and its right application.

Another survey, The McKinsey survey held in 2011, gives additional interesting information about the most common enterprise approach towards sustainability. The survey states that many company efforts are directed to reduce energy usage, waste and managing corporate reputation, integrating the sustainability approach throughout enterprise processes, in particular "*mission and values*" and "*external communications*".

McKinsey also traces a sort of best approach towards sustainability for an enterprise, deriving it from survey findings. Substantially, "*a company must first determine its baseline performance on sustainability issues and then decide on a portfolio of initiatives to create value in those areas"* (McKinsey, 2011). Afterwards it has not to concentrate its attention on each singular impact of its initiatives but on the value created for the entire value chain and, finally, companies have to look at opportunities related to any area of the company in order to choose the best one.

1.3 Social Innovation

It is impossible to face the sustainability concept without touching upon innovations and their role. As a consequence of the last financial crisis, the modern society has called its pillars and bases into question: it is time to reshape the current society, including all its aspects such as economic, political and academic ones.

Innovations, in particular social innovations, are right answers to lots of questions that have been rising to develop a new future, following fresh thoughts and mindsets. Moreover, this framework has been affecting also the business sector, driving it towards a sustainable development.

The complexity of the world has arisen complicated problems that could be solved only with knowledge sharing and collaborations between different sectors: this is also the first step to create an innovation and, for this reason, this term has become central in this period of changes.

This matter was analysed by Thomas Osburg and René Schmidpeter in "*Social Innovation*" where they went in deep into this subject, examining all its aspects, interactions and concrete examples of its application.

Following the structure of the book, firstly it is important to define what an innovation is. As for the concept of sustainability, even the term *Innovation* has not a unique

definition: it could be considered as "*a new combination of production factors*" (Schumpeter, 1982) or as "*a specific instrument of entrepreneurship, an act that endows resources with a new capacity to create wealth*" (Drucker, 1985) or as "*an adoption of something new that creates value for the organisation*" (Baldwin and Curley, 2007) or as "*new solutions that address societal challenges in a way that is contextual, targeted, and promotes common welfare*" (European Business School, 2012). In addition, this term has not to be confused with the term *Invention*: indeed, "*contrary to the mere Invention, the concepts of Innovation include the process of transforming an idea or an invention into a solution that creates value for stakeholders.*" (Osburg and Schmidpeter, 2013, 14).

Social innovations have a close connection with business and companies: in particular, it is related to Corporate Social Responsibility (CSR) and Corporate Sustainability (CS) since social innovations could provide new paths to overcome the old setting of CSR, by adapting to the current requirements of the business environment, and to achieve targets related to the sustainability of companies.

As business definition, the CSR is related to ethics implications of companies in their own strategic vision: it is company willpower to manage all matters that could have social and ethical impacts.

According to Osburg and Schmidpeter, ethics and innovations are closely related and they influence each other. This is a consequence of the definition of ethics: it is not a list of rules and procedures that companies have to follow, indicating what they should or should not do, but it has a wider meaning. Ethics evaluates human actions not only as good or bad ones but also as part of a more complex evolution that develops the human being, trying to understand the impact of actions on this process and indicating the right path in order to achieve the best result. In other words, ethics fosters human beings to fulfill good actions for a better human evolution, stating that there are no limits to how much an action is good and there is not a unique way to fulfill good actions. Therefore, innovation becomes central in ethics definition because "*the pursuit of excellence*", as it is included in ethics definition, "*necessarily implies a tendency towards innovation and new behaviours in order to improve. Ethics is a process of continual improvement that necessarily implies an innovative attitude.*" (Osburg and Schmidpeter, 2013, 25). However, at the same time, ethics definition conditions innovation: "*not everything that is technically possible is ethically acceptable. Innovations cannot be implemented at all costs.*" (Osburg and Schmidpeter, 2013, 27).

Actions are the basis of the business: for this reason, ethics entered in business sector through CSR and, subsequently, it has involved innovations. This dimension of the business has permitted to consider also other aspects (social, ethical, environmental etc.) in the making-decision process of a company, giving them the importance that they deserve.

This situation has led companies to be interested in being involved in the development. The old concept of CSR, related to philanthropy as the only way to have a positive impact on surrounding environment, is surpassed by a more active involvement of companies in society, which is useful for their own sustainable competitiveness. The CSR does not simply help people but also teach them how they can help themselves, a sort of sustainable assistance. To underline the current close relationship between CSR and social innovation, even CSR Europe gave its own definition of Social Innovation:

> *"Social innovation refers to new ideas, business models, products and services, which resolve existing sustainability challenges and create new social collaborations between business sectors and stakeholders. Social Innovation is increasingly seen as a sound business strategy to solve some of society's most difficult problems at local, regional, national and global level."* (CSR Europe, 2012, 5).

Thanks to its link with social innovation the evolution of CSR, has assumed a keystone position in the enterprise structure: indeed, if a company does not consider CSR concerns as principle, it can miss out competitiveness gains and sustainability opportunities, losing its role in the global market and society. CSR should understand the power of innovation in order to create an effective strategy for supporting organisations to respond to the external environmental changes.

In their book, Osburg and Schmidpeter also speculate that CSR will be replaced by Corporate Social Innovation:

> "*Corporate Social Innovation (CSI) is a strategy that combines the unique set of corporate assets (entrepreneurial skills, innovation capacities, managerial acumen, ability to scale, etc.) in collaboration with the assets of other sectors to co-create breakthrough solutions to complex social, economic, and environmental issues that impact the sustainability of both business and society.*" (Mirvis and Googins, 2012, 93).

It is a congestion between public and private assets that needs to develop new approaches towards innovations and to assist current challenging business environment. CSI is a step over CSR, where innovations can be included thanks to its

dynamism, which is fundamental in order to react instantly to innovations. By utilising CSI, companies could be able to engage more employees and stakeholders, involving them in a co-creating process to find solutions to social and environmental issues.

CSI has some new characteristics compared with CSR: it creates a company social vision, its efforts are concentrated towards employee improvements, it fosters intrapreneurship, NGOs are often important company partners for R&D and service support, it prefers innovation in comparison with philanthropy and it uses technology and social media for innovation. All these features are necessary to build a new generation of companies that have a relevant interest on corporate sustainability and sustainability in general.

The close relationship between social innovations and the business world is also highlighted by factors that generate these relevant innovations: so-called Social Innovators. In *Social Innovation,* authors indentified three different levels of social innovators, all related to economics and business.

The first category is an individual level and it includes innovators or entrepreneurs:

> "*according to the Skoll Foundation, 'social entrepreneurs are society change agents, creators of innovations that disrupt the status quo and transform our world for the better'.*", whereas "*a social innovator is a person who changes the collective action situation of a relevant group in such a way that their social or cultural capital is either modified or extended in order to achieve mutual cooperation in the production of public goods.*". (Osburg and Schmidpeter, 2013, 68).

In other words, this level is characterised by the use of existing personal talents to foster a sustainable impact on the surrounding environment, exploiting much more intangible capital rather than tangible one.

The second group is about an organisational level where social companies, like NGOs, utilise all its energies to create a social innovation. In this step, it is relevant the ability of each enterprise to innovate, which is called "*social innovation capital*". It is fundamental that companies understand the key role of social innovations: struggling against social problems, avoiding to solve only problems related to business, is a stimulus to innovate and its results affect not only social communities but also provide business returns.

The last step is to look at social innovations from a national or community point of view. Researchers state that there are no evidences of a positive or negative contribution of these macro level agents on social innovations. Indeed, their positive pressure towards

innovations is not sometimes transferred to adequate norms or regulations, which could obstacle or limit the freedom necessary to feed social innovations.
However, these kind of actors cannot operate alone to achieve a satisfying social innovation: they have to collaborate each other and with other marketplace agents and sectors.
Social innovations and sustainability share also the same problem: it is difficult to find right indices or KPIs[4] to measure their impact on the enterprise and the society. For this reason, company accounting does not disclose these important data on their own reports and financial statements. Nowadays, more than previously, the enterprise value is composed mainly by intangible assets such as partnerships, innovations, workforce competences that should find their representation in the balance sheet for a correct valuation.
Authors of *Social Innovation* argue that specialists have to find alternative approaches to be able to collect indispensable information to achieve this target and to manage better the application of social innovations.
They suggest two different approaches: mono-indicator and multi-indicator approach. The first one could be used when it is possible to utilise monetary value in order to evaluate the initiative. Among several different methods of this approach, Osburg and Schmidpeter state that the Discounted Cash Flow (DCF) model is the best practise to manage social innovation evolution since it is based on an income approach. It considers both costs and benefits and it includes simultaneously effects for society, individuals and the organisation. They also propose to sustain this method with no-financial KPIs for those aspects (justice or effectiveness) that cannot be valued through money indicators.
The other approach, multi-indicator approach, consists in "*a set of quantitative indicators (KPIs) to assess intangibles like social innovations*." (Osburg and Schmidpeter, 2013, 162). The most widespread example is Global Reporting Initiatives (GRI) Guidelines will be examined in deep in chapter 3. In this system, the selection of KPIs according to the type of business or innovation is fundamental for the success of the disclosure.

[4] "*A set of quantifiable measures that a company or industry uses to gauge or compare performance in terms of meeting their strategic and operational goals. KPIs vary between companies and industries, depending on their priorities or performance criteria.*" (sourced by www.investopedia.com).

Almost all experts know the elaborate relationship between society and business but the tradition approach towards this issue (with great attention towards stakeholders and financial implications of social ,environmental concerns) is not currently sufficient to foster a sustainable path to reach a more sustainable future. In this uncertainty, focusing on social innovation can be the best avenue, which can be taken, to pursuit a sustainable development for a future sustainable society.
Finally, Osburg and Schmidpeter endorse that there is not a simple relationship between social innovation and sustainable development but the latter one could be considered as a form of social innovation that involves all aspects of human existence and all sectors.
Indeed, "*sustainable development represents a new and overarching paradigm for development – it stands as a new way of understanding and promoting human activities that contribute to economic and social development within the environmental limits of our natural resources and processes.*" (Osburg and Schmidpeter, 2013, 299).
This definition matches with the term *social* related to innovation: this term revokes the necessity to involve several actors inside the overall environment to overcome those barriers that limit the possibilities of changing. This dynamic evolution suggests a reconsideration of company strategies and structures, moving towards a sustainable company. "*This will mean business and its managers participating in a grand form of social innovation.*" (Osburg and Schmidpeter, 2013, 306). Therefore, sustainability could be taken into consideration as a driver of social innovation, "*if the respective behaviour or action improves the social conditions in a society and improves or at least maintains the status quo with regard to the economic and environmental dimensions.*" (Osburg and Schmidpeter, 2013, 312).

CHAPTER 2

CORPORATE SOCIAL RESPONSIBILITY

2.1 Introduction

Sustainability reporting, as it is known, is the result of many years of study, research and expert discussions. Before the current state-of-the-art about company disclosure, financial statement was the only document considered useful for enterprise representations and sufficient to control companies for their stakeholders. This was as a consequence of worldwide situation of economics and marketplace that was not as unstable as the current one, caused mainly by its vitality and mutation velocity, as well as the recent financial crisis that has extended these features.

In this chapter, there will be presented the main reasons of why financial disclosure is currently not enough for a complete communication of enterprise value, reporting also conflicting opinions about the new trend towards non-financial information.

After that, there will be a brief description of Corporate Social Responsibility (CSR), being the first step towards the substantial transformation of company reporting. Its importance and the first assimilation of the sustainability concept are analysed in deep.

However, the most relevant matter is the impact of CSR on company performance, as the first stage towards sustainability reporting. For this reason, next paragraphs show impacts of sustainability on the manager mindset and management approach, as well as the relationship between social responsibility and company performance: it is interesting to analyse this aspect also in CSR. If CSR has a positive influence in enterprise value yet, it could be considered also as a first clue of the possible positive impact of sustainability reporting.

In the last paragraph, there is an investigation on government actions through its regulations in this field: it is fundamental to take in consideration also this aspect since regulations can have relevant repercussions on future reporting developments because of their limits, orientations and incentives.

2.2 Financial Reporting: Is it Still Adequate Nowadays?

2.2.1 Brief Overview on Financial Reporting

The reporting process is not only a company procedure to spread information about itself but also a company message that, through a particular channel, reaches its addressees, influencing them in its decisions or judgements about its status.
Even if, in this first definition, this process seems to be voluntary for corporations, often pressures from external subjects can after induce companies to spread communications that previously were not required. Therefore, the way chosen for distribution of company information, the company communication plan and coherency between information required and several subjects, who demand and are interested in it, are relevant aspects for a right company disclosure, where there are no misunderstandings about the core company message.
The financial reporting is one of the first communication modes that corporations have used, due to regulatory requirements and their own volition. It is necessary to clarify the economic, financial and capital aspects of companies because they are destined to people who have invested in enterprise businesses. Because of its aim, the financial reporting is a fundamental mean to collect human, intangible and financial resources, which are helpful for the future company prosperity.
Many experts have tried to provide a definition of financial reporting:

- It is information broadcasting from corporate management towards all social representatives, or only towards some of them, about economic, financial and capital evolution of corporate structure [Coda, 1990].
- It is a set of information, sent outside the company, that is liable of the updating of available knowledge about status and perspectives of company stocks among its investors [Guadri e Massari, 1992].
- It is the part of company disclosure destined to financial market, related to capital sourcing [Bertinetti, 1996].

Thus, the main aim of a financial reporting is to favour enterprise success and foster agreement and confidence on its business proposal. Generally, it is utilised to establish a continuing and qualified connection with financial investors, as well as a strategic and operative reliability as a sort of corporate image of credibility. It can be indentified

strategic and tactical targets. Strategic goals are to construct see-through links between shareholders and company itself to place all people concerned having got basic information and to allow them employing consciously their roles. Another strategic aim is to put all stakeholders in condition to know and judge corporate management. On the other hand, tactical targets show financial reporting as an opportunity for answering to information needs of the financial community and institutions, keeping a high interest in listed stocks to bait novel investors and hold old ones, solidifying business community consensus and attracting towards relevant professional, managerial and financial resources of the company.

Furthermore, investor decisions are influenced by different types of risks that a company brings with itself and only the financial reporting can provide them a correct risk evaluation and, consequently, give a right collocation of financial instruments in the financial market: it is the only mean that allows investors to understand the risks that the company asks to share with them [Bertinetti, 1996].

In order to be really useful for investor decision making, financial information have to be some characteristics besides transparency: they have to be relevant, reliable, neutral, clear, and comparable. Besides these features, there is also materiality: this concept is related to the company choice not to disclose information since there are not enough data. Nevertheless, data quantity cannot be considered the only discriminating factor for a materiality evaluation but it could be taken in account also the nature of things and circumstances of the company [Eccles and Krzus, 2012].

The financial reporting has not to be considered as a one-way process: it seems a circuit where, on the one hand, company spreads its financial information and, on the other hand, capital market agents react to this information, judging corporate choices and its management. Thus, the company receives a feedback from its investors about its management so far: this is a relevant step for the financial reporting since, if the enterprise decodes investors' message in their reactions, it will be able to activate necessary revisions about disclosure suitability or imprecise risk evaluation to improve its financial market position [Bertinetti, 1996].

This important role of financial reporting compels companies, in particular the listed ones, to devise an information stream, allowing financial market to evaluate correctly risks to reconsider instantly previous investment decisions [Bertinetti, 1996]. For this

reason, the financial reporting has an important role in the capital market since it allows an efficient allocation of financial resources in the same marketplace.

Although investors are the principal subjects interested in company financial reporting, they are not the only ones: indeed, the financial disclosure is directed to other stakeholders such as shareholders, employees, suppliers, clients, public institutions etc. that can affect stock value in the financial market. Each subject is interested in company financial performance for several reasons because each one has different capabilities, purposes and interest duration in the company.

The financial reporting can be separated in mandatory and voluntary disclosure. Mandatory disclosure is related to regulatory restrictions that guarantee and defend stakeholder interests: they are standardized documents like balance sheets, interim reports etc. and they represents basic information required to each company. Instead, voluntary disclosure is not imposed by external factors, yet the enterprise decides to spread additional info about itself. It is done to satisfy information desire of stakeholders and it completes basic data that are provided in the mandatory disclosure. Whereas the voluntary disclosure is almost free from strict structures, procedures and requirements, the mandatory disclosure has to follow precise rules and international standards to protect uniformity, comparability and objectivity of corporate documents, giving a minimum level of clearness.

It is fundamental that these two types of disclosures find a balance in the corporate communication process because, if they are considered each one as a singular document, both are not enough to provide a complete frame of enterprise value and have different limitations that prevent a wider information capacity. For example, constraining companies to raise their mandatory disclosure through more information can cause a complexity problem: more information is not always synonym of much more company transparency because it can cause loss of relevant corporate matters. Moreover, thanks to a longer mandatory disclosure, companies suffer to increase disclosure costs and possibility to reveal relevant strategic corporate details that could decrease company competitiveness and strength in the marketplace in favour of their direct competitors [Guidara, 2011].

For many years, the financial reporting has been composed only by balance sheet because there has been privacy principle considered as a fundamental enterprise value. During those years, risk evaluations have been very difficult due to the subjectivity of

same balance items and its contents (there are only past data, without any references to budget plan or future company strategies). These obstacles have moved towards an evolution of financial reporting that has begun to display companies through not only data but also considering their vision, mission, strategies, and intangible assets [Guidara, 2011].

Finally, the paragraph has illustrated the explicit financial reporting, which consists in those communications that come from the company itself or primary informational dealers, but there is also an implicit one. This is based on the Signalling Theory: it is a no-verbal communication, but it derivates from company behaviours, used by corporate managers to give signals to the financial market. This type of communication is totally founded on the confidence that the company message is true and on future consequences caused by those enterprise actions.

2.2.2 Issues about Financial Reporting

The financial reporting is still the principle document among several types of company disclosures but it has been evolving, by following stakeholder needs. This improvement is a direct consequence of its definition. Indeed, through financial reporting, companies not only spread its message but also active a learning-by-doing process where financial community feedbacks are fundamental to confirm a good corporate management and to influence future corporate plans; moreover, companies have a multitude of different stakeholders who are interested in distinct corporate aspects and, as a direct consequence, they need specific information and communication related to their personal concern.

In this frame, during the last few decades, CSR and sustainability reporting were arisen to fill a gap between traditional company disclosure and new requests of the stakeholder communities. Themes as child labour, labour rights, greenhouse gas (GHG) emissions etc., which were unheeded before, have currently a relevant interest among stakeholders because it has become important not only the financial capital, as in the past, but also the human and environmental matter. Companies have to create value for themselves and surrounding communities and not to raise its fair value taking possession of value from other factors. For example, destroying nature because of company actions does not mean to create value: certainly, enterprise value will be

increased than previous one but additional value is stolen to environment and not created with positive activities.

However, there are other issues that have led financial reporting to evolve and not to be the unique informational document for corporations.

The first problem is related to information asymmetry between managers and current or future investors. This matter is caused by the lack of some objective information to investors that, instead, corporate managers have got: this situation could favour opportunistic behaviours of companies (named Moral Hazard), trying to confuse others about fair value of the company and its assets [Bertinetti, 1996]. In this way, investors tend to overvalue poor-assets and undervalue real good ones.

Another problem is agency costs: managers, through their behaviour, try to maximise their own utility, sometimes going against company and shareholder interests.

Both problems are in some ways linked to a lack of information for stakeholders. This has caused a progressive increase in available information for companies to fill the gap between insiders and other stakeholders. The increase of information can be seen as a positive aspect for stakeholders, if the additional information is useful for their personal interests, but, at the same time, it is a negative aspect for companies that can consider it as a financial weight because it needs different IT systems and human resources to be implemented.

Therefore, the main problem of company disclosure is the dichotomy between information that companies want to spread and information required by users [Eccles and Krzus, 2012].

Paradoxically, nowadays, the real issue of financial reporting is the complexity that refers *"[...] to the difficulty for investors to understand the economic substance of a transaction or event and the overall financial position and results of a company."* (SEC, 2008, 18). Balance sheets are more and more rambling, not underling adequately key messages that companies have to disclose. According to experts, this is a consequence of a standard overloading that has been recorded during the last decade as a response to heavy pressure of stakeholders outside companies.

A possible solution can be found in a right balance between general principles and detailed rules, as well as by coordinating all accounting committee around the world to achieve a common scheme and round-robin rules for financial reporting [Eccles and Krzus, 2012].

This matter is so relevant in the accounting field that there is a SEC[5]'s commission dedicated to study how managing the corporate complexity: it is the Advisory Committee on Improvements to Financial Reporting (CIFR), named also Pozen Committee. As per Eccles and Krzus, this committee finds a relevant number of possible factors that can origin the problem: for instance, the size of companies, company business transactions, how accounting standards are developed, use of a simple language or superabundance of information etc. can be all a motif of its complexity. The same commission has advised some modes to shrink complexity in financial reporting preparation and to grow utility and materiality of disclosed information [Eccles and Krzus, 2012]:

- delimiting creation of new accounting standards base on fair value;
- avoiding sharp definition in accounting standards since they can be used to alter real company situation;
- deleting repetitions and overlapping in the accounting regulation;
- removing handbooks about rules related to specific industrial field.

Finally, there is also a hard discussion about the recent consistent use of fair value accounting[6], caused by the pressing stakeholder request of more applicable financial information, useful for their making-decision process. By utilising a fair value accounting, there should be a more useful financial reporting because data are referred to the current value in the market, instead of historical cost of assets. However, at the same time, these types of data are too volatile for long-term valuation of enterprise status because they are based on hypothesis of changeable and arbitrary price evolution. This latter matter about fair value accounting has been mitigated thanks to a different measurement of assets and liabilities [Eccles and Krzus, 2012].

---

[5] The U.S. Securities and Exchange Commission: it is created "*to regulate the securities market and protect investors. In addition to regulation and protection, it also monitors the corporate takeovers in the U.S.*" (sourced by www.investopedia.com).

[6] It *"is a financial reporting approach in which companies are required or permitted to measure and report on an ongoing basis certain assets and liabilities (generally financial instruments) at estimates of the prices they would receive if they were to sell the assets or would pay if they were to be relieved of the liabilities. Under fair value accounting, companies report losses when the fair values of their assets decrease or liabilities increase. Those losses reduce companies' reported equity and may also reduce companies' reported net income."* (Sourced by Council of Institutional Investors, 2008, 1).

2.2.3 Towards Non-financial Reporting

As explained before, the financial reporting is a circular process where companies and stakeholders exchange information: in particular, companies provide information in order to allow to financial market the evaluation of their risks. For this reason, over the last decades, experts took into account also the disclosure of sustainable aspects of companies because they believed that these corporate factors could assume a relevant role in order to reveal in the capital market the correct size of undertaken risks. Indeed, the financial reporting has to answer some questions related to value creation for company stakeholders, investment stability, company trustworthiness etc. and the current stakeholder needs of company information require a wider enterprise overview, including strategic, social and environmental aspects. For instance, social and environmental performance indexes, which are linked to corporate activities and its targets/strategies, touch all stakeholder points about financial reporting: indeed, they are connected with long-term remuneration, risk profile of a company, faith and trust of company proposals and profit promises.

This new type of information is called *non-financial information*. This term have several definitions: for instance, according to the International Corporate Governance Network (ICGN), "*non-financial business reporting is a wide ranging term which can include both regulated and voluntary disclosure by companies. From a shareowner and investor prospective, it is information, other than financial statements, which is relevant and material to investment decision-making.*" (ICNG, 2008, 11) or, according to Eccles and Krzus, it is a full-meant term that is implemented with all information, conveyed to shareholders and stakeholders, which is not defined by an accounting standard or based on a standard accounting computation [Eccles and Krzus, 2012]. Others consider sustainability information simply as data about society, environment or governance or it is used to identify key performance indicators (KPIs).

The financial reporting is based only on financial data and economic aspects and it considers barely company ethics or efforts for the surrounding community. However, there is currently a most of experts believes in the connection between company performance and its socio-environmental impacts of corporate activities; thus, non-financial information has to be included or associated with company financial data, through a social and environmental disclosure, CSR reporting, or sustainability reporting.

Although this novel information is considered more and more important for a company disclosure, almost all companies around the world are not forced by national laws to display their social, environmental and ethical impact in the community where they are settled. It is a voluntary disclosure, even if some of its aspects, like intangible assets or social and environmental results, have become more and more relevant sectors that are looked at with significant interest by investors and stakeholders [Guidara, 2011].

In addition, strong socio-political and environmental changes of the modern society have been pushing companies towards a reporting that includes these types of aspects and their impacts.

The current question is to understand it this type of additional company communication has to be voluntary, namely companies decide independently to adopt and how to disclose it, or it has to be arranged with a mandatory party whose basic data are indispensable, entailing more costs for companies.

It is complex to understand if there is a real positive relationship between enterprise value and this additional information because it is difficult to separate reporting effects in stock price of the company. However, as Guidara stated, theoretically a higher level of information quality can reduce to minimum the effect caused by the difference between fair value, market price and information asymmetry, getting close company fair value and its price. According to this view, the current sustainability reporting should be a competitive instrument in the capital market because it provides relevant company information, useful for its correct valuation. This competitiveness is not only related to the reliability of company information but also to enterprise approach with the capital market: this should be proactive because information quality is a strategic lever of companies for their development, consensus, confidence and success among their stakeholders and market agents.

The financial theory is based on the Shareholder Value Theory (SVT) that considers the maximisation of the enterprise value for its shareholders as the main aim of the corporate management. It is a way to cancel target conflicts that exist between managers and shareholders. In this context, sustainability enters as an important factor because, if companies adopt randomly the value maximisation for shareholders, overlooking environmental and social impacts, they destroy inadvertently the value. The SVT is still the basis for a financial view of the company, yet it is necessary that its goal (the

maximisation of enterprise value for shareholders) is in line with principles related to sustainable development since the company could fall afoul of value demotion.

There are many benefits linked to a broader vision of enterprise value and its disclosure: for this reason, over the last years, the sustainable approach has been spreading and the market has understood its key role in cash flow settlements, thanks to its connection with company strategy and policy. One possible advantage of this additional disclosure is more facility in the decision-making process of corporate managers; another advantage is more accuracy for market evaluation of companies.

In 2012, a Canadian study (Berthelot, Coulmont, and Serret, 2012) showed that investors gave positive value to sustainability reporting as a separated document: they underlined the importance of international initiatives like GRI that fostered companies to adopt sustainability reporting. This study stated that this new trend has been diffused mainly in developed countries where chiefly big corporations have had this type of approach in company communication. Plus enterprise value, derived by these additional data, is due to anticipation of production cost decrease or to more sells, connected to sustainable projects of the company or communication strategies for political benefits.

In 2013, an EY's survey, which analysed more than 7000 reports, demonstrated that sustainability reporting "*may reduce forecast inaccuracy by roughly 10%*" (EY, 2014, 2). It drew up also a ranking of sustainability reporting benefits as they are perceived by companies and their managers: the first one is an improvement of company reputation (more than 50% of respondents), the second is an increase of employee loyalty (around 40%), reduction of evaluation inaccuracy (about 35%) and the last relevant one is the improvement of company capital access (less than 35%). However, the survey also showed that all benefits or positive effects caused by sustainability data and communication are closely related to corporate transparency: this is the major improvement of this additional disclosure and it has an influence on all key corporate factors.

The progressive utilisation of sustainability reporting is also due to some common points with the financial sector: complexity, addressees and materiality [White, 2010].

- *Complexity*: on one hand, financial reporting has to keep pace with current complex transactions, financial instruments and obligations; on the other hand, sustainability reporting faces the measurement problem (quantitatively and

qualitatively) of social, environmental, and governance performance of the company.

- *Several beneficiaries*: financial reporting is mainly created for investors, but it is also used by other stakeholders such as employees, NGO. As financial reporting, sustainability reporting has many subjects interested in it with different profiles.
- *Materiality*: in financial reporting *"[...] not all possible disclosures are material disclosures. [...] New risks and opportunities constantly challenge reporters to avoid information overload through judicious selection and clear presentation of material information. This is no less true for sustainability reporting. Specific risks and opportunities are not equally relevant to all firms across all sectors."* (White, 2010, 30).

These affinities between financial and sustainability reporting have been leading experts and doctrine toward the adoption of an Integrated Reporting, where both financial and ESG information can be disclosed together (deeper analysis in the next chapter).
Although there are so many positive aspects about non-financial data disclosure and a strong increase in its application, there are some quite skeptical people about its usefulness and impacts on enterprise value.

2.2.4 Several Tools for Non-financial Disclosure

For non-financial information, there is not only one tool, internationally recognised, that allows a standard disclosure of this information. The most recent tool is integrated report (IR), suggested by International Integrated Reporting Committee (IIRC), that tries to sum up the financial and non-financial information into the same corporate document[7]. An attempt of standardising sustainability reporting has been doing through Global Reporting Initiative (GRI) Guidelines, which have draft specific indexes about environmental, social, and economic aspects of companies for a conformed sustainability report. Both are key subjects of this writing and they will be analysed in deep in the next chapter.

[7] Integrated Reporting "*is a process founded on integrated thinking that results in a periodic integrated report by an organization about value creation over time and related communications regarding aspects of value creation. [...] 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 in the short, medium and long term.*" (Sourced by www.theiirc.org).

In this paragraph, other documents are presented for company disclosure of non-financial information, through a brief summary of their focal points.

The Social Report

The social report is a document where companies disclose periodically and voluntarily all their activities portrayed by social aspects, which are not exposed to readers through accounting and financial information [Guidara, 2011].
In Italy, they have been established since the '70s, when national regulation has requested it as essential and mandatory corporate information.
The social report has three characterising elements: voluntariness, exposition of corporate commitments and social effects and the construction of a dialogue with company stakeholders.
This report, as almost all non-financial reports, is primarily a corporate cultural process and not a technical corporate tool: it is the result of a process where firms describe their choices, activities, results and resource exploiting in order to allow a stakeholder judgement of how companies try to achieve their mission and aims.
The main critical points for a good social report are: a good quality reporting process and a relevant number of involved subjects in this process.
It is not only an element to improve corporate transparency towards external agents but also a way to meditate on its own organisational features and to monitor them. It is an internal consciousness process that brings to a deeper external dialogue with stakeholders.
There are four steps in the social reporting process:

1) *Definition of reporting system*: individuation of working group and reporting areas, definition of organisation program and essential indexes.
2) *Collection of data*: collection of information and data that have to be assimilated with programming and control system.
3) *Editing and endorsement of the document*: structuring of qualitative and quantitative information in a governance document.
4) *Social reporting disclosure*: planning of disclosure actions for external circulation.

Moreover, there are some expedients to complete a flawless social report: there are the necessity of an adequate internal information system for reporting, the involvement of

internal governance authority and surrounding community, and the continuity of the initiative.
In summary, the social report is a company instrument to reply to a corporate need to be recognised in the society through the communication of corporate social aspects.

The Environmental Report

The environmental reporting is later than the social one. It aims to describe and disclose the main aspects of the relationship between enterprises and nature: for instance, it can face natural resource exploitation caused by the company, the quality of GHG emissions of the company and the corporate behaviour related to financial investments reducing negative company impacts on environment.
It is composed by quantitative and qualitative information on the environmental matter for companies [Guidara, 2011]. There is a sort of integration between ecological and financial dimension of a company.
The environmental report has also to describe corporate strategies and policies followed in order to pursue company targets related to environmental impact and to show past environmental performance of the company in order to compare them with previous goals, illustrating reasons of possible gaps between results and purposes.
For instance, some companies consider only GHG emissions in order to measure its impact on nature and they substitute the wider environmental report with a strict GHG emission disclosure.

The Sustainability Report

The sustainability report is a socio-environmental disclosure, created as an integrated tool for strategic and corporate performance evaluation and communication in a path towards sustainable development.
It is more articulate than previous types of reporting (social and environmental) since it is structured according to TBL approach, integrating the social, environmental and governance disclosure. It aims to reveal the real character of the company, conveying information in the simplest and clearest way.
At the same time, the sustainability reporting is not a simple document about past data and information but it is also a precious management tool, thanks to its view towards development strategies. For this reason, it can be considered as an fundamental instrument for all stakeholders.

The internal function of this report consists in fostering companies to improve management and control systems, pondering on corporate performance, its impacts and possible areas that could be revised.

On the other hand, the external function allows to create the necessary accountability for stakeholder valuation of the company and to provide relevant information for policymakers such as company targets, business difficulties and obstacles, company impacts on a wider social and environmental context.

Lots of these reporting effects have been inactive because, in these types of reports, only good news have been disclosed, converting sustainability reporting in a marketing or public relation tool.

According to Guidara, the sustainability reporting is a collateral instrument to economic and financial tools that has the objective to provide perspective information related to corporate value drivers [Guidara, 2011]. In this way, Guidara looks at firms as organisations placed at the centre of a connection grid, declaring a wider responsibility of the company.

2.2.5 Opposing Opinions about Non-financial Reporting

As it is presented previously, the majority of lecturers and experts agree upon the necessity of sustainability reporting in companies and its positive impact on enterprise value and reputation. Nevertheless, there are some of them who are skeptical about the adoption of this new type of company reporting in addition to financial one.

In 2009, Timothy Devinney indentified some negative aspects of Corporate Social Responsibility (CSR): he presented five points that could be considered as motifs against CSR utility for companies.

1) "*Corporations exist to generate economic return, not to solve societal problems [...] to optimize themselves*" (Devinney, 2009, 49). This first point is also supported by Milton Friedman:

   > *"There is one and only one social responsibility for business – to use its resources and engage in activities designed to increase profits so long as it stays within the rule of the game, which is to say, engages in open and free competition without deception or fraud."* (Friedman, 1970, 6).

2) Company habit to distort societal standards for its own interest and necessity.

3) "*Corporations are not representative of society in large [...] corporations are urban upper-middle class. They do not represent the poor and disadvantage of a society.*" (Devinney, 2009, 50).
4) Many companies are conservative due to their nature and, for this reason, they have no propensity for experiments or investments in which they cannot see a clear profit for their financial effort.
5) The last point is that "*CSR allows governments to abdicate some of their social responsibilities, thus making the delivery of those social services provided by companies less accountable and transparent and more subject to the whims of unelected decision makers.*" (Devinney, 2009, 51).

Also Eccles and Krzus has presented some arguments against the integrated report (IR), which is the most recent type of reporting related to company sustainability aspects and non-financial information (IR will be analysed in chapter 3).

In their last book, "*One Report*" (2012), they show three different objections to the integrated reporting adoption.

The first one is about market efficiency: the idea is that, if non-financial information had had an effect on enterprise value, the financial market would have already considered, by modifying the stock price. Therefore, there should not be a reason to disclose this type of information for companies. Moreover, devices like Bloomberg already have available non-financial information (about environment, society and governance), thus users could already access to it and utilise, if they need.

Another objection is that, if there had been a real benefit from IR, companies would have already adopted, making it a universal model for company disclosure. This statement assumes that, in any period, all companies are always managed in the best way. Obviously, it is a quite untenable argument since, in that environment, there would not be any change opportunities. The real fear is that IR's costs could be higher than its benefits: in particular, costs simply consists in printing expenses of documents and coordination costs related to correlate operatives units to provide a coherent message for the IR.

The last point against the adoption of IR is the fact that integrated reporting strengthens company actions only for specious and utilitarian aims, rather than for common well-being. This disapproval is based on the fact that stakeholder and shareholder interests are not coincident and that social wealth increases only with the value movement from

shareholders to other stakeholders. The IR helps to evaluate the possible negative impact of sustainable strategies and, for this reason, it could reduce their investments in the company business. At the same time, this transfer of value between shareholders and other stakeholders is minor than costs related to this type of trend: in this context, IR and, more in general, sustainability reporting are only a risk for companies.
However, these types of opinions and experts positions are only a minority and their assumptions, as illustrated before, are quite debatable and detached. In this writing, it is underlined the importance and positivity of non-financial disclosure and specifically sustainability reporting, bringing samples, data and expert opinions.

2.3 Corporate Social Responsibility: Origins and Definitions

When the reporting of sustainability aspects in companies is going to be presented, it has to be previously introduced also the corporate social responsibility (CSR) since it plays a fundamental role in the company communication.
Even if, until the 1970s, CSR was considered an insurgent theory and an alienated notion, it has become a key concept into business practise since the 1990s. Indeed, the business sector has been utilising "*CSR agenda as a response to wider social pressures, aiming to reduce reputational risks, gain financial benefits and ultimately contribute to a more sustainability-oriented development.*" (Skouloudis and Evangelinos, 2012, 130). A deeper relationship between sustainability and CSR is stated by Mel Wilson with its first definition of this term:

> "*Like sustainable development, corporate social responsibility (CSR) is also a broad, dialectical concept. In the most general terms, CSR deals with the role of business in society. Its basic premise is that corporate managers have an ethical obligation to consider and address the needs of society, not just act solely in the interests of the shareholders or their own self-interest.*" (Wilson, 2003, 2).

CSR is a concept older than other terms like sustainable development or other concepts mentioned in this dissertation (for instance, in 1973 Nicholas Ebserstadt wrote that CSR came from ancient Greeks, when first rules for businessmen and merchants were set out by governments), but there has been an expert debate on it and many different definitions.
The European Commission has defined CSR as "*a concept whereby companies integrate social and environmental concerns in their business operations and in their interaction*

with their stakeholders on a voluntary basis."[8] (European Commission, 2011, 3). In this definition, CSR has five dimensions, which can be indentified in almost CSR definitions: voluntariness, connection with stakeholders, with social, environmental, and economic aspects. In addition to the previous definition, the European Commission stated that CSR is "*[...] a concept whereby companies decide voluntarily to contribute to a better society and a cleaner environment.*" (Petcu, 2010, 846). In other passages of their writings, the European Commission underlined the association between CSR adoption and company voluntariness to undertake actions that go over legal obligations or economic goals. There is a sort of Triple Bottom Line (TBL) approach, namely a economic, social and environmental approach. According to this institution, the enterprise is responsible with its stakeholders: it should put effort in giving balanced company behaviour and contributing to improve workforce and society lives. In order to achieve this target, the European Commission believes that government regulations, also to European level, it is necessary to provide a opportune environment.

Although the European Commission definition of CSR can be considered the principle one, there are other definitions that are often used in business.

For example, in 1999 the World Business Council for Sustainable Development described the CSR as:

> "*[...] the ethical behaviour of a company towards society; management acting responsibly in its relationship with other stakeholders who have a legitimate interest in the business, and it is the commitment by business to behave ethically and contribute to economic development while improving the quality of life of the workforce and their families as well as the local community and society at large.*" (Petcu, 2010, 846).

In this definition, it is mentioned almost five dimensions of CSR, excluded the economic dimension.

Another CSR definition, which is frequently used, is Khoury's one. He wrote his definition in 1999 and it is a very interesting concept because he highlighted the corporate responsibility aspects also in financial performance of the company:

> "*Corporate social responsibility is the overall relationship of the corporation with all of its stakeholders. These include customers, employees, communities, owners/investors, government, suppliers and competitors. Elements of social responsibility include investment in*

[8] Communication number COM(2011) 681 by European Commission.

community outreach, employee relations, creation and maintenance of employment, environmental stewardship and financial performance." (Petcu, 2010, 845).

It has been presented some of the most spread definitions of CSR, but not the only ones: CSR is a concept barely to define only in one way since the responsible company behaviour is a changeable idea that modifies needs and expectations. It is a dynamic concept in terms of time and space, which refers to different backgrounds.

The common opinion is that CSR is a voluntary company action and its most relevant aspect is the social one: social aspect does not handle only with company stakeholders in ethical and responsible way, but also it includes the economic responsibility of the enterprise. With the adoption of CSR, the company attention is addressed towards stakeholders and not shareholders, including a wider category of subjects.

As it is defined in its notions, CSR is more than a simple additional reporting for companies: indeed, it influences corporate decision activities, actions and long-term results. It involves the entire company structure because it includes corporate culture, corporate strategies and policies, its management and behaviours, intern control and disclosure process.

The extraordinary success of CSR, during the last two decades, is due to arguments that some philosophical theories have provided to demonstrate ethical responsibility of corporate managers [Wilson, 2003]:

- *Social Contract Theory*: society is composed by several contracts (explicit or implicit) between individuals and organisations that have been evolving, making trust and harmony as important elements for exchanges.
- *Social Justice Theory*: institutions have to make possible a satisfying life for people and give active contributions to the community, providing opportunities for a continuous human development.
- *Deontological Theory*: it "*deals with the belief that everyone, including corporate managers, has a moral duty to treat everyone else with respect, including listening and considering their needs."* (Wilson, 2003, 3).

In practise, CSR and, consequently, company ethical behaviours have become corporate manners as a response to two different forces: pressure of stakeholders, who want to regulate company actions according to their needs and expectations, and government regulations, which request a change in company approach to the business. In other

words, CSR is a contribution to corporate sustainability because it provides ethical suggestions about reasons for corporate managers to lead their companies towards a sustainable development. Indeed, society believes that corporate sustainability is a valuable target and companies have to help it moving towards that aim. As Kotler and Lee stated in 2005, "*CSR is a commitment to improve community well-being through discretionary business practise and contributions of corporate resources*." (Petcu, 2010, 846).

2.3.1 Notions around CSR

When someone sets about subjects as corporate social responsibility or sustainability reporting, he can chance upon novel terminology, which has many changeable meanings or several implications. As the sustainability concept was discussed in the first chapter, in this paragraph the most common definitions are exhibited in order to provide a useful background for readers.

The first concept is the term *stakeholders*. As all know, they are subjects who influence or are influenced by company activities, products or services and their performances. Although it is a common term in business, it is important to highlight the concept of *shared value* that is inside it because it is one of the several pillars on which sustainability reporting is based. According to Porter (2011), shared value is an economic value creation that produces value also for the society, beating its needs and difficulties: it is a new mode to achieve business success for companies, which have to link their own success with social progress. This aspect is important because the necessity of companies to reconsider completely themselves is essential for a correct adoption of CSR or sustainability reporting: it explains better why they should not simply consider as additional company communication but a real remodelling of corporate structure and aims.

Therefore, *corporate citizenship* has assumed a central role in companies since it has the capability to integrate social troubles with ecological challenges through processes that take in consideration all company stakeholders [Eccles and Krzus, 2012].

If the enterprise does not undertake this path towards corporate responsibility and sustainability, shareholders can be proactive to make pressure on corporate management, utilising their status of owners: this action is named *shareholder activism.* It is a sort of raising awareness that can be activated through meetings and dialogues

between shareholders and corporate managers or the use of voting right during shareholders' meetings.

A quite recent notion is the *Socially Responsible Investing* (SRI): this is a new approach to investment decisions, a novel investment theory based on an accurate analysis and information selection that involves also the private investor. It was born in the USA in the '70, when money savers decided to make pressure to companies through their asset allocation. This new trend has its pillars on responsibility linked to moral and ethical principles and not only to economic profit. It is a way to foster social responsibility, sustaining a yield equal to the market average and involving environmental and social evaluation of company investments. This system is allowed by a minor corporate risk due to these long-term investments and, consequently, by less volatility of company stock price: both two factors mirror in lower capital cost. It is called also *ethical finance* that recognises the multi-dimension of enterprise value, considering in its valuation also the socio-environmental performance of companies.

From this new financial approach, *SRI funds* were born, named also *Ethical Funds.* They utilise traditional savings products yet they select those financial instruments resorting economic, social and environmental criteria, looking at sustainable development. If these financial products respect these types of criteria, fund managers select which ones have to be included in their portfolio considering their expected profitability. They have a long-term duration because sustainable investments have this period. Nowadays, they are quite spread around the world, even if they are still a minority in the financial context.

Related to these types of investments, there are *sustainability indices*: they are specialised indices, composed by investments in companies considered social responsible, which provide a benchmark for investments in sustainable development.

For instance, in stock exchanges, there are new indexes associated to sustainability: the most famous one is surely *Dow Jones Sustainability Index* (DJSI) that evaluates corporate sustainability performance of around 2500 companies listed in Dow Jones Global Total Stock Market (DJTSK). It was launched in 1999 and it includes only companies that make a relevant effort to manage sustainable development and operate in a sustainable and ethical manner. Another one is *FTSE4Good Index*: it was created in 2001 and, as DJSI, it "*is designed to provide exposure to companies that are managing their social and*

environmental risks, while also helping ethical investors avoid companies that aren't."[9] Companies, which would like to be included in these types of indexes, have to lead themselves towards sustainable development, support human rights, foster good labour standards also in its supply chain, maintain good rapport with stakeholders, struggle corruption etc.

As it has been developed an ethical finance, also rating agencies has created an *ethical or sustainability rating*: it is a concise opinion, derived by an accurate analysis of internal corporate documents and company communications and based on conversations with stakeholders and insiders. This rating measures that analyse a company's corporate responsibility issues and agencies state if the company could be considered as possible investment of an SRI fund. Therefore, for this evaluation, ethical agencies give an external valuation of the enterprise, following not only financial and economic but also social and environmental criteria, evaluating also company capability to create value for all stakeholders.

Sustainability information has been more and more important so much so that they are included in investment decision: for this reason, it is risen the problem of its compliance and assurance. During the last few years, the auditing and validation of sustainability reporting, made by an external agent, have been assuming a central role in this field. It is a necessary procedure to review information and its reliability and to defend report readers from mistake. However, it is a complex process because this type of review requires not only information accuracy but also to verify information significance and importance.

Even if the assurance of non-financial information is still voluntary, there has been an increase in its adoption: according to a KPMG survey, in 2008 half of companies located in principle European countries (such as the UK, Spain, Italy, France) requested an expert evaluation of their sustainability reports, whereas in the U.S., this percentage was at around 14% with a significant increase compared to 2% recorded in 2002 [Eccles and Krzus, 2012].

This type of review could be done by both financial-consulting companies and other organisations that have the credibility and reputation to do it: for instance, engineering companies could verify spills or emissions of the firm.

[9] Sourced by www.investopedia.com.

At the same time, experts have developed *assurance standards* that are voluntary standards for sustainability reporting compliance.
One of the most relevant is *AccountaAbility 1000* (AA-1000APS) that suggests three principles:

- *Inclusiveness*: to favour stakeholder participation in the development and achievement of a responsible and strategic reaction to sustainability;
- *Materiality*: to determine subject importance for a corporation and its stakeholders;
- *Responsiveness*: to provide answers to stakeholder expectations about company performance.

However, the main problem for non-financial information assurance is the lack of standards as IFRS or U.S. GAAP: there are some like that related to GHG emissions and other climate and environmental parameters, yet the majority of non-financial information has not these types of standards.
All these notions come from a wider idea: the *green economy.* It is an economic development model based on both economic indexes, like GDP, as the traditional one and environmental impacts of business activities, considering their possible damages on biodiversity and nature.

2.3.2 International Principles and Guidelines

If a big company wants to adopt formally CSR disclosure, there are several international guidelines and principles that can help it in this critical step. As European Commission stated[10], there is "*authoritative guidance*" recognised all over the world such as "*OECD Guidelines for Multinational Enterprises, ten principles of the United Nations Global Compact, the ISO 26000 Guidance Standard on Social Responsibility, the ILO Tri-partite Declaration of Principles Concerning Multinational Enterprises and Social Policy, and the United Nations Guiding Principles on Business and Human Rights.*" (COM 681, 2011, 6). It is the current framework about CSR that is taken in consideration also by European Commission to write its own guidelines for the CSR promotion in Europe.
All these international standards agree about the subjects that CSR has to include: in its CSR disclosure, a company has to take an interest in human rights, environmental

[10] Communication number COM(2011) 681 by European Commission.

matters (climate change, biodiversity etc.), labour and employment practise (gender equally, diversity etc.) and fighting corruption, as well as "*community involvement and development, integration of disabled persons, and consumer interests, including privacy, [...]*" (COM 681, 2011, 7), volunteering between corporate employees, development of opportunities for its supply-chain.

The process of CSR adoption and development should be activated by companies themselves: the same European Commission stated that "*public authorities should play a supporting role through a smart mix of voluntary policy measures and, where necessary, complementary regulation [...]*" (COM 681, 2011, 8).

The companies approach to CSR should be flexible in order to be adaptable to all circumstances that could surround enterprises: it is also the aim of European Commission that tries to provide devices to adhere principles to each specific enterprise. Companies utilise often government support towards some CSR guidelines as a benchmark to value their own progress in that field.

This process of CSR launch should be matched with the monitoring process of trade unions and civil society organisations that have to identify problems, make pressure and to find solutions through cooperation with companies. Corporate reputation could be improved, enhancing market reward, thanks to external agents like consumers, mass media and investors.

The European Commission has pushed enterprises towards self- and co-regulation processes: companies should create code of conducts about societal matters related to their own sector. According to the commission, "*when such processes are designed in appropriate way they can earn stakeholder support and be an effective means of ensuring responsible business conduct.*" (COM 681, 2011, 9).

These mentioned principles and guidelines are functional for a CRS implementation in companies and their good practises; there are others that are related only to sustainability disclosure and its communication activity. The commission considers the disclosure step as important as the implementation of CSR in corporations: in fact, it believes that social, environmental and governance disclosure can help stakeholder involvement and a right identification of corporate sustainability risks.

About disclosure process, there are other international commissions that have pointed out the international framework path for sustainability reporting: Global Reporting Initiative (GRI), related to sustainability report, and International Integrated Reporting

Committee (IIRC), related to more recent integrated report (IR). Both are followed by the European Commission, which wants to make uniform the state regulation about non-financial disclosure in order to avoid additional costs for some enterprises, and it will be analysed in deep in chapter 3.

2.4 Importance of Sustainability Information

As already stated in the previous paragraphs, sustainability reporting is a fundamental developmental opportunity to be taken quickly by companies, if they want to reach a long-term success and a competitive advantage compared with competitors. Indeed, the safety of quantitative information like financial one is not currently adequate for a complete company reporting in order to respond to stakeholders' needs: communication can be considered as "*an interaction between the sender and the recipient and identifies the importance of the consumption, as well as production, in the consideration of the intentionally of communication.*" (Tregidga, 2012, 224). One more time, the circular structure of corporate disclosure is confirmed and it can be assimilated to the corporate finance circuit for its structure in information exchange.

For this reason, "*community pressure groups are a major source of influence on companies' social disclosure practises*." (Tilt, 1994, 47): "*pressure groups*" are main subjects interested in corporate activities and they can be summed up in "*shareholders, stakeholders and society in general.*" (Tilt, 1994, 50). Tilt also stated that, even if environmental groups were the majority, environmental matters were not the most disclosed types of information because there could have been other groups or simply because of a no accurate company perception of its audiences and preferences as it already happened into financial disclosures. Although almost all pressure groups can influence companies, these also help companies through a co-operative relationship.

In addition to the previous reasons, there are some theories that support the necessity of facing together social, environmental and economic issues and, as a consequence, the sustainability disclosure.

The first and wider theory is a *political economy theory* (Gray, Owen and Adams, 1996), where society, politics and economics cannot be isolated and their issues cannot be analysed or considered alone.

Another one is the *legitimacy theory* (Donaldson, 1982): it describes the organisation habits that appear into bounds and norms of their respective societies during company

operations, in order to legitimate their activities from outside parties. There is a sort of implicit social contract between organisations and society: it consists in societal expectations of company manners to conduct its operations. Thus, the company has to consider the public at large and not simply its investors or shareholders. If the company does not respect social guidelines, it pays sanctions related to social contract violations. Therefore, for the companies it is fundamental that more and more types of operations can be considered social acceptable and the only way to do this is to disclose publically more information in order to inform of any changes.

The most recent theory is the *stakeholder theory* (Deegan, 2000) that has many similarities with the legitimacy theory. The main difference is that, in the legitimacy theory, the audience of interest is identified with the society, whereas, in the shareholder theory, the same aspect is related to a relevant public, namely a specific group of stakeholders. Moreover, in this theory, as in the previous one, the company is considered as a part of social system but the attention is oriented towards different stakeholders and how they could be managed by companies: indeed, the company has not adequate power and resources to respond equally to all of them and it has to select who is more powerful to influence it. This stakeholder power is related to criticality of their resources for future success of the business organisation: a company can be considered as a successful one when it can satisfy the requests of the powerful stakeholder groups.

Over all these theories and positive opinions on sustainability reporting, there are also two other points in order to underline its importance and fundamental role in the recent scenario: transparency and corporate regulation.

Over the past decade, there was an increased pressure towards company accountability and a consequent demand for more transparency about corporate behaviour. This pressure was caused by some enormous scandals related to corporate governance and accountability such as Enron and Parmalat, which have involved these two aspects of company reporting. As reaction to these and other scandals, the transparency has been becoming a fundamental feature for all companies in the world. It has two developmental paths: "*On the one hand, accountability requirements in the context of corporate governance have expanded, and are starting to sometimes cover staff-related ethical aspects as well. On the other hand, [...] sustainability reporting has emerged*" (Kolk, 2006, 2) and it has been not mainly related to environmental but also ethical, social,

employee and community matters. Therefore, sustainability reporting has been fundamental for an increase of corporate transparency through the improvement of "*shareholder insight in and influence on corporate behaviour on the whole range of business matters.*" (Kolk, 2006, 3).

Another change that has imposed a disruptive reconsideration of company communication is about government approach towards regulation: they have progressively moved from a command-and-control approach towards one closer to self-regulation. According to David Hess (2007), this "new *governance model of regulation replaced centralized regulation with a more collaborative approach and works from the belief that 'economic efficiency and democratic legitimacy can be mutually reinforcing'*." (Hess, 2007, 453). This new approach affects also corporate governance that should launch a new mechanism for "*enabling stakeholders democracy in corporate governance, which is consistent with the collaborative, participatory and decentralized approach of New Governance regulation.*" (Hess, 2007, 454): this mechanism is sustainability reporting.

However, the same author of his paper stated that, reviewing the experience, "*social reporting is not meeting the goals of corporate accountability through either transparency and accountability [...]*" (Hess, 2007, 454): it is the consequence of its application as risk management tool by the firms that "*attempt to change 'perspective without changing facts'*." (Hess, 2007, 457). "*Instead of transparency, firms have been able to engage in strategic disclosure designed to protect their legitimacy rather than paint a complete of the firm's social performance*" (Hess, 2007, 455) through only emphasis on positive firms' results. This behaviour could seem an acute way to improve company's image and legitimacy in society and, at the same time, to influence stakeholders and others during their making-decision process, completing a voluntary disclosure like sustainability one as part of a corporate communication strategy.

A study, conducted by Reimsbach and Hahn in 2013, underlines the distressing effect that this corporate behaviour can provoke in company. First of all, they underlined the relevant role of NGOs with their "*watchdog function*", namely they uncover "*company misconduct and (supposedly) negative incidents that could also have devastating effects on legitimacy and reputation and thus o shareholder value*." (Reimsbach and Hahn, 2013, 2). They believes that managers try to hide negative reporting incidents since they feel pressure to do it.

Therefore, they studied the possible negative effects on company shareholder value of the negative information inclusion in sustainability reporting of a company: from their results, not only the disclosure of negative information "*has no significant effect on potential decision of non-professional investors*" but also, if the same negative incident is disclosed by an independent NGO, this "*has a significant negative effect on decisions of non-professional investors*". They also stated that their "*results suggest that investors seem to punish those companies that were 'caught off guard' by negative NGO reports.*" (Reimsbach and Hahn, 2013, 15). This means that a company has not to use the sustainability report as a tool to promote itself hiding negative aspects since, if they are discovered and reported by NGOs, their consequences on its value will be negatively much higher.

Although all the theories, benefits and studies support the adoption of sustainability reporting as a necessary and important tool for a right company disclosure, there are still lots of companies that do not consider this tool so indispensable.

A study, conducted by Stubbs, Higgins and Milne in Australia in 2013, went in deep about why some companies do not produce sustainability reports. This research is relevant because it analysed this aspect in a country as Australia where sustainability reporting is a key feature of the corporate agenda.

Firstly, they underlined that:

> "*In light of the changing business landscape, business organisations both should and would disclose more information about their impacts as a matter of principle. Extended accountability would to social and organisational change [...] and it will raise management consciousness and motivate stakeholders to change on an organisation*." (Stubbs, Higgins and Milne, 2013, 458).

This statement confirms the initial argument about the importance of sustainability reporting as a tool in order to follow the evolution of business environment.

They also believed that companies usually suspected there is not an adequate stakeholder interest in their social and environmental outcomes, as well as there is confusion about what and how to report. These reasons, as other ones do not prevent "*non-reporters*" (i.e. firms that do not make sustainability reports) from engaging *"in some communication with stakeholders some social/environmental issues. [...] there was an awareness of the social and environmental issues associated with their operations, and an understanding of community concern*." (Stubbs, Higgins and Milne, 2013, 461). Thus,

according to these scholars, the absence of sustainability report is not an indicator of the lack of social and environmental responsibility or sustainability matter by a company. Indeed, the respondents to this study were certain that actions are better than words: so they considered sustainability reporting as a additional but not relevant tool because they took in consideration the same matters, faced in this type of report, yet they did not disclose them to the public.

Moreover, the authors found five themes of why "a *firm does not produce a comprehensive and publicly available report of its social/environmental report*" (Stubbs, Higgins and Milne, 2013, 461):

1) *The lack of external stakeholder pressure*: in all "*non-report*" companies of the study sample, there are none who "*suggested that any extension of prevailing accountability norms or requirements was necessary.*" (Stubbs, Higgins and Milne, 2013, 461). For many companies, sustainability report is important only if at least one investor asks for it to assess company risks.
2) *No perceived benefits*: only few of "*non-reporters*" believe in possible benefits of sustainability reporting, whereas others consider it as a "*waste of time, a distraction to core business, and something that offered few real business outcomes*." (Stubbs, Higgins and Milne, 2013, 463).
3) *It is nice-to-do, not must-do*: the sustainability reporting is a voluntary disclosure and it "*is seen as a luxury and not an obligation*" (Stubbs, Higgins and Milne, 2013, 464). In the majority of "*non-reporters*", there are not people dedicated to sustainability.
4) *Compliance culture*: sustainability reporting is seen as unnecessary because, in these companies, a different logic prevails. "*Those viewing it as unnecessary tend to be subject to extensive reporting requirements set down by regulatory bodies.*" (Stubbs, Higgins and Milne, 2013, 465).
5) *Structure and culture do not encourage reporting*: "*non-reporters*" state that sustainability is closely linked with corporate culture or "*part of the way they do business*" (Stubbs, Higgins and Milne, 2013, 466). This does not mean sustainability has to be extent to sustainability reporting.

Finally, the sustainability reporting is an important step of company disclosure as it has been explained all through this dissertation, although there are still big companies that

believe it as unnecessary or a luxury tool for their communication. If a public community wants this constant widespread of sustainability reporting, stakeholders have to exert pressure for this wider and deep disclosure of business organisations since some of them do not report social and environmental information only as a consequence that none demand of them.

2.5 Sustainability Management Practise

The presence of a good sustainability reporting or a relevant corporate social responsibility disclosure does not make sense whether the specific corporate management does not go along with sustainability principles and practise.

As already said so far, the sustainability reporting is not a simple new type of company communication, a new model/scheme where corporate data and events are disclosed for stakeholders and investors. Indeed, the sustainability concept has to be part of corporate culture and philosophy, at the base of strategies and operational activities of the company: the sustainability reporting is a new and wider representation of the corporate situation for who are interested in and, for this reason, the report can be named as "*sustainability report*" only if the company has among its aims also the achieving of sustainability and sustainable development for its ongoing success.

At the same time, the utilisation of this tool can be an opportunity to represent the company as it is not in reality, keeping calm stakeholders and achieving a convenient risk perception that increases the company perceived value: this company behaviour can damage heavily its value if it is reported by an NGO since investors tend to punish these misleading conducts (matter faced in page 43).

Therefore, the current matter is how a company can put into practise the sustainability concept in its every-day activities, main strategies, business model, in all its aspects in order to be a sustainable company: only through sustainable companies, a sustainable society will be reached.

Sustainability has to enter in a company as a corporate culture, namely sustainability has to be a way to do business and to remain competitive over the years. In other words, corporate responsibility can be considered as a different way to produce profits and generate company value, managing and predicting risks of the surrounding environment that is evolving, connecting economic targets with socio-ethical ones [Eccles and Krzus, 2012]. The company commitment in sustainability cannot be a common and

irresponsible choice of the company since sustainability implies a long-term corporate effort that involves its strategy and structural operational activities. Moreover, according to Porter and Kramer (2006), a corporate strategy can be considered sustainable only if it aims at the development of a society that is also sustainable; consequently, not all actions that can contribute to the society benefit to company value in the short-term period.

Being corporate sustainability related to ESG aspects of corporate activities that have an impact upon society and its citizens in the present and the future, the sustainability in a company has to include its management practices and activities, as well as managers' and employees' culture and mindset. However, also among stakeholders there should be an interest towards long-term sustainability in order to make pressure to the company, if it is not following by itself a sustainable development.

As there are many ideas about sustainability, there are also several opinions about how a company has to do for achieving a sustainable development (very often these are linked with the different definitions of sustainability that are presented in chapter 1).

A first definition of sustainability in a firm is "*the rate at which recourses are consumed by the organisation in relation to the rate at which resources can be regenerated*." Thus, "*unsustainable operations can be accommodated for either by developing sustainable operations or by planning for a future lacking in resources currently required.*" (Aras and Crowhter, 2009, 280). In this definition, the business organisation can achieve a less unsustainability improving its efficiency in the way resources are utilised. This corporate practise derived directly from the sustainability concept that considers sustainability as the society effort to using "*no more resources that can be generated*" Aras and Crowhter, 2009, 279).

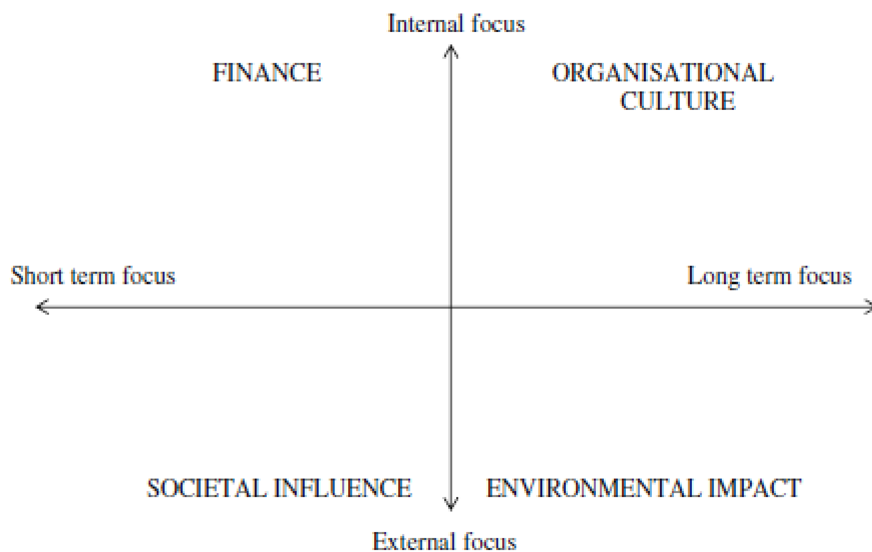
Another aspect of corporate management practise closed to sustainability is related to the strategic planning: a sustainable company has to consider environmental and social matters when it draws its plans, organising activities "*in which decisions made in the present do not restrict the choices available in the future.*" (Aras and Crowhter, 2009, 281). In this case, the concept of sustainability is much closer to the concept of necessity than to the one of choice.

For a complete right approach with sustainability, a company cannot overlook some common aspect of management: for example, in all initiatives launched for a sustainable

development, the company cannot overlook financial aspects and performances that are still fundamental in order to avoid any failures in financial analysis.
According to Aras and Crowhter (see **Figure 1**), there are four aspects of sustainability that have to be considered and analysed by the company in its management practise:

1) *Social influence*: it is the impact on companies of social contracts and stakeholders influence.
2) *Environmental impact*: it is related to the impact of corporate activities upon biodiversity, nature, generally surrounding natural environment.
3) *Organisational culture*: it is "the relationship between the corporation and internal stakeholders, particularly employees, and all aspects of the relationship." (Aras and Crowhter, 2009, 282).
4) *Finance*: it can be considered as an "*adequate return for the level of the risk undertaken.*" (Aras and Crowhter, 2009, 282).

Figure 1: Model of corporate sustainability.



Sourced by Aras and Crowhter, 2009, 282.

All these aspects of corporate sustainability have the same importance in a company and they are the dimensions of sustainability that have to be taken in consideration in all management decisions and practices.
This good management practise could be extended towards overall supply-chain: the green supply-chain management (GrSCM). As Srivastava stated, if you want to "*ensure environmentally excellence in product development, process design, operation, logistic, marketing, regulatory compliance and waste management*" (Srivastava, 2007, 53), the

company has to involve these independent and separate organisational units into its sustainability process. The GrSCM is "*[...] defined as integrating environmental thinking into supply-chain management, including product design, material sourcing and selection, manufacturing processes, delivery of the final product to the consumers as well as end-of-life management of the product after its useful life*." (Srivastava, 2007, 55). However, it is not only related to be environmental friendly but also to a good business practise and value creation: "*it is a business value driver and not a cost centre.*" (Srivastava, 2007, 55). The main reasons of green investments could be productivity improving, resource saving and waste eliminating. The GrSCM has three different approaches to support these targets [Srivastava, 2007]:

a) *Reactive approach*: commitment of minimal resources during corporate activities, labelling of products that can be recycled and management of its own products during their end-of-life period.
b) *Proactive approach*: pre-empting "new environmental laws by releasing a modest resource commitment to initiate the recycling of products and designing green products." (Srivastava, 2007, 57).
c) *Value-seeking approach:* integration of environmental activities and ISO[11] implementation as strategic initiatives.

Even if sustainability reporting and, more recently, integrated reporting cannot be seen as tool for risk management, the sustainability and its disclosure have a strong influence in the corporate risks, especially after the recent financial crisis:

> "*Currently, organisations are being called on to assess and manage risks that are derivates from a networked society, in which there a no longer boundaries between organisational activities and external environment. Thus risks itself is becoming borderless.*" (Quarchioni and Trovarelli, 2014, 168).

In this sense, stakeholders and investors connect the sustainability management practise and sustainability reporting with corporate risks and their perception. As a large company, also sustainable companies are "*less risky than one which is not*": for

[11] "*Standards developed by the International Organization for Standardization (ISO). The purpose of this family of standards is to increase customer satisfaction through the deliverance of quality products and services.*" (Sourced by www.businessdictionaty.com).

this reason, "*large companies in their reporting mention sustainability and frequently it features prominently.*" (Aras and Crowhter, 2009, 284).

Therefore, it means that a sustainable development for a company brings fewer risks the business since "*it creates an image of safety for investors and thereby reduces the cost of capital for such corporations*." (Aras and Crowhter, 2009, 285).

In line with this approach into appraisal of risks, managers have to change also tools for their decision-making: Net Presented Sustainable Value (NPSV).

This new tool was born from the managers' necessity to improve corporate social responsibility through strategies: to do this, control systems and budgeting are two significant elements. In this context, strategic tools as net present value (NPV) are not adequate for a strategy mainly not based on financial target since the current strategies need to include improvements of financial, environmental and social performance of the company: "*traditional tools for investment appraisal cannot support the implementation of corporate sustainability strategies.*" (Liesen et al., 2013, 176).

The NPSV fills the lack of a tool that permits sustainable investment appraisal: indeed, it allocates not only financial resources as NPV but also environmental and social ones, taking "*into account environmental and social performance in a systematic way.*" (Liesen et al., 2013, 176).

According to Liesen, "*the NPSV examines if the present value of the anticipated future returns from using environmental and social resources are in line with the targets defined by a company's sustainability strategy*"; it "*can support the implementation of corporate sustainability strategy by allocation not only financial, but also social and environmental resources according to strategy*." (Liesen et al., 2013, 176).

In addition, the NPSV results have to be understandable by the business organisation and, for this reason, they have to be communicated in a language comprehensible to the majority.

As the previous NPV, also the NPSV is based on the principle that companies need economic capital that is a limited and must be utilised in order to generate the highest possible return. This aim is achieved through the opportunity cost principle: "*to create value, companies must generate at least as much return with economic capital as an alternative use of capital would have generated.*" (Liesen et al., 2013, 177).

Similarly to this approach, also environmental and social resources have this type of challenge: for the majority, the prerequisite for a sustainable development is at least preserving constant levels of social and environmental capitals.

The operation of NPSV is based on NPV principles (for instance, an investment with positive NPV should be undertaken): "*the NPSV determines the anticipated return that an investment creates with the use of financial, environmental, and social resources compare to the company's minimum rates of return.*" This means that the NPSV needs two prerequisites: "*a minimum rate of return for all resources included in the assessment and a reasonable discount rate to account for the time value of money.*" (Liesen et al., 2013, 179).

Firstly, the minimum rate of return is a strategic efficiency target about a resource and represents the opportunity costs of the resource utilisation. It could be static or dynamic: in the static case, "*a company may define a fixed return rate that must be at least achieved over the lifespan of an investment or a project*" (Liesen et al., 2013, 179); in the dynamic case where the company tries to reduce the utilisation of social and environmental resources, also the return rate modifies itself during the period taken in consideration for the investment.

For the discount rate, the choice can be managed in the same way that is in the NPV since the monetary figures in the NPSV are discounted for the same reason as in the traditional financial analysis: it is the time value of money.

Liesen presents seven steps for the calculation of the NPSV, which are shown in the **Table 1**.

In conclusion, the sustainability reporting passes all through the company, from its strategies towards its reporting and disclosure, from corporate culture towards investments and their valuation: in other words, sustainability and sustainable development are philosophies that have to be adopted totally in order to achieve future success.

Table 1: Summary of the necessary steps to carry out an NPSV analysis.

Step	Description	Calculation
1	Determinate the target efficiency of resource *i* for each period *t* through the defined minimum rate of return *F* of resource *i* and the targeted yearly improvement rate c_i.	F_i = ratio between targeted return and targeted use of resource *i* as defined by sustainability strategy. c_i = targeted yearly improvement of F_i. Target efficiency of resource *i* in period *t* = $F_i (1 + c_i)^t$.
2	Determinate anticipated efficiency of resource *i* in period *t*.	R_t = anticipated return of the investment in period *t*. $U_{i;t}$ = anticipated amount of resource *i* used by the investment in period *t*. Anticipated efficiency of resource *i* in period $t = R_t / U_{i;t}$.
3	Determine the value spread (VS) for resource *i* by subtracting the target efficiency of resource *i* from the anticipated efficiency of resource *i* for each period *t.*	$VS_{i;t} = R_t / U_{i;t} - F_i (1 + c_i)^t$.
4	Determine the value contribution (VC) of the use of resource *i* by multiplying the anticipated resource use with the value spread (VS) for each period *t*.	$VC_{i;t} = VS_{i;t} * U_{i;t}$.
5	Determine the Net Present Value Contribution (NPVC) of resource *i* through discounting the value contribution of each period *t* using the financial discount *r* and summing up.	*r* = financial discount rate for similar projects. $NPVC_i = \sum (VC_{i;t} / (1 + r)^t)$.
6	Repeat steps 1 to 5 for every resource *i* considered.	
7	Determine the NPSV by summing up all the net present value contributions of all the resources and dividing by the number *n* of resources considered.	$NPSV = \sum NPVC_i / n$.

Sourced by Liesen et al., 2013, 180.

2.6 Sustainability Reporting versus Corporate Performance

The main matter on sustainability reporting is about its direct connection with corporate performance and enterprise value: a personal study based on a sample of a hundred companies of *Fortune Global 500* will be presented in the last chapter, showing results and personal opinion about this topic matter. Although it is a question largely debated between scholars and experts, there is still not a complete sureness that there is a positive relationship between sustainability reporting and corporate performance, even though the majority of them tend to mantain this position.

Undoubtedly, the sustainability reporting allows firms to include and follow their environmental and social impacts, creating a platform for the dialogue with stakeholders: hence, if it is realised in an effective way, this form of disclosure improves the stakeholder-related performance (CPS[12]), being a strong informative source for internal decisions. It can make possible to enterprises the identification of strong and weak points into corporate responsibilities that measure the relationship and asset long-term values. In addition, it allows companies to better manage external relationships, appealing stakeholders who prefer instead social responsible businesses.

Accounting and reporting standards have been developed due to this high interest on measurement of social and environmental performances of companies and their implementation has become an important issue for every company.

According to who believes in the positive correlation between sustainability reporting and corporate financial performance, the corporate social responsibility is used as a tool to mitigate corporate risks or to improve the company access to resources. Investments in independent projects for the surrounding community are important activities if they are linked to a future positive economic result such as increase of marketplace opportunities or less terrorism. Having a strong commitment in CSR brings companies to have a more stable stock price, an improvement in workforce turnover, more competitiveness, better opportunities in the resource marketplace and relationships with national governments and local/global communities.

[12] It means benefits (often measured by financial or accounting indices) obtained by companies thanks to the implementation of their own CSR program.

Before going in deep about the possible positive correlation between sustainability reporting and corporate performance, it is important to understand how this type of disclosure is perceived by experts of the company valuation: the equity analysts.

According to Fieseler (2011), it is important to communicate the CSR aspects not only towards social responsible investors but also towards all financial community and other investors since the capital market is more and more competitive. The scholar based his research on interviews of sell-side and buy-side analysts from Frankfurt's stock exchange, which is not particularly involved in social responsible investments. His analysis consists in how these analysts detect economic responsibility, legal, ethical and philanthropic strategies of listed companies (following the Carroll[13]'s responsibility partition) and how they consider these aspects during their own analysis and recommendations.

Among stakeholders, there has been an increasing interest in ESG and sustainability factors that are used more and more as information for a better investment decision or analysis. According to Fieseler, corporate responsibility should be seen as "*multidimensional constructs*" where several types of corporate social activities have different effects on company financial performance and long-term benefits of a responsible behaviour are displayed through financial benefits and risk mitigation.

ESG aspects are important for analysts because they valuate business corporations not only with quantitative models but also they consider non-financial factors to understand the future success of the business: indeed, they take into account general economic trends, industry developments, the business environment of different geographical marketplace and other macroeconomic aspects that could help analysts in their generation process of an opinion. Therefore, analysts consider companies, that reduce their environmental expositions, as better investments than competitors, being equal other conditions, because they believe that social and environmental matters influence the future success of the business: the companies that follow ESG factors have a long-term strategy and this should ensure a future value creation for companies.

---

[13] Carroll has proposed a subdivision of corporate responsibility into four parts, all included in a pyramid: his "*set of defined cumulative responsibilities combines a company's distinct responsibilities to be profitable (economic responsibility), to adhere to the law (legal responsibility), to show moral conduct that exceeds the legal minimum (ethical responsibility) and to actively support the community (philanthropic responsibility)*." (Fieseler, 2011, 132).

Following the Carroll's subdivision of corporate responsibility, after economic aspect (at the base of the pyramid) there is legal responsibility: *"[...] legality may be viewed in terms of compliance with law, as well as avoidance of civil litigation and anticipation of the law."* (Fieseler, 2011, 138). Analysts consider this as a basic condition to obtain revenues for the company: thus, analysts rely upon company reliability and their leadership, where a good corporate governance system is fundamental for the creation of the trust among stakeholders and mainly investors.

However, according to the analysts interviewed by Fieseler, it is not sufficient the company compliance with government laws yet they underline the importance of law anticipation by companies, through a pro-active approach to understand how government laws could change: this is the ethical responsibility. It is a relevant aspect in the company valuation because these types of changes can modify the risk profile of the analysed companies and their capital cost: recent scandals have increased the importance of these aspects to replace the market and corporate governance integrity. In order to assume an ethical responsibility, Fieseler states that the company has to establish a confident relationship with every stakeholder through a conspicuous and complete disclosure on business operations and strategic targets of the company. Analysts consider this confident climate as a precautionary measure, as well as a valid investment in the corporate public image and its reputation, which is an index related to the company future success.

About philanthropic responsibility, which is on the top of Carroll's pyramid, Fieseler underlines that there is a wide company discretion about the amount of its donations and voluntary contributions towards the society. Analysts have a controversial opinion about this aspect of corporate responsibility: they believe that corporate actions have to be oriented towards the main responsibility, that is value generation for shareholders, and philanthropy spends company money in initiatives not shareholder oriented. There is the risk that corporate managers waste company assets and resources in activities directed to their personal aims that do not generate wealth for the company. In other words, analysts do not often accept the company expense in CSR activities that do not give back a relevant advantage to the firm.

In addition to the analyst positive opinion on the usefulness of sustainability and social responsibility disclosure, Fieseler states that there is also a positive relation between short-term effects of sustainability initiative and financial performance of the company.

Although this positive relation, it is not simply to measure the real effect but the results have to be read in a critical way.

Over the last decade, there have been many studies that try to investigate if there is a real positive correlation between a good sustainability reporting (or CSR one) and corporate performance, showing a general but not total positive feeling about the existence of this good relation.

Among recent researches, Schadewitz and Niskala in 2010 investigated how sustainability communication affects firm value, utilising a sample of Finnish listed companies that made sustainability reporting according to GRI guidelines.

First, it is important to underline how enterprises' value is more and more linked with intangible assets and R&D initiatives and it means that companies' value is closely related to future expectations rather than fundamentals. These two scholars highlighted *"[...] some evidence is available that firms with strong environmental management enjoy a better financial performance [...]"*, as well as *"[...] that emission reduction is positively related with firm performance."* (Schadewitz and Niskala, 2010, 97).

On the other hand, they declared that the relation between company's value and sustainability reporting was still not completely understood and results were quite mixed: for instance, they presented a research on if eco-efficiency[14] had economic value for a firm, in which "*obtained results show a positive but asymmetrical relation between eco-efficiency and a firm's Tobin's q*[15]." (Schadewitz and Niskala, 2011, 98), or another example is a Swedish study that has demonstrated a negative influence of firm's environmental performance on its market value.

However, their model shows that "*the communication via GRI responsibility reporting is an important explanatory factor for a firm market value [...]*" and "*the results indicate that responsibility reporting is a part of firm's communication tools in order to decrease information asymmetry between managers and investors*", producing a "*[...] more precise market valuation of the firm*." (Schadewitz and Niskala, 2011, 104).

According to financial theory, the long-term fair value of a company should be in line with its share price and this aim can be achieved through the informativeness given by sustainability reporting. This statement is also supported by Greeves and Ladipo's

[14] "*the ability to create more value while using fewer environmental resources.*" (Schadewitz and Niskala, 2011, 98).

[15] "*market value of assets divided by the book value of assets.*" (Schadewitz and Niskala, 2011, 98).

research (2004): "*their analysis indicated that as a group, the early adopters of the GRI had on average marginally lower share-price volatility and higher operating profit margins despite slower revenue growth.*" (Schadewitz and Niskala, 2011, 99).

Another paper, written by Molina-Azorin et al. in 2009, analyses the quantitative studies and literature about the influence of green management on corporate financial performance and, as before, it shows varied results about the relation between environmental proactive management and company performance.

It tries to find out concrete reasons to implement environmental strategies in the corporate business. Molina-Azorin reports that "*the influence exerted by environmental management on firm performance [...] may result from the positive impact on firms' costs and differentiation levels*" (Molina-Azorin et al., 2009, 1082): for example, preventing pollution may reduce energy consumption and save control costs or eco-efficiency could reduce impact and use of resources. These types of green strategies can improve the efficiency of the firm and companies, which adopt environmental strategies, "*may benefit from premium pricing and increased sales because of enhanced market legitimacy and greater social approval.*" (Molina-Azorin et al., 2009, 1082). Hence, environmental management can contribute at the same time to increase revenues (through a better access to specific markets, differentiating products, and vending pollution-control machines) and reduce costs (thanks to better risk management, cost of services, material and energy, relations with stakeholders, capital and labour costs).

Nonetheless, Molina-Azorin reported that there is "*a more traditional stance, which postulates that an improvement in the environmental impact caused by an enterprise leads to a reduction in its profitability*" (Molina-Azorin et al., 2009, 1083): this is the consequence of the increase of corporate costs caused by costs of environmental regulations that reduce the company capability to compete. This last stance shows a negative relationship between corporate financial performance and green management: "*social and environmental performance make use of firm resources in ways that confer significant managerial benefits rather than devoting those resources to alternative investment projects or returning them to shareholders.*" (Molina-Azorin et al., 2009, 1083).

However, the result of this paper is that the positive relationship between environmental and company performance is the predominant positions between experts and scholars: "*in fact, 21 studies*" (out of 32 examined) "*have obtained a positive*

impact of environmental management and/or environmental performance on financial performance." (Molina-Azorin et al., 2009, 1093): hence, companies should consider environmental matter in their business activities to improve their performance and value perception. Nevertheless, the author states that there are several ways for companies to internalize this concept in their scopes: in particular, there are three different evolutionary stages of the environmental matter management.

The first one is called "*functional specialisation*" and it consists in a simple corporate behaviour oriented towards reacting to the pressure made by environmental regulations: company procedure and organisation remain the same, environmental factors are not considered competitive yet a pollution control system is implemented in the company.

The second stage is named "*internal integration of environmental management*". The main aim of the company is preventing pollution through corporate performance objectives: environmental factors could be used for the development of some products or in specific company divisions (not in everyone), yet they are still not considered strategic factors and there is not an environmental staff into the firm.

The third stage is "*external integration of environmental management*" where "*environmental activities are integrated into the company's overall business strategy*" (Molina-Azorin et al., 2009, 1093). Environmental matters have a main role into company's competitiveness thanks to the economic and strategic benefits.

In addition, during the conclusion of his paper, Molina-Azorin highlights that the vast majority of studies look at the influence of environmental factors on corporate financial performance but there could be a "*two-way interaction between environmental variables and financial performance*": indeed, "*financial performance may also influence environmental management; [...] in fact, a firm with a good financial performance can allocate more resources to prevention-oriented technologies, practises and initiatives.*" (Molina-Azorin et al., 2009, 1094).

Another approach to study the relation between corporate financial performance and ESG variables is presented by Adrian Way Kong Cheung in 2011. In his paper, he examined investors' reactions to exclusion/inclusion of the US corporate sustainable firms into Dow Jones Sustainability World Index (DJSWI[16]). He measured the "*impact in*

[16] It "*was firstly published on 8th September 1999, and was the first global index to track the performance of companies that lead the field in terms of corporate sustainability. DJSWI is internationally recognised for its*

terms of stock returns, risk and liquidity" because he believed that "*if financial markets do not value their efforts on corporate sustainability, they do not have proper incentive to become or continue to be corporate sustainable company.*" (Cheung, 2011, 145). This paper wants to inspect if investors value corporate sustainability (CS) and in what ways they do it. This type of approach has many advantages:

- "*First, by looking into how stock markets respond to this index inclusion (or index exclusion) events, it can provide direct answer to the question of whether or not investors care about CS."* (Cheung, 2011, 146)
- *"Second, event study methodology allows to examine the responses of stock market in more than one dimension. These dimensions include security return and risks, [...]*" (Cheung, 2011, 146).
- The third advantage is to include the liquidity dimension into the analysis and how events of inclusion or exclusion from the Index can affect this parameter.
- The last benefit is to be able to "*[...] understand both short- and long-term stock behaviour towards CS [...]"* (Cheung, 2011, 147), only varying the time window of the analysis.

Similar analysis were done by Tsai (2007), who revealed a significant negative effect of the index exclusion stocks but none about the index inclusion ones, and by Kalson and Chakarova (2008), who instead did not reveal in both cases a significant effect on stock returns.

According to Cheung's study, there is not "*strong evidence that the event of announcement has a significant impact on stock returns of index constituent stocks, be they index inclusion stocks or index exclusion stocks.*" (Cheung, 2011, 160). Although this important evidence, Cheung stated that, during the "*day of change or days nearby, there are some temporary but significant impacts. In particular, index inclusion stocks experience an increase in stock returns, while index exclusion stocks suffer from a decrease in stock returns.*" (Cheung, 2011, 160). In other words, there is no permanent change in the stock price of the listed companies related to inclusion or exclusion from DJSWI.

---

informational transparency and objectivity, and is well received by international investment community. [...] A well-defined set of criteria and weightings is used for company selection. They assess the opportunities and risks faced by those companies in economic, environmental and social dimensions." (Cheung, 2011, 145-146).

Cheung concludes his research stating that the US investors are interested in corporate sustainability and environmental initiatives but only in temporary way.

In the end of this paragraph, I will present a paper written by Eva Hortathova in 2010 about why three decades of researches on environmental performance impacts on financial performances are still inconclusive. She took in consideration 37 empirical studies and 64 outcomes for a meta-analysis[17] "*to uncover the underlying factors that influence the variation in the empirical results in terms of environmental performance (EP) -financial performance (FP).*" (Hortathova, 2010, 56).

It is interesting to report that the negative link between EP and FP is often observed into correlation with coefficients and portfolio studies, whereas "*the use of multiple regressions and panel data techniques has not effect on the outcome.*" (Hortathova, 2010, 56).

Anyway, the most important finding is that an appropriate time frame is fundamental "*in order to establish a positive link between SP and FP.*" (Hortathova, 2010, 56). Moreover, this positive connection, according to Hortathova's research, can be find more frequently in common-law developed countries rather than in civil-law ones: there is a lower pollution in common-law countries. This type of relation is also very frequent in analysis in which scholars use quantitative information to compare environmental and financial performances.

Finally, many experts pay attention to the best financial index in order to investigate the connection between corporate environmental initiatives and corporate financial performances: according to the last paper results, "*it does not seem to be important which type of financial performance is used.*" (Hortathova, 2010, 56).

2.7 Country Regulations and Their Impacts

The increasing success of sustainability reporting, as well as the rising conviction that it brings benefits to corporate performance and the surrounding society, has questioned among scholars and experts if national government policies and regulations have to be involved in this matter or not. In other words, the question is if sustainability reporting should be regulated and it would become a mandatory disclosure for a company as the

[17] It "*refers to methods that focus on contrasting and combining results from different studies, in the hope of identifying patterns among study results, sources of disagreement among those results, or other interesting relationships that may come to light in the context of multiple studies.*" (sourced by www.wikipedia.org).

financial reporting. About this matter, there are several opinions and researches that try to understand possible impacts of a mandatory disclosure of ESG factors.

This idea of a mandatory disclosure for the sustainability reporting is due to the increase of global community awareness about the degradation both in natural and social environments caused by business and economic activities. As Kent and Monem said, "*in recent decades, companies have come under increased pressure in justifying their nature and scale of consumption because they are among the largest consumers of natural and social resources.*" (Kent and Monem, 2008, 2).

According to their analysis based on Australian companies, there are two opposite arrays: the first one (composed by accounting firms and bodies, companies and industry associations) is "*in favour of a free market approach where companies decide on their level of corporate responsibility and TBL reporting*"; the second one (composed by employee groups, individuals, non-government and consumer associations) affirms that it is necessary a "*legislation that required companies to report on their social responsibilities to protect interested stakeholders.*" (Kent and Monem, 2008, 2). Although this debate was very burning, currently sustainability reporting is still voluntary in Australia.

Moreover, authors underlined that "*demands for social and environmental information are likely to vary across countries*[18] *because of differences in environmental awareness in society, volatility in the natural environment and cultural differences*." (Kent and Monem, 2008, 3): this means that each country has a specific factor mix than can foster a voluntary or mandatory sustainability disclosure.

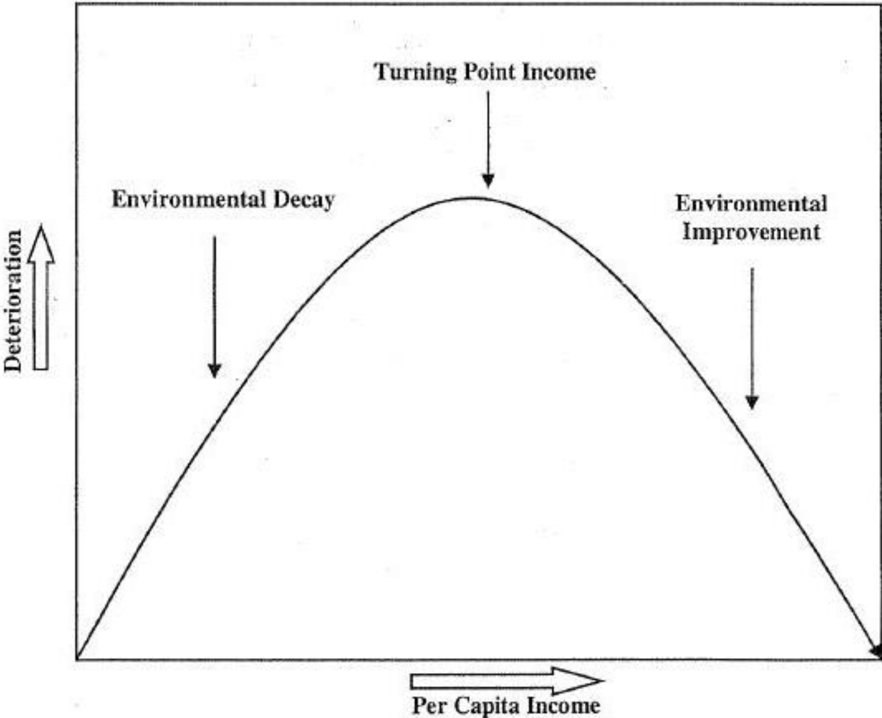
If there is a voluntary disclosure, Kent and Monem stated that there are two reasons that encourage a company to adopt a TBL reporting: the adverse publicity can damage seriously the company reputation and a good corporate governance should be shown to the public. They are convinced that, even though business corporations have to be more "*responsible to the impacts of their activities on the environment and society*", sustainability reporting "*will mainly remain sporadic and self-laudatory without legislation.*" (Kent and Monem, 2008, 25).

By contrast, Alam and Kabir have a different opinion: further to their research results, they state that there is a positive relationship between environmental sustainability and

[18] This question is analysed in deep in the last paragraph of next chapter where different countries' approaches about GRI and IR disclosure are presented.

economic growth thanks to the positive impact of gross domestic product (GDP) per capita on environmental measurements and, partially, on eco-efficiency. For this reason, they believe that mainly in developing countries, "*the policies should not be developed on the basis of pollution control, [...] it is also necessary to consider the eco-efficiency aspects of environmental sustainability [...].*" (Alam and Kabir, 2013, 92). Against the traditional theory, which "*suggests a trade-off between economic growth and the quality of environment*", these authors sustain that "*both are compatible to each other and economic growth is a perquisite for environmental sustainability*." (Alam and Kabir, 2013, 86). In other words, they evoke the "*Environmental Kuznets Curve*" (EKC, **Figure 2**) that represents "*an inverted U-relationship existing between GDP per capita increase and some indicators of environmental quality.*" (Alam and Kabir, 2013, 86).

Figure 2: Environmental Kuznets Curve (EKC).



Sourced by Alam and Kabir, 2013, 91.

The arguments at the basis of this theory are:

"*Every economy on its early stage of economic development gives high interest on increasing industrial production which causes rapid pollution. Moreover, policy maker also emphasize more on the generation of income rather than maintenance of environment. However, during the later stage of the development process when income reaches to a significantly high level, people became more conscious regarding the clean environment than the income and [...] pay*

more attention to the environment eventually helps pollution level to decline." (Alam and Kabir, 2013, 87).

This demonstrates that economic growth only at the beginning can be considered as a threaten for natural environment because, with its increase, it contributes to limit and reduce environmental pollution, denying the possible environmental limits for a perpetual worldwide growth: this position has brought to think economic growth as synonym of environmental improvement. Some scholars stated even that "*economic growth alone is the solution to all environmental problems.*" (Stern et al., 1996, 1152). In this scenario, a government legislation is necessary principally during the early stage of country development, when human interest is focused on business to the detriment of natural and social environment.

A completely different idea is suggested by Bleischwitz and Langrock in 2003: indeed, they believe that there should be a "co-*evolution of corporate and political strategies*" (Bleischwitz and Langrock, 2003, 1) for sustainability in companies and the society.

The traditional view of sustainability, which is considered a matter that can be managed through conventional strategies of economic welfare, is outdated. Sustainable development governance has to be over "*state-centred policy making because it aims a pro-active changes of private actors' behaviours at different level [...]*" (Bleischwitz and Langrock, 2003, 2), involving individuals in policy implementation and formulation.

Market and government have two different but positive roles in the current society and its sustainable development: the first one has to provide knowledge, products and innovation for societal evolution, whereas the national government should guarantee a satisfying life. These two functions are closely related because the market has to follow the guidance and rules of government that, at the same time, has to design the adequate context in which the market should operate. For this reason, these two scholars introduced the term "*regulated self-regulation*" in the sustainable development context: "*governments need to ensure that markets works properly within such an institutional frame [...]; market and state serve complementary functions to keep system running*", being "*a well-performing market economy a mix composition of state and markets.*" (Bleischwitz and Langrock, 2003, 6).

In line with this description, they promoted a "*co-evolution governance approach*" instead of the traditional one-shoot policies. This idea is based on the conviction that business targets and expectations have been readjusting, thus regulations have to

readapt according to these new evolution guidelines: "*regulated self-regulation can be seen as an on-and-off between political and governance activities, where different stages of progress can emerge over time.*" (Bleischwitz and Langrock, 2003, 7).

In a frame of innovation and sustainable development, there has to be a responsive regulation because the governance deals with several forms of business and a day-to-day policies of different market actors:

> "*This type of regulation [...] co-evolves with the specific developments in each cases. Such co-evolution between corporate and political actors is based on the insight that important governance functions have to be deal with day-to-day governance and cannot completely be regulated ex-ante by any political and constitutional order. [...] Innovations inducing regulation hence co-evolves with corporate activities and the emerge of new market of sustainability.*" (Bleischwitz and Langrock, 2003, 12).

According to this position, regulations have a short-time life period to be useful (months or years) and they have to be conveyed towards the solution for specific problems. Government has not to know about all matters but it has to foster win-win coalitions in which decisions and actions will be taken. Specifically, in a flexible and uncertain context, "*adaptive flexibility*" becomes very important not only for corporate business and structures but also for national governments that have to keep up with market needs.

In other words, Bleischwitz and Langrock stated that government regulations have to participate also in the sustainable development of companies and the society yet its rule has to be reviewed: the national government has no more a dominant position from which it can impose its rules but, from its strong and privilege position, it has to cooperate with market actors (such as companies, individuals, NGOs etc.) in order to build a flexible and well-oriented set of regulations and laws.

Another study goes in deep on which impacts a Mandatory Corporate Sustainability Reporting (MCSR) has on corporate management and behaviour. It was conducted by Ioannou and Serafeim in 2012 for the Harvard Business School. It is very interesting since, on the contrary of some previous positions, they strongly suggest that the government regulation to impose a sustainable mindset to the companies and their managers: either sustainability reporting, which follow GRI guidelines, or integrated reporting should be a mandatory disclosure for a firm.

They states that, during the last years, the sustainability report has been promoted by national governments and stock exchange through an increase of laws and regulations that have reviewed "*the governance arrangements of corporations to ensure that practises are aligned with broader social interests.*" (Ioannou and Serafeim, 2012, 2).
The results from their analysis, which has covered several countries around the world as well as a firm- and country-level analysis, "*show that MCSR significantly impacts managerial decision-making by promoting socially responsible practise*" (Ioannou and Serafeim, 2012, 3) along with the three pillars of CSR: society, environment and governance. In particular, a mandatory disclosure for sustainability reporting brings an increase of ethical behaviours, as well as a decrease of corruption cases.
The authors discover that "*in countries with higher enforcement the social responsibility of business leaders' increases more and sustainable development becomes a higher priority compared with countries with weaker enforcement*" (Ioannou and Serafeim, 2012, 4), affecting slightly also the employee training. The greatest improvement about environmental matters of a company can be seen in firms that for the first time adopted the sustainability reporting, due to the national government imposition.
In addition, MCSR may have a strong positive impact on corporate competitiveness because it can generate *"[...] high level of trust in business and its leaders."* (Ioannou and Serafeim, 2012, 5). However, these effects will take likely several years to materialise, complicating the first adoption of sustainability reporting in companies that have some doubts on its corporate value effectiveness.
Ioannou and Serafeim endorse that "*disclosure of sustainability information forces companies to manage these matters more effectively to avoid bad sustainability performance to their multiple stakeholders*" (Ioannou and Serafeim, 2012, 29), combined with the implication that a mandatory disclosure of sustainability information can modify the way corporate managers conduct their businesses.
In conclusion, the majority of scholars and experts believe that national governments should regulate through laws and regulations the sustainability reporting or the integrated reporting, which is its natural evolution, as well as impose a sort of minimum set of sustainability information that has to be included in these new disclosures. Nonetheless, they do not agree how much national governments have to interfere: someone believes completely in the positive effects of sustainability information on a mandatory disclosure, someone else asks a greater company freedom according to

country development, as well as a greater government flexibility for national laws and regulations.

In the last paragraph of the next chapter, after an in-depth analysis of GRI guidelines for sustainability reporting and IR, it will be presented the state-of-the-art of government regulations around the world, providing also some examples.

CHAPTER 3

GLOBAL REPORTING INITIATIVE AND INTEGRATED REPORTING

3.1 Introduction

In the previous chapters, I have presented the term *sustainability* with its several meanings and I have explained the corporate social responsibility (CSR) and sustainability reporting besides going in deep about the main experts' and scholars' arguments about this concept.

In this chapter, I would like to introduce two of the most relevant international initiatives that have been standardising non-financial information disclosure all around the world: the Global Reporting Initiative (GRI), which has been developing international indexes to report corporate sustainability and its sustainable development, and the International Integrate Reporting Committee (IIRC), which has to develop the international integrated reporting framework in order to lead integrate reporting (IR) towards a worldwide acknowledgment.

In particular, GRI Guidelines will be specifically introduced since these standards are nowadays the most widespread and utilised in the world for the sustainability reporting: for this reason, the next chapter of my analysis of the relationship between sustainability information disclosure and financial performance is based on the scanning of companies' sustainability reports, followed by G3 guidelines.

Nevertheless, IR, which can be considered as a sort of evolution of sustainability reporting, is the future of this type of information disclosure and it cannot be ignored.

Both initiatives are continuously in evolution not only in terms of standards, indexes and guidelines, but also in terms of concepts and approaches: thus, it is currently quite difficult to understand how they will enhance and, later, it is described their developments so far.

It is shown some national governments' approaches and regulations about sustainability reporting and international standards: it is interesting to underline the disunion of the countries' behaviour about the matter of a mandatory disclosure and the international guidelines to be adopted.

3.2 Global Reporting Initiative (GRI)

"The Global Reporting Initiative (GRI) is a leading organization in the sustainability field. GRI promotes the use of sustainability reporting as a way for organizations to become more sustainable and contribute to sustainable development."

"GRI is an international not-for-profit organization, with a network-based structure. Its activity involves thousands of professionals and organizations from many sectors, constituencies and regions. The Framework is developed collaboratively with their expert input: international working groups, stakeholder engagement, and due process – including Public Comment Periods – help make the Framework suitable and credible for all organizations."

These two definitions are quotations from GRI website[19]: they are how GRI defines itself in the face of external agents.
The Global Reporting Initiative is currently the organisation develops the most prevailing sustainability principles in the world. The reasons of its success are three fundamental points that are at the basis of this initiative: the capability of its indicators to measure the corporate performance in any field (natural, social and governance environment), the multi-stakeholder process of its editing that has allowed to consider all points of view during the principle compilation and the multi-level framework development that consents a first approach for its usage also to small and middle companies.
The GRI operates as a free network, composed by expert stakeholders that want to improve and diffuse this global guidance, through the GRI Reporting Guidance Framework: this is a platform that connects many different user positions and perspectives about awkward matters and it offers a general guidance about reporting activities on legal questions, regulations and other specific aspects and indexes.
The corporation began to operate in 1997 as a CERES[20]'(Coalition for Environmentally Responsible Economies) and Tellus Institute[21]'s project with the aim to create a

[19] www.globalreporting.org

[20] It is a non-profit sustainability advocacy organisation founded in 1989 and based in Boston, Massachusetts. Its mission is to "*mobilize investor and business leadership to build a thriving, sustainable global economy.*" . through its activities, it has been accelerating the adoption of sustainable business practises and the building of a healthy economy. It is also considered one of the first hundred most influential global players in corporate governance.

reporting mechanism compatible with CERES' principles about responsible environmental behaviour.

During the following year, the project received the United Nations Environment Programme[22]'s (UNEP) support, extending the project actions also in the social and economic fields and modifying the previous organisation through the actual multi-stakeholder committee to define a specific standard for each reporting matter.

In 2000, it was published the first version of the GRI Guidelines and, only after two years (in 2002), the committee provided the first update that was named G2. During the same year, the GRI moved its headquarters to Amsterdam, assuming for the first time its no-profit status and it was officially included in the United Nations organisations, cooperating with UNEP.

The third generation of GRI Guidelines (G3) was published in 2006 (the most recent versions will be presented); after that, the organisation concentrated its efforts towards sector-specific guidance (called Sector Guidelines), its global spread and its standard concurrence in the marketplace: for instance, GRI launched a collaboration with UN Global Compact[23] and OECD for the matched use of GRI Guidelines and ISO26000[24].

In 2011, the GRI commission updated and completed the third version of its guidelines, drafting the G3.1, adding in the report also gender, community and human rights-related

---

[21] "*Tellus Institute was established in 1976 as an interdisciplinary not-for-profit research and policy organization.*". It is considered a leader in source and environmental strategies and in shaping a sustainable development. Its mission is to promote "*a global civilization of sustainability, equity, and well-being through research, education, and action.*" (sourced by www.tellus.org).

[22] It was established in 1972 and it is an organisation of United Nations system that has to face global environmental matters. It also monitors the national and international environmental trends and it promotes environmental instruments to manage these types of problems.

[23] "*The UN Global Compact is a strategic policy initiative for businesses that are committed to align their operations and strategies with ten universally accepted principles in the areas of human rights, labour,environment and anti-corruption. By doing so, business, as a primary driver of globalization, can help ensure that markets, commerce, technology and finance advance in ways that benefit economies and societies everywhere.*" (sourced by www.unglobalcompact.org).

[24] It is an International standard, launched by the International Organisation for Standardization (ISO), that provides guideline for social responsibility (SR): for this reason is also named ISO SR. Draft in 2010, "*its goal is to contribute to global sustainable development, by encouraging business and other organizations to practice social responsibility to improve their impacts on their workers, their natural environments and their communities.*" (sourced by www.iso.org).

performance. The most recent version is G4 Guidelines, presented in May 2013 during the fourth conference on Sustainability and Transparency in Amsterdam, which attracted more than 1500 delegates from around 70 different countries. In this last guideline generation, GRI develops standards also for the Integrated Report (IR), thanks to its entrance in the IIRC for supporting the non-financial information disclosure.

The most innovative thing in GRI is the multi-stakeholder approach that is a closely collaboration with several experts and companies such as accounting and consulting organisations, rating agencies, scholars, financial experts and business corporations that have obtained more experience in non-financial information disclosure: for example, Enel is one of the GRI's Global Partners for the on-going development of these guidelines.

Going into the details, one of the GRI's strongest point is an easy availability of its materials and documents: the Guidelines and the Sector Guidelines, translated in several languages, can be downloaded free from the GRI website, included reporting examples and additional publications that have to be paid.

Moreover, GRI wants to spread its non-financial reporting model also among less expert subjects providing a gradual standard adoption: indeed, GRI Guidelines has three application level (A, B and C) according to the number of information included in the sustainability report. To the level a "+" (A+, B+ or C+) can be added in order to specify if the sustainability reporting was submitted to external assurance (**Table 2**).

Until 2009, GRI utilised a system of colourful stickers (red, yellow, and light blue) for the standard level statement (self-declared, 3rd party Checked or GRI Checked, **Figure 3**). However, in 2010 this system was abolished and, since that year, the companies, which have asked a level statement verification, have been receiving an official document to be included in the sustainability reporting (also in the digital version).

Figure 3: GRI standard level statement.

Sourced by www.globalreporting.org

Table 2: GRI application level table.

Report Application Level	C	C+	B	B+	A	A+
Standard Disclosures — G3 Profile Disclosures (OUTPUT)	Report on: 1.1 2.1 - 2.10 3.1 - 3.8, 3.10 - 3.12 4.1 - 4.4, 4.14 - 4.15	Report Externally Assured	Report on all criteria listed for Level C plus: 1.2 3.9, 3.13 4.5 - 4.13, 4.16 - 4.17	Report Externally Assured	Same as requirement for Level B	Report Externally Assured
G3 Management Approach Disclosures (OUTPUT)	Not Required		Management Approach Disclosures for each Indicator Category		Management Approach Disclosures for each Indicator Category	
G3 Performance Indicators & Sector Supplement Performance Indicators (OUTPUT)	Report on a minimum of 10 Performance Indicators, including at least one from each of: Economic, Social and Environmental.		Report on a minimum of 20 Performance Indicators, at least one from each of Economic, Environmental, Human rights, Labor, Society, Product Reponsibility.		Report on each core G3 and Sector Supplement* Indicator with due regard to the Materiality Principle by either: a) reporting on the Indicator or b) explaining the reason for its omission.	

*Sector supplement in final version

Sourced by www.globalreporting.org.

This verification cannot be confused with the external assurance that GRI does not provide. It verifies only the real presence of data and number of indexes required by selected level statement without controlling the quality and trustfulness of information provided.
The structure of GRI report is composed by a standard arrangement where "*Strategy and Analysis*" and "*Organisational Profile*" sections are the same in all types of companies, whereas in the section "*Management Approach and Performance Indicators*" a list of economic, social and environmental indices is provided according to their significance in business activities.
The GRI's vision is a world led by a "*sustainable global economy*", in which long-term profitability is combined "*with ethical behaviour, social justice, and environmental care, [...] where organizations manage their economic, environmental, social and governance performance and impacts responsibly, and report transparently*." (www.globalreporting .org).
Consequently, the GRI's mission is "*to make sustainability reporting standard practice by providing guidance and support to organizations.*" (www.globalreporting .org).

The Structure of the Organisation

As it has already been touched on, GRI is part of a multi-stakeholder network in which reporters, report users and experts are involved in working groups and governance bodies. Because of the involvement of this big number of people, the structure of GRI organisation is not so simple with lots of committees and boards, as well as offices and functions. In this paragraph, the main parts of its structure are presented, describing components, activities and other relevant information.
Firstly, I would like to present the organisation's heart: the governance bodies that have the task to supervise GRI's reporting guidance and lead its activities. It is composed principally by senior experts with different skills, life experience, education and cultural backgrounds, coming from over 30 countries all around the world, and it is divided in three complementary bodies: the Board of Directors (BoD), the Technical Advisory Committee (TAC) and the Stakeholder Council (SC).
The BoD is " *the final decision-making authority at GRI*" and it "*has the ultimate fiduciary, financial and legal responsibility for GRI, including final decision-making authority on proposed revisions of its Framework and Guidelines, and on its organizational strategy*

and work plans." (www.globalreporting .org). The member of the Board are appointed by the SC, excluding the Chief Executive who is selected by the Board's members. The Board is composed by seventeen members who voluntarily send their CVs and other documents requested by GRI for their personal candidacy (afterwards they will be selected by SC).

The members have a three-year term for their positions in the Board and they can be elected only two consecutive times; however an ex-member of the Board can be chosen again only if he has been off this body for at least one year.

The Board has many key responsibilities such as "*determine the GRI's mission and purpose, ensure effective organizational planning and succession planning of key positions, ensure and manage adequate financial resources to run the organization, determine, monitor and strengthen GRI's programs and services*" etc. (www.globalreporting .org).

Its two-day regular meetings have to be held at least two times a year, locations and dates of meetings are decided by Chief Executive of the Board during the previous year, who also draws the agenda of the Board.

The SC is "*the formal stakeholder policy forum within the GRI governance structure, and advises the Board on strategic issues. The SC's key governance functions include appointing Board members and making recommendations on future policy, business planning and activity.*" (www.globalreporting .org).

It is composed by 50 members who are diverse each other because they come from all the countries represented in the United Nations. The process for their nomination is more complex that the previous one: indeed, 60% of new annual SC's members are elected by the Organizational Stakeholders and the other 40% by the same SC.

This body is divided into four "*constituents categories*", each with a different number of member seats: Business (22 seats), Civil Society Advocacy Organisations (16), Mediating Institutions (16), and Labour (6). All members have to attend all council meeting during the year and, if they cannot be there, they have to write their view about the subjects discussed during the meeting before the same meeting so that also their opinion can be taken in cosideration. Their term-limits are the same of Board's members.

Other relevant responsibilities of the Stakeholder Council are: "*make recommendations on the GRI Guidelines revisions, in the form of a concur or non-concur recommendation, make broad strategic recommendations to the Board and support the mission of GRI, as*

well as appoint two of the members of the standing GRI Nominating Committee (GNC)[25]*.*" (www.globalreporting .org).

The third body of governance is the TAC that "*assists GRI's Board and Secretariat in maintaining the overall quality and coherence of the GRI Framework by providing high-level technical advice and expertise*," as well as it "*recommends the development plan, specific technical direction, and form of GRI's technical content and [...] ensures that GRI's technical content is developed following its due process.*" (www.globalreporting .org).

It is composed by 15 members (as maximum number), who are selected, according to strict requirements, through a particular process that involves the Stakeholder Council, the Organisational Stakeholders[26] (OS) and the Board only as a reviewer, and its main task is to submit an occur/non-occur recommendation to the BoD "*about the release of all GRI's Reporting Framework materials.*".

To coordinate all these bodies, the GRI is helped by the Secretariat, based in Amsterdam. It "*implements the technical work plan set out by GRI's governance bodies, and manages network and institutional communications, outreach, stakeholder relations, and financial administration.*" (www.globalreporting .org). It is composed by several offices and teams, which have each specific tasks about management and planning of GRI activities.

The most recent GRI's body, established in 2008, is the Governmental Advisory Group that is "*a high-level advisory body that provides GRI's Board and Executive Management with a direct source of advice from governments. It is an informal body with no constitutional role, thereby preserving GRI's independence.*" (www.globalreporting .org). It provides governments' perspectives on CSR and sustainability reporting and, at the same time, it permits to national governments to be updated about GRI's work and to benefit from it. It is an opportunity to exchange ideas between national government

---

[25] It is a committee composed by members from from the Board and SC. "*The GNC forwards a list of proposed candidates to the Organizational Stakeholders. The GNC highlights candidates it believes will contribute to the geographic diversity of the SC, or who fulfill a need for specific expertise*." (www.globalreporting .org).

[26] It "*connects more than 600 organizations from over 60 countries, committed to advancing sustainability reporting. OS are GRI's core supporters – they play an important governance role and provide key funding for GRI's activities. [...] OS put their name to GRI's mission, contribute their expertise, play an important governance role, and invest in GRI through annual financial contributions. The OS Program includes companies and organizations drawn from civil society, business, mediating institutions, academia, labour, public agencies and intergovernmental agencies.*" (www.globalreporting .org).

delegates and experts, making governments aware about sustainable development, developing policies and sustainability reporting.

In GRI's structure, the several alliances and synergies with other partner organisations are also fundamental, being a multi-stakeholder network: for example, GRI collaborates with OECD, The Global Impact, ISO, IFC etc.

Partnerships are essential also to fund the GRI since it is a no-profit organisation: in particular, governments, foundations and international organizations gives the main financial contribution to this initiative, its projects and events, as well as its organisational stakeholders who are the core GRI's supporters. Moreover, GRI offers supporting material and services such as "*publications, training programs and governments, foundations and international organizations*" that contribute to increase its revenues.

3.3 GRI Different Generation Guidelines

As described before, over the last decade, GRI has edited several generations of guidelines (G2, G3, G3.1, and G4) that have been improving the sustainability reporting and the disclosure of non-financial corporate information.

Although there are differences among these generations, all guidelines are based on the same principles and definitions about sustainability and its reporting. GRI defines:

> "*A sustainability report is a type of corporate or organizational report*" that "*conveys sustainability-relate information in a way that is comparable with financial reporting. [...] A sustainability report is a report published by a company or organization about the economic, environmental and social impacts caused by its everyday activities*" and "*[...] presents the organization's values and governance model,*" as well as it "*demonstrates the link between its strategy and its commitment to a sustainable global economy.*" (www.globalreporting.org).

In other words, it is a practise of measuring and disclosing that accounts for internal and external stakeholders and for the corporate performance in a context of sustainable development: in this way, it should "*provide a balanced and reasonable representation of the sustainability performance of a reporting organisation. [...]*" (G3 Technical Protocol).

According to GRI, it is not a simple disclosure but it helps the numerous companies that want to make their operations sustainable, to measure, communicate and understand their environmental, governance, social and economic performance: *"[...] sustainability –*

the ability for something to last for a long time, or indefinitely – is based on performance in these four key areas." (www.globalreporting .org).

Through the sustainability reporting, companies measure its activity and change impacts as a sort of performance and impact platform (communicating both negative and positive aspects). In a company that wants to adopt this reporting, there should be a program for a continuos data collection and responses, affecting decision makers during their choices about corporate policies and strategies.

It is considered as a necessary tool for a sustainable global economy since it combines a long-term profitability with other aspects such as social justice, environmental care and ethical behaviour.

GRI Guidelines are only a part of the GRI Framework, which includes also the Sector Guidance, to adjust the sustainability reporting on each specific organisation. Each generation has its own Guideline and Sector Guidance.

The Framework indentifies three different purposes for the sustainability reporting:

- Benchmarking and assessing sustainability performance through the respect of national laws, regulations, performance standards etc.;
- Demonstrating how sustainability expectations can influence corporate and external activities;
- Comparing the performances (with previous years or other companies).

The GRI Framework is apt for any type of company and for its creation, practical considerations from different organisation situations was taken into account.

The Guidelines "*assist in the preparation of sustainability reports by organizations, regardless of their size, sector or location*", offering "*an international reference for all those interested in the disclosure of governance approach and of the environmental, social and economic performance and impacts of organizations*." (www.globalreporting .org).

Other GRI documents support the Guidelines:

- *Indicator Protocols*: there is one for each Performance Indicator and they "*provide definitions, compilation guidance, and other information to assist report prepares and to ensure consistency [...]*" (G3 Technical Protocol) in their interpretations.
- *Sector Supplements*: they suggest for each sector how to apply GRI Guidelines, promoting specific Performance Indicators. They are documents that complete Guidelines recommendations.

- *Technical protocols*: they are used in combination with other GRI documents and they define the reporting boundary. They are useful for the most common organisational issues during the reporting.

Instead, the GRI's Sector Guidance "*makes reporting more relevant and user-friendly for organizations in diverse sectors.*" (www.globalreporting .org). GRI recognises 10 different macro-sectors, which include all organisations such as airport operators, construction and real estate, electric utilities, event organizers, financial services, food processing, media, mining and metals, NGO, oil and gas.

3.3.1 G3 Guidelines[27]

It is one of the first guideline edited by GRI and it was endorsed in 2006. It was a relevant innovation in sustainability reporting since it gave flexibility and transparency in key sustainability areas to the organisations that adopted it.

The guidance to G3 suggests that the first step for the GRI sustainability reporting adoption is to determine the report content; it states that some companies want to complete the full GRI Reporting Framework from their first disclosure, whereas others start with the most feasible and relevant topics at first and only gradually they introduce the other topics over time. This second approach is suggested by the guidance.

Each report should contain a description of its own target and plans about future reporting improvements over time. The company has also to declare which GRI Application Level wants to apply (A, B or C) in order to facilitate report reader and preparer tasks as through this declaration they can know which GRI Framework elements are applied.

Moreover, when a company decides to follow GRI guidelines to report its sustainability reporting, it has to notify its decision to GRI.

All Sustainability Reporting Guidelines include three different relevant parts: Reporting Guidance, Reporting Principles, which define the report content and guarantee reported information quality, and Standard Disclosures.

[27] All quotations about the Guidelines come from GRI's official documents that are available on GRI's official website (www.globalreporting.org).

The Reporting Guidance

It is the part of the framework where GRI helps to interpret and govern its Reporting Framework. It describes "*actions that can be taken, or options that the reporting organisation can consider when making decision on what report on [...].*".

In particular, there are two matters that GRI faces in this part: how to define the report content and to set report boundary.

As regard the first one, the Guidance draws the leading path to identify the content that the company has to cover through its sustainability reporting. It states that the reporting organisation has to take in consideration for its decision "*both the organisation's purpose and experience, and the reasonable expectations and interests of the organisation's stakeholders*".

First of all, it is fundamental to identify the topics and their indicators that are relevant in the specific corporate context; after that, the firm has to match the chosen topics with GRI Indicators and Principles in order to take the best decision (also Sector Guidance and Principle Tests are useful tools for this task).

In this research, it is important to perceive the Core from the Additional GRI's Indicators: the GRI's multi-stakeholder process assigns the mark Core to those indicators that "*are generally applicable [...] and assumed to be material for most organisation*", whereas the Additional Indicators have less probability to be material in all circumstances.

The part of the Reporting Guidance about Boundary Setting indentifies "*which entities' (e.g. subsidiaries and joint ventures) performance will be represented by the report.*". In the report boundary, all entities, "*over which the reporting organisation exercises control or significant influence both in and through its relationship with various entities upstream and downstream*", should be included.

For this reason, the GRI provides its own definition of control and significant influence:

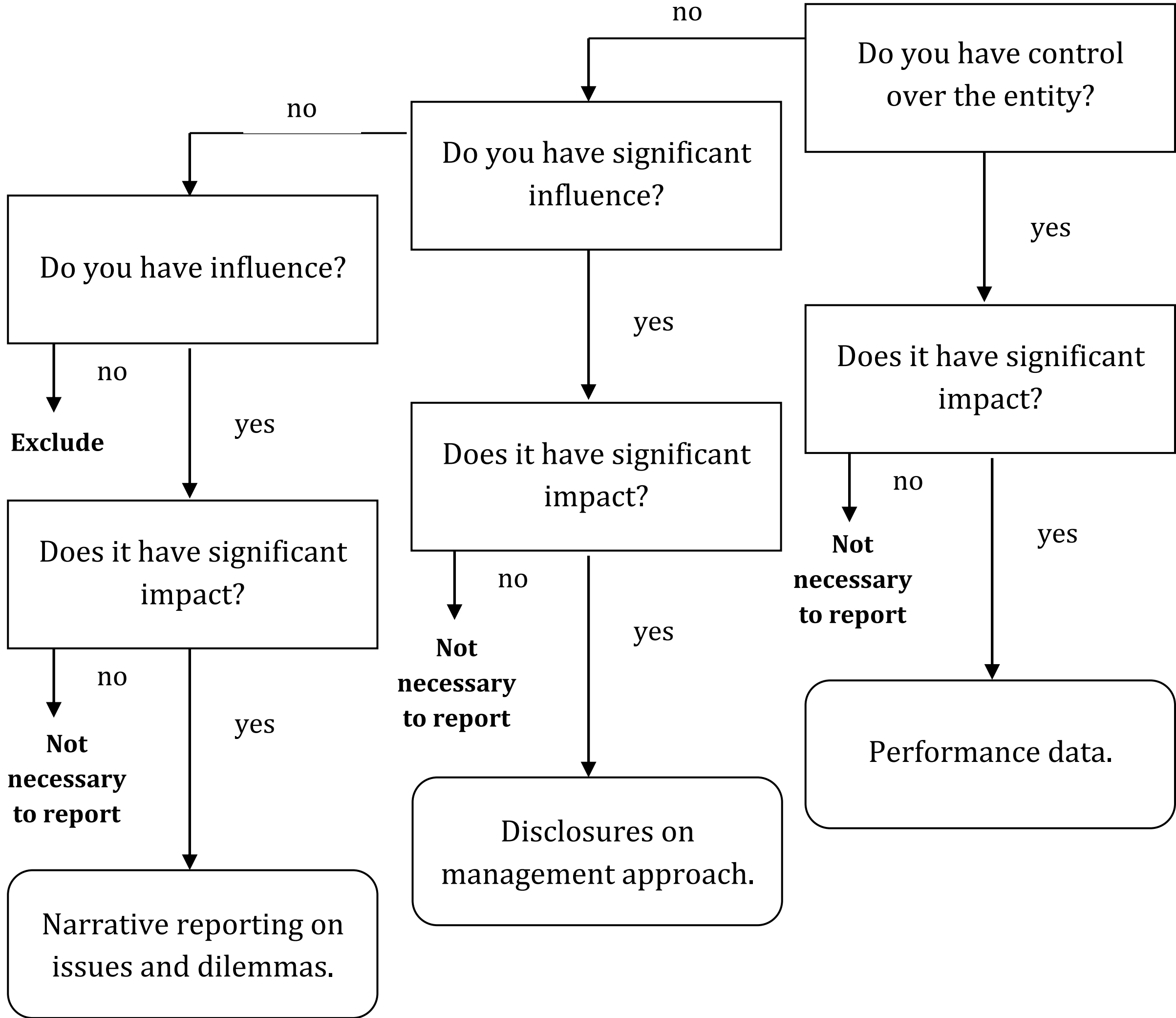
- Control: "*the power to govern the financial and operating policies of an enterprise so as to obtain benefits from its activities.*".
- Significant influence: "*the power to participate in the financial and operating policy decisions of the entity but not the power to control the policies.*".

Even though in this way an organisation can identify its reporting boundary, the Guidance states that not all entities inside that boundary have to be reported in the same

way: the Guidance recognises that "*different relationships involve different degrees of access of information and the ability to affect the outcomes*." (For instance, a company has a different information access in a controlled entity rather than in a joint venture or in a supplier). For this reason, it is also important to understand the importance of each entity when companies collet information for the sustainability reporting: "*entities with significant impacts typically generate the greatest risk and opportunity for an organisation and its stakeholders*" and they have to be more accountable and responsible than the others. These entity impacts and activities have to be reported using "*either indicators of operational performance, indicators of management performance, or narrative descriptions.*".

The decision making process for the definition of reporting boundary can be summed as in the table below (**Table 3**).

Table 3: Decision tree for Boundary Setting.



Sourced by G3 Guidelines Technical Protocol.

The Reporting Principles

The reporting Principles are provided by GRI as a way to support and effort reporting companies towards transparency: the GRI defines transparency as "*the complete disclosure of information of the topics and indicators required to reflect impact and enable stakeholders to make decisions, and the processes, procedures, and assumptions used to prepare those disclosures.*".

It illustrates the results that "*a report should achieve and guide decisions throughout decision process*": for instance, it helps reporting companies in their process of content decision.

Each principle is composed by a definition and a set of tests to guide the use of the principles, as well as an example for a better explanation.

The Reporting Principles can be divided into two macro-areas: "*principles for determining topics and indicators on which the organisation should report*" (**Table 4**) and "*principles for ensuring the quality and appropriate presentation of reported information*" (**Table 5**).

Table 4: Reporting Principles for defining content (GRI information principles).

PRINCIPLE	***DEFINITION***	***OTHER INFORMATION***
Materiality	The information in a report should cover topics and indicators that reflect the organisation's significant economic, environmental and social impacts or that would substantively influence the assessments and decisions of stakeholders.	It is the threshold at which an issue or indicator becomes sufficiently important that should be reported. Not all material topics will be of equal importance and the emphasis in the report should follow the relative priority. The sustainability materiality is a threshold in affecting the ability to meet the needs of the present without compromising the needs of the future generations.
Stakeholder Inclusiveness	The reporting organisation should identify its stakeholders and explain in the report how it has responded to their reasonable expectations and interests.	They are a key reference point for many decisions during report preparation. Not all interests have to be taken in consideration in the report. This presents challenges in balancing specific interests of stakeholders who can reasonably be expected to us the report with broader expectations of accountability to all stakeholders.
Sustainability Context	The report should present the organisation's performance in the wider context of sustainability.	Information on performance should be placed in context. The underlying question is how an organisation contributes to improvement or deterioration of overall conditions

		and trends. The report should seek to present performance in relation to broader concepts of sustainability.
Completeness	Coverage of the material topics and indicators and definition of the report boundary should be sufficient to reflect significant economic, environmental, and social impacts and enable stakeholders to assess the reporting organisation's performance in the reporting period.	This concept can be also used to refer practises in information collection and whether the presentation of information is reasonable and appropriate. It is also important the time that is referred to the need for the selected information to be complete for the period specified by the report.

Table 5: Reporting Principles for defining quality (GRI quality principles).

PRINCIPLE	*DEFINITION*	*OTHER INFORMATION*
Balance	The report should reflect positive and negative aspects of the organisation's performance to enable a reasonable assessment of overall performance.	Providing an unbiased picture of the organisation's performance. Not selections, omissions that can influence the reader's judgement.
Comparability	Issues and information should be selected, compiled, and reported consistently. Reported information should be presented in a manner that enable stakeholders to analyse changes in the organisation's performance over time, and could support analysis relative to other organisations.	It is necessary for evaluating performance. Report preparers should consider providing context that will help report users understand the factors tat may contribute to differences in performance between organisations. When changes occur, reporting organisations should restate current disclosures alongside historical data.
Accuracy	The reported information should be sufficiently accurate and detailed for stakeholders to assess the reporting organisation's performance.	Responses have to be expressed in many different ways, ranging from qualitative responses to detailed quantitative measurements. The characteristics to define accuracy vary for each singular information.
Timeliness	Reporting occurs on a regular schedule and information is available in time for stakeholders to make informed decisions.	Related to information usefulness. The timing of release refers both to the regularity of reporting as well as its proximity to the actual events described in the report.
Clarity	Information should be made available in a manner that is understandable and accessible to stakeholders using the report.	Information has to be understandable, and usable by the organisation's range of stakeholders. Graphics and tables are suggested.
Reliability	Information and processes used in the preparation of a report should be gathered, recorded, compiled, analysed, and disclosed in a way that could be subject to examination and that establishes the quality and materiality of the information.	It is he confidence about the veracity of report's content and information. All of them have to be checked by an internal control and supported by corporate documents.

Sourced by G3 Guidelines Technical Protocol.

The Standard Disclosures

It is the core part of GRI Guideline and sustainability reporting since it includes all indices to disclose standardise non-financial information of the reporting companies.
In other words, "*this section specified the base content that should appear in a sustainability report [...]".*
This section is divided in five big areas (see **Table 6**), which correspond to three different types of disclosure:

- *Strategy and Profile*: it is related to the first part of sustainability report. It sets the overall corporate context to understand organisational performance. The subsections are: *Profile, Organisational Profile, Report Parameters*, and *Governance, Commitments, and Engagements.*
- *Management Approach:* it composes (with the next type of disclosure) the second and last part of sustainability reporting. It explains "*how an organisation addresses a given set of topics in order to provide context for understanding performance in a specific area.*". it is specific for each category in which Performance Indicators are divided.
- *Performance Indicators:* they present comparable information about different sustainability topics (economic, environmental, and social). They are divided according to the three main topics, which are mentioned before: in particular, it is important to underline that Social Indicators are divided in sub-sections because of their extent: *Labour (LA), Human Rights (HR), Society (SO),* and *Product Responsibility (PR).* Each indicator is marked as CORE or ADDITIONAL (ADD) to distinguish indicators that can be applied generally and be material for most organisations (CORE) from others (ADD).

In addition, the G3 suggests some guidance for the indicator and data application:

- *Reporting on trends:* information has to refer to the current reporting period (for example last year) and to the two previous ones.
- *Use of Protocols:* the GRI suggests to follow its Protocols in order to interpret and compile information.
- *Presentation of Data:* depending on contexts and types of data, sometimes it is better to provide also ratios and normalised data in addition to absolute data.

- *Data aggregation:* each report should have the appropriate level of aggregate information.
- *Metrics:* reporting companies have to use the accepted international metrics to present data in their sustainability reporting.

Table 6: G3's Standard Disclosure.

PROFILE	
1. Strategy and Analysis Providing a high-level, strategic view of the organisation's relationship to sustainability in order to provide the context.	
1.1	Statement from the most senior decision-maker of the organization (e.g., CEO, chair, or equivalent senior position) about the relevance of sustainability to the organization and its strategy.
1.2	Description of key impacts, risks, and opportunities.
2. Organisational Profile	
2.1	Name of the organization.
2.2	Primary brands, products, and/or services.
2.3	Operational structure of the organization, including main divisions, operating companies, subsidiaries, and joint ventures.
2.4	Location of the organization's headquarters.
2.5	Number of countries where the organization operates, and names of countries with either major operations or that are specifically relevant to the sustainability issues covered in the report.
2.6	Nature of ownership and legal form.
2.7	Markets served (including geographic breakdown, sectors served, and types of customers/beneficiaries).
2.8	Scale of reporting organization, including: number of employees, net sales (for private sector organizations) or net revenues (for public sector organizations), total capitalization broken down in terms of debt and equity (for private sector organizations), and quantity of products or services provided.
2.9	Significant changes during the reporting period regarding its size, structure, or ownership including: the location of, or changes in operations, including facility openings, closings, and expansions, and changes in the share capital structure and other capital formation, maintenance, and alteration operations (for private sector organizations).
2.10	Awards received in the reporting period.
3. Report Parameters	
Report profile	
3.1	Reporting period (e.g., fiscal/calendar year) for information provided.
3.2	Date of most recent previous report (if any).
3.3	Reporting cycle (annual, biennial, etc.).
3.4	Contact point for questions regarding the report or its contents.

Report scope and boundary	
3.5	Process for defining report content, including: determining materiality, prioritizing topics within the report, and identifying stakeholders the organization expects to use the report.
3.6	Boundary of the report (e.g., countries, divisions, subsidiaries, leased facilities, joint ventures, suppliers).
3.7	State any specific limitations on the scope or boundary of the report.
3.8	Basis for reporting on joint ventures, subsidiaries, leased facilities, outsourced operations, and other entities that can significantly affect comparability from period to period and/or between organizations.
3.9	Data measurement techniques and the bases of calculations, including assumptions and techniques underlying estimations applied to the compilation of the Indicators and other information in the report.
3.10	Explanation of the effect of any restatements of information provided in earlier reports, and the reasons for such restatement (e.g., mergers/acquisitions, change of base years/periods, nature of business measurement methods).
3.11	Significant changes from previous reporting periods in the scope, boundary, or measurement methods applied in the report.
3.12	Table identifying the location of the Standard Disclosures in the report.
Assurance	
3.13	Policy and current practice with regard to seeking external assurance for the report. If not included in the assurance report accompanying the sustainability report, explain the scope and basis of any external assurance provided. Also explain the relationship between the reporting organization and the assurance provider(s).
4. Governance, Commitments, and Engagement	
Governance	
4.1	Governance structure of the organization, including committees under the highest governance body responsible for specific tasks, such as setting strategy or organizational oversight.
4.2	Indicate whether the Chair of the highest governance body is also an executive officer (and, if so, their function within the organization's management and the reasons for this arrangement).
4.3	For organizations that have a unitary board structure, state the number of members of the highest governance body that are independent and/or non-executive members.
4.4	Mechanisms for shareholders and employees to provide recommendations or direction to the highest governance body.
4.5	Linkage between compensation for members of the highest governance body, senior managers, and executives (including departure arrangements), and the organization's performance (including social and environmental performance).
4.6	Processes in place for the highest governance body to ensure conflicts of interest are avoided.
4.7	Process for determining the qualifications and expertise of the members of the highest governance body for guiding the organization's strategy on economic, environmental, and social topics.
4.8	Internally developed statements of mission or values, codes of conduct, and principles relevant to economic, environmental, and social performance and the status of their implementation.
4.9	Procedures of the highest governance body for overseeing the organization's identification

	and management of economic, environmental, and social performance, including relevant risks and opportunities, and adherence or compliance with internationally agreed standards, codes of conduct, and principles.
4.10	Processes for evaluating the highest governance body's own performance, particularly with respect to economic, environmental, and social performance.
Commitments to external initiatives	
4.11	Explanation of whether and how the precautionary approach or principle is addressed by the organization.
4.12	Externally developed economic, environmental, and social charters, principles, or other initiatives to which the organization subscribes or endorses.
4.13	Memberships in associations (such as industry associations) and/or national/international advocacy organizations in which the organization: 1) has positions in governance bodies; 2) participates in projects or committees; 3) provides substantive funding beyond routine membership dues; 4) views membership as strategic.
Stakeholder engagement	
4.14	List of stakeholder groups engaged by the organization.
4.15	Basis for identification and selection of stakeholders with whom to engage.
4.16	Approaches to stakeholder engagement, including frequency of engagement by type and by stakeholder group. Indicate the principles formulated at corporate level that guide your company's stakeholder engagement at site level.
4.17	Key topics and concerns that have been raised through stakeholder engagement, and how the organization has responded to those key topics and concerns, including through its reporting.

5. Management Approach and Performance Indicators

Economic Performance Indicators

It concerns the organisation's impacts on the economic conditions of its stakeholders and on economic systems at local, national, and global levels.

Aspects: economic performance (EC1-4), market presence (EC5-7) and indirect economic impacts (EC8-9).

EC1	*CORE*	Direct economic value generated and distributed, including revenues, operating costs, employee compensation, donations and other community investments, retained earnings, and payments to capital providers and governments.
EC2	*CORE*	Financial implications and other risks and opportunities for the organization's activities due to climate change.
EC3	*CORE*	Coverage of the organization's defined benefit plan obligations.
EC4	*CORE*	Significant financial assistance received from government.
EC5	*ADD*	Range of ratios of standard entry level wage compared to local minimum wage at significant locations of operation.
EC6	*CORE*	Policy, practices, and proportion of spending on locally-based suppliers at significant locations of operation.
EC7	*CORE*	Procedures for local hiring and proportion of senior management hired from the local community at significant locations of operation.
EC8	*CORE*	Development and impact of infrastructure investments and services

		provided primarily for public benefit through commercial, in-kind, or pro bono engagement.
EC9	*ADD*	Understanding and describing significant indirect economic impacts, including the extent of impacts.
Environmental Performance Indicators It concerns an organisation's impacts on living and non-living natural systems. It covers performance related inputs and outputs. **Aspects**: materials (EN1-2), energy (EN3-7), water (EN8-10), biodiversity (EN11-15), emissions, effluents and waste (EN16-25), products and services (EN26-27), compliance (EN28), transport (EN29), and overall (EN30).		
EN1	*CORE*	Materials used by weight or volume. See Indicator Protocol for guidance on calculation.
EN2	*CORE*	Percentage of materials used that are recycled input materials.
EN3	*CORE*	Direct energy consumption by primary energy source.
EN4	*CORE*	Direct energy consumption by primary energy source.
EN5	*ADD*	Energy saved due to conservation and efficiency improvements.
EN6	*ADD*	Initiatives to provide energy-efficient or renewable energy-based products and services, and reductions in energy requirements as a result of these initiatives.
EN7	*ADD*	Initiatives to reduce indirect energy consumption and reductions achieved.
EN8	*CORE*	Total water withdrawal by source.
EN9	*ADD*	Water sources significantly affected by withdrawal of water.
EN10	*ADD*	Percentage and total volume of water recycled and reused.
EN11	*CORE*	Location and size of land owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas.
EN12	*CORE*	Description of significant impacts of activities, products, and services on biodiversity in protected areas and areas of high biodiversity value outside protected areas.
EN13	*ADD*	Habitats protected or restored.
EN14	*ADD*	Strategies, current actions, and future plans for managing impacts on biodiversity.
EN15	*ADD*	Number of IUCN Red List species and national conservation list species with habitats in areas affected by operations, by level of extinction risk.
EN16	*CORE*	Total direct and indirect greenhouse gas emissions by weight.
EN17	*CORE*	Other relevant indirect greenhouse gas emissions by weight.
EN18	*ADD*	Initiatives to reduce greenhouse gas emissions and reductions achieved.
EN19	*CORE*	Emissions of ozone-depleting substances by weight.
EN20	*CORE*	NOx, SOx, and other significant air emissions by type and weight.
EN21	*CORE*	Total water discharge by quality and destination.
EN22	*CORE*	Total weight of waste by type and disposal method.
EN23	*CORE*	Total number and volume of significant spills.

EN24	*ADD*	Weight of transported, imported, exported, or treated waste deemed hazardous under the terms of the Basel Convention Annex I, II, III, and VIII, and percentage of transported waste shipped internationally.
EN25	*ADD*	Identity, size, protected status, and biodiversity value of water bodies and related habitats significantly affected by the reporting organization's discharges of water and runoff.
EN26	*CORE*	Initiatives to mitigate environmental impacts of products and services, and extent of impact mitigation.
EN27	*CORE*	Percentage of products sold and their packaging materials that are reclaimed by category.
EN28	*CORE*	Monetary value of significant fines and total number of non-monetary sanctions/convictions for non-compliance with environmental laws and regulations.
EN29	*ADD*	Significant environmental impacts of transporting products and other goods and materials used for the organization's operations, and transporting members of the workforce.
EN30	*ADD*	Total environmental protection expenditures and investments by type.
Social Performance Indicators It concerns the impacts an organisation has on the social systems within which it operates.		
Labour practise and decent work **Aspects:** employment (LA1-3), labour/management relations (LA4-5), occupational health and safety (LA6-9), training and education (LA10-12), diversity and equal opportunity (LA13-14).		
LA1	*CORE*	Total workforce by employment type, employment contract, and region.
LA2	*CORE*	Total number and rate of employee turnover by age group, gender, and region.
LA3	*ADD*	Benefits provided to full-time employees that are not provided to temporary or part-time employees, by major operations.
LA4	*CORE*	Percentage of employees covered by collective bargaining agreements.
LA5	*CORE*	Minimum notice period(s) regarding significant operational changes, including whether it is specified in collective agreements.
LA6	*ADD*	Percentage of total workforce represented in formal joint management-worker health and safety committees that help monitor and advise on occupational health and safety programs.
LA7	*CORE*	Rates of injury, occupational diseases, lost days, and absenteeism, and total number of work-related fatalities by region.
LA8	*CORE*	Education, training, counselling, prevention, and risk-control programs in place to assist workforce members, their families, or community members regarding serious diseases.
LA9	*ADD*	Health and safety topics covered in formal agreements with trade unions.
LA10	*CORE*	Average hours of training per year per employee by employee category.
LA11	*ADD*	Programs for skills management and lifelong learning that support the continued employability of employees and assist them in managing career endings.
LA12	*ADD*	Percentage of employees receiving regular performance and career development reviews.

LA13	*CORE*	Composition of governance bodies and breakdown of employees per category according to gender, age group, minority group membership, and other indicators of diversity.
LA14	*CORE*	Ratio of basic salary of women to men by employee category.
Human rights **Aspects:** investment and procurement practises (HR1-3), non-discrimination (HR4), freedom of association and collective bargaining (HR5), abolition of child labour (HR6), prevention of forced and compulsory labour (HR7), security practises (HR8), indigenous rights (HR9).		
HR1	*CORE*	Percentage and total number of significant investment agreements that include human rights clauses or that have undergone human rights screening.
HR2	*CORE*	Percentage of significant suppliers and contractors that have undergone screening on human rights and actions taken.
HR3	*ADD*	Total hours of employee training on policies and procedures concerning aspects of human rights that are relevant to operations, including the percentage of employees trained.
HR4	*CORE*	Total number of incidents of discrimination and actions taken.
HR5	*CORE*	Operations identified in which the right to exercise freedom of association and collective bargaining may be at significant risk, and actions taken to support these rights.
HR6	*CORE*	Operations identified as having significant risk for incidents of child labour, and measures taken to contribute to the elimination of child labour.
HR7	*CORE*	Operations identified as having significant risk for incidents of forced or compulsory labour, and measures taken to contribute to the elimination of forced or compulsory labour.
HR8	*ADD*	Percentage of security personnel trained in the organization's policies or procedures concerning aspects of human rights that are relevant to operations.
HR9	*ADD*	Total number of incidents of violations involving rights of indigenous people and actions taken.
Society **Aspects:** community (SO1), corruption (SO2-4), public policy (SO5-6), anti-competitive behaviour (SO7), compliance (S08).		
SO1	*CORE*	Nature, scope, and effectiveness of any programs and practices that assess and manage the impacts of operations on communities, including entering, operating, and exiting.
SO2	*CORE*	Percentage and total number of business units analyzed for risks related to corruption.
SO3	*CORE*	Percentage of employees trained in organization's anti-corruption policies and procedures.
SO4	*CORE*	Actions taken in response to incidents of corruption.
SO5	*CORE*	Public policy positions and participation in public policy development and lobbying.
SO6	*ADD*	Total value of financial and in-kind contributions to political parties, politicians, and related institutions by country.
SO7	*ADD*	Total number of legal actions for anti-competitive behaviour, anti-trust, and

		monopoly practices and their outcomes.
SO8	*CORE*	Monetary value of significant fines and total number of non-monetary sanctions for non-compliance with laws and regulations (e.g. human rights).
Product responsibility **Aspects:** customer health and safety (PR1-2), product and service labelling (HR3-5), marketing communication (HR6-7), customer privacy (HR8), compliance (PR9).		
PR1	*CORE*	Life cycle stages in which health and safety impacts of products and services are assessed for improvement, and percentage of significant products and services categories subject to such procedures.
PR2	*ADD*	Total number of incidents of non-compliance with regulations and voluntary codes concerning health and safety impacts of products and services, by type of outcomes.
PR3	*CORE*	Type of product and service information required by procedures, and percentage of significant products and services subject to such information requirements.
PR4	*ADD*	Total number of incidents of non-compliance with regulations and voluntary codes concerning product and service information and labelling, by type of outcomes.
PR5	*ADD*	Practices related to customer satisfaction, including results of surveys measuring customer satisfaction.
PR6	*CORE*	Programs for adherence to laws, standards, and voluntary codes related to marketing communications, including advertising, promotion, and sponsorship.
PR7	*ADD*	Total number of incidents of non-compliance with regulations and voluntary codes concerning marketing communications, including advertising, promotion, and sponsorship, by type of outcomes.
PR8	*ADD*	Total number of substantiated complaints regarding breaches of customer privacy and losses of customer data.
PR9	*CORE*	Monetary value of significant fines for non-compliance with laws and regulations concerning the provision and use of products and services.

Sourced by G3 Guidelines Technical Protocol.

Moreover, the G3 Guideline states that some information may be not disclosed by reporting companies because of gathering costs or its confidentiality, yet they should indicate this fact on the sustainability report and write reasons for such omission.

In a sustainability reporting, it is not only important the aggregation level but also disaggregate information since sometimes it is relevant going in detail about specific matters.

There is not a prearranged time period for the disclosure of sustainability reporting: reporting companies usually edit their reports each year or, sometimes, they report biannually their non-financial information.

The appropriate media for the disclosure of sustainability reporting are paper reports or an electronic and web-based report: the reporting organisations can also choose both of

them. However, the most important thing is that all information (declared before with the Application Level) is available for their stakeholders and users.
Finally, the GRI suggests to choose an assurance for enhancing the credibility of the sustainability report. Companies have often an internal system of information control that is certainly relevant for credibility and integrity of a report, yet the use of external assurance providers or groups is an additional evidence of reporting and information quality: it is different from an internal one because it follows a set of professional standards and it provides written conclusions that are published at the end of sustainability reporting.

3.3.2 G3.1 Guidelines

G3.1 Guidelines, along with G3, is the reporting scheme used into sustainability reports analysed for my case study. Indeed, I have taken in consideration sustainability reports (GRI format) of the first hundred companies in Fortune500 from the year 2007 to the year 2011.
The G3.1 Guidelines is an update of G3 rather than a new generation of GRI's guidelines. It was published in 2011 and it modified not all GRI Framework but it adjusted only some indices or definitions with a review of datum requirements or contents, as well as introducing some new Performance Indicators (**Table 7**).

Table 7: G3.1 new Performance Indicators.

LA15	*CORE*	**Aspect:** Employment. Return to work and retention rates after parental leave, by gender.
HR10	*CORE*	**Aspect:** Assessment. Percentage and total number of operations that have been subject to human rights reviews and/or impact assessments.
HR11	*CORE*	**Aspect:** Remediation. Number of grievances related to human rights filed, addressed and resolved through formal grievance mechanisms.
SO1	*CORE*	**Aspect:** Local Communities. Percentage of operations with implemented local community engagement, impact assessments, and development programs.
SO9	*CORE*	**Aspect:** Local Communities. Operations with significant potential or actual negative impacts on local communities.
SO10	*CORE*	**Aspect:** Local Communities. Prevention and mitigation measures implemented in operations with significant potential or actual negative impacts on local communities.

Sourced by G3.1 Guidelines Technical Protocol.

The G3.1's Reporting Guidance and Reporting Principles have not so many changes in comparison with G3 Guideline: there are some new definitions (new employee hires, basic salary, remuneration, etc) and little variations in the content of some principles such as materiality, stakeholder inclusiveness and sustainability context (their definitions remain the same as in G3).

Nevertheless, the most relevant innovations in the GRI's Guidelines are in the Standard Disclosures section: there are evident changes of index definitions, as well as new indices (**Table 7**) and aspects throughout the sustainability report.

In the table below (**Table 8**), I have outlined the most interesting changes from G3, underlining the new parts of definitions in order to convey more clearly the variations.

Table 8: G3.1 More relevant definition variations.

2.8	Scale of reporting organization, including: number of employees, number of operations, net sales (for private sector organizations) or net revenues (for public sector organizations), total capitalization broken down in terms of debt and equity (for private sector organizations), and quantity of products or services provided.	
4.3	For organizations that have a unitary board structure, state the number and gender of members of the highest governance body that are independent and/or non-executive members.	
4.7	Process for determining the composition, qualifications, and expertise of the members of the highest governance body and its committees, including any consideration of gender and other indicators of diversity.	
EC5	*ADD*	Range of ratios of standard entry level wage by gender compared to local minimum wage at significant locations of operation.
LA1	*CORE*	Total workforce by employment type, employment contract, and region, broken down by gender.
LA2	*CORE*	Total number and rate of employee hires and employee turnover by age group, gender, and region.
LA3	*ADD*	Benefits provided to full-time employees that are not provided to temporary or part-time employees, by significant locations of operation.
LA7	*CORE*	Rates of injury, occupational diseases, lost days, and absenteeism, and total number of work-related fatalities by region and by gender.
LA10	*CORE*	Average hours of training per year per employee by gender, and by employee category.
LA12	*ADD*	Percentage of employees receiving regular performance and career development reviews, by gender.
LA13	*CORE*	Composition of governance bodies and breakdown of employees per employee category according to gender, age group, minority group membership, and other indicators of diversity.
LA14	*CORE*	Ratio of basic salary and remuneration of women to men by employee category, by significant locations for operation.
HR1	*CORE*	Percentage and total number of significant investment agreements and contracts that include clauses incorporating human rights concerns, or that have undergone human rights screening.

HR2	CORE	Percentage of significant suppliers, contractors, and other business partners that have undergone human rights screening and actions taken.
HR3	CORE	Total hours of employee training on policies and procedures concerning aspects of human rights that are relevant to operations, including the percentage of employees trained.
HR4	CORE	Total number of incidents of discrimination and corrective actions taken.
HR5	CORE	Operations and significant suppliers identified in which the right to exercise freedom of association and collective bargaining may be violated or at significant risk, and actions taken to support these rights.
HR6	CORE	Operations and significant suppliers identified as having significant risk for incidents of child labour, and measures taken to contribute to the effective abolition of child labour.
HR7	CORE	Operations and significant suppliers identified as having significant risk for incidents of forced or compulsory labour, and measures taken to contribute to the elimination of all forms of forced or compulsory labour.

Sourced by G3.1 Guidelines Technical Protocol.

Due to new indices and sustainability reporting policy that are more careful about gender differences, there are some new aspects faced by GRI Performance Indicators.

The first new aspect is in "*Labour practise and decent work*" section where the LA14 index is associated with the analysis of "*Equal remuneration for women and men*": the salary and remuneration are considered as key factors to establish the equal qualification between different genders, insomuch as several national governments have introduced specific laws to ensure it. For this reason, this information is fundamental to understand the workforce status in a reporting company.

The other two aspects, related to the new indexes (HR10 and HR11), are "*Assessment*" and "*Remediation*", located in "*Human rights*" section.

The first one is related to organisations' awareness of the importance of human right respect and their protection: for this reason, it is fundamental not only their own compliance but also their effort to spread this policy through their nearby organisations. Indeed a company can affect human rights also indirectly through its interactions and relationships with surrounding subjects.

Instead, the "*Remediation*" is about the reporting company capability to react to human right disputes: not only prevention but also a good grievance mechanism can assure the human right respect.

3.3.3 G4 Guidelines

This paragraph presents a general and brief overview of those guidelines that have not been analysed in the last chapter.

G4 is the last and most recent generation of GRI Guidelines, launched in May 2013 after two years of stakeholders' debate. It represents a sort of revolution in the GRI sustainability reporting in comparison to G3.1.

In G4, all the classifications and scheme of sustainability reports are changed: in particular, in the "*Standard Disclosures*" section, all standards are renamed, giving a new order and introducing new standards and indices, as well as modifying contents and their data points (for instance the standard *1.1* in G4 is named *G4-1*, or the index EC1 in *G4* is *G4-EC1* etc.). There are around 16 new General Standards, as well as 2 deleted and about 13 new Performance Indices: this means that G4 is a big change compared to the transition between G3 and G3.1.

The most evident innovation is that G4 "*includes harmonisation with other important global frameworks*" such as the "*OECD Guidelines for Multinational Enterprises, the UN Global Compact Principles, and the UN Guiding Principles on Business and Human Rights.*".

For this reason, G4 is compatible with a wider range of different reporting format in comparison to the previous generations.

Moreover, G4 provides widely recognised global standards that could be included also in the new path of sustainability reporting and non-financial information disclosure: the integrated reporting.

However, as the older generations, this new GRI Guidelines does not change its scope and core definitions, fostering companies to analyse the deep relationship between sustainability impacts/sustainable development and their business operations and strategies.

In sum, through this last guideline generation, GRI tries to develop a sustainability reporting that can be compatible with other relevant and widespread international initiatives about sustainable development in order to be more and more acceptable by any company in the world. At the same time, with its collaborations with IIRC and the possibility of standard exchange, GRI recognises the new and future path of sustainability disclosure that is the integrated report.

3.4 More Information about GRI

GRI Guidelines are one of the most important sustainability reporting standards thanks to its worldwide spread among reporting companies. For this reason, it is interesting to present some data about the GRI subject in order to understand what its state-of-the-art is.

Over the last three decades, CSR information and standards have increased their diffusion and popularity "*in response to financial scandals and ongoing economic crisis.*" (Marimon et al., 2012, 132), creating an uncertain climate into the market. Because of this situation, companies have tried to react to this uncertainty providing more information (also non-financial) through the sustainability report in order to decrease the information asymmetry between organisations and stakeholders and to increase its transparency and reputation.

In this context, GRI has become the most widely used international standard for SR as many researchers have demonstrated. This status of the best format for sustainability reporting has some features at its basis: firstly, the GRI is "*the best option available for SR given that it is based on foundations that consider economic, environmental and social dimensions.*" (Marimon et al., 2012, 133); secondly, "*GRI represents a 'harmonised, standardised, understandable and objective report' [...]*" as well as being *"[...] 'an obligation for certain information to be expressed numerically and monetarily so as to facilitate its comparison'.*" (Marimon et al., 2012, 133).

According to Marimon's research in 2012, the area in which GRI reports were the most diffused is Europe in 2010 with 829 sustainability reports.

The second area for GRI certifications is Asia that provided 367 reporting companies in 2010, whereas the other parts of the world do not contribute in a relevant way. The total number of GRI reports in North America and Oceania were around 147 reports in 2010, whereas in Latin America there were about 258 reports.

The total amount of GRI reports in the world in 2010 was at 1656, "*in contrast to 11 GRI reports that were registered in 1999*" (Marimon et al., 2012, 138) at the beginning of the initiative, underling a rocketing growth in only one decade.

The absolute number of GRI reports does not figure out rightly the fundamental position of this initiative in a sustainability reporting context: indeed, it is more interesting to understand how many organisations among CSR reporting companies adopt these types of standards. Europe is the area with the best datum, recording around 50% of

sustainability reporting companies that are in compliance with GRI Guidelines. In the second position, as in absolute reports' ranking, there is Asia with a 20% of reporting organisations, whereas North America has the lowest percentage, considering that Oceania and Africa record a 4% of reporting organisations.

Miromon tries to justify these spreads, particularly between North America and Europe. He states that this depends on a different concept of sustainability, being the USA and Canada companies concentrate mainly on philanthropic activities as sustainable initiatives, avoiding GRI reporting and utilising different channels to communicate their non-operational activities. Instead, "*European companies surpass the North America companies in all elements of responsibility that consider customers and employees*" (Marimon et al., 2012, 138), being inferior about environmental information. Moreover, this low American adoption of GRI reporting is due to the American investors' scepticism stating that "*SR is valuable in the pricing of financial assets*" and "*companies do not believe in the payoffs to be gained from social performance.*" (Marimon et al., 2012, 141).

The current situation and past trends could be changed because of external factors *"such as strengthening of laws or increased number of disclosure requests from stakeholders*" that can "*affect the motivation to fulfil the GRI requirements*." (Marimon et al., 2012, 137). Further to the factors that have led to the current international scenario, Marimon states that more than one thousands of new companies will subscribe to the GRI, "*despite the high costs associated with the collection, verification and design of reports.*" (Marimon et al., 2012, 142).

Among the top seven sectors (such as financial services, energy utilities, mining, telecommunications, energy, food and beverage products, and construction), which represent around 45% of all GRI reports, the two most active ones are the financial service and the energy sector: the first one is the leading sector with a constant growth, while the second one has shown the most relevant increase in GRI reports from 2005 to 2010. The reason for the wide spread of GRI reporting in these sectors is a "*rapid increase in those sectors where the environment and society are at increased risk and the visibility in the capital market is higher.*" (Marimon et al., 2012, 142).

Even though positive data and feedbacks about the GRI are rather spread, "*the number of companies that have adopted GRI reporting is still very low*." (Marimon et al., 2012, 140). One of the possible solutions is a national governances' promotion of GRI sustainability

reporting through regulations and incentives as already happen in some European countries such as Norway, Sweden and Austria.

The diffusion of GRI is also due to another significant innovation in the non-financial disclosure field: it provides standards that foster reporting companies to report both positive and negative aspects of their sustainability performance. It is an important step in this type of reporting because, in the past, it was common to state principally positive company impacts in order to improve corporate reputation.

Nonetheless, reporting companies have assumed "*communicative legitimating strategies*" (Hahn and Lulfs, 2013, 1) to report the negative aspects because "*the reporting of negative aspects [...] can endanger corporate legitimacy if perceived by the stakeholders as not being in line with societal norms and values.*" (Hahn and Lulfs, 2013, 1). This corporate behaviour damages "*the overall balance of sustainability reporting"*, undermining "*the true and fair view in sustainability disclosure.*" (Hahn and Lulfs, 2013, 1).

As an alternative to these strategies, a reporting company has two different choices:

- Reporting the negative aspect as it is: the negative sustainability performances can affect also corporate financial performance, increasing stock market risk of the reporting company; or
- Not reporting the negative aspect: in this case, the reporting company "*might encounter increased scepticism regarding the reliability of sustainability disclosure with potentially negative consequences for their accountability*." (Hahn and Lulfs, 2013, 2).

A study, conducted by Hahn and Lulfs in 2013, shows several types of these companies' approaches, highlighting the companies' inclination of an abundance of positive information rather than negative voluntary disclosures. Indeed, "*companies often seem to try to use overly positive, whitewashed sustainability reports merely for PR purpose as a tool for gaining and improving a company's reputation and legitimacy.*" (Hahn and Lulfs, 2013, 2). These corporate strategies do not avoid negative aspect disclosure but they consider the disclosure of negative aspects, if it is done in the right way, as a positive signal for managing risks and future company's issues.

The scholars present six different corporate strategies to disclose companies' negative impacts:

1) *Marginalisation*: companies "*seek to legitimise a negative incident by rendering it non-relevant, unimportant, or negligible*" (Hahn and Lulfs, 2013, 10) though judgemental adjectives and sentences. The company tries to minimise the importance of the incident but, at the same time, it gives an evaluation of the impact by not providing criteria.
2) *Abstraction*: the company tries to generalise the negative impact as a common aspect of the overall industry sector by distancing itself from this negative aspect. It dilutes the connection between the negative aspect and itself, legitimising the negative aspect by its widespread occurrence in the industry.
3) *Indicating Facts*: the company mentions the negative aspect in sustainability performance "*without providing explanations or justifications for it.*" (Hahn and Lulfs, 2013, 11). There is not an evaluation of its impact, thus without benchmarks, the judgement of the negative impact is left to the report's readers.
4) *Rationalisation*: in this strategy, the company does not deny the negative aspect in sustainability performance but it explains and justifies it "*by referring to the utility or function of specific actions and practices*" as well as "*using an economic rationale.*" (Hahn and Lulfs, 2013, 11). There are two different types of rationalisation: the first one is *Instrumental Rationalisation*, in which the company "*legitimises the aspect or practice in question by highlighting the benefits, functions, or purposes*" (Hahn and Lulfs, 2013, 11); the second one is *Theoretical Rationalisation*, in which the company simply states that the negative aspect was an inevitable fact.
5) *Authorisation*: the company refers to the authority (such as national regulations, academic research etc.) in order to justify its behaviour. It gives "*external explanations, validations, and judgements of the negative aspect.*" (Hahn and Lulfs, 2013, 11). It is not a company judgement but an external one, thus in the way the reporting company provides a more subjective justification for the negative aspect.
6) *Corrective Action*: "*the company provides ideas, plans, or measures in order to tackle or avoid the negative aspects in the future.*" (Hahn and Lulfs, 2013, 11).

In conclusion, these strategies have been able to develop thanks to the absence of a clear GRI's definition of negative aspects and a missing concrete characterisation. This fact allows companies to manipulate the sustainability reporting format and scope, leaving doubts on how and what negative information has to be disclosed. In addition to this

fact, GRI does not provide a criteria about *"[...] impartiality, which is, however, necessarily to again avoid manipulation."* (Hahn and Lulfs, 2013, 14).

3.5 Towards the Integrated Reporting

As stated before, nowadays GRI sustainability reporting is quite spread and recognised among all organisations that are interested in a sustainable development.

Nonetheless, especially over the last few years, it has been become starting to establish a new reporting trend; the Integrated Reporting (IR), mainly thanks to its capability to join financial performances and information together with ESG data and strategies.

The corporate space can be divided into two big areas: the business area and the environmental area. In the first one, the company has competitive and cooperative relationships with its stakeholders that are directly involved in the corporate activities and interested in the economic and financial performance of the company itself; in the environmental area, the subjects are far from the company's core activities. They are very different each other and they have several interests related to the company and its social responsibility. The development of the corporate environmental space has allowed to promote firstly the sustainability reporting and then the integrated reporting.

The IR origins are almost simultaneous to CSR and sustainability reporting: it was born between the end of the '70s and the beginning of the '80s, when the workforce active role became more and more important in the sharing of the corporate value. Starting from this context, before CSR was created and other reporting tools have followed the natural evolution of this new thinking trend, where IR is the current last step. After the last financial crisis, "*it is not surprising to see a number of entrepreneurs, corporate leaders, and organisations moving towards the hybrid ideal where the values*[28] *embraced influence and are influenced by the way in which value creation and distribution are accounted [...]*."(Busco et al., 2013, 5).

The IR structure is inspired by the thinking that the corporate social dimension has to be set next to the economic and financial performance of the company in order to provide an overall overview of the corporate performance. Indeed, according to Eccles and Krzus, in order to realise a sustainable economy, data related to the financial

[28] "*Broadly defined as principles, beliefs, standards, and ideals that shape our feelings and emotions and help us decide how to act*." (Busco et al., 2013, 5).

performance and to the company's commitment in sustainable projects and actions have to be certified and integrated into a unique document, which is the integrated report.

The IR is a unique document that includes both descriptive and financial information of the common financial statement, and descriptive and non-financial information (ESG information) related to CSR and sustainability reporting. In this way, the reporting company provides information that is relevant and interesting for several types of stakeholder groups. Moreover, if the IR is supported by a web platform, it can provide more detailed data and information that can meet stakeholders' information needs.

This new format of corporate report can highlight the impact of financial information on non-financial information and vice versa, improving the image and reputation of the reporting organisation.

One reason, which justifies the IR adoption, is that the explanation of the relationship between financial and non-financial information displays the motifs about how companies' financial performance produces externalities on stakeholders, as well as it provides more transparency about corporate performance and how it has been achieved (social costs and benefits). This is because almost all economic activities have a social and not individual nature, based on integrity and confidence [Eccles and Krzus, 2012].

The IR is closely related to the Triple Bottom Line (TBL) approach, which wants to guarantee decision-making process and it is able to put at the same level financial growth and corporate responsibility, short-term profits and long-term profitability, shareholders' interests and stakeholders' needs.

Many companies, such as Enel, Eni, Novo Nordisk etc. (there were around 270 companies that adopted IR in 2011), adopt this new reporting scheme because they believe there is a strong correlation between corporate performances and the context in which they operate with a relevant interrelation between economic goals and socio-environmental corporate targets. An organisation should have the capability to generate corporate value also from external agents, integrating in its development strategies social concerns and environmental challenges through policies and processes that take in consideration impacts on its stakeholders (named also *corporate citizenship*). The IR is a disclosing format that permits to report the CSV (Creating Shared Value), which is the value creation for both the enterprise and the surrounding society.

Moreover, with the adoption of IR, the reporting companies have to rise the corporate process integration in order to keep a more stable support to the strategic management decisions in order to favouring better corporate perspectives.
Going in the details, there are several arguments in favour of the integrated reporting application [Eccles and Krzus, 2012]:

1) *More clearness about corporate relationships and commitments*: through the IR, the reporting company has to use financial and ESG indices and illustrate the strategy adopted to achieve company's targets. It also shows the close relationship between financial and non-financial data and indices.
2) *Better corporate decisions*: corporate managers discover new information thanks to a more precise analysis that derives from of the IR implementation in the company.
3) *More stakeholder involvement*: the IR deletes differences between shareholders and stakeholders, providing all information related to corporate performance in a unique document.
4) *Reputational risk reduction*: over the last years, reputational risk has become very important for a company and it is quite difficult to manage it because of the lack of appropriate techniques and means. The IR leads a significant role as it can fill the gap between corporate reputation and reality, which is one of the principal determiners of reputational risk in a company. In addition, it permits to evaluate the impacts of convictions and expectations evolution on the company.
5) *Enterprise value:* the IR displays the value that an organisation creates in favour of both the enterprise itself and society. New value drivers.
6) *CSR:* it allows reporting organisations to assess the corporate social responsibility.
7) *Innovation:* the IR sets the reporting company as a leader with a focus on innovations.

In other words, the IR is a communicating process where organisations provide information about how they "*create value over time, and their impact from an economic, social and environmental point of view.*" (Busco et al., 2013, 4). The International Integrated Reporting Council[29] (IIRC) has defined the IR in this way:

[29] It is a "*global coalition of regulators, investors, companies, standards setters, the accounting profession, and nongovernmental organisations*" that during last few years "*has actively operated to redesign the*

"The IR process has the potential to shed light on this critical issue as it 'brings together material information about an organisation's strategy, governance, performance and prospects in a way that reflects the commercial, social and environmental context within which it operates. It provides a clear and concise representation of how an organisation demonstrates stewardship and how it creates and sustains value'." (Busco et al., 2013, 4).

The IR explains how an organisation leads the value generation over time (short, medium, and long-term), in a specific environmental context. It improves stewardship and accountability of the reporting organisation, taking in consideration the six different types of capital (financial, intellectual, social, manufactured, human, and natural) and their interdependencies: "*IR is designed to support integrated thinking, decision making, and actions that focus on sustainable value creation for stakeholders.*" (Busco et al., 2013, 8).

At the basis of this concept, there is the conviction that value is influenced by external environmental conditions, generated also by relationships with external subjects and factors, and it depends on the management of various corporate resources. For this reason, a fundamental point of the IR is the disclosure of reporting company's business model: according to IIRC, the business model is "*a chosen set of inputs, business activities, outputs and outcomes that aims to create value over short, medium and long term.*" (Busco et al., 2013, 9).

The main target of any company is value creation that, according to IIRC, can be achieved only with interests' fulfilment of the organisation stakeholders and their collaborations: for this reason, the IR is the new and best way for the reporting of corporate information.

The IR's structure is composed by seven elements that define reporting contents and how the reporting organisation has to communicate its value-creation story: they are Organisational overview and external environment (about organisation's products, activities, culture, ethics and values), Governance (governance and leadership structure

landscape of corporate reporting." (Busco et al., 2013, 4). It began only in 2011 as a pilot programme, yet it was founded on the 2nd of August 2010 by the Accounting for Sustainability Project (A4S) and the Global Reporting Initiative (GRI). Its mission is "*to create a globally accepted integrated reporting framework which brings together financial, environmental, social and governance information in a clear, concise, consistent and comparable format in order to help business to take more sustainable decisions and enable investors and other stakeholders to understand how an organisation is really performing.*" (Busco et al., 2013, 6).

to support value-creation abilities), Opportunities and risks (both short and long term, their likelihood and possible mitigating solutions), Strategy and resource allocation (about organisation's will), Business model (main inputs and capitals used), Performance (objectives achieved by the reporting organisation and its outcomes) and, finally, Future outlook (challenges and performance predictions). This path leads the reporting organisation to describe its business story, showing also its business model and interactions with external factors.

This IR structure is combined with some guiding principles, which are not founded on a rigid and rules-based approach, in order to provide an appropriate balance between prescription and flexibility to the IR. The guiding principles are a way to "*stimulate the active consideration by organisations of the relationships between their various operating and functional units and the kinds of capital that they use and have an effect on*." (Busco et al., 2013, 13). The IIRC provides six principles for the IR (**Table 9**).

Table 9: The guiding principles of Integrated Reporting.

PRINCIPLE	***DEFINITION***
Strategic focus and future orientation	An integrated report should provide insight into the organisation's strategy and how that strategy relates to the organisation's ability to create value in the short, medium, and long term and its use of and effects on its capitals.
Connectivity of information	An integrated report should show, as a comprehensive value-creation story, the combination, interrelatedness, and dependencies between the components that are material to the organisation's ability to create value over time.
Stakeholder responsiveness	An integrated report should provide insight into the quality of the organisation's relationships with its key stakeholders and how and to what extent the organisation understands, takes into account, and responds to their legitimate needs, interests, and expectations.
Materiality and conciseness	An integrated report should provide concise information that is material to assessing the organisation's ability to create value in the short, medium, and long term.
Reliability and completeness	An integrated report should include all material matters, both positive and negative, in a balanced way and without material error.
Consistency and comparability	The information in an integrated report should be presented on a basis that is consistent over time and in a way that enables comparison with other organisations to the extent, it is material to the organisation's own value creation story.

Sourced by Busco et al., "*Integrated Reporting*", 13.

This new method of companies' reporting has called the old business models into question, because of also a context irregularity that has changed space and time

perception. For this reason with the IR, also new business and organisational models have been developing in order to give more attention to company's stakeholders.
The reporting evolution towards the integrated reporting coincides with a deep change in the corporate organisational culture: it is not sufficient that the CEO collaborates closely with the CFO, but also the corporate sustainability manager (the Chief Sustainability Officer, CSO) has to develop a strong collaboration with other roles in the company.
This new organisational approach is named Integrated Management and it is the principle companies' challenge for the 21st century. It is the management process of the organisation that, in the strategy definitions, considers not only economic variables but also social, environmental and governance ones: it is a model that permits to understand the comprehension how an organisation is managed, to develop the capability in order to identify risks and opportunities and to increase information for all stakeholders. The integrated management is based on shared value produced by company for itself and surrounding society.
This new organisational model has been changing the corporate managers' way to do business, increasing the organisational performance of companies, as well as bringing an extraordinary cultural change in order to develop new ways to do business. A constant inter-functional collaboration is at the basis of this new approach.
Even though the IR has been following the business and organisational changes, very few companies adopt it as a tool for their reporting activities (less than companies that utilise GRI Guidelines for their Sustainability Reporting). For this reason, experts and scholars have suggested some indications and advices to accelerate the application between companies and organisations of the IR:

- Enterprises have to assume the responsibility to act in person;
- Stakeholders should contribute for corporate innovations;
- It is necessary the support of investors and standard evolution;
- Legislation and regulations have to be reviewed for the IR adoption;
- Society should support this adoption path in order to foster others to do the same.

Finally, the IIRC explains the first four steps for the implementation of IR in a company.

First, the reporting company has to define its desire state: in other words, the company should try to understand what the IR implementation means for itself, as well as to define its vision, business and other core factors.

After that, it has to assess material issues through a materiality analysis to determine risks and opportunities related to the IR and which of them are important for corporate management and company's stakeholders. In this way, the company can specifically define its business strategies and material issues.

Third, the reporting company should try to fit its current state with the most appropriate IR practise in order to select the best IR method for the organisation. Thanks to this choice, the company's quality, processes and organisation could be presented in the best way possible to stakeholders.

The last step is the creation of a road map where environmental, social and fiscal activities and projects have a key role in the creation and preservation of enterprise value. Moreover, it is important to implement a control system and processes to support the quality of reporting and to communicate corporate successes about targets achieved.

3.6 Several National Governments' Approaches

Over the past two decades, several national governments have promoted sustainability reporting in various ways: some of them have provided rules and regulations (mandatory disclosure) that specific companies have to respect during the disclosure process of ESG information, others have left voluntary the possibility to report non-financial information, providing only general guidelines in order to align sustainability reports of reporting organisations.

Countries, which adopt a mandatory disclosure of the environmental, social and governance information, have used several tools such as "*regulation for sustainability or Environmental, Social and Governance (ESG) disclosure, stock exchange rules, public procurement provisions, safety and health protection laws, financial regulation [...]*" (Fogelberg et al., 2013, 10). The origin of the sustainability initiative and regulation depends on the country because of the national situation, even if "*much of the exiting mandatory social and environmental corporate reporting is triggered by issue specific rules emanating from government ministries [...]*" (UN, 2013, 5).

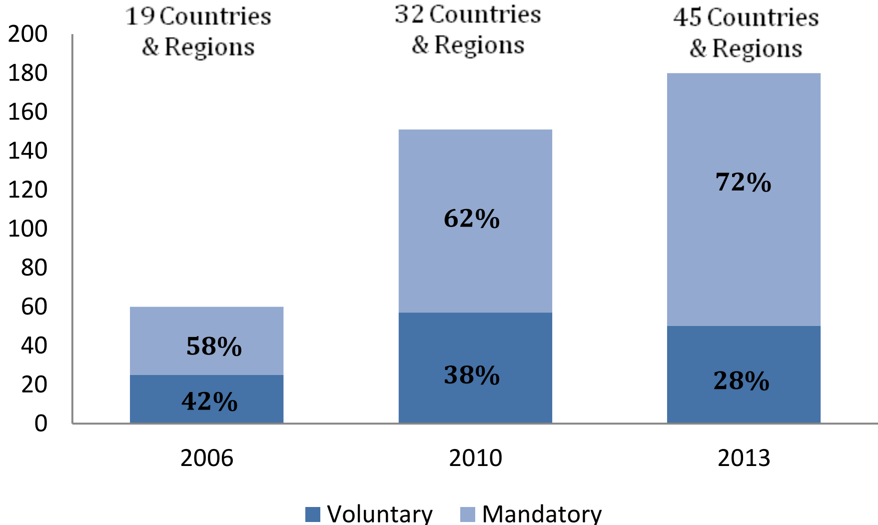
As in the adoption process of sustainability rules, also the decision of "*which institution, stock exchange or regulator is most appropriate to launch a sustainability reporting initiative will depend on the market's unique circumstances.*" (UN, 2013, 5).

This run towards sustainability reporting and its regulation has been fostered by the last global financial and economic crisis that has forced countries to embed sustainability in regulation and policy in order to react to the downturn trend of national and international economics. "*This is evidenced by the fact that more and more countries – including developing countries – are issuing sustainability reporting policies and regulations [...]*", (Fogelberg et al., 2013, 10) intensifying also the cooperation with the private sector in order to raise the positive impacts of national governments' intervention.

Nowadays, the sustainability reporting is considered as a necessary tool to tackle internationals challenges and matters related not only to environmental aspects, but also to human rights, social responsibility and corporate impacts on society. This key role of sustainability reporting was also underlined by almost all countries during the United Nation Conference on Sustainable Development held in Rio in June 2012: corporate transparency and SR are considered fundamental for the evolution of the modern society.

In 2013, the annual UN survey on sustainability provided data that underline a recent upward trend among countries related to sustainability reporting as mandatory disclosure (**Chart 1**).

Chart 1: Trends in Mandatory and Voluntary sustainability reporting.



Sourced by "Carrots and Sticks" report, 9 (2013).

These data show as there has been an increase in emphasis on sustainability reporting, as well as in the combination between its voluntary e mandatory disclosures around the world. Moreover, there has been more attention among countries for the disclosure of the combination and interaction between corporate governance, financial and sustainability reporting.

During the last decade, data show that more and more countries and regions (including developing areas) have been involved in sustainability matters, providing sustainability regulations and policies (voluntary or mandatory). In particular, national governments have preferred mandatory disclosure than voluntary one, as it is displayed in the **Chart 1**. Indeed, "*of the more than 180 national reporting policies and initiatives*", identified in the Carrots and Sticks report, "*around two third are mandatory.*" (Fogelberg et al., 2013, 13). In particular, climate market instruments and measurements (especially related to GHG emissions) have become the most common aspects of sustainability reporting that have been regulated by national governments.

The stock exchange has a key role in this regulation matter mainly in developing countries where sustainability issues tend to be more regulated: especially in these countries, it takes in consideration the market's sustainability reporting landscape in its enterprise evaluation.

According to ACCA[30], "*sustainability reporting gives national governments an opportunity to show how in their thinking and actions they are dealing with social, economic and environmental challenges ahead.*" (Hannah, 2010, 5). It also believes that sustainability reporting could change by sector according to its purpose, motivation and responsibility. It also suggests that national governments "*should recognise that actions take now have implications for the future*" and, as consequence, "*the indictors*" and regulations "*should be flexible enough to adopt over time and between regions and reflects different priorities.*" (Hannah, 2010, 13).

The first countries that took in consideration sustainability in their policies were France and the Netherlands together with Austria, Germany and Switzerland. In the '80s, in the

[30] The Association of Chartered Certified Accountant is "*the global body for professional accountants*". It was founded in 1904. It "*works to strengthen a global profession based on the application of consistent standards, which*" are "*best supports international business and the desire of talented people to have successful, international careers.*" (sourced by www.accaglobal.com).

UK and the US a new investment approach made inroads through ethical investments funds, selecting firms according to their social and ethical performances.
Now, we are going to describe some national countries initiatives and regulations in order to provide an overview of sustainability disclosure regulations around the world and some country examples.

The European Union

Each member state of the European Union has a different approach towards corporate sustainability and its disclosure. Nonetheless, the European Union tries to uniform the initiatives of its country members, providing some regulations and guidance.
One of the first relevant actions of European Committee was the Directive 2003/51 in 2003: this imposed that "*European companies are required to also include non-financial information in their annual and consolidated reports, if it is necessary for an understanding of companies' development, performance or position.*" (Fogelberg et al., 2013, 51). It also stated that its members could extend this obligation to all small and medium-sized companies. Together with this obligation, another directive (2006/46) forced listed companies "*to include a corporate governance statement in their annual report.*" (Fogelberg et al., 2013, 51).
A more recent European Union's initiative was the Strategy for Corporate Social Responsibility in 2011: by means of this measure, the EU wanted to announce the proposal for a transparency regulation of the social and environmental information in the business sectors.

Denmark

In October of 2008, the Danish Financial Statement Acts was introduced by the Minister for Economic and Business Affairs. Since the fiscal year 2009, large companies have had to supplement the common statement with a report about social responsibility. To enter in this obligation, the company has to satisfy two of these three requirements: 1) total assets more than DDK 143 million; 2) net revenues of DDK 286 million; and 3) 250 employees as average number of full-time workers.
Through this act, "*it is not mandate that companies adopt or implement such policies; however, if companies did not have such policies, they were required to disclose this fact in their management's review.*" (Ioannou and Serafeim, 2014, 7).

It was issued because the national governments wanted to improve international competitiveness of Danish companies besides trade and industry.

France

Also in France, there is a mandatory disclosure for companies that overcome a specific size. This legislation (Grenelle Act II) passed in 2012 and it forces "*companies to include information on their environmental and social performance, including all of company's subsidiaries*" (Fogelberg et al., 2013, 62), turning the financial statement into an integrated reporting. This additional non-financial information has to be verified by an accredited and independent third party.

The companies, which have to follow these disclosure obligations, have to be listed in the national stock exchange or they must have a balance or turnover of €100 million and an average of 500 annual employees.

This regulation has to be followed by companies involved from fiscal year 2014.

Italy

The mandatory disclosure covers only a small part of sustainability field. In 2008, a ministerial decree introduced the obligation of a sort of sustainability reporting only for social enterprises and in 2009 national government promoted a program for corporate integrity and transparency for every public organisation.

Even though there is not a strict regulation for sustainability reporting, in Italy there are lots of initiatives to provide guidance for a voluntary disclosure of corporate non-financial information. The last and most recent one is the Social Reporting Standards, issued in 2013, that provides guidelines for the adoption of sustainability reports, in particular for public organisations and local Italian companies.

As all other members of the European Union, Italian government has converted European directives about CSR and sustainability reporting, presented in the previous page.

The United Kingdom

There are regulations that provide guidance for a mandatory disclosure of ESG corporate information. The most recent governmental act was issued in 2013: since then, all companies listed in the London Stock Exchange main market have to report their level of GHG emission, using the UK Government GHG Guidance or another

voluntary methodology. In the future, this measure will be probably extended to all large English companies.

Other two important acts have draft the current legislative situation in the UK. The first one is the Companies Act in 2006 that forced all large and medium size companies to provide a narrative about their performance, risks and position. Since that year, listed companies have had to disclose environmental, employee, social, and community matter in their annual reports. The second one is the UK Corporate Governance Code in 2012 that was related to corporate governance organisation and remuneration, as well as to the structure of governance information disclosure to inform stakeholders about corporate governance situation.

China

Companies have recorded "*very low levels of ESG reporting before regulations.*" (Ioannou and Serafeim, 2014, 8). The two main stock exchanges (Shanghai Stock Exchange – SHSE - and Shenzhen Stock Exchange - SZSE) "*mandated certain listed firms to disclose ESG information starting for financial year end in 2008*." (Ioannou and Serafeim, 2014, 8): in SHSE, this non-financial information reporting has to be completed by financial firms, firms with shares overseas and firms included into SHSE Corporate Governance Index, whereas in SZSE it has to be adopted by all companies included in Shenzhen 100 Index.

The national government believes that "*CSR could be a driver for harmonious growth [...] and it could help organisational creativity, reputation, and employee engagement.*" (Ioannou and Serafeim, 2014, 8).

In China, there is a mix between formal regulations and voluntary standards that have to enforce the sustainability reporting and non-financial disclosure. This mix has involved not only business organisations in sustainability but also other organisations such as schools, hospitals etc. Even though this relevant national government efforts for sustainability, there are still many sustainability reporting too short (maximum five pages), providing an insufficient non-financial disclosure. Moreover, these reports do not often include any quantitative data and indicators.

The United States of America

The USA is the largest capital market in the world: "*open and transparent capital markets are a key factor in the success of players in globalised capital markets*." (Fogelberg et al., 2013, 35). For this reason, the US governments approved laws and regulations about

companies' disclosure. In addition, many American trade associations utilise ESG factors to foster and recommend better corporate practises.
The same national government stated that climate change is become a risk factor for all companies and organisations. For this reason, a quite large diffusion of non-financial information reporting: around 57 per cent of Fortune 500 universe report these types of data and indicators.
Although this relevance of sustainability among American business organisations, in the USA there is not a so strictly regulation: there are a SEC's guidance on climate change risks, which outlines material effects of these risks, and a mandatory GHG reporting for high impact industries, made by US Environmental Protection Agency.
In other words, in the USA there will be a mix of voluntary and mandatory disclosure and standards, which will be indispensable for large-cap companies.

South Africa

The role of this country in the sustainability field is central; it has been a country leader for many years: "*this is partially due to its political history and transition to democracy in the 1990s [...]*" (Fogelberg et al., 2013, 34), including transparency and disclosure in country debates from an early stage. It is one of the few developing countries and the only one in Africa that records an important sustainability reporting activity. Moreover, "*it was the first country in the World where integrated reporting was required [...]*" (Fogelberg et al., 2013, 35) and the first among emerging markets that introduced a stock exchange index related to social responsibility investment (SRI Index).
Since 2010 financial year, the Johannesburg Stock Exchange (JSE) has required the reporting of sustainability information for listed companies and, since the following year (2011), it has obliged the disclosure of IR through the King III Report: "*the JSE made integrated reporting mandatory for all listed companies on an 'apply or explain' basis allowing companies that did not issue an integrated report to explain why this was the case.*" (Ioannou and Serafeim, 2014, 8). In other words, a listed company can decide not to provide ESG information but it has to explain its reasons.
Even though there is a mandatory disclosure of non-financial information through IR tool, in South Africa there is not a specific set of metrics to standardise this type of report.

CHAPTER 4

CASE STUDY: SUSTAINABILITY REPORTING VERSUS CORPORATE FINANCIAL PERFORMANCE

4.1 Introduction

Sustainability is the actual and future global matter that interests not only development countries but also developing ones. Around half of total world's population (3 billion) live with less than 2$ a day: for this reason, business organisations placed in developing countries want to attract multinationals from developed countries to become their suppliers and to grow their business beyond national boundaries. This path can be walked through only if these organisations have a good sustainability performance and policy.

However, this is not the only reason of sustainability spread around the world: as said before, sustainable development for an sustainable society is possible only through sustainable business organisations, institutions and human mindsets.

This growing interest on sustainability is also underlined when recently the sustainability matter has become one of the first discussing issues for importance in the international agenda of global institutions and organisations (e.g. UNEP). This international interest on sustainability has been mainly led by climate change problems that have brought international community to think about the tension between development needs and their negative consequence, especially on nature.

In this context, internal and external stakeholders have been increasing their pressure on their own company in order to enhance corporate transparency and accountability, fostering companies to disclose more non-financial information and their approach with sustainability. The traditional statements (financial) have not been enough to report this new information and to cover new stakeholders' informational needs; thus they have been replaced by sustainability reporting and integrated reporting that disclose environmental, social, economic and governance performance of the reporting companies.

The concept of Triple Bottom Line (TBL or Triple P, Elkington, 1997) has inspired the basic structure of sustainability reporting: it refers to corporate managers' needs to focus on Planet (environmental), People (social) and Profit (economic) aspects for public reports. In other words, sustainability reporting can provide information that allows stakeholders to understand if a company is sustainable or not.

Moreover, there are many different incentives and benefits with the adoption of sustainability reporting, thanks to the sustainability policies and strategies that anticipate sustainability disclosure: in particular, there are an improvement of relations with stakeholders and a compliance with regulations and industry codes by reducing operation costs and adherence to society rules and social responsibility.

According to one of the last KPMG's survey in 2011, around 95 per cent of top 250 companies in the Fortune Global 500 prepare a sustainability reporting, compared to the 52 per cent in 2005.

Although its widespread, the sustainability reporting has not an international recognised set of guidelines that all companies have to follow when they want to report non-financial information. Nonetheless, the GRI Guideline is the most spread in the world: indeed, according to KPMG, in 2008 around 75 per cent of sustainability reporting companies in the Fortune Global 500 adopted the GRI's international approach.

The usefulness of sustainability reporting as a document that provides additional and necessary information for stakeholders' valuations of enterprises is not under discussion and this is demonstrated also by the fact that more and more business organisations adopt it.

However, do sustainability strategies and targets affect the corporate financial performances in a positive or negative way? Is sustainability reporting useful only for stakeholders and corporate reputation or also for the reporting company that could have some benefits in its financial data and indicators?

This is the core question of the research that will be exposed in this chapter and the most debated question among experts and scholars, which have not found a unique answer yet.

4.2 Theoretical Background

This research study wants to investigate the relationship between non-financial information disclosure and corporate financial performance, basing on sustainability reports that have GRI Guidelines structure. In order to analyse the relationship between sustainability information disclosure and financial performance, I have chosen some financial indicators: the Debt to Equity (DEQ) for companies' solvency, the Return on Assets (ROA) and the Return on Equity (ROE) for their profitability, the Revenue Growth (REV) for corporate reputation and the Tobin's Q for the relation between market and book enterprise value (King and Lenox, 2001; King and Lenox, 2002; Khurana et al., 2006; Nakao et al., 2007).

In order to investigate this relationship, this study will carry out first a correlation analysis where the economic disclosure level, the environmental disclosure level and the social disclosure level are each other correlated to return on equity, return on assets, sales growth, debt to equity and Tobin's Q. The reason for dividing sustainability disclosure level into three different components is to understand the relationship between each component with each performance measure.

In addition to this correlation study, this research will develop multiple regression models in order to investigate the relationship among economic disclosure level, environmental disclosure level and social disclosure level and each financial performance measure. In this way, R-square values will be determined in order to encourage companies to engage in sustainability reporting and to advocate on mandatory corporate sustainability reporting. For each regression, there will be different control variables.

As it has already been presented in the paragraph 2.6, many scholars and experts have tried to understand which type of relationship there is between the two core corporate information, not achieving a common final finding about this matter. Lots of research studies found a positive relationship (for instance, Jones et al., 2007, and Hillman and Keim, 2001 are the most recent studies); others found economic benefits for companies that undertake a sustainable development such as less information asymmetry, higher shareholder value and reduction of operational costs.

Although the positive mood around this issue is the very common and widespread, there were opposite points of view. Some researchers stated that there are not any evidences of the positive correlation between corporate non-financial and financial performance,

founding a not significant relationship (Alexander and Buchholz, 1978). Moreover, some scholars stated even that there is a negative relationship between these two corporate factors (Preston and O'Bannon, 1997).

As the vast majority of previous researches' findings, I would like with my research findings to show a positive relationship between sustainability information disclosure and corporate financial performance information (ROE, DEQ, REV and Tobin's Q).

4.3 Data & Methodology of Reporting Analysis

The purpose of this research is to investigate the relationship between sustainability information and corporate financial performance in order to encourage business organisations to engage in sustainability reporting, if there is a strong positive relationship. In other words, the core concern of this research is to analyse and compare the disclosure level of economic, environmental and social information with the disclosure level of corporate financial performance.

The reason of separating the sustainability disclosure level in three different levels is to enhance understanding of the relationship between each component with each financial performance measure.

Only sustainability reports have been chosen. They follow GRI Guidelines because not only it has been the most widespread international guidelines on sustainability reporting, but also it is based on TBL approach with a quite specific division of corporate sustainability components, which permits to investigate deeper their relationships with corporate financial performance. Indeed, according to GRI, sustainability reports based on its principles and guidelines can be utilised to benchmark and compare organisational performance, as well as to demonstrate reporting company's commitment towards sustainable development.

GRI believes that its objectives will be achieved only when all business organisations will prepare their sustainability reports basing on its guidelines and these reporting companies will publish a full reported sustainability reports, disclosing all economic, environmental, social and governance indicators.

This research is based on the analysis of the top 100 companies listed in Fortune Global 500: around 44% of them have edited at least one sustainability report, based on GRI Guidelines (in particular G3 and G3.1) between 2007 and 2011. This does not mean that other listed companies in the top 100 did not provide sustainability reports during the

period taken in consideration: the group of companies excluded from this research includes both companies that did not report any non-financial information and companies that provided sustainability reports, but they did not follow the GRI Guidelines. In some cases, some companies provided GRI sustainability reports not for five years of the analysis, but, only for some years, they disclosed non-financial information basing on other formats or principles. In this last case, sustainability reports based on GRI Guidelines have been taken in consideration, whereas those years, when companies provided non-GRI sustainability reports, have been excluded from this research (they are marked as "*not provided*") to guarantee the homogeneity of the analysis.

After that, a content analysis of sustainability reports was done by hand. First of all, for each GRI sustainability report, it was identified which GRI indexes the company reported or not: in a table, it was marked "1" in correspondence to the index, if the specific index or information was included into sustainability report, and "0", if it was not disclosed. The inclusion of an index in the sustainability reports not only depends on which disclosure level (A, B, or C) the company wanted to present its ESG information, but also in which industry it is located: some GRI indexes, specially additional ones, cannot be reported by some business organisations because of its business nature (for instance, some environmental standards cannot be disclosed by financial corporation).

The second part of the content analysis was an evaluation of the direction of the information provided by each index of each GRI sustainability report. The evaluation consisted in marking each index with a "*positive*", "*neutral*" or "*negative*" score: these marks are based on objective perceptions of how the specific non-financial information, included in the index, can affect (positively, neutrally or negatively) the stakeholders view of the reporting company, also taking in consideration and comparing with data and information of previous years. In other words, an index information of a specific year can be marked "*negative*", if it presents a negative environmental, social or economic aspect of the business organisation (for example the presence of fines due to environmental law matters) or a negative trend of data compared with previous year (for example the increase of GHG emission related to operational activities than the previous year).

The evaluation criteria to define "*positive*", "*neutral*", or "*negative*" a specific index were composed considering the GRI definition for each index. A proper information table can be found here below (**Table 10**).

Research Design

a) In this section, it is explained as variables have been made operational for the panel regression analysis. In order to insert this kind of evaluation of the GRI indexes, we created three different dummy variables in which "1" corresponds to the presence of that specific mark and "0" its absence: the dummy variable "*Good*" is for the positive mark, "*Neutral*" for a neutral evaluation and "*Bad*" for the negative mark.
For each sustainability category (EC for the economic one, EN for the environmental one and SO for the social one), it was calculated the total amount of indexes disclosed (e.g. EC_Disclosure) and its standardised value (e.g. EC_Score).
Therefore, we have created the following variables:

- *Disclosure Variable* ("*ec_disclosure*", "*en_disclosure*" and "*so_disclosure*"): it is the total number of indexes disclosed by the reporting companies per category (economic, environmental and social); in other words, it is the sum of sustainability indexes, divided by category, that have a full or partial disclosure in the GRI sustainability reporting.
- *Score Variable* ("*ec_score*", "*en_score*" and "*so_score*"): it is the standardisation of the previous variables. The standardisation was calculated as the relation between the category indexes disclosed and the total number of indexes included in that specific category. For example:

$$Number\ of\ EC\ indexes\ disclosed \big/ Total\ numeber\ of\ EC\ indexes.$$

Table 10: Description of GRI index mark definitions.

INDEX	POSITIVE (GOOD)	NEUTRAL	NEGATIVE (BAD)
EC1	Positive gap compared with the previous year, mainly considering total revenues and after EBIT and net profit. All these indexes should be positive and the amount of revenues has to be higher than the previous year.	There are no relevant differences in the compared with the previous year. I considered EBIT and net profit. All these indexes have to be positive.	There is a negative trend in main financial indices: it could be also only a decreasing growth, it is not a necessary negative figure in absolute terms. When EBIT or net profit with the same amount of revenues are negative, the index mark is negative.
EC2	The company expresses a positive feedback about future business linked to the change of climate or it shows more opportunities instead of risks.	There is not a real opinion of the company that writes a general overview of the matter.	The company shows mainly business risks related to the change of climate or shows worries about its future possible impact on company business.
EC3	The company respects the coverage plan of its benefit plan obligations. It has already covered all them or there is a positive feedback (It could be also an improvement of unfunded plans, more contributions). Usually there are tables about it.	There are not any sort of positive or negative statement about this matter. The company declares simply that it is in compliance with national laws.	The company states that there is an increase in unfunded benefits plans (part of them, less contributions) or there are important losses that have to be amortized.
EC4	The company received incentives and money from governments. It also states the amount.	There is a sort of cooperation with the government that supports company business but there are no releases about a significant financial help.	There are no financial contributions.
EC5	There is a ratio over 1 between the entry wage of the company and the minimum entry wage by region. If there is a comparable table with previous years, it should show an increase of this ratio.	There are no ratios by region but only a general summary about the company approach. If there is a comparable table with the previous year, ratios should be almost the same.	Only if there is a downturn trend of these ratios.
EC6	Company stresses the importance of local-based suppliers, the predilection to buy from them. Usually it indicates also the amount of the spending: there is an increase.	It illustrates the practise in order to use these type of suppliers, but it does not underline their importance. No spending amount, only general sentences.	The company spend towards suppliers is decreasing in its total amount compared with the previous year.

EC7	There is a description of the procedure of local hiring, underling their importance. if there is the indication of its rate on total employees.	There is a general statement on its importance but not a real description or concrete facts about company behaviour or procedure.	If there is no procedure on local hiring and the firm is even under process of formulating local hiring procedures; this shows the absence of procedures.
EC8	The company states these type of investment, declaring the amount by types and their benefits for the community. It shows a positive upward trend about their amount.	The company states only in general its efforts for public benefits but it does not show the types of funds. There is only a general overview of the subject.	The company has not this type of investments or, often, it has them but it states a negative trend with a decrease of their amount over the years.
EC9	The company describes a positive indirect economic impact, mainly underling its contribution to the society with taxes.	The company does not express a clear position about its economic impact. No data, no details.	It describes a negative economic impact of its activity on the society.

EN1	Decrease (in comparison with the previous year) of the weight of purchased materials, in particular related to packaging and paper.	Not significant variation or not indications about the amount of materials.	Increase of the total amount.
EN2	Increase of the ratio related to recycled materials used in the production.	There are not any sort of data or, if there are, they cannot be comparable with the previous year data.	Decrease of the amount of recycled materials used in the production.
EN3	Decrease of this type of energy source than the previous year consumption.	No significant changes or no sufficient data for the comparison.	Increase of the consumption in absolute terms.
EN4	Decrease of this type of energy source than the previous year consumption.	No significant changes or no sufficient data for the comparison.	Increase of the consumption in absolute terms.
EN5	There is an increase of the energy saved due to efficiency improvements.	No significant changes than the previous year or no data to estimate if there is an improvement.	There is a decrease of the energy saved due to efficiency improvements or there are no efficiency improvements.
EN6	The company launches these types of initiatives or improves those already existing. Usually there are some spot data about their results.	There is only a statement about a general efforts of the company to achieve results related to this matter.	There are not any sort of initiatives.
EN7	The company launches these types of initiatives or improves those already existing. Usually there are some spot data about their results.	There is only a statement about a general effort of the company to achieve results related to this matter.	There are not any sort of initiatives.

EN8	Decrease of total water withdrawal compared to the previous year data.	No significant changes or no possibility to make a comparison or estimate the trend.	Increase of total water withdrawal compared with the previous year data.
EN9	No sources are mentioned in the report and the company states its efforts to prevent this matter, by reducing the use of freshwater and increasing recycled water. It there are data, they consist in an improvement of the previous situation.	There is only a general opinion about the matter and a summary of the company position, without reporting data or any other type of insights to express a positive or negative judgement.	Negative impact of company activities on water sources.
EN10	Increase of this percentage and a statement about company improvements related this matter.	Only a objective statement on future company efforts related to this matter or future initiatives. No data.	A progressive deterioration of this percentage in comparison with the previous year.
EN11	There are not these types of land or areas nearby the company locations or owned by the company.	There is only a statement about an hypothetical situation and the company possible behaviour. The company could be near to this type of land but there are no details.	The company has got one or more of these lands or it is near to in different part of the world. Usually, it shows its prevention code and initiatives but there are environmental risks related to its location.
EN12	A deep description of initiatives and company efforts to conserve biodiversity, with tangible examples or no impact statement.	Only a general description of company guidelines related to biodiversity.	If the information on the biodiversity is available but no clear guidelines have been formulated then it would be considered as negative information.
EN13	The company states that it protects and restores habitats where it is located, generally indicating what areas and giving examples.	There is a general company effort to preserve several habitats but it does not report current initiatives or concrete example.	There are not. Usually in this case, the company states nothing.
EN14	The company states its plans for the activities with impact on biodiversity. Usually there are initiatives to prevent negative future impacts.	The company only indicates its attention towards biodiversity, without showing any type of initiatives.	There are not any sort of these initiatives.
EN15	There are not any types of these species around company operational areas.	In the report, protected species are mentioned as a possible matter for the company. Generally, the company states its effort to protect them.	There are these types of species in the company operational areas. Sometimes, some of them are described with company activities to protect them.
EN16	Decrease in its total amount.	No significant variations or no possibilities to compare current data with previous ones.	Increase in its total amount.

EN17	Decrease in its total amount.	No significant variation or no possibilities to compare current data with previous ones.	Increase in its total amount.
EN18	The company launches some initiatives to reduce GHG emissions. Usually it describes them and sometimes it shows the expectations and the results achieved.	There are company guidelines to reduce GHG emissions but there are not specified initiatives described.	There are no or there are some problems with their launch.
EN19	Decrease in its total amount.	No significant variations or no possibilities to compare current data with previous ones or no data.	Increase in its total amount.
EN20	Decrease in its total amount.	No significant variations or no possibilities to compare current data with previous ones.	Increase in its total amount.
EN21	Decrease in its total amount.	No significant variations or no possibilities to compare current data with previous ones.	Increase in its total amount.
EN22	Decrease in its total amount.	No significant variations or no possibilities to compare current data with previous ones.	Increase in its total amount.
EN23	Decrease in its total amount.	No significant variation or not possibilities to compare current data with previous ones.	Increase in its total amount.
EN24	Decrease in its total amount, related to only hazardous waste.	No significant variations or no possibilities to compare current data with previous ones.	Increase in its total amount.
EN25	No effects of company discharge of water on wetland ecosystems.	There are no clear information about it. Only a company opinion.	Negative impact of water discharge on surrounding environment.
EN26	Description of company initiatives to mitigate these type of impact.	There is only a general statement about the company intents but there are no concrete initiatives or descriptions.	Absence of these types of initiatives.
EN27	Very high percentage of products or packaging that could be reclaimed or a higher percentage than the previous year (if there is a table for comparison).	There are no precise data to be compared with the previous ones.	There are not these types of products or lower percentage than during the previous year.
EN28	The company states that there are no fines or other monetary sanctions during the current year.	The company has some troubles with environmental regulations but there are not any references to fines or sanctions.	There is at least 1$ of sanction.

EN29	Reduction of their impacts, usually measured in GHG emission.	No significant variations or no possibilities to compare current data with previous ones or no data.	Growth of their impacts, usually measured in GHG emission.
EN30	High spend on these types of investments or their increase.	No significant variations or no possibilities to compare current data with previous ones or no data.	No expenditure or lower spend.

LA1	Increase of the total number of employees in the company compared with the previous year number.	No indication of the total number or, if there is, there is no possibility to compare with the previous amount.	Decrease of the total number of employees in the company compared with the previous year number.
LA2	Decrease of turnover with respect to previous year or with respect to industry and increase in the new hiring	No indication of the rate or, if there is, there is no possibility to compare with the previous year rate.	Increase of the turnover rate related to the total number of employees (in comparison with the previous year rate) or total number of new hirings.
LA3	The full-time employees and the others (mainly part-time employees) have almost the same benefits. Differences are not underlined or reported.	There is only a general statement about this matter. No indications on benefits or other details.	There are lots of different benefits between full-time employees and others. Usually there is a table with all full-time employee benefits and the indications of the differences with others.
LA15	Upward trend of this rate, usually showed not with numbers or percentage but by words.	General statement. We can not give a positive or negative mark.	Downturn trend of this rate.
LA4	Increase of this percentage than the previous year one.	There is not the detail of this percentage but only the company statement about the compliance with laws. Not possibility to compare.	Decrease of this percentage.
LA5	There is the minimum period and there are details about the duration of this period. Usually it is compliant with laws and the company gives some more possibilities.	There is the minimum period but without details. Only the compliance with law.	There are not any minimum periods.
LA6	There are these sort of committees and the detail of total number of workers who attend them (or the percentage).	There is only the indication of the presence of these committees without details. No possibilities to understand if workers are involved in them.	There are not these committees.

LA7	Decrease of the rate of injuries and decrease of fatalities (usually they should be equal to zero). The number of fatalities is more important than the rate of injuries.	There are no relevant differences with the previous year rate or we can not compare data.	There is a general increase of fatalities and injury rate.
LA8	The company has these types of programs and it specifies their structure, scope and details.	There is the company effort to provide these programs but there are no details of their launches or no descriptions.	The company has not these programs.
LA9	There is the company statement of the presence of these topics in trade unions agreements.	There are not any references to the trade unions, even if these topics are covered by the company interest.	There is the company statement of the absence of these topics in trade unions agreements.
LA10	Increase of the average or the total number of training hours for employees compared to the previous year data.	No data or the impossibility to compare.	Decrease of the average or the total number of training hours for employees, in comparison with previous year data.
LA11	The company has these types of programs and it specifies their structure, scope and details.	There is the company effort to provide these programs but there are no details of their launches or no descriptions.	The company has not these programs.
LA12	Very high percentage of employees who have received this training (usually it is around 100%).	There is not the detail of this percentage or, if there is, it is not so high and we can not compare with previous data.	There is not this procedure in the company.
LA13	There is an increase of the incidence of women or minorities in governance bodies (compared with the previous year data). If there is no details about the governance, we use the same percentage on total workforce as its approximation.	The ratio is almost the same or we can not do any comparisons.	The overall diversity ratio is decreasing: less women and minorities.
LA14	There is a balance between man and woman basic salary: they are almost the same with a ratio around 1. Or there is a reduction of the disparity in comparison with the previous year ratio.	There are not any improvements or data for any comparisons. Only a general statement of the company about its effort to prevent this type of disparity.	There is a huge spread between men and women basic salary or a worsening of the previous situation in the company.
HR1	Usually there is not the percentage. It is positive if the company states these types of screening or human rights in its agreements.	The company does not explicate this procedure but it underlines its efforts to consider human rights in all its business decisions.	The company clarifies that it has not this approach.

HR2	There is a procedure in the company that selects suppliers considering their ethical behaviour and human rights. In case of percentage, we should do some considerations.	No significant difference in percentage or general statement about the matter.	The company does not consider human rights in its process of supplier selection.
HR3	An increase in the total amount of hours about this training or about the percentage of trained people.	We can not make any sort of comparison or there are specified data about this matter.	A decrease of total hours or of the percentage or the absence of this type of training in the company.
HR4	No incidents during the year.	There are not any specifications: only general opinion about it or the intent to prevent these types of incidents.	The company records at least one incident or it was obliged to take some actions to prevent it.
HR5	No operations or suppliers that have problems with freedom of association.	There are not any indications about the presence or absence of these incidents. Only a general company position about the matter.	The company records some incidents during the year or actions taken due to the high risk.
HR6	No operations or suppliers that have problems with child labour.	There are not any indications about the presence or absence of these incidents. Only a general company position about the matter.	The company records some incidents during the year or actions taken due to the high risk.
HR7	No operations or suppliers that have problems with forced labour.	There are not any indications about the presence or absence of these incidents. Only a general company position about the matter.	The company records some incidents during the year or actions taken due to the high risk.
HR8	There should be a very high percentage of security personnel trained (around 100%).	No details about the widespread of this training in the company but the company states that it involves its employees in this type of training.	The company has not any sort of training.
HR9	No incidents during the year.	It is not indicated any sort of information about it but there is a positive company statement.	At least one incident during the year or action taken because of the high risk.
HR10	It is difficult to find the total number of operations. Usually there is the percentage that should be very high.	There are not details but the company states that it considers human rights, mainly during its suppliers review.	There is not this type of procedure.
HR11	No grievances during the year.	The company talks about its grievance mechanism but it does not write about the number of cases during the year.	At least one grievance during the year.

SO1	Usually there is not the percentage. The company shows these types of operations and programs, going in deep with the description.	The company has a general commitment in this matter but it does not write about concrete operations.	There are not these types of commitments.
SO9	There are not these types of operations.	The company talks about a possible negative impact of some operations but at the same time it shows its procedures to prevent any sort of negative effects.	There are at least one of these operations and the negative effects could be already tangible.
SO10	The company has launched these measures and it describes them.	The company does not detail these measures but it describes possible solutions in case of risky operations.	The company have risky operations and it does not apply any sort of measure to prevent their negative impacts.
SO2	High percentage (around 100%) or a better coverage of its business units review.	There are no data about this matter but the company states its effort to prevent corruption (codes, regulations etc).	There are not this type of analysis.
SO3	High percentage (around 100%) or a better coverage.	There is not the detail but the company states its procedures and codes.	There are not any sort of prevention of corruption.
SO4	No actions. No incidents.	No references about actions or incidents but the company details its behaviour in case of future arising of these problems.	The company had to take action because of corruption problems in it.
SO5	An active position of the company, describing its contributes.	There is not a clear statement of its position but it is shown the strong link between its business and public policy.	The company is totally disinterested about this matter.
SO6	At least 1$ in favour of political parties or similar institutions.	There is not the detail about the amount of money but the company states its contribution and interest in political matters.	No financial contributions.
SO7	No legal actions related to noncompetitive behaviour.	There is only a broad position of the company about this matter.	At least one dispute about anticompetitive behaviour.
SO8	No fines. No sanctions.	The trial position of the company is not detailed.	At least 1$ of fine or one sanction against the company.
PR1	The company adopts this cycle to control its products and it gives a sort of description of stages.	There is not an explicit adoption of this procedure but the company states its commitment on the safety and health of its products.	There are not any sort of these types of procedures.

PR2	No incidents.	The company writes a sort of description about its behaviour in these types of situations.	At least one incident.
PR3	The company declares that it provides all the information requested by laws and also extra information.	The company only states its compliance with laws but in general.	-
PR4	No incidents.	The company writes a sort of description about its behaviour in these types of situations.	At least one incident.
PR5	The company adopts these practises and reports for its customer satisfaction index (there should be an improvement).	The company does not describe any sort of these practise but it declares that customer satisfaction is one of its main aims.	No interest in customer satisfaction.
PR6	There is totally adherence of these laws.	The company does not state that it adheres explicitly but it says that it is generally in compliance.	There are not any programs or it does not adhere: it could have legal problems.
PR7	No incidents.	The company writes a sort of description about its behaviour in these types of situations.	At least one incident.
PR8	There are not substantiated complaints, no problems with customer data and privacy.	The company writes a sort of description about its behaviour in this type of situations.	At least one case that is related to this matter.
PR9	No fines. No sanctions.	The company explains about possible problems related to non-compliance matters.	At least 1$ of fine or one sanction against the company.

Researcher's elaboration of index evaluation criteria.

On the other hand, for each sustainability category we created a Quality Index (QI) variable to understand the prevalence of a positive or negative evaluation of that specific category. Firstly, I summed up the Total Number of "*Good*" indexes (TNG) and, at the same time, the Total Number of "*Bad*" ones (TNB), inserting "+1" for a positive mark and "-1" for a negative one. I hypothesized that "*Neutral*" indexes have no effects (inserting "0" as neutral mark) in the category quality index. In this way, for example, if a sustainability category has got 10 indexes with all positive marks, there should be "+10" in the TNG and "0" in TNB and vice versa for the opposite situation. Afterwards, I created the QI that is the standardised difference between TNG and TNB (named "*Real Value*"):

$$QI = \frac{Real\ Value - Minimum}{Maximum - Minimum}$$

where "*Minimum*" is the worst case about the specific sustainability category (e.g. "-10" in the previous example) and "*Maximum*" is the best case (e.g. "+10" in the previous example).

This index goes from 1 to 0 as own value: when QI is equal to 1, it means that all indexes of the specific sustainability category have a positive mark and it is equal to 0 in the opposite situation (all indexes with negative mark). Therefore, according to this approach, we get the following Quality Indexes per sustainability category: "*q_ec_index*", "*q_en_index*" and "*q_so_index*".

These three different types of sustainability variables (Disclosure, Score and Quality Index) are the independent variables used in the model for the panel regression analysis.

b) The general statistical model that is used as the basis for the following panel regression analysis is:

$$FP = \alpha + \beta_1 IV_1 + \beta_2 IV_2 + \cdots + \beta_n IV_n + \beta_{CON_1} CON_1 + \beta_{CON_2} CON_2 + \cdots + \beta_{CON_n} CON_n + \varepsilon$$

where FP is the Financial Performance (e.g ROE, ROA, Sales Growth, etc.), IV is the Independent Variable (sustainability variable, e.g. EC Score or Disclosure, EC Quality Index etc.) and CON is the CONtrol variable.

It has been used five different proxy of the corporate financial performance in order to remove distortions due to the individual selection of financial indexes. For this reason,

the five dependent variable that will be utilised in this panel regression analysis are quite different each other (and according to the literature so far):

1) *ROE* (*"return_on_equity"*): it is calculated as the amount of net income returned as a percentage of shareholders equity;
2) *ROA* (*"return_on_assets"*): calculated by dividing a company's annual earnings by its total assets, ROA is displayed as a percentage;
3) *Sales Growth* (*"sales_growth"*): it is calculated as percentage change in sales with respect to previous year's sales volume;
4) *Debt to Equity* (*"net_debt_to_shrhldr_eqty"*): it is a measure of a company's financial leverage calculated by dividing its total debt by stockholders' equity;
5) *Tobin's Q* (*"Tobin"*): it is a measure of firm assets in relation to a firm's market value and it is calculated as enterprise market value over enterprise book value.

In order to collect the financial data of the companies analysed, I utilised Bloomberg financial software: the financial data downloaded are not only dependent variables but also other financial items indispensable to calculate other control variables.
In the control variables selection, I compared around 20 international papers about sustainability, accounting and financial matters and we selected 17 control variables as total number. In the table below (**Table 11**), there is a detailed explanation of each control variable and when it is utilised. Some of them are utilised only with ROA and ROE, others with Tobin's Q etc.

Table 11: Description of control variables.

NAME	*DESCRIPTION*	*DEPENDENT VARIABLE*
Firm Size *(CON1)*	Calculated as the log of the company assets.	*ROA, ROE, D/E, SALES GROWTH, TOBIN'S Q*
Firm Size Square *(CON2)*	Calculated as the log of square of the company assets.	*ROE*
Sales Growth *(CON3)*	Calculated as percentage change in sales with respect to previous year's sales volume.	*ROA, ROE, TOBIN'S Q*
Leverage *(CON4)*	Calculated as the ratio of firm debt on total assets.	*ROA, ROE, TOBIN'S Q*
Capital Intensity *(CON5)*	Calculated by dividing capital expenditures by sales.	*ROA, ROE, TOBIN'S Q*
Asset turnover ratio *(CON9)*	Defined as total assets per operating revenue.	*ROE*

Tobin's Q	Market value firm/Book Value or replacement value of the firm.	*D/E*
Advertising Intensity *(CON11)*	Calculated as advertising expenses/sales.	*ROA, ROE*
ROA *(CON12)*	Calculated as operating income/total assets & net income/total assets.	*D/E, SALES GROWTH*
Unexpected earnings	Portion of earnings as the annual change in earnings per share scaled by stock price at the beginning of the period	*TOBIN'S Q*
Profit Margin	The ratio of net income to net sales.	*TOBIN'S Q*
Collateral Value of Assets	Average fixed assets (book value)/total assets over five year period.	*D/E*
Growth *(CON16)*	Percentage change in total assets over five year period.	*SALES GROWTH*
Business Risk	Coefficient of variation in average annual growth rate of operating profit over five year period.	*SALES GROWTH*
Earnings per Share Dilution *(CON18)*	Dummy variable. It is equal to 1 the after-tax cost of debt exceeds the ratio of net profits to market value of equity capital.	*SALES GROWTH*
Liability Ratio	The ratio of current liabilities to total liabilities.	*SALES GROWTH*
Debt Ratio	The ratio of net debt to shareholder equity.	*ROA, ROE, TOBIN'S Q*

Researcher's elaboration of control variable definitions.

All these data and indexes were put into a panel in order to analyse the relationship between sustainability information and corporate financial performances. To run this analysis, I used the STATA software through which I first analysed the correlation between dependent and independent variables (principally Disclosure, Score and QI) to understand the predictive relationship between variables and then we did the panel regressions with company fixed effects to explore the sustainability disclosure impact on the corporate financial performance. In these two types of analysis, we analysed the different dependent variables as proxies of the company financial performance. In the panel regression analysis, I adopted the following approach:

1) for each dependent variable, I analysed separately the impact of each category Disclosure, Score and Quality Index, considering the control variables related to the dependent variable taken in consideration;

2) in case of control variables with too high p-value (over 70 per cent) or that limit the number of useful data, I dropped them;

3) to verify better the significance, I have followed a top down approach, dropping one by one all independent variables that displayed a p-value exceeding 10 per cent, staring from the independent variable with the highest p-value;

4) in case of a relationship between a Score or a Disclosure variable with one of dependent variable considered in this research, I tried to combine their impacts with the impact of QI variable, in order to investigate the presence of a sort of combined impact.

In the following paragraph, there will be presented only the penel regressions with interesting results related to the research questions. Those findings were found following the methodology described in this paragraph.

4.4 Findings

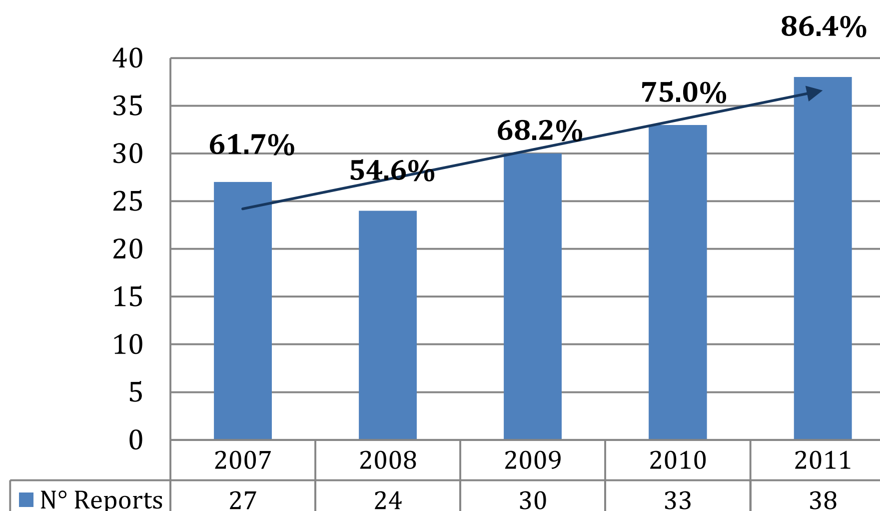
In order to facilitate the reading and the comprehension of the research findings, this paragraph is divided into three sub-paragraphs in order to focus the reader's attention on the results of each specific analysis. The three different paragraphs are: Descriptive Analysis, Correlation Analysis and Panel Regression Analysis.

4.4.1 Descriptive Analysis

In this research, 152 GRI (G3) sustainability reports of 44 companies listed in Fortune Global 500 have been analysed following the methodology explained in the previous paragraph. These reports are related to the period between 2007 and 2011 (five-year analysis period).

Firstly, it is important to underline that the upward trend of non-financial information and sustainability disclosure is clearly evident also in these research findings. As it is illustrated in the **Chart 2**, over the years more and more companies, among those ones of the research sample, spread a sustainability report to disclose non-financial and sustainability information. Indeed, in 2007 around 62 per cent of the companies published the GRI report, whereas in 2011 about 86 per cent of them did it, with a positive spread of 24 percentage points in a 5-year period. This is in line with other data, previously presented, that indicate a continuous widespread of this disclosure approach among companies all around the World.

Chart 2: Number of reports analysed by year.



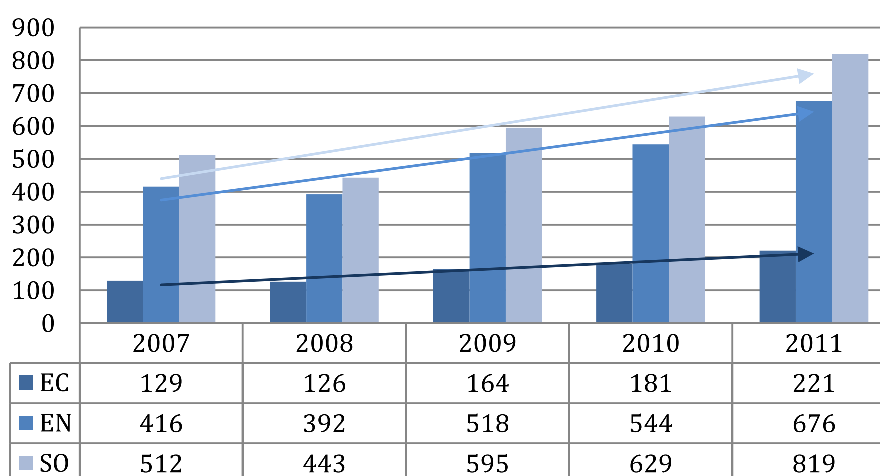
	2007	2008	2009	2010	2011
N° Reports	27	24	30	33	38

Research data elaboration.

Only in 2008, there is a slight decrease in the number of companies that published the sustainability report (55 per cent instead of 62 per cent in 2007). This fact could be influenced by the relevant financial crisis in 2007 that might have interrupted non-financial information disclosure in some companies because they were concentrated in the economic and financial reaction to the crisis in favour of their businesses, depriving attention, energies and support to the corporate sustainability matters and reporting.

The same trend is presented in the following chart (**Chart 3**) that analyses the total number of indexes, divided into the three main categories (EC = economic indexes, EN = environmental indexes, SO = social indexes, which include LA, HR, SO, PR indexes) per year.

Chart 3: Total number of indexes disclosed by year.



	2007	2008	2009	2010	2011
EC	129	126	164	181	221
EN	416	392	518	544	676
SO	512	443	595	629	819

Research data elaboration.

It is shown the same upward trend as in the Chart 1. However, this last chart presents a stronger increase in non-economic indexes over the year, highlighting that in sustainability reporting these indexes have been more and more appreciated and taken in consideration by companies that want to achieve the sustainable development. This evidence is well described by line inclination of EN's and SO's tendency lines compared to EC's one.

Although the trends in chart 2 are influenced by the variation of number of reports analysed year by year, the upward trend of sustainability indexes, included in the sustainability reports, are also marked in the **Table 13** (reported at the end of this paragraph). Indeed, in the last two years (2010 and 2011), there are more "*green boxes*" than "*red*" ones (in 2011, there are 48 "*green boxes*" compared to 14 "*red*" ones) and to than previous years. This means that the completeness of sustainability reports is increased compared to the previous year.

In that table, it is shown the sustainability report completeness for each company per year: for instance, in 2009, Chevron reported all EC's GRI indexes and, for this reason, the 100 per cent of completeness is indicated in the proper box. The colourful boxes indicate a variation in the completeness of the specific index category compared to the previous year data: "*red box*" means a decrease in completeness of the specific group of indexes, "*green box*", instead, means an increase, and "*white box*" means no variations in comparison with the previous year datum. The boxes without data mean that in that specific year the company did not publish or propose the GRI sustainability report.

The list of companies considered in this research sample is presented in the table below (**Table 12**).

Table 12: Summary of the companies analysed.

Company Name	Industry	Number of Reports	Tot. Average Score (%)
Hess	Oil & Gas	5	90.00
Dow Chemical	Chemicals	5	88.10
IBM	IT	5	84.76
Intel	IT	5	77.14
P&G	Personal Products	5	72.14
Johnson & Johnson	Healthcare	5	58.57
UPS	Delivery Services	5	58.33

HP	IT	5	54.52
Cisco Systems	Networking Devices	5	53.81
Exxon Mobil	Oil & Gas	5	51.19
Philips	Electronics	5	49.05
Merck	Healthcare	5	48.57
Dell	IT	5	48.10
Chevron	Oil & Gas	5	46.19
General Electric	Multinational Conglomerate	5	45.71
PepsiCo	Beverages	5	40.00
Citigroup	Financial Services	5	38.33
Coca-Cola	Beverages	5	37.38
Abbott Laboratories	Healthcare	5	34.05
Best Buy	Electronics	5	25.00
Johnson Controls	Multinational Conglomerate	4	94.05
Pfizer	Healthcare	4	32.14
AT&T	Telecom	4	24.40
Apple	Electronics	4	23.51
Ford Motor	Automotive	3	74.60
Allstate	Financial Services	3	36.90
Target	Discount	3	30.56
Delta Air Lines	Airlines	3	24.60
Tyson Food	Meat Products	2	57.74
DuPont	Chemicals	2	45.83
Bank of America Corp.	Financial Services	2	45.23
Walt Disney	Entertainment	2	44.64
Wells Fargo	Financial Services	2	36.31
ConocoPhillips	Oil & Gas	2	33.33
CVS Caremark	Healthcare	2	24.40
Tesoro	Oil & Gas	2	23.81
Kroger	Grocery	2	13.10
General Motors	Automotive	1	67.86
Morgan Stanley	Financial Services	1	50.00
Massachusetts Mutual Life	Financial Services	1	36.90

Insurance			
Oracle	IT	1	28.57
Safeway	Grocery	1	22.62
American Express	Financial Services	1	19.05
Humana	Healthcare	1	11.04

Research data elaboration.

Not all of them issued the sustainability report every year during the research period: 20 of them (less than 50 per cent of companies considered in the research) disclosure the non-financial information through a GRI report every year. As presented in the table, most of the companies related to healthcare, oil and gas, IT and electronic industries are more accurate in sustainability reporting and non-financial information disclosure, providing a yearly GRI report. This evidence can be due to specific industry matters related to pollution and environment impacts. Although these companies' efforts provide additional information for stakeholders, reporting every year sustainability data and information does not mean that those reports are complete and full of corporate indications. In fact, lots of them include less than 50 per cent of GRI indexes as average completeness score. The financial service industry presents generally the lowest interest in sustainability and its reporting approach: only Citigroup completed the GRI report every year, even if with a low average score (around 38 per cent); others presented 1 or 2 reports combined with low average scores.

Hess, Dow Chemical and IBM are three companies with the highest average completeness score, publishing GRI sustainability report every year. They have a very accurate approach: for instance, Dow Chemical presents its GRI indexes one by one, providing specific information for each sustainability index and dedicating for each one a specific paragraph; IBM has a detailed sustainability report thanks to its web version that grants a more precise and quick research of documents and information about corporate sustainability matters.

On the opposite side, American Express reported the GRI report only in one year with a very low completeness score (around 19 per cent). I would like to remake this case because, even if it has not the worst score of the sample, it has one of the worst disclosing approach. Indeed, it has a confused sustainability report without a map or table in which the reader can find easily GRI index pages or references.

Moreover, only 15 companies (about 34.1 per cent) include at least the 50 per cent of GRI indexes in their sustainability reports. Although some indexes cannot be disclosed by all companies because of the type of industry, this finding shows how companies still have a sort of scepticism in the disclosure of some critical information. They prefer to avoid the disclosure of these data instead of risking to give a competitive advantage to a direct business competitor. It is not rare that in some GRI indexes there is a note informing readers about the lack of specific information as it could be a critical detail for corporate competitive advantage.

Not all indexes have the same frequency of disclosure due to their collecting complexity, to the matter faced (it could be specific for some types of industries) etc.

The most disclosed index is EC1 (147 times out of 152 reports) related to financial and economic corporate performance: this is an expected result since every company has to provide yearly a financial statement that provides the necessary information to complete EC1 disclosing points.

In the environmental section, the most disclosed indexes are EN16 (140 times out of 152 reports) and EN18 (139 times out of 152 reports): also this finding is not surprising since these two indexes are related to greenhouse gas emissions that are the most debated environmental issue around the world. Moreover, stakeholders and consumers are interested in companies' GHG emissions because they are linked with climate changes and global warming; thus, companies want to reassure them disclosing their impacts and efforts in order to reduce their negative contribution to these global problems.

The most used indexes in the social section are LA8 (124 times out of 152 reports) and SO5 (125 times out of 152 reports): the first one is related to the employee training that is a relevant attractive point for a company, whereas the second one is linked with public policy and companies' participation.

On the other hand, there are some GRI indexes that are utilised rarely: in this sample, the least used indexes are new indexes introduced with the G3.1 upgrade in 2011 such as LA15, HR10, HR11, SO9 and SO10. This is obvious: companies could have used them since 2011 that is the last year of this research period.

In the economic index area, the least used index is EC5 (33 times out of 152 reports) since it is related to the employee wage that is a confidential information for many companies.

EN15 (22 times out of 152 reports) and EN25 (16 times out of 152 reports) are the indexes less disclosed in the environmental section: both of them are related to protected species and biodiversity that are information difficult to collect and not interesting for all types of industries (i.e. example financial service industry).
In the social index section, it is interesting to notice that the least used indexes are mainly PR (product responsibility) indexes, in particular PR2, PR4, PR7 and PR8 (27 times out of 152 reports). This fact evidences another time as critical information (in this case related to companies' products) is not so often disclosed. The other index is HR9 (27 times out of 152 reports) related to trade union agreements.
It is important not only to analyse the GRI indexes and reports in term of quantity of information provided to stakeholders but also their quality: as explained in the methodology paragraph, for each index, disclosed by companies, I have tried to qualified (positive, negative or neutral) information inside it in term of corporate impact, following some criteria that I determined and summarised in **Table 10** (previous paragraph).
In the **Table 14**, I have tried to summarise the findings of qualitative analysis of GRI sustainability indexes: for each GRI index, it is indicated the percentage of good, neutral and bad affects per year, as well as considering the five years altogether.
There are also some colourful boxes to display more clearly some research evidences: the "*light blue box*" means that the index has recorded more than 50 per cent of positive mark over the five years; the "*dark blue box*" means that the index has more than 50 per cent good mark and it has never recorded a negative mark; the "*yellow box*" means that the index has never recorded a negative mark but it does not surpass the 50 per cent threshold with positive marks; the "*green box*" means the prevalence of positive marks for an index in a specific year.
Looking at this table, the majority of GRI indexes tend to present positive information and aspects of the reporting companies: indeed, over the five years, around 61.9 per cent of indexes have more positive marks (over 50 per cent). This trend is also emphasized over the past years: indeed, in 2007, there were the 57.1 per cent of indexes that recorded a prevalence of the positive mark, whereas in 2011 this percentage grew to 66.7 per cent (around 8 more indexes than 5 years before). Indeed, reporting companies tend to report only their positive aspect about sustainability, being sustainability reporting a voluntary disclosure all around the World: if a company has to disclose a

negative effect of its business and operational activities, sometimes it presents data and information without specific details or highlights new corporate initiatives to face the problem in order to minimise the negative corporate aspect in front of stakeholders.

This fact is also encouraged by GRI itself since it has provided some index definitions in which it is very difficult to present a negative corporate aspect or impact on surrounding world: these indexes are highlighted as "*dark blue*" and "*yellow boxes*" and they are around 27.5 per cent of the GRI index total number (around 22 out of 84 indexes). For instance, all environmental indexes related to possible initiatives launched by the reporting company can have only a positive mark since, if a company have not any initiatives, it does not disclose the specific index, ignoring the specific matter: nobody declares to its stakeholders that it has not any types of environmental initiatives.

In order to support the evidence of the general positive disclosure of GRI indexes, I have created a bar chart (**Chart 4**) in which the overall index marks are summarised by category (EC, EN, and SO).

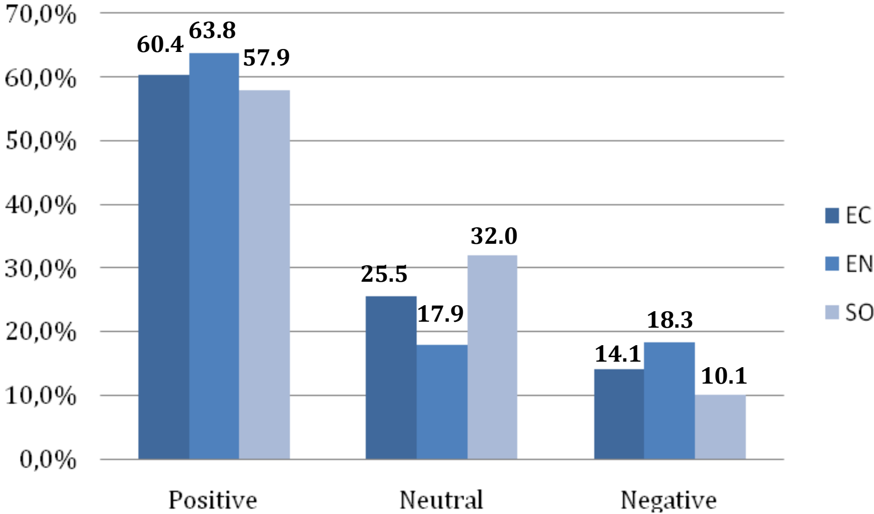
In this graph, all categories present a predominant presence of positive marks (over 50 per cent) but not all SO sub-categories: only the HR (Human Rights) sub-category shows less than 50 per cent of positive marks, yet this is due to the inaccurate companies' reporting of the specific information that has shifted the mark evaluation from positive to neutral outcomes (around 41.2 per cent of neutral marks).

The category with more positive outcomes is EN category, with around 64 per cent of positive marks: this fact demonstrates as reporting companies want to communicate environmental reliability about their businesses. These results could be affected also by national regulations that compel business organisations to follow national environmental laws and regulations.

Finally, it is interesting to note that the highest percentage in the presence of negative marks is related to the EN category (environmental have 18.3 per cent of negative outcomes), followed by EC category (with 14.1 per cent): at first glance, this could be strange since environmental and economic issues are the principle issues and targets for every company. I believe that this finding is due to the nature of EC and EN index definitions: indeed, in these two categories, there are more quantitative index definitions that bring to a more objective representation of the corporate situation about specific matters. This explanation is highlighted by 32 per cent of neutral marks for SO

category: this fact underlines the prevalence of qualitative and ambiguous index definitions in SO category.

Chart 4: Total number of positive, neutral and negative marks by index category.



	Positive	**Neutral**	**Negative**
EC (Tot.)	552	233	129
EN (Tot.)	1624	456	466
SO (Tot.)	1727	953	301

Research data elaboration.

Table 13: Index completeness table of sustainability reports analysed by year.

	2007			2008			2009			2010			2011		
Company Name	**EC**	**EN**	**SO**	**EC**	**EN**	**SO**	**EC**	**EN**	**SO**	**EC**	**EN**	**SO**	**EC**	**EN**	**SO**
Abbott Laboratories	22.2%	50.0%	17.8%	44.4%	50.0%	20.0%	44.4%	46.7%	20.0%	33.3%	26.7%	8.9%	55.6%	73.3%	46.7%
Allstate	-	-	-	-	-	-	66.7%	40.0%	37.8%	55.6%	30.0%	15.6%	66.7%	56.7%	31.1%
American Express	22.2%	23.3%	15.6%	-	-	-	-	-	-	-	-	-	-	-	-
Apple	-	-	-	11.1%	40.0%	11.1%	11.1%	40.0%	13.3%	11.1%	40.0%	13.3%	11.1%	53.3%	13.3%
AT&T	-	-	-	22.2%	16.7%	17.8%	22.2%	26.7%	20.0%	22.2%	30.0%	20.0%	44.4%	36.7%	28.9%
Bank of America Corp.	-	-	-	-	-	-	-	-	-	77.8%	43.3%	33.3%	77.8%	63.3%	33.3%
Best Buy	22.2%	13.3%	28.9%	22.2%	10.0%	26.7%	22.2%	16.7%	26.7%	44.4%	20.0%	33.3%	33.3%	23.3%	33.3%
Chevron	55.6%	40.0%	44.4%	66.7%	53.3%	28.9%	100%	60.0%	28.9%	100%	56.7%	28.9%	100%	63.3%	33.3%
Cisco Systems	33.3%	30.0%	28.9%	55.6%	43.3%	35.6%	66.7%	66.7%	51.1%	88.9%	53.3%	53.3%	100%	100%	68.9%
Citigroup	66.7%	46.7%	26.7%	66.7%	53.3%	24.4%	66.7%	46.7%	17.8%	55.6%	50.0%	22.2%	66.7%	53.3%	35.6%
Coca-Cola	66.7%	43.3%	46.7%	22.2%	46.7%	28.9%	22.2%	36.7%	28.9%	44.4%	40.0%	33.3%	44.4%	40.0%	33.3%
ConocoPhillipis	-	-	-	44.4%	36.7%	28.9%	-	-	-	-	-	-	-	-	-
CVS Caremark	-	-	-	-	-	-	-	-	-	22.2%	26.7%	17.8%	22.2%	30.0%	26.7%
Dell	11.1%	20.0%	88.9%	33.3%	56.7%	31.1%	33.3%	53.3%	22.2%	88.9%	100%	68.9%	77.8%	80.0%	62.2%
Delta Air Lines	-	-	-	-	-	-	22.2%	16.7%	13.3%	22.2%	26.7%	26.7%	44.4%	33.3%	28.9%
Dow Chemical	100%	83.3%	82.2%	100%	83.3%	82.2%	100%	90.0%	84.4%	100%	93.3%	82.2%	100%	96.7%	93.3%
DuPont	11.1%	46.7%	40.0%	-	-	-	-	-	-	-	-	-	66.7%	60.0%	44.4%
Exxon Mobile	66.7%	50.0%	24.4%	77.8%	53.3%	37.8%	77.8%	53.3%	48.9%	77.8%	53.3%	46.7%	77.8%	63.3%	62.2%
Ford Motor	-	-	-	-	-	-	77.8%	83.3%	64.4%	77.8%	83.3%	66.7%	77.8%	83.3%	73.3%
General Electric	11.1%	56.7%	31.1%	22.2%	46.7%	22.2%	33.3%	53.3%	28.9%	88.9%	80.0%	53.3%	88.9%	56.7%	46.7%
General Motors	-	-	-	-	-	-	-	-	-	-	-	-	55.6%	76.7%	64.4%
Hess	77.8%	86.7%	64.4%	100%	100%	88.9%	100%	100%	88.9%	100%	100%	88.9%	100%	100%	88.9%
HP	55.6%	70.0%	37.8%	66.7%	70.0%	44.4%	66.7%	73.3%	37.8%	66.7%	76.7%	40.0%	66.7%	76.7%	40.0%
Humana	-	-	-	-	-	-	-	-	-	-	-	-	22.2%	10.0%	11.1%
IBM	55.6%	100%	73.3%	77.8%	100%	31.1%	100%	100%	88.9%	100%	100%	88.9%	100%	100%	88.9%
Intel	66.7%	70.0%	71.1%	88.9%	76.7%	68.9%	88.9%	83.3%	71.1%	88.9%	80.0%	82.2%	88.9%	80.0%	82.2%
Johnson Control	100%	100%	88.9%	-	-	-	100%	100%	88.9%	100%	100%	88.9%	100%	100%	88.9%
Johnson & Johnson	33.3%	63.3%	48.9%	66.7%	60.0%	42.2%	44.4%	66.7%	42.2%	55.6%	66.7%	51.1%	88.9%	80.0%	80.0%
Kroger	-	-	-	-	-	-	-	-	-	11.1%	20.0%	88.9%	11.1%	20.0%	88.9%
Mass. Mutual Life Ins.	44.4%	40.0%	33.3%	-	-	-	-	-	-	-	-	-	-	-	-

	2007			2008			2009			2010			2011		
	EC	**EN**	**SO**	**EC**	**EN**	**SO**	**EC**	**EN**	**SO**	**EC**	**EN**	**SO**	**EC**	**EN**	**SO**
Merck	55.6%	50.0%	62.2%	66.7%	60.0%	66.7%	55.6%	40.0%	22.2%	33.3%	13.3%	66.7%	77.8%	80.0%	75.6%
Morgan Stanley	-	-	-	-	-	-	-	-	-	-	-	-	77.8%	50.0%	44.4%
Oracle	-	-	-	-	-	-	-	-	-	22.2%	46.7%	17.8%	-	-	-
P&G	88.9%	83.3%	62.2%	88.9%	83.3%	62.2%	88.9%	83.3%	62.2%	88.9%	83.3%	60.0%	88.9%	83.3%	60.0%
PepsiCo	77.8%	26.7%	37.8%	88.9%	40.0%	37.8%	55.6%	30.0%	17.8%	77.8%	50.0%	37.8%	44.4%	63.3%	33.3%
Pfizer	77.8%	66.7%	33.3%	-	-	-	44.4%	56.7%	24.4%	44.4%	10.0%	17.8%	44.4%	26.7%	15.6%
Philips	55.6%	33.3%	35.6%	55.6%	23.3%	35.6%	77.8%	56.7%	55.6%	77.8%	56.7%	55.6%	77.8%	56.7%	55.6%
Safeway	-	-	-	-	-	-	-	-	-	-	-	-	33.3%	23.3%	20.0%
Target	44.4%	0.0%	37.8%	-	-	-	11.1%	43.3%	37.8%	-	-	-	44.4%	23.3%	31.1%
Tesoro	-	-	-	-	-	-	-	-	-	22.2%	30.0%	15.6%	33.3%	26.7%	24.4%
Tyson Foods	66.7%	46.7%	28.9%	-	-	-	88.9%	73.3%	75.6%	-	-	-	-	-	-
UPS	44.4%	46.7%	20.0%	66.7%	53.3%	60.0%	77.8%	53.3%	64.4%	77.8%	63.3%	68.9%	77.8%	60.0%	77.8%
Walt Disney	-	-	-	44.4%	53.3%	37.8%	-	-	-	33.3%	60.0%	37.8%	-	-	-
Wells Fargo	-	-	-	-	-	-	55.6%	36.7%	26.7%	-	-	-	66.7%	50.0%	26.7%

Research data elaboration.

Table 14: Summarising table of index qualitative analysis by year.

Index	Over 5 Years			2007			2008			2009			2010			2011		
	G	N	B	G	N	B	G	N	B	G	N	B	G	N	B	G	N	B
EC1	72.9%	6.1%	21.0%	88.5%	7.7%	3.8%	77.3%	0.0%	22.7%	37.9%	6.9%	55.2%	78.1%	6.3%	15.6%	81.6%	7.9%	10.5%
EC2	23.9%	52.2%	23.9%	33.3%	44.4%	22.2%	27.8%	55.6%	16.7%	13.0%	56.5%	30.4%	21.7%	56.5%	21.7%	29.0%	45.2%	25.8%
EC3	45.1%	20.6%	34.3%	53.9%	30.8%	15.4%	35.3%	29.4%	35.3%	65.0%	15.0%	20.0%	40.9%	18.2%	40.9%	36.7%	16.7%	46.6%
EC4	39.6%	26.4%	34.0%	40.0%	20.0%	40.0%	60.0%	20.0%	20.0%	58.3%	25.0%	16.7%	30.8%	30.8%	38.4%	27.8%	27.8%	44.4%
EC5	30.3%	57.6%	12.1%	25.0%	75.0%	0.0%	25.0%	75.0%	0.0%	28.6%	57.1%	14.3%	25.0%	50.0%	25.0%	40.0%	50.0%	10.0%
EC6	88.1%	6.5%	5.4%	85.8%	7.1%	7.1%	94.1%	5.9%	0.0%	83.3%	5.6%	11.1%	90.0%	0.0%	10.0%	87.0%	13.0%	0.0%
EC7	80.9%	17.7%	1.4%	64.3%	35.7%	0.0%	76.9%	23.1%	0.0%	100%	0.0%	0.0%	85.8%	7.1%	7.1%	81.3%	18.7%	0.0%
EC8	93.3%	5.0%	1.7%	90.5%	9.5%	0.0%	88.2%	5.9%	5.9%	88.0%	12.0%	0.0%	96.3%	0.0%	3.7%	100%	0.0%	0.0%
EC9	93.6%	6.4%	0.0%	100%	0.0%	0.0%	100%	0.0%	0.0%	89.5%	10.5%	0.0%	95.5%	4.5%	0.0%	88.0%	12.0%	0.0%
EN1	22.4%	64.5%	13.1%	27.3%	45.5%	27.2%	25.0%	50.0%	25.0%	11.8%	76.5%	11.7%	6.3%	81.3%	12.4%	40.0%	60.0%	0.0%
EN2	57.6%	26.1%	16.3%	60.0%	26.7%	13.3%	53.3%	26.7%	20.0%	63.2%	26.3%	10.5%	55.0%	30.0%	15.0%	56.6%	21.7%	21.7%
EN3	58.9%	8.5%	32.6%	54.6%	13.6%	31.8%	61.9%	4.8%	33.3%	76.9%	0.0%	23.1%	44.5%	14.8%	40.7%	57.6%	9.1%	33.3%
EN4	54.2%	9.4%	36.4%	46.7%	20.0%	33.3%	64.7%	11.8%	23.5%	78.3%	8.7%	13.0%	39.1%	4.4%	56.5%	44.8%	6.9%	48.3%
EN5	72.0%	22.4%	5.6%	80.0%	20.0%	0.0%	63.2%	36.8%	0.0%	73.1%	15.4%	11.5%	66.7%	25.9%	7.4%	75.8%	18.2%	6.0%
EN6	100%	0.0%	0.0%	100%	0.0%	0.0%	100%	0.0%	0.0%	100%	0.0%	0.0%	100%	0.0%	0.0%	100%	0.0%	0.0%
EN7	97.5%	2.5%	0.0%	94.1%	5.9%	0.0%	100%	0.0%	0.0%	91.7%	8.3%	0.0%	100%	0.0%	0.0%	100%	0.0%	0.0%
EN8	54.4%	12.3%	33.3%	55.0%	20.0%	25.0%	72.2%	0.0%	27.8%	45.8%	16.7%	37.5%	45.5%	13.6%	40.9%	56.7%	10.0%	33.3%
EN9	55.6%	44.4%	0.0%	42.9%	57.1%	0.0%	60.0%	40.0%	0.0%	62.5%	37.5%	0.0%	55.6%	44.4%	0.0%	56.3%	43.7%	0.0%
EN10	44.9%	46.4%	8.7%	44.4%	55.6%	0.0%	33.3%	55.6%	11.1%	20.0%	73.3%	6.7%	56.3%	31.3%	12.4%	60.0%	30.0%	10.0%
EN11	46.0%	32.0%	22.0%	66.7%	16.7%	16.6%	42.9%	28.6%	28.5%	45.5%	36.4%	18.1%	38.5%	46.1%	15.4%	46.2%	23.1%	30.7%
EN12	38.2%	61.8%	0.0%	54.6%	45.4%	0.0%	50.0%	50.0%	0.0%	33.3%	66.7%	0.0%	40.0%	60.0%	0.0%	23.5%	76.5%	0.0%
EN13	73.1%	26.9%	0.0%	70.0%	30.0%	0.0%	85.7%	14.3%	0.0%	66.7%	33.3%	0.0%	66.7%	33.3%	0.0%	78.6%	21.4%	0.0%
EN14	74.3%	14.3%	11.4%	63.6%	18.2%	18.2%	91.7%	0.0%	8.3%	75.0%	16.7%	8.3%	66.7%	22.2%	11.1%	76.5%	11.8%	11.7%
EN15	63.7%	13.6%	22.7%	100%	0.0%	0.0%	50.0%	50.0%	0.0%	75.0%	0.0%	25.0%	50.0%	16.7%	33.3%	57.1%	14.3%	28.6%
EN16	65.7%	4.3%	30.0%	58.3%	12.5%	29.2%	63.6%	4.6%	31.8%	85.7%	3.6%	10.7%	64.5%	3.2%	32.3%	57.1%	0.0%	42.9%
EN17	62.3%	8.5%	29.2%	37.5%	25.0%	37.5%	61.1%	22.2%	16.7%	86.4%	4.6%	9.0%	54.6%	0.0%	45.4%	64.3%	0.0%	35.7%
EN18	98.6%	1.4%	0.0%	100%	0.0%	0.0%	100%	0.0%	0.0%	100%	0.0%	0.0%	96.8%	3.2%	0.0%	97.2%	2.8%	0.0%
EN19	48.5%	24.2%	27.3%	66.7%	8.3%	25.0%	50.0%	20.0%	30.0%	53.3%	26.7%	20.0%	38.5%	38.5%	23.0%	37.5%	25.0%	37.5%

	Over 5 Years			2007			2008			2009			2010			2011		
Index	**G**	**N**	**B**	**G**	**N**	**B**	**G**	**N**	**B**	**G**	**N**	**B**	**G**	**N**	**B**	**G**	**N**	**B**
EN20	54.8%	17.9%	27.3%	62.5%	12.5%	25.0%	66.7%	16.7%	16.6%	50.0%	18.8%	31.2%	44.5%	22.2%	33.3%	54.6%	18.2%	27.2%
EN21	47.1%	30.0%	22.9%	60.0%	40.0%	0.0%	53.9%	23.1%	23.0%	33.3%	40.0%	26.7%	46.2%	23.1%	30.7%	47.4%	26.3%	26.3%
EN22	52.9%	11.6%	35.5%	61.9%	19.1%	19.0%	36.9%	10.5%	52.6%	60.0%	12.0%	28.0%	44.0%	8.0%	48.0%	58.1%	9.7%	32.2%
EN23	52.9%	17.2%	29.9%	53.3%	20.0%	26.7%	50.0%	14.3%	35.7%	47.1%	17.7%	35.2%	76.5%	17.7%	5.8%	41.7%	16.7%	41.6%
EN24	47.4%	21.1%	31.5%	14.3%	28.6%	57.1%	50.0%	16.7%	33.3%	83.3%	0.0%	16.7%	28.6%	28.6%	42.8%	58.3%	25.0%	16.7%
EN25	62.5%	37.5%	0.0%	100%	0.0%	0.0%	50.0%	50.0%	0.0%	66.7%	33.3%	0.0%	75.0%	25.0%	0.0%	40.0%	60.0%	0.0%
EN26	97.0%	3.0%	0.0%	100%	0.0%	0.0%	95.5%	4.5%	0.0%	96.3%	3.7%	0.0%	96.3%	3.7%	0.0%	97.0%	3.0%	0.0%
EN27	50.8%	43.2%	6.0%	45.5%	36.4%	18.1%	77.8%	22.2%	0.0%	50.0%	43.8%	6.2%	38.5%	53.9%	7.6%	50.0%	50.0%	0.0%
EN28	38.7%	9.7%	51.6%	29.4%	5.9%	64.7%	25.0%	8.3%	66.7%	40.0%	5.0%	55.0%	41.2%	17.6%	41.2%	48.2%	11.1%	40.7%
EN29	63.0%	22.2%	14.8%	66.7%	25.0%	8.3%	69.2%	23.1%	7.7%	66.7%	33.3%	0.0%	52.9%	17.7%	29.4%	62.5%	16.7%	20.8%
EN30	64.7%	15.7%	19.6%	72.7%	27.3%	0.0%	62.5%	25.0%	12.5%	55.6%	11.1%	33.3%	60.0%	0.0%	40.0%	69.2%	15.4%	15.4%
LA1	43.7%	24.4%	31.9%	38.1%	38.1%	23.8%	50.0%	25.0%	25.0%	25.0%	20.8%	54.2%	58.3%	16.7%	25.0%	46.7%	23.3%	30.0%
LA2	35.2%	24.1%	40.7%	18.2%	54.5%	27.3%	55.6%	22.2%	22.2%	27.3%	9.1%	63.6%	44.4%	0.0%	55.6%	35.7%	28.6%	35.7%
LA3	22.7%	48.5%	28.8%	33.4%	44.4%	22.2%	10.0%	60.0%	30.0%	9.1%	63.6%	27.3%	17.7%	41.2%	41.1%	36.8%	42.1%	21.1%
LA15	0.0%	100%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%	0.0%	0.0%	100%	0.0%
LA4	26.1%	53.6%	20.3%	11.1%	77.8%	11.1%	37.5%	50.0%	12.5%	37.5%	56.3%	6.2%	20.0%	33.3%	46.7%	23.8%	57.1%	19.1%
LA5	54.2%	37.5%	8.3%	22.2%	66.7%	11.1%	100%	0.0%	0.0%	41.7%	50.0%	8.3%	54.6%	36.4%	9.0%	75.0%	16.7%	8.3%
LA6	36.5%	63.5%	0.0%	31.3%	68.7%	0.0%	46.7%	53.3%	0.0%	35.3%	64.7%	0.0%	38.9%	61.1%	0.0%	31.6%	68.4%	0.0%
LA7	70.7%	10.3%	19.0%	66.9%	14.0%	19.1%	63.6%	18.2%	18.2%	79.2%	4.2%	16.6%	72.7%	4.6%	22.7%	70.4%	11.1%	18.5%
LA8	99.2%	0.8%	0.0%	100%	0.0%	0.0%	100%	0.0%	0.0%	100%	0.0%	0.0%	96.3%	3.7%	0.0%	100%	0.0%	0.0%
LA9	59.4%	31.2%	9.4%	0.0%	50.0%	50.0%	33.3%	66.7%	0.0%	57.1%	28.6%	14.3%	77.8%	22.2%	0.0%	77.8%	22.2%	0.0%
LA10	22.4%	62.1%	15.5%	12.5%	87.5%	0.0%	6.3%	81.3%	12.4%	23.8%	47.6%	28.6%	28.0%	60.0%	12.0%	32.0%	48.0%	20.0%
LA11	91.0%	9.0%	0.0%	91.3%	8.7%	0.0%	88.2%	11.8%	0.0%	85.0%	15.0%	0.0%	95.2%	4.8%	0.0%	93.3%	6.7%	0.0%
LA12	77.6%	21.2%	1.2%	78.6%	21.4%	0.0%	50.0%	50.0%	0.0%	85.7%	14.3%	0.0%	77.8%	16.7%	5.5%	88.0%	12.0%	0.0%
LA13	37.0%	50.4%	12.6%	35.0%	60.0%	5.0%	52.6%	42.1%	5.3%	38.5%	46.2%	15.3%	33.3%	50.0%	16.7%	30.0%	53.3%	16.7%
LA14	32.3%	64.5%	3.2%	33.4%	33.3%	33.3%	50.0%	50.0%	0.0%	37.5%	62.5%	0.0%	28.6%	71.4%	0.0%	22.2%	77.8%	0.0%
HR1	35.7%	60.0%	4.3%	41.7%	50.0%	8.3%	27.3%	72.7%	0.0%	30.8%	61.5%	7.7%	31.3%	68.7%	0.0%	44.4%	50.0%	5.6%
HR2	77.8%	8.1%	14.1%	86.7%	6.7%	6.6%	83.3%	5.6%	11.1%	72.8%	13.6%	13.6%	70.0%	10.0%	20.0%	79.2%	4.2%	16.6%

	Over 5 Years			2007			2008			2009			2010			2011		
Index	**G**	**N**	**B**	**G**	**N**	**B**	**G**	**N**	**B**	**G**	**N**	**B**	**G**	**N**	**B**	**G**	**N**	**B**
HR3	14.9%	82.1%	3.0%	16.7%	83.3%	0.0%	0.0%	100%	0.0%	9.1%	81.8%	9.1%	13.3%	86.7%	0.0%	23.8%	71.4%	4.8%
HR4	38.2%	34.6%	27.2%	45.5%	36.4%	18.1%	42.9%	28.6%	28.5%	53.9%	30.8%	15.3%	16.7%	33.3%	50.0%	33.3%	41.7%	25.0%
HR5	37.5%	52.5%	10.0%	46.7%	46.7%	6.6%	46.1%	46.2%	7.7%	58.8%	29.4%	11.8%	57.9%	21.1%	21.0%	54.6%	36.4%	9.0%
HR6	50.0%	34.8%	15.2%	33.4%	44.4%	22.2%	43.8%	43.8%	12.4%	58.8%	29.4%	11.8%	57.9%	21.1%	21.0%	54.6%	36.4%	9.0%
HR7	46.6%	38.6%	14.8%	43.8%	37.5%	18.7%	40.0%	40.0%	20.0%	55.6%	33.3%	11.1%	41.2%	41.2%	17.6%	50.0%	40.9%	9.1%
HR8	63.4%	36.6%	0.0%	57.1%	42.9%	0.0%	66.7%	33.3%	0.0%	50.0%	50.0%	0.0%	77.8%	22.2%	0.0%	63.6%	36.4%	0.0%
HR9	66.7%	29.6%	3.7%	100%	0.0%	0.0%	66.7%	33.3%	0.0%	66.7%	33.3%	0.0%	50.0%	50.0%	0.0%	66.7%	22.2%	11.1%
HR10	40.0%	20.0%	40.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%	0.0%	0.0%	33.4%	22.2%	44.4%
HR11	42.9%	57.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%	0.0%	50.0%	50.0%	0.0%
SO1	77.7%	20.2%	2.1%	84.2%	15.8%	0.0%	82.4%	17.6%	0.0%	70.0%	25.0%	5.0%	76.5%	17.7%	5.8%	76.2%	23.8%	0.0%
SO9	60.0%	20.0%	20.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%	0.0%	0.0%	50.0%	25.0%	25.0%
SO10	100%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%	0.0%	0.0%	100%	0.0%	0.0%
SO2	32.4%	62.2%	5.4%	28.6%	71.4%	0.0%	40.0%	50.0%	10.0%	23.2%	69.1%	7.7%	31.3%	56.3%	12.4%	38.1%	61.9%	0.0%
SO3	67.0%	33.0%	0.0%	47.6%	52.4%	0.0%	52.9%	47.1%	0.0%	73.9%	26.1%	0.0%	66.7%	33.3%	0.0%	81.8%	18.2%	0.0%
SO4	23.5%	66.2%	10.3%	33.3%	58.3%	8.4%	11.1%	77.8%	11.1%	23.1%	76.9%	0.0%	35.8%	57.1%	7.1%	15.0%	65.0%	20.0%
SO5	94.4%	5.6%	0.0%	81.8%	18.2%	0.0%	90.5%	9.5%	0.0%	100%	0.0%	0.0%	96.0%	4.0%	0.0%	100%	0.0%	0.0%
SO6	65.0%	22.0%	13.0%	62.5%	25.0%	12.5%	66.7%	20.0%	13.3%	68.8%	12.5%	18.7%	65.2%	21.7%	13.1%	63.3%	26.7%	10.0%
SO7	40.5%	28.5%	31.0%	33.3%	50.0%	16.7%	33.7%	33.0%	33.3%	28.6%	28.6%	42.8%	45.5%	18.2%	36.3%	46.6%	26.7%	26.7%
SO8	28.9%	40.4%	30.7%	11.1%	44.4%	44.5%	33.3%	50.0%	16.7%	50.0%	30.0%	20.0%	18.2%	45.5%	36.3%	31.3%	37.5%	31.2%
PR1	88.9%	11.1%	0.0%	88.9%	11.1%	0.0%	82.6%	17.4%	0.0%	95.2%	4.8%	0.0%	90.0%	10.0%	0.0%	87.0%	13.0%	0.0%
PR2	63.0%	18.5%	18.5%	50.0%	50.0%	0.0%	75.0%	0.0%	25.0%	80.0%	0.0%	20.0%	100%	0.0%	0.0%	40.0%	30.0%	30.0%
PR3	69.4%	30.6%	0.0%	53.3%	46.7%	0.0%	75.0%	25.0%	0.0%	65.0%	35.0%	0.0%	75.0%	25.0%	0.0%	77.3%	22.7%	0.0%
PR4	63.0%	18.5%	18.5%	80.0%	20.0%	0.0%	33.3%	0.0%	66.7%	60.0%	0.0%	40.0%	66.7%	33.3%	0.0%	62.5%	25.0%	12.5%
PR5	96.1%	3.9%	0.0%	75.0%	25.0%	0.0%	100%	0.0%	0.0%	100%	0.0%	0.0%	100%	0.0%	0.0%	100%	0.0%	0.0%
PR6	82.2%	17.8%	0.0%	75.0%	25.0%	0.0%	80.0%	20.0%	0.0%	79.2%	23.8%	0.0%	81.8%	18.2%	0.0%	92.6%	7.4%	0.0%
PR7	66.7%	22.2%	11.1%	100%	0.0%	0.0%	66.7%	33.3%	0.0%	66.7%	16.7%	16.6%	50.0%	33.3%	16.7%	70.0%	20.0%	10.0%
PR8	59.3%	37.0%	3.7%	42.9%	57.1%	0.0%	50.0%	50.0%	0.0%	60.0%	40.0%	0.0%	75.0%	25.0%	0.0%	66.7%	22.2%	11.1%
PR9	37.2%	48.8%	14.0%	50.0%	33.3%	16.7%	20.0%	40.0%	40.0%	55.6%	44.4%	0.0%	33.3%	55.6%	11.1%	28.6%	57.1%	14.3%

Research data elaboration.

4.4.2 Correlation Analysis

In this paragraph, it will be analysed the correlation between variables, dividing them according to the dependent variable (especially to manage control variables).

A common point of all correlation analysis is that all sustainability variables considered (Disclosure, Score and Quality Index by category) are positively correlated to each other. It is intuitive for the sustainability variables of the same category (EC, EN or SO) but it is interesting if we consider the different sustainability index categories. This means that, if a company has a good score in the Environmental Disclosure, not only it has a good "*EN_Score*" and "*Q_EN_Index*", but also in the same variables related to the other two sustainability categories (**Table 15**).

Another important common point is the coincidence between Disclosure and Score variables. In all sustainability categories, there is a correlation equal to 1 and they have the same correlation with the dependent variable considered in each analysis. This means that the standardisation of the total number of indexes disclosed by category does not give more or different information from the simple total number of disclosed indexes. Thus, it is indifferent to include in a regression the Score or the Disclosure variable in order to verify the particular impact of a specific sustainability category (**Table 15**). In the regression analysis, I considered and included the Score variables instead of the Disclosure ones because the Score variables are standardised.

The correlation between control variables is not so important and it was not investigated since they are only variables that are held constant in order to assess or clarify the relationship between two other variables.

ROA and ROE

In the tables below (**Table 15** and **16**), all the Score variables by category are positively correlated with ROA and ROE. This means that they could be significant in the panel regression, displaying and explaining a sort of positive impact on this corporate financial performance indicator. At the same time, four control variables (Debt to Equity, CON3, CON4 and CON11) have a significant correlation with the dependent variable ROA and, for this reason, they are selected to be included in the following regression analysis. On the other hand, ROE has Debt to Equity, CON4, CON9 and CON11 as its four significative control variables.

Table 15: Correlation analysis of variables related to ROA.

	return~t	ec_dis~e	ec_score	q_ec_i~x	en_dis~e	en_score	q_en_i~x
return_on_~t	1.0000						
ec_discosure	0.2096*	1.0000					
ec_score	0.2096*	1.0000*	1.0000				
q_ec_index	0.1474	0.6022*	0.6022*	1.0000			
en_disclos~e	0.2642*	0.9021*	0.9021*	0.4588*	1.0000		
en_score	0.2642*	0.9021*	0.9021*	0.4588*	1.0000*	1.0000	
q_en_index	0.1105	0.3115*	0.3115*	0.1734*	0.5135*	0.5135*	1.0000
so_disclos~e	0.2307*	0.9016*	0.9016*	0.5008*	0.9222*	0.9222*	0.3702*
so_score	0.2307*	0.9016*	0.9016*	0.5008*	0.9222*	0.9222*	0.3702*
q_so_index	-0.0271	0.6457*	0.6457*	0.4892*	0.7529*	0.7529*	0.3293*
net_debt_t~y	-0.3262*	-0.1112	-0.1112	-0.1321	-0.1412*	-0.1412*	-0.1035
con1	-0.1264	0.1119	0.1119	0.0665	0.0755	0.0755	0.1690*
con3	0.1895*	-0.1163	-0.1163	0.0451	-0.0880	-0.0880	-0.1922*
con4	-0.4129*	-0.1264	-0.1264	-0.1411	-0.1000	-0.1000	0.1243
con5	0.0565	0.0637	0.0637	0.0838	-0.0082	-0.0082	-0.0164
con11	0.5399*	-0.0604	-0.0604	-0.2947	-0.0218	-0.0218	-0.1474

	so_dis~e	so_score	q_so_i~x	net_de~y	con1	con3	con4
so_disclos~e	1.0000						
so_score	1.0000*	1.0000					
q_so_index	0.8414*	0.8414*	1.0000				
net_debt_t~y	-0.1324	-0.1324	-0.0982	1.0000			
con1	-0.0347	-0.0347	-0.1122	0.1674*	1.0000		
con3	-0.0997	-0.0997	-0.1195	-0.0029	-0.1874*	1.0000	
con4	-0.1119	-0.1119	0.0281	0.3755*	0.2769*	-0.1157	1.0000
con5	-0.0175	-0.0175	0.0242	0.0173	0.2519*	-0.4035*	-0.0010
con11	0.0964	0.0964	-0.2484	-0.4961*	-0.6096*	0.2308	-0.4945*

STATA data elaboration.

Table 16: Correlation analysis of variables related to ROE.

	return~y	ec_dis~e	ec_score	q_ec_i~x	en_dis~e	en_score	q_en_i~x
return_on_~y	1.0000						
ec_discosure	0.1441*	1.0000					
ec_score	0.1441*	1.0000*	1.0000				
q_ec_index	0.0977	0.6022*	0.6022*	1.0000			
en_disclos~e	0.2082*	0.9021*	0.9021*	0.4588*	1.0000		
en_score	0.2082*	0.9021*	0.9021*	0.4588*	1.0000*	1.0000	
q_en_index	0.1504	0.3115*	0.3115*	0.1734*	0.5135*	0.5135*	1.0000
so_disclos~e	0.1825*	0.9016*	0.9016*	0.5008*	0.9222*	0.9222*	0.3702*
so_score	0.1825*	0.9016*	0.9016*	0.5008*	0.9222*	0.9222*	0.3702*
q_so_index	0.0770	0.6457*	0.6457*	0.4892*	0.7529*	0.7529*	0.3293*
net_debt_t~y	-0.6322*	-0.1112	-0.1112	-0.1321	-0.1412*	-0.1412*	-0.1035
con1	-0.0430	0.1119	0.1119	0.0665	0.0755	0.0755	0.1690*
con2	-0.0430	0.1119	0.1119	0.0665	0.0755	0.0755	0.1690*
con3	0.0348	-0.1163	-0.1163	0.0451	-0.0880	-0.0880	-0.1922*
con4	-0.1600*	-0.1264	-0.1264	-0.1411	-0.1000	-0.1000	0.1243
con5	0.0566	0.0637	0.0637	0.0838	-0.0082	-0.0082	-0.0164
con9	0.4495*	0.1799*	0.1799*	0.1092	0.2035*	0.2035*	0.0410
con11	0.5820*	-0.0604	-0.0604	-0.2947	-0.0218	-0.0218	-0.1474

	so_dis~e	so_score	q_so_i~x	net_de~y	con1	con2	con3
so_disclos~e	1.0000						
so_score	1.0000*	1.0000					
q_so_index	0.8414*	0.8414*	1.0000				
net_debt_t~y	-0.1324	-0.1324	-0.0982	1.0000			
con1	-0.0347	-0.0347	-0.1122	0.1674*	1.0000		
con2	-0.0347	-0.0347	-0.1122	0.1674*	1.0000*	1.0000	
con3	-0.0997	-0.0997	-0.1195	-0.0029	-0.1874*	-0.1874*	1.0000
con4	-0.1119	-0.1119	0.0281	0.3755*	0.2769*	0.2769*	-0.1157
con5	-0.0175	-0.0175	0.0242	0.0173	0.2519*	0.2519*	-0.4035*
con9	0.2014*	0.2014*	-0.0427	-0.2635*	-0.2238*	-0.2238*	0.2113*
con11	0.0964	0.0964	-0.2484	-0.4961*	-0.6096*	-0.6096*	0.2308

	con4	con5	con9	con11
con4	1.0000			
con5	-0.0010	1.0000		
con9	-0.4194*	0.2222*	1.0000	
con11	-0.4945*	0.2011	0.4696*	1.0000

STATA data elaboration.

Debt to Equity

In the following table (**Table 17**), only EN Score variable has a significant correlation with the Debt to Equity variable: it is a negative correlation. This means that when there is a positive variation of EN Score variable, the dependent variable suffers a negative variation of its own value.

The control variables with a significative correlation with this dependent variable are only two (CON1 and CON12), which will be initially included in the following panel regression analysis.

Table 17: Correlation analysis of variables related to Debt to Equity.

	net_de~y	ec_dis~e	ec_score	q_ec_i~x	en_dis~e	en_score	q_en_i~x
net_debt_t~y	1.0000						
ec_discosure	-0.1112	1.0000					
ec_score	-0.1112	1.0000*	1.0000				
q_ec_index	-0.1321	0.6022*	0.6022*	1.0000			
en_disclos~e	-0.1412*	0.9021*	0.9021*	0.4588*	1.0000		
en_score	-0.1412*	0.9021*	0.9021*	0.4588*	1.0000*	1.0000	
q_en_index	-0.1035	0.3115*	0.3115*	0.1734*	0.5135*	0.5135*	1.0000
so_disclos~e	-0.1324	0.9016*	0.9016*	0.5008*	0.9222*	0.9222*	0.3702*
so_score	-0.1324	0.9016*	0.9016*	0.5008*	0.9222*	0.9222*	0.3702*
q_so_index	-0.0982	0.6457*	0.6457*	0.4892*	0.7529*	0.7529*	0.3293*
con1	0.1674*	0.1119	0.1119	0.0665	0.0755	0.0755	0.1690*
capital_ex~d	0.0765	-0.2017*	-0.2017*	0.0044	-0.1505*	-0.1505*	-0.0250
con10_1	0.0993	-0.0558	-0.0558	-0.1160	-0.0533	-0.0533	-0.1871*
con12	-0.3262*	0.2096*	0.2096*	0.1474	0.2642*	0.2642*	0.1105

	so_dis~e	so_score	q_so_i~x	con1	capita~d	con10_1	con12
so_disclos~e	1.0000						
so_score	1.0000*	1.0000					
q_so_index	0.8414*	0.8414*	1.0000				
con1	-0.0347	-0.0347	-0.1122	1.0000			
capital_ex~d	-0.1064	-0.1064	0.1111	-0.3381*	1.0000		
con10_1	-0.0635	-0.0635	-0.0930	-0.1010	0.0478	1.0000	
con12	0.2307*	0.2307*	-0.0271	-0.1264	-0.1488*	0.0891	1.0000

STATA data elaboration.

Sales Growth and Tobin's Q

In the following tables (**Table 18** and **Table 19**), we can notice that Sales Growth variable is the only dependent variable with a significative correlation with sustainability Quality Index. In this case, there is a significant negative correlation between EN Quality Index and the specific dependent variable. This means that, when there is a positive variation of that Quality Index, there will be an opposite variation of the dependent variables. Sales Growth and Tobin's Q are both the only dependent variables of these research with no-correlation with any other disclosure index. Moreover, Tobin's Q has no-correlation with all sustainability independent variables.

The significant correlated control variables for Sales Growth are four: CON1, CON12, CON16 and CON18, whereas for Tobin's Q are Debt to Equity and CON4. All of theme were utilised for the following panel regression analysis.

Table 18: Correlation analysis of variables related to Sales Growth.

	sales_~h	ec_dis~e	ec_score	q_ec_i~x	en_dis~e	en_score	q_en_i~x
sales_growth	1.0000						
ec_discosure	-0.1163	1.0000					
ec_score	-0.1163	1.0000*	1.0000				
q_ec_index	0.0451	0.6022*	0.6022*	1.0000			
en_disclos~e	-0.0880	0.9021*	0.9021*	0.4588*	1.0000		
en_score	-0.0880	0.9021*	0.9021*	0.4588*	1.0000*	1.0000	
q_en_index	-0.1922*	0.3115*	0.3115*	0.1734*	0.5135*	0.5135*	1.0000
so_disclos~e	-0.0997	0.9016*	0.9016*	0.5008*	0.9222*	0.9222*	0.3702*
so_score	-0.0997	0.9016*	0.9016*	0.5008*	0.9222*	0.9222*	0.3702*
q_so_index	-0.1195	0.6457*	0.6457*	0.4892*	0.7529*	0.7529*	0.3293*
con1	-0.1874*	0.1119	0.1119	0.0665	0.0755	0.0755	0.1690*
con12	0.1895*	0.2096*	0.2096*	0.1474	0.2642*	0.2642*	0.1105
con16	0.2880*	-0.0927	-0.0927	-0.0261	-0.0521	-0.0521	-0.1396
con17	0.0913	-0.0448	-0.0448	-0.0582	-0.0094	-0.0094	0.0191
con18	-0.2444*	0.1471*	0.1471*	0.1544	0.0243	0.0243	0.0092
con19	0.0569	-0.0173	-0.0173	0.0530	0.0310	0.0310	-0.0539

	so_dis~e	so_score	q_so_i~x	con1	con12	con16	con17
so_disclos~e	1.0000						
so_score	1.0000*	1.0000					
q_so_index	0.8414*	0.8414*	1.0000				
con1	-0.0347	-0.0347	-0.1122	1.0000			
con12	0.2307*	0.2307*	-0.0271	-0.1264	1.0000		
con16	-0.0860	-0.0860	-0.0272	-0.0359	0.2793*	1.0000	
con17	0.0243	0.0243	0.0429	0.0256	0.0575	0.0429	1.0000
con18	0.1172	0.1172	0.1353	0.0408	-0.3377*	-0.2626*	-0.0216
con19	0.0010	0.0010	-0.0166	-0.0318	0.2072*	0.0779	-0.0417

STATA data elaboration.

Table 19: Correlation analysis of variables related to Tobin's Q.

	Tobin	ec_dis~e	ec_score	q_ec_i~x	en_dis~e	en_score	q_en_i~x
Tobin	1.0000						
ec_discosure	-0.0488	1.0000					
ec_score	-0.0488	1.0000*	1.0000				
q_ec_index	-0.0996	0.6022*	0.6022*	1.0000			
en_disclos~e	-0.0548	0.9021*	0.9021*	0.4588*	1.0000		
en_score	-0.0548	0.9021*	0.9021*	0.4588*	1.0000*	1.0000	
q_en_index	0.0148	0.3115*	0.3115*	0.1734*	0.5135*	0.5135*	1.0000
so_disclos~e	-0.0481	0.9016*	0.9016*	0.5008*	0.9222*	0.9222*	0.3702*
so_score	-0.0481	0.9016*	0.9016*	0.5008*	0.9222*	0.9222*	0.3702*
q_so_index	-0.0820	0.6457*	0.6457*	0.4892*	0.7529*	0.7529*	0.3293*
net_debt_t~y	0.5879*	-0.1112	-0.1112	-0.1321	-0.1412*	-0.1412*	-0.1035
con1	-0.0901	0.1119	0.1119	0.0665	0.0755	0.0755	0.1690*
con3	0.0310	-0.1163	-0.1163	0.0451	-0.0880	-0.0880	-0.1922*
con4	-0.1894*	-0.1264	-0.1264	-0.1411	-0.1000	-0.1000	0.1243
con5	0.0207	0.0637	0.0637	0.0838	-0.0082	-0.0082	-0.0164

	so_dis~e	so_score	q_so_i~x	net_de~y	con1	con3	con4
so_disclos~e	1.0000						
so_score	1.0000*	1.0000					
q_so_index	0.8414*	0.8414*	1.0000				
net_debt_t~y	-0.1324	-0.1324	-0.0982	1.0000			
con1	-0.0347	-0.0347	-0.1122	0.1674*	1.0000		
con3	-0.0997	-0.0997	-0.1195	-0.0029	-0.1874*	1.0000	
con4	-0.1119	-0.1119	0.0281	0.3755*	0.2769*	-0.1157	1.0000
con5	-0.0175	-0.0175	0.0242	0.0173	0.2519*	-0.4035*	-0.0010

STATA data elaboration.

4.4.3 Panel Regression Analysis

Considering most of the previous literature, we expected to find a positive impact of sustainability information on corporate financial performance of reporting companies.
However, adopting ROE and Debt to Equity Ratio as dependent variables we do not find any statistically significant variables: in both cases, no sustainability indexes (Disclosure, Score and Quality Index) have an impact on these two ratios. In order to a clear exposition of the relevant research findings, only the significant analysis will be expose throughout this paragraph.
The first significant result is found by investigating the non-financial information impacts on ROA (**Table 20**): as table data display, there is a combined impact of EC Score and SO Score variables on the Return on Assets. It is only a combined impact because, including only EC Score variable in the panel regression analysis, there is no relevant impact on companies' ROA (**Table 20, Model 4**).
The control variable CON11 is dropped in order to extend the number of companies for the panel regression analysis: in the **Model 1**, it is displayed that only 10 companies from my samples are included in the panel regression analysis if CON11 is included as control variable, instead of 44 companies. In this way, with more companies the reliability of the panel regression analysis is improved.
The combined effect of EC and SO Score variables on ROA induces EC Score to have a negative impact on ROA: this result is surprising and a possible reason is that a high number of economic indexes are observed by stakeholders as a companies' necessity for economic result explanation.
At the same time, the Quality Indexes have not any impacts on ROA ratio: thus, the prevalence of positive or negative information does not affect the companies' Return on Assets (**Table 20, Model 5** and **6**).
Another significant results was found in the panel regression analysis of Sales Growth Ratio (**Table 21**). This financial variable is not affected by the quantity of sustainability indexes (Disclosure and Score) but only by the Quality Indexes: in particular, the EN Quality Index has a negative impact on the company's sales growth (**Table 21**, **Model 4**), whereas the other two indexes have not any sort of impacts. This effect is quite understandable: today consumers are very careful about all matters related to pollution and processes with negative impact on nature and, if a company has a negative performance in the environmental disclosure (high emission of GHG, no attention to

natural biodiversity, etc), it could be boycotted by some customers, reducing its sales or not achieving the sales targets.

The control variable CON18 is dropped because there are not sufficient data to run this variable in the panel regression analysis.

The last interesting finding of this analysis is related to the Tobin's Q. The Tobin's Q is affected not only by the combined impact of EN and SO Score variables (**Table 22**, **Model 3**), but also by the singular effect of EN Score variable (**Table 22**, **Model 4**).

While the SO Score variable has a positive impact on Tobin's Q, EN Score variable has a negative impact in both cases on this corporate financial performance indicator. The positive effect of the standardised number of social indexes included in the sustainability report could be due to the increase of companies' market value: spreading information about social structure and policy of a company can reveal corporate information that shows to stakeholders and to the market that corporate items and potentialities are not included in the corporate financial statements (in the equity book value).

On the other hand, EN Score variable has the opposite effect (negative one): probably, it is due to the reduction of information asymmetry (thanks to more information coming from environmental indexes) that increases the perception of business risk of the reporting company. It is a possible reason because EN Score variable is related to relevant information about business risk that nowadays is more and more affected by environmental matters.

Indeed, this effect of EN Score variable is mitigated by the Quality Index associated (EN Quality Index). As we can see in the **Model 7** (**Table 22**), the negative impact of EN Score variable is counterbalanced by the positive effect of its Quality Index. This means that, if the number of environmental information affects negatively the corporate market value by increasing the business risk perceived by stakeholders, at the same time the prevalence of good environmental information and data can reassure people, rising the market value of the reporting company.

Observations for Future Researches

This analysis can be improved with some further expedients.

Firstly, after the identification of any sort of impact of global sustainability indexes (Disclosure, Score and Quality Index by category) on the financial ones, it could be

interesting to analyse in deep which GRI sustainability indexes have more impacts on the corporate financial indicators and, if their marks (good, neutral and bad) can have any sort of influence on their impacts. Indeed, there could be some sustainability indexes that have much more weight in affecting the corporate financial results than others and, separating these ones from not relevant sustainability indexes, it can be found stronger relationships and the regression errors could be reduced. For this reasons some global sustainability indexes used in this research resulted not having any impact on some corporate financial performance indicators.

Another interesting concept to develop this research is to eliminate the "*neutral*" mark in order to enlarge the quality data sample: the researcher has to evaluate singularly each index with the "*neutral*" mark in order to change it into a "*positive*" or "*negative*" one, basing his consideration on the previous year corporate data, hidden corporate information and his own experience.

Table 20: Panel regression analysis with ROA as dependent variable.

	Model1	*Model2*	*Model3*	*Model4*	*Model5*	*Model6*
VARIABLES	***return_on_asset***	***return_on_asset***	***return_on_asset***	***return_on_asset***	***return_on_asset***	***return_on_asset***
ec_score	**-1.65**	**-3.354**	**-3.801***	**-0.887**	**-2.551**	**-2.388**
	(5.8860)	(2.4910)	(2.2920)	(1.2180)	(2.7490)	(2.6260)
en_score	1.266	-1.411				
	(-7.287)	(3.0400)				
so_score	**-2.197**	**5.566**	**4.639**		**3.244**	**1.153**
	(8.8670)	(3.6920)	(3.0970)		(4.2290)	(3.3270)
net_debt_to_shrhldr_eqty	0.00258	0.00227**	0.00228**	0.00222**	-0.000755	-0.00071
	(.0031)	(.0011)	(.0011)	(.0011)	(.0012)	(.0012)
con3	-0.014	0.0226*	0.0228*	0.0219*	0.0543***	0.0546***
	(.0318)	(.0124)	(.0124)	(.0124)	(.0205)	(.0204)
con4	-36.26*	-29.32***	-29.79***	-28.89***	-25.36***	-26.89***
	(19.6700)	(7.1680)	(7.0810)	(7.0820)	(8.0790)	(7.8650)
con11	-35.72					
	(40.4300)					
q_ec_index					8.09	7.498
					(5.0190)	(4.9380)
q_so_index					-8.898	
					(10.500)	
Constant	21.90**	12.99***	13.01***	13.01***	12.98**	9.120***
	(8.7230)	(1.7370)	(1.7320)	(1.7390)	(5.9950)	(3.3330)
Observations	48	210	210	210	147	148
Number of ticker_code	**10**	**44**	**44**	**44**	**43**	**43**
R-squared	0.139	0.13	0.129	0.117	0.199	0.193
Standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1						

STATA data elaboration (see Notes page 153).

NOTES (tables 20, 21 & 22):

1) ***ec_score:*** *total number of EC indexes disclosed/total number of GRI EC indexes;*
2) ***en_score:*** *total number of EN indexes disclosed/total number of GRI EN indexes;*
3) ***so_score:*** *total number of SO indexes disclosed/total number of GRI SO indexes;*
4) ***q_ec_index:*** *(EC Real Value – EC min)/(EC max – EC min);*
5) ***q_en_index:*** *(EN Real Value – EN min)/(EN max – EN min);*
6) ***q_so_index:*** *(SO Real Value – SO min)/(SO max – SO min);*
7) ***con1:*** *calculated as the log of the company's assets;*
8) ***con3:*** *calculated as percentage change in sales with respect to previous year's sales volume;*
9) ***con4:*** *calculated as the ratio of firm's debt to total assets;*
10) ***con5:*** *calculated by dividing capital expenditures by sales;*
11) ***con11:*** *calculated as advertising expenses/sales;*
12) ***con12:*** *calculated as operating income/total assets & net income/total assets;*
13) ***con16:*** *percentage change in total assets over five year period;*
14) ***con18:*** *dummy variable. It is equal to 1 the after-tax cost of debt exceeds the ratio of net profits to market value of equity capital;*
15) ***net_debt_to_shrhldr_eqty:*** *net debt/shareholder equity;*
16) ***return_on_assets:*** *company's annual earnings/total assets;*
17) ***sales_growth:*** *variation of company's total sales compared to the previous year as percentage;*
18) ***Tobin's Q:*** *enterprise market value/book value.*

Table 21: Panel regression analysis with Sales Growth as dependent variable.

	Model1	***Model2***	***Model3***	***Model4***
VARIABLES	***sales_growth***	***sales_growth***	***sales_growth***	***sales_growth***
q_ec_index	32.96	32.96	28.74	
	(22.1800)	(22.1800)	(21.6300)	
q_en_index	**-57.98****	**-57.98****	**-59.65****	**-61.85****
	(24.4500)	(24.4500)	(24.3500)	(24.3900)
q_so_index	-31.56	-31.56		
	(35.7800)	(35.7800)		
con1	60.56***	60.56***	58.84***	62.16***
	(18.8300)	(18.8300)	(18.7100)	(18.6100)
con12	1.367***	1.367***	1.411***	1.532***
	(.4350)	(.4350)	(.4310)	(.4230)
con16	-0.151*	-0.151*	-0.151*	-0.169*
	(.0905)	(.0905)	(.0904)	(.0898)
con18	0			
	0			
Constant	-264.5***	-264.5***	-271.7***	-269.1***
	(94.8900)	(94.8900)	(94.4300)	(94.7600)
Observations	149	149	149	149
Number of ticker_code	43	43	43	43
R-squared	0.236	0.236	0.23	0.217

Standard errors in parentheses

****** p<0.01, ** p<0.05, * p<0.1***

STATA data elaboration (see Notes page 153).

Table 22: Panel regression analysis with Tobin's Q as dependent variable.

	Model1	*Model2*	*Model3*	*Model4*	*Model5*	*Model6*	*Model7*
VARIABLES	*Tobin's Q*	*Tobin's Q*	*Tobin's Q*	*Tobin's Q*	*Tobin's Q*	*Tobin's Q*	*Tobin's Q*
ec_score	-0.0494	0.00649					
	(.8400)	(.8500)					
en_score	**-1.892***	**-2.866*****	**-2.863*****	**-0.978****		**-3.938*****	**-3.089*****
	(1.0450)	(1.0650)	(.9880)	(.4930)		(1.2580)	(.9110)
so_score	**1.8**	**2.544***	**2.549****		**-0.381**	**1.591**	
	(1.2620)	(1.2930)	(1.1630)		(.5860)	(1.4650)	
net_debt_to_shrhldr_eqty	0.00618***	0.00663***	0.00663***	0.00664***	0.00664***	0.00656***	0.00657***
	(.0004)	(.0003)	(.0003)	(.0003)	(.0003)	(.0004)	(.0004)
con1	-4.552***						
	(1.2060)						
con3	0.00229						
	(.0046)						
con4	-11.07***	-13.12***	-13.12***	-13.57***	-13.72***	-12.81***	-13.39***
	(2.5640)	(2.4400)	(2.4260)	(2.4450)	(2.4710)	(2.8840)	(2.7940)
con5	1.382						
	(1.4100)						
q_en_index						**3.658***	**3.819****
						(1.9060)	(1.8880)
q_so_index						-1.854	
						(3.6690)	
Constant	27.47***	5.674***	5.675***	5.826***	5.593***	5.844**	4.969***
	(5.7020)	(.6080)	(.6020)	(.6050)	(.6150)	(2.2870)	(1.3260)
Observations	206	208	208	208	208	147	147
Number of ticker_code	43	43	43	43	43	43	43
R-squared	0.687	0.737	0.737	0.73	0.724	.7310	0.728
*Standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1*							

STATA data elaboration (see Notes page 153).

CONCLUSION

The results of this research point out that there are different impacts of non-financial information included in the GRI sustainability reports according to the corporate financial performance and indicators that are taken in consideration.

At the same time, also the disclosure of non-financial information and its quality (in this research, I have talked about "*marks*") have different effects on corporate financial performances, with different impacts and relationships.

From these findings, I can state that the simple disclosure of non-financial information is not so relevant to influence (positively or negatively) the financial items related to the companies' financial statements: only ROA is negatively affected by the SO Score variable that is related to the total number of economic indexes included in the GRI sustainability reporting.

However, with the Tobin's Q, which considers the market value of reporting companies, the quantitative sustainability indexes (EN and SO Score variable) have a relevant impact on this corporate financial performance index because they affect the enterprise value perceived by shareholders and stakeholders, reducing the asymmetry gap between insiders and others.

On the other hand, the quality of non-financial information (specially EN Quality Index, related to environmental information) has a primary role in the influence of corporate financial performance, both market and book indicators. This is clear in the panel regression analysis with Sales Growth as dependent variable and also in the other one with the Tobin's Q. This fact means that current environmental information and companies' policies to reduce their impact on nature are crucial for the value creation and a better business performance.

For all these reasons, I would like to suggest companies to undertake the sustainability way and its disclosure, following GRI Guidelines. In this way they can reduce the risk to get a market value not in line with the fair value of the firm since, through sustainability reporting, the information asymmetry will decrease. According to these findings, I cannot state with certainty that the disclosure itself is useful for a better business performance but a company with good sustainability performance could have relevant enhancement in its business performance (see consideration about Sales Growth).

In conclusion, I would like in order to give some suggestions to GRI Committee to improve the usefulness of its sustainability report. Firstly, I think that the GRI should consider not only the quantity of the sustainability reporting indexes disclosed by a company for the sustainability reporting evaluation (Level A, B or C) but also the quality of the information included. This means that a company with more positive information in its sustainability report should receive a better mark than a comparable company with more but worse information. In addition, the GRI should control not only if a company gives some information about a specific index but also the completeness of the index information. It is not rare to find available indexes partially completed, with missing information or with the total absence of required information that the company is not able to disclose.

These evidences were revealed during my analysis of GRI sustainability reports from the research sample.

REFERENCES

Alam S., Kabir N. (2013), "Economic Growth and Environmental Sustainability: Empirical Evidence from East and South-East Asia", *International Journal of Economics and Finance* **5**(2):86-97.

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

Aras G., Crowther D. (2009), "Corporate Sustainability Reporting: A Study in Disingenuity?", *Journal of Business Ethics* **87**:279-288.

Baldwin E., Curley M. (2007), *Managing IT innovation for business value, IT best practice series*, Intel Press, Santa Clara.

Bell, D. & Schwartzberg, P. (2000), "Advancing Community Sustainable Development in the Ontario Region: The Role of the Government of Canada", for *Environment Canada*, Central Region, Toronto: York University.

Berns M., Townend A. (2009), "The business of Sustainability: imperatives, advantages, and actions", The Boston Consulting Group report.

Berthetot S., Coulmont M., Serret V. (2012), "Do investors Value Sustainability Reports? A Canadian Study", *Corporate Social Responsibility and environment Management,* Wiley Online Library.

Bertinetti G. (1996), *Comunicazione finanziaria aziendale e teoria della finanza,* EGEA, Milan.

Bleischwitzv R., Langrock T. (2003), "Governance of Sustainable Development: C-Evolution of corporate and political strategies", revised draft of the *IHDP-Conference of Berlin*.

Bonini S., Gorner S. (2011), "The business of sustainability: McKinsey Global Survey results", McKinsey&Company (last updated: October 2011).
http://www.mckinsey.com/insights/energy_resources_materials/the_business_of_sustainability_mckinsey_global_survey_results

Bowen H.R. (1953), *Social responsibilities of the businessman*, Harper & Row, New York.

Busco C. Et al. (2014), *Integrated reporting: Concepts and Cases that Redefine Corporate Accountability*, Springer International Publishing, Switzerland.

Case P. (2012), "Managing Sustainability: risks and opportunities in the financial services sector", PriceWaterhouseCoopers UK (last updated: May 2012).
http://www.pwc.com/sustainability

Cheung A.W.K. (2011), "Do Stock Investors Value Corporate Sustainability? Evidence from an Event Study", *Journal of Business Ethics* **99**:145-165.

Curtis F., Warring K. (2008), “ICNG Statement and Guidance on Non-financial Business Reporting”, *International Corporate Governance Network* (ICGN).

Dempsey N., Bramley G., Power S., Brown C. (2011), “The social dimension of sustainable development: defining urban social sustainability”, *Sustain Dev* **19**:289-300.

Devinney T.M. (2009), “Is the Social Responsibility Corporation a Myth? The Good, the Bad, and the Ugly of Corporate Social Responsibility”, *the Academy of Management Perspective* **May**:44-56.

Dixon J.A., Fallon L.A. (1989), “The concept of Sustainability: origins, extensions and usefulness for policy”, *Soc. Natur Resour* **2**:73-84.

Drucker P.F. (1985), *Innovation and entrepreneurship*, Harper Trade, New York.

Dyllick T., Hockerts K. (2002), “Beyond the case for corporate sustainability”, 2002, *Bus Strat Environ* **11**:130-141.

Eccles R.G., Cheng B., Saltzman D. (2010), *The Landscape of Integrated Reporting: reflections and next steps,* Harvard Business School, Massachusetts.

Eccles R.G., Krzus M.P. (2012), *Report integrato: rendicontazione integrata per una strategia sostenibile,* Philanthropy, Forlì.

Fieseler C. (2011), “On the corporate social responsibility perceptions of equity analysts”, *Business Ethics: A European Review* **20**:131-147.

Financial Times (2014), “Definition of business sustainability”.
http://lexicon.ft.com/term?term=business-sustainability

Fogelberg T. Et al. (2013), ”Carrots and Sticks: Sustainability reporting policies worldwide – today’s best practises, tomorrow’s trends”, *United Nations Environment Programme (UNEP),* 2013 Edition.

Friedman M. (1970), “The social responsibility of business is to increase its profits”, *New York Times Magazine*:1-6.

Guidara F. (2011), *La comunicazione finanziaria: come dialogare e convincere il mercato,* EGEA, Milan.

Hahn R., Lulfs R. (2013), “Legitimizing Negative Aspects in GRI-Oriented Sustainability Reporting: A Qualitative Analysis of Corporate Disclosure Strategies”, Springer Science, *J Bus Ethics.*

Hannah J. (2010), “Sustainability reporting matters: what are national governments going about it?”, *the Association of Chartered Certified Accountant (ACCA),* London.

Hess D. (2007), “Social reporting and new governance regulation: the prospects of achieving corporate accountability through transparency”, *Business Ethics Quarterly* **17**(3):453-476.

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

Horvathova E. (2010), "Does environmental performance affect financial performance? A meta-analysis", *Ecological Economics* **70**:52-59.

Hueting R., Reijnders L. (1998), "Sustainability is an objective concept", *Ecological Economics* **27**(2):139-147.

Ioannou I., Serafeim G. (2012), "The Consequences of Mandatory Corporate Sustainability Reporting", *Harvard Business School Press*:1-44.

Ioannou I., Serafeim G. (2014), "The Consequences of Mandatory Corporate Sustainability Reporting: Evidence from Four Countries", *Harvard Business School Press*:11-100.

Jones S. Et al. (2007), "An empirical examination of the market returns and financial performance of entities engaged in sustainability reporting", *Australian Accounting Review* **17**(41):78-87.

Kent P., Monem R. (2008), "What drivers TBL reporting: good governance or threat of legitimacy?", *ePublications* of Bond University:1-35.

Kidd C.V. (1992), "The evolution of Sustainability", *J Agr Environ Ethic* **5**:1-26.

Kolk A. (2006), "Sustainability, Accountability and Corporate Governance: Exploring Multinationals' Reporting Practises", *Wiley InterScience Bus. Strat. Env.* **18**:1-15.

Liesen A., Figge F., Hahn T. (2013), "net Present Sustainable Value: A New Approach to Sustainable Investment Appraisal", *Strat. Change* **22**:175-189.

Marimon F. et al. (2012), "The worldwide diffusion of global reporting initiative: what is the point?", *Journal of Cleaner Production* **33**:132-144.

Marshall J.D., Toffel M.W (2005)., "Framing the Elusive Concept of Sustainability: A Sustainability Hierarchy", *Environmental Science & Technology* **39**(3):673-682.

Molina-Azorin J.F. et al. (2009), "Green management and financial performance: a literature review", *Management Decision* (7)**47**:1080-1100.

Molnar D., Morgan A.J. (2001), "Defining Sustainability, Sustainable Development and Sustainable Communities: A working paper for the Sustainable Toronto Project", David V. J. Bell (eds.), for *The Sustainable Toronto Project*.

Osburg T., SCHmidpeter R. (2013), *Social Innovation: Solutions for a Sustainable Future*, Springer, London.

Petcu D, Gherhes V., Suciu S. (2010), " Corporate Social Responsibility – A Conceptual Approach", *JEL* **M14**:844-848.

Piermattei L., Ventoruzzo F. (2011), "Dall'Integrated Reporting all'Integrated Management", *Harvard Business Review Italia* **11**:63-66.

Preston L. E., O'Bannon D. P. (1997), "The corporate social-financial performance relationship", *Business and Society* **36**(4):419-429.

Rachel England (2011), "What does it mean to be a sustainable business?", The Times (last updated November 15 2011).
http://www.thetimes.co.uk/tto/public/greengrowth/article3227202.ece

Reimsbach D., Hahn R. (2013), "The Effects of Negative Incidents in Sustainability: Reporting on Investors' Judgement – an Experimental Study of Third-party Versus Self-disclosure in the Realm of Sustainable Development", *Bus. Strat. Env.*:1-19.

Remigijus C., Ramanauskiene J., Bronislovas M. (2009), "The concept of sustainable development and its use for sustainability scenarios", *Engineering Economics* **2**:28-37.

Schadewitz H., Niskala M. (2010), "Communication via Responsibility Reporting and its Effect on Firm Value in Finland", *Corp. Soc. Responsib. Environ. Mgmt.* **17**:96-106.

Schumpeter J.A. (1982), *The theory of economic development: an injury into profits, capital, credit, interest, and business cycle*, Transaction Publishers, New Jersey.

Skouloudis A., Evangelinos K. (2012), "A research design for mapping national CSR terrains", *International Journal of Sustainable Development &World Ecology* **19**(2):130-143.

Smith A. (1776), *The wealth of Nations*, CreateSpace Independent Publishing Platform.

Srivastava S.K. (2007), "*Green supply-chain management: A state-of-the-art literature review*", *International Journal of Management Reviews* **9**(1):53-80.

Starbuck S., LeBlanc B., Bramhall J. (2014), "Value of a Sustainability Reporting", EY and Boston College Center.
http://www.ey.com/Publication/vwLUAssets/EY_Value_of_sustainability_reporting/$FILE/EY-Value-of-Sustainability-Reporting.pdf

Stephen G.R. (2009), "Fair value accounting: understanding the issues raised by the credit crunch", for the *Council of Institutional investors*.

Stubbs W., Higgins C., Milne M. (2013) "Why Do Companies Not Produce Sustainability Reports?", *Bus. Strat. Env.* **22**:456-470.

Sudhir, A. and Sen, A. (2000), "Human Development and Economic Sustainability", *World Development* **28**(12): 2029-2049.

Tilt C.A. (1994), "The Influence of External Pressure Groups on Corporate Social Disclosure", *Accounting Auditing & Accountability Journal* **7**(4):47-72.

Tregidga H., Milne M., Lehman G. (2012), "Analysing the quality, meaning and accountability of organisational reporting and communication", *Accounting Forum* **36**:223-230.

United Nations (2013), "Best practise guidance for policymakers and stock exchanges on sustainability reporting initiatives", *United Nations Conference on Trade and Development.*

United States Securities and Exchange Commission (SEC, 1 August 2008), "Final Report of the Advisory Committee on Improvements to Financial Reporting".

Various authors (2012), "Enterprise 2020 informative brochure", CSR Europe, Brussels. http://www.csreurope.org/sites/default/files/Enterprise%202020%20Strategy.pdf

Werbach A. (2009), "When sustainability means more than 'green'", McKinsey&Company (last updated: July 2009). http://www.mckinsey.com/insights/strategy/when_sustainability_means_more_tha_green

Wilson M. (2003), "Corporate sustainability: What is it and where does it come from?", *Ivey Business Journal* March/April:1-5.

Woodcraft S. (2012), "Social sustainability and new communities: moving from concept to practise in the UK", *Procedia – Social and Behavioural Science* **68**:29-42.