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The Relationship between Corporate Social Responsibility and Corporate Financial Performance: Empirical Evidence from Italian Listed Companies

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Acknowledgments

In my life, I have rarely felt the need to publicly express my thankfulness. Dedications have never been part of my way of communicating gratitude. Today, I believe it is dutiful to stop and give voice to all my appreciation to the people who surround and support me every day. I hope to be able to convey what I really mean.

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There is a song which says: *"When you love someone, you make room."*
I sincerely hope these simple words of mine reach your hearts. You all represent my safe place, my messy little room.

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Introduction

Nowadays, sustainability is a major cause of concern as well as one of the most discussed topics around the globe. A multitude of organizations and individuals are continuously dealing with climate change and its effects, social justice and economic inequalities, financial downturns and health crises. Both academics and managers are debating the role of business in a period of such uncertainty and profound changes.

The phenomenon of Corporate Social Responsibility (CSR) perfectly fits the widespread discussion around environmental, social and governance themes. The last century has witnessed a large amount of research trying to frame corporate sustainability under different perspectives. Several conceptual frameworks emerged from the interrelation of theory and business case studies. Still, there is not a unique and single definition or framework that best describes CSR yet. Even though the last couple of decades have attested a profound advancement in the social responsibility practices implemented by business entities, both scholars and managers are continuously handling with a large amount of fragmented and inconclusive research, as well as competing and intricate CSR performance measuring and reporting systems.

The reasoning behind this introductory paragraph led to the creation of this dissertation. The purpose is clarifying the complex and manifold relationship between CSR and corporate financial performance, assessing an empirical research. The object of analysis is a sample of Italian companies listed on the Italian Stock Exchange. The empirical investigation revolves around the following question: is there a linear relationship between CSR, or one of its subcomponents, and corporate financial results? Two regression models are tested to assess whether the level of CSR performance has an impact on corporate financial return.

The paper is organized as follows. The first theoretical part looks at clarifying a series of aspects related to CSR and its relationship with corporate financial performance (CFP). The second empirical part performs the regression analysis and it eventually discusses the results obtained.

Specifically, chapter 1 presents an overview of corporate social responsibility. It introduces the most well-known definitions, and it describes advantages and detriments associated to the implementation of CSR initiatives. It also briefly explores the historical development of corporate sustainability and major theoretical frameworks which have emerged over the last century. Chapter 2 focuses on CSR measurement and disclosure. First, it describes corporate sustainability systems (CSSs), deepening CSR indices, rankings, and ratings, then it examines the most widespread reporting frameworks. Chapter 3 discusses the relationship between CSR performance and CFP under different perspectives. The first paragraph analyses different mathematical functions which have been used to describe the CSR-CFP relationship in previous studies. The second contains a literature review divided according to geographical areas. Advanced economies have been separated from emerging countries to comprehend whether the socio-economic background may affect the nexus between the variables under investigation. The chapter closes with a focus on the Italian market, which is very insightful as regards as the thesis continuation. Chapter 4 presents research hypotheses and methodology, as well as the linear regression models. In order to deepen the research questions, several specifications consisting of various dependent and independent variables are studied. Chapter 5 reports the econometric outcomes of correlation and regression analyses. After presenting empirical findings and the attached considerations, additional analysis seeking to expand the research are discussed. At the end of the chapter, a dedicated section closes with limitations and suggestions for future empirical works. Eventually, the conclusion of this study can be found.

Chapter 1

Corporate Social Responsibility Overview

1.1 CSR definition

In the last decades, corporate social responsibility (CSR) has become a relevant concept in the business world. Issues related to environmental, social, and governance (ESG) dimensions have gradually increased their influence and impact on business decisions. Improvements in measuring and disclosing corporate sustainability could help investors and other categories of stakeholders better understand how firms will respond to the contemporary, dynamic and rapidly evolving landscape.

This section compares several definitions of corporate social responsibility in order to appreciate how different authors perceive and interpret what CSR actually is.

The idea at the core of this broad concept is that corporate social responsibility is an evolving framework which changes according to several dimensions like the historical period, the research field, the reference theory, and the business environment in which firms operate.

Presently, there is ambiguity as to how CSR should be defined, both in the academic and the corporate world. According to Van Marrewijk (2003), there is a profusion of definitions which are often biased toward a specific interest. This phenomenon prevents the development and implementation of a universally accepted framework.

The predominant idea behind CSR is that business entities have some kinds of responsibilities and commitment toward the society where they operate that goes beyond the profitability goal (Branco and Rodrigues, 2006). Generally, CSR is conceptualized as the way a company integrates, in an accountable and transparent way, environmental, social, and economic issues into its strategy, culture, and operations. The main purpose is to improving business practices while providing benefits for the society as a whole (Hohnen and Potts, 2007).

In 2008, Dahlsrud (2008) conducted a content analysis finding 37 diverse definitions from 27 authors. Since then, many other scholars and international institutions provided additional interpretations to this conceptual framework. Table 1 includes a series of complementary but diverse definitions related to the wide concept of corporate social responsibility. The notions proposed in Table 1 represent a small set of the existing CSR formulations.

Table 1 – CSR concepts and definitions.

Author	Year	CSR Definition
Bowen	1953	"Businessmen's obligation 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 society."
Davis	1960	"Businessmen's decisions and actions taken for reasons at least partly beyond the firms direct economic or technical interest."
Carroll	1979	"It involves the conduct of a business so that is economically profitable, law abiding, ethical and social supportive."
Wood	1991	"A business organization's configuration of principles of social responsibility, processes of social responsiveness, and policies, programs, and observable outcomes as they relate to the firm's societal relationship."
World Business Council for Sustainable Development	2000	"The continuing commitment by businesses to behave ethically and contribute to economic development while improving the quality of life of the workforce, their families as well as the local community and society at large."
McWilliams	2001	"Actions that appear to further some social good, beyond the interests of the firm and that which is required by law."
Mohr et al.	2001	"A company's commitment to minimizing or eliminating any harmful effects and maximizing its long run beneficial impact on society."
Carroll	2008	"The commitments of business firms to seek those strategies, to settle on those decisions, or to pursue those lines of activity that are according to societal values and expectations."
Hediger	2010	"Programmes in which companies not only seek to increase profits but also contribute to the well-being of stakeholders. "
European Commission	2014	"The company's responsibility for its impact on the environment and society."

Source: created by the author.

As has already emerged, corporate social responsibility cannot be explained with a single statement, since it is a multifaceted phenomenon. The main reason behind its complexity is represented by the intrinsic link between CSR and the society. Companies are required to act on different aspects so as to increasing their social responsibility (Halme and Laurila, 2009).

Despite the multitude of notions, this dissertation will use as reference the definition provided by Carroll, one of the most important authors in this field. According to his belief, "Corporate social responsibility involves the conduct of a business so that is economically profitable, law abiding, ethical and social supportive" (Carroll, 1979, p.499). Thanks to a later publication, the author referred to CSR as "The commitments of business firms to seek those strategies, to settle on those decisions, or to pursue those lines of activity that are according to societal values and expectations" (Carroll, 2008, p.1).

These concise statements include all the main aspects that every modern business should contemplate in order to be considered a responsible organisation. Quoting Han et al. (2019), the description of CSR given by Carroll is still the most widely-acknowledged in the literature.

1.1.1 Interrelationships between theory, research, and practice

As it was for the definition, the classification of CSR dimensions is quite vague, and it depends on several factors. Crowther and Aras (2008) identified a model based on three basic principles, which embrace the whole set of CSR activities. These are: sustainability, accountability, transparency. Another interesting framework is the triple bottom line, synthesizable in 3Ps: profit, people, planet. This theory was developed by Elkington (1994), and it will be fully described in chapter 1.4.4.

According to Geva (2008, p.2), "Three CSR models are recognized, represented graphically as a pyramid, intersecting circles, and concentric circles." A comparative analysis of their underlying assumptions, conceptual structures, and managerial implications might be helpful in clarifying ambiguity related to CSR.

The first model is Carroll's CSR pyramid (1979). He realized a fourfold framework to identify the entire range of obligations that society expects from corporations. This configuration embodies "The economic, legal, ethical, and discretionary expectations that society has of organizations at a given point in time" (Carroll, 1979, p.499).

Figure 1 depicts the decomposition of the overall social responsibility into four different levels, reflecting its categorization in a more exhaustive way. According to Carroll, even though all of these types of responsibilities have always existed, business history suggests an initial emphasis on the economic and legal aspects, followed by a later concern for ethical and philanthropic issues.

Figure 1 – Carroll's CSR pyramid
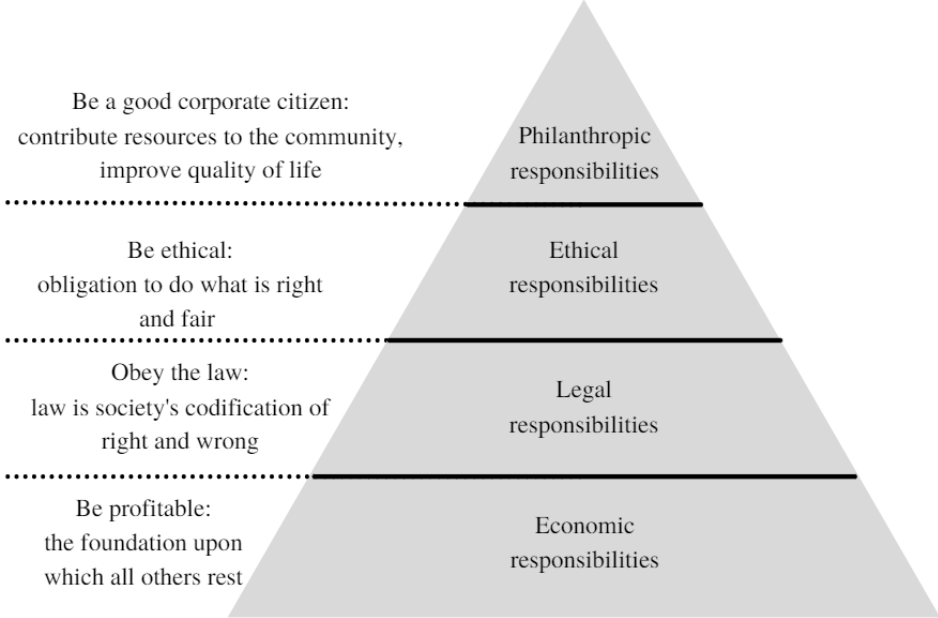
Source: adaptation from Carroll, A. B. (1979).

Before anything else, companies are business entities. *Economic responsibility* is the first and foremost responsibility. Companies' main goal is to produce goods and services in order to sell them and to realize a profit. All other business roles and activities are based on this vital and crucial assumption.

The *legal responsibilities* framework assumes that society expects firms to accomplish their economic mission respecting laws and regulations. However, there are further activities and behaviors that are not necessarily codified into the legislative dimension.

Ethical responsibilities are the most difficult for companies to deal with. Society and its members have expectations from businesses over and above regulatory requirements. In recent years, a continuous debate regarding ethical responsibilities has clearly stressed this fundamental aspect of CSR.

Discretionary or philanthropic responsibilities are left to individual choice. Society has not a clear-cut message: these concerns are at business' discretion. The essence of this

category is that if a company doesn't contribute to discretionary activities, it is not believed unethical per se. Examples of voluntary actions are philanthropic donations to the local community as well as the establishment of any kind of employees' facilities (Carroll, 1979).

This pyramidal representation of social responsibilities draws the attention upon two important considerations. First, the economic emphasis is not separated from social responsibilities. The economic assumption is at the core of each business: profitability is the foundation upon which all others rest. Second, quoting Churchill (1974, p.3), "Social responsibility is a moving target". The CSR framework designed by Carroll recognizes the possibility of shifting from a category to the next. For instance, an ethical expectation can become a legal expectation over time.

The second CSR paradigm here presented is the intersecting circles model. It differs from Carroll's pyramid for two main reasons. It conceptualizes the possibility of inter-relations between CSR dimensions, and it rejects the hierarchical structure specified by Carroll.

Figure 2 – The intersecting circles model of CSR
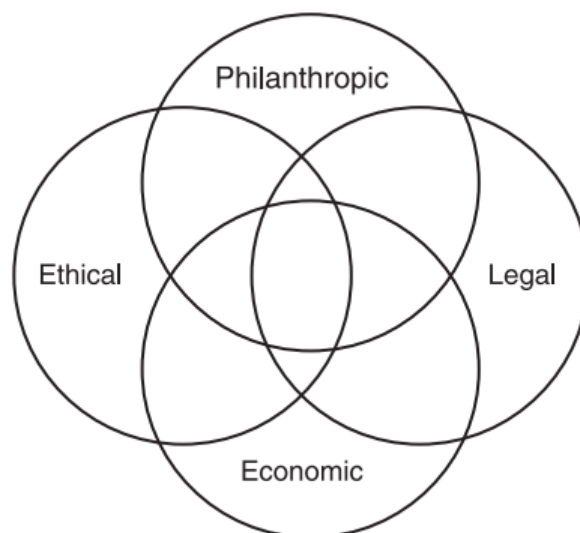
Source: Geva, A. (2008).

The IC model is based on the idea that different responsibilities are in a dynamic interaction with each other. Carroll's primary assumption regarding the supremacy of the economic dimension is questioned by this model. According to Davis (1973, p.315), "It is true that corporations are designed for business, but before anything else they are social

creations whose very existence depends on the willingness of society to endure and support them." In this context, the economic undertaking is not more important than social responsibilities of the firm.

Thanks to its interrelatedness and overlapping nature, the IC model could be useful to identify and analyse existing tensions between the different dimensions. From a managerial point of view, the most important characteristic of this model is flexibility. The role of the manager is not limited to forecast and eventually resolve existing conflicts, but to improve harmony and create occasions for beneficial partnerships (Geva, 2008). Indeed, the IC framework is almost limitless. It allows managers to draw and promote multiple responsibilities, while leaving them with no restricted decision-making principles and criteria. This permits managers to exercise their own preferences in spending firm's resources.

A further insightful CSR model has been conceived by CED[1], an American organisation of influential business leaders. In 1971, the Committee for Economic Development defined corporate social responsibility through the use of three concentric circles: the inner circle, the intermediate circle, and the outer circle (Figure 3a).

The inner circle is referred to the economic responsibility of businesses. The production of goods, the creation of jobs, and the contribution to economic growth are all functions of this. The intermediate circle integrates some social values to economic responsibility, such as the safeguard of the environment and the employees working condition. It encompasses the responsibilities to pursue the economic challenge with a sensitive awareness of social values and priorities as well as ethical norms. To conclude, the outer circle represents the willingness of the company to undertake voluntary and vigorous activities in order to promote the development of the community. Examples are actions to improve the urban liveability or to foster the development of rural areas (Nigro and Petracca, 2016). Figure 3b depicts an adaptation of the original model. It had been called the concentric circles model of CSR. The COD model differs from the original statement of CED in that, for clarity and to allow the comparison between the three CSR frameworks,

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[1] "The Committee for Economic Development (CED) is the public policy center of The Conference Board. The non-profit, nonpartisan, business-led organization delivers well-researched analysis and reasoned solutions in the nation's interest. CED Trustees are chief executive officers and key executives of leading US companies who bring their unique experience to address today's pressing policy issues. Collectively they represent 30+ industries, over a trillion dollars in revenue, and over 4 million employees." Source: www.ced.org

it includes legal responsibilities between the economic and the ethical circles. This adaptation was made necessary also to respond to the growing importance of the legal dimension (Geva, 2008).

Figure 3 – The concentric-circle models of CSR
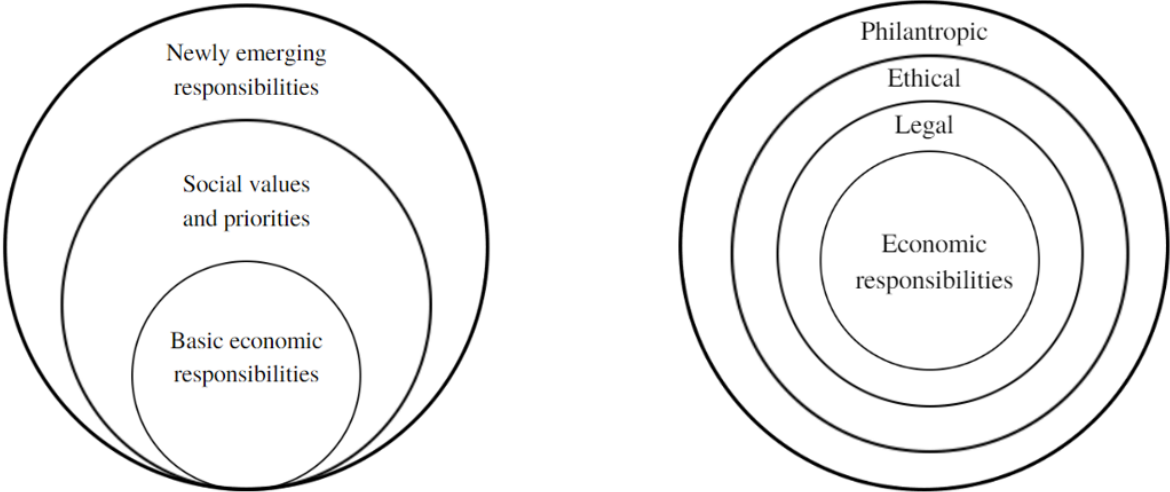
Figure 3a   Figure 3b

Source: Fig. 3a – Committee for Economic Development, (1971).
Fig. 3b – Geva, A. (2008).

This framework is similar to Carroll's pyramid because it collocates the economic function of business as its core responsibility. It is also similar to the intersecting circles model in that it underlines the interconnections among different CS responsibilities. However, there is a substantial difference regarding the definition of corporate responsibilities presented by different models. While the pyramidal scheme defines economic responsibility in terms of restricted self-interest (be profitable), the CON model describes the economic function as a mean to enhance the good of the society in its entirety (being constructively profitable). It is worth it to mention one more relevant dissimilarity. While Carroll's pyramid and the IC model are focused on the tensions between business and society, the concentric circle scheme emphasizes the interdependencies among them (Geva, 2008).

In this section, the existence of numerous models of corporate social responsibility has been ascertained. As regard the thesis continuation, CSR will be evaluated according to the ESG classification: the most prominent and globally recognized framework (Gillan et al., 2021). This popular term was initially coined in a study titled "Who cares wins", a

United Nation's initiative in partnership with the International Finance Corporation in 2004. At the time, the sustainability report was endorsed by 20 renowned financial institutions. In less than 15 years, ESG criteria have grown in popularity, advancing from a UN's CSR initiative to a global sustainability phenomenon.

ESG stands for Environmental, Social, and Governance. These three large spheres include a relevant number of both tangible and intangible factors related to sustainability and to the ethical impact of businesses. At the moment, ESG compliance represents a big deal. Major constituencies of each category are presented below, even though there is not a single ESG framework that dictates which elements shall be included into the ESG classification.

1. Environment. This pillar may include corporate climate policies as well as natural resources usage and preservation. These criteria may concern aspects like pollution, CO2 emissions, energy consumption, waste disposal, etc. Climate crisis and environmental sustainability are key terms in the modern business era. The environmental pillar also indicates how a company evaluates and manages environmental risks. Every responsible business, from SMEs to multinationals, shall envision these aspects in their missions, pursuing concrete green initiatives.

2. Social. It refers to social concerns in relation to a company's stakeholders, both internal and external. Core social themes are diversity, human rights, and consumer protection. The promotion of health and safety standard in the workplace, the company's contribution to the development of the local community are further relevant examples.

3. Corporate Governance. It includes business ethics programs, anti-competitive practices, transparency for stakeholders, anti-corruption, and law-abiding policies. Other fundamental aspects are executive compensation, employee relations and pay equity (Romanis, 2021).

1.2   Benefits and costs associated to CSR initiatives

Following the discussion on conceptual frameworks, this paragraph exhibits benefits and detriments related to CSR activities.

There are different reasons firms might decide to engage in CSR strategies: from the objective of doing something good for the society to the opportunistic intent of increasing

the overall financial return. These two behaviors, altruistic and opportunistic, represent two faces of the same coin. From one side, companies engage in 'profit sacrificing' actions. They allocate resources to ethical scopes, being aware that those capitals may not be recovered. On the other side, these social responsibility actions trigger several advantages that might ultimately boost financial performance.

In the end, many over-compliance behaviors might result in opportunistic rather than altruistic actions (Elhague, 2005). The boundary among these two aspects is extremely blurred. In some cases, the adoption of sustainable practices is guided by the systematic implementation and execution of a set of predetermined actions. Even if this "to do list" approach may seem the least expensive and the most effective, it should be avoided because the establishment of CSR practices requires a long term planning.

Nowadays, it is not rare to see companies that opportunistically leverage the hype around CSR in order to gain short term advantages. Generally, opportunistic behaviors lead to higher costs, detriment of credibility and loss of market share in the medium-long term (Tegon, 2021). This widely diffused practice has been called greenwashing: "It is the process of conveying a false impression or providing misleading information about how a company's products are more environmentally sound. Greenwashing is considered an unsubstantiated claim to deceive consumers into believing that a company's products are environmentally friendly."[2]

On the contrary, the right approach to implement responsible practices within a company is to embed sustainability in the core strategy, implementing an ad hoc business plan and evaluating the actions that could potentially lead to a sustainable competitive advantage in the long term (Tegon, 2021).

There are numerous benefits for companies engaging in CSR. Adopting a stakeholder's viewpoint, responsible and sustainable actions could favour several categories of firms' interlocutors. First, the implementation of socially responsible activities helps attracting best talents on the job market. At the same time, it increases employees' loyalty, their commitment, and retention rate (Kuo et al., 2009).

In addition, CSR improves the relationship with regulators and the community. It attracts new investors, and it increases customers' willingness to purchase. It is argued that firms

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[2] Definition of greenwashing. Source: Investopedia, www.investopedia.com/terms/g/greenwashing.asp

pursuing CSR initiatives can potentially gain a competitive advantage over competitors due to reputational enhancement and the creation of a pure and virtuous brand image (Dyck et al., 2018; Hejase et al., 2012; Juscius, 2007). Company reputation represents a fundamental intangible resource since it is very difficult to replicate.

In the long term, CSR may foster R&D activities, allocating resources to solve social issues. It also provides the opportunity for creating and developing eco-friendly new products, while changing societal expectations and needs (Dyck et al., 2018; Kuo et al., 2009).

Although some scholars disagree, all the factors hereby presented have the potential to generate higher profits and return on investments while controlling for costs and risks (Barauskaite and Streimikiene, 2020).

It is noticeable that not only the advantages but also the drawbacks of CSR engagement emerged in the scientific literature (Barauskaite and Streimikiene, 2020).

Recently, a corporate hypocrisy phenomenon has been observed. It refers to customers scepticism resulted from companies' messages and actions referred to CSR. Many consumers do not believe in advertisement campaigns in which sustainable and responsible activities are promoted (Arli et al., 2019). Corporate actions could hurt the firm's image if motives are perceived as dishonest and insincere (Yoon et al., 2006). Ascertained that it's necessary to spend more on CSR activities than on advertising, the adoption of sustainable practices requires a constant and intense interaction with stakeholders. This could increase reporting and transparency costs (Hopkins and Cowe, 2003).

Considering the social dimension of CSR, some scholars found that costs related to social initiatives should be sustained immediately but they do not produce revenues increases in the short term. For this reason, they conclude that this category of CSR activities reduce the stock price in the short run (Barauskaite, 2021; Agostinis, 2018; Hillman and Keim, 2001; Riahi-Belkaoui, 1992; Vance, 1975).

To conclude. According to Cismas et al. (2019), it is easier for a socially responsible and well-managed company assessing potential risks while improving financial results. In the meanwhile, especially in the modern era, companies that do not implement CSR actions may suffer from frauds and scandals, employees strikes, and management inconsistencies. Table 2 synthetizes benefits and drawbacks related to the implementation of socially responsible activities within a corporation.

Table 2 – CSR advantages and disadvantages.

Advantages	Disadvantages
Enhance employees' commitment	Require expenditure on social inclusion
Attract best talents in the job market	Necessitate abilities to solve social problems
Improve retention rate	Increase reporting costs
Enhance firm's reputation and its image	Require constant interaction with the society
Increase transparency	Increase transparency costs
Improve the relation with stakeholders	Require the monitor of internal activities
Facilitate access to capital	Require the report on social responsibilities
Increase customers satisfaction	Require following a human right policy
Increase business risk management	Establish large initial investments
Provide a better cost controlling	Reduce stock price in the short term
Improve relationship with regulators and society	Create consumer skepticism
Encourage and foster R&D	Create risk of greenwashing perception

Source: created by the author.

1.3 Historical development of CSR

The phenomenon of corporate social responsibility has been studied for decades. Its analysis is still in progress. As has been already extensively explained, there is no international agreed definition regarding the concept itself and its fundamental dimensions. Furthermore, the theme is extremely broad and in continuous expansion. For these reasons, it is argued that a profound historical analysis of corporate social responsibility could be valuable.

This section presents a general overview of CSR conceptual development, and it explains how CSR has impacted the management of organizations over time.
Over the last 70 years, the literature on social responsibility has undergone several changes. Starting from the research of an appropriate conceptualization of the phenomenon, it passed through the development of a managerial approach, until it became the departure point to study other related concepts, like stakeholder theory

(Carroll, 2008). Some of these themes embrace the logic behind CSR and they are quite well-matched with that.

The origins of social responsibility are traced back to the end of 1800s, when the first managerial actions to promote better working conditions took place in the most advanced economies. At the same time, entrepreneurial philanthropic initiatives began to be noticed and appreciated by the collectivity (Amatori and Colli, 2013).

However, the birth of the modern social responsibility concept is dated back to 1950s. At the beginning, the first studies were referred to social responsibility without a significant relevance on corporations. According to Carroll (1999), this is probably due to the economic context of the time, where firms didn't dominate the business sector yet.

In 1953, Howard R. Bowen published the book "Social responsibilities of businessmen". For the first time, a scholar attempted to give a definition of corporate social responsibility (see table 1). The conceptual framework developed by Bowen was based on the fundamental duties that businessmen have towards society. He argued that social responsibility is not a panacea for the entirety of business problems. Still, it contains an important truth that should govern companies in the future (Bowen, 1953). Later on, Carroll (1979) said that Bowen should be consider the father of CSR.

The investigation on corporate social responsibility increased in popularity during the '60s. Numerous definitions and conceptual frameworks were created in that period (Davis, 1960; Frederick, 1960; McGuire, 1963; Walton, 1967). These authors shared a common innovative vision of social responsibility. In those years, a breakthrough intimate relationship between the business and the community emerged while social responsibility started to be conceived as a business and entrepreneurial priority (Nigro and Petracca, 2016). Later, Murphy defined the 1960s the decade of 'awareness' for CSR (Carroll and Shabana, 2010). From that moment on, corporate responsibility started to go beyond economic and legal duties, even though concrete practices and implementation strategies weren't well outlined yet.

Corporate social responsibility began to be included in firms' strategic plans during the '70s. Thanks to the book "The social responsibility of business: company and community", Heald (1970) intertwined CSR theoretical contents to managerial policies and practices. In this way, he provided a utilitarian interpretation of corporate social responsibility.

At the time, the author argued that companies should have developed managerial plans aimed at the well-being of society and its members. According to this, executives and managers should base their policies on philanthropic activities and the development of a continuous relationship with the community (Heald, 1970). This represents a strong and powerful statement since, for the first time, a scholar linked CSR theory to concrete business strategies.

Most of the definitions emerged in that period have a common thread. During the 1970s, there was a raising awareness regarding the social aim of company activities. They should go beyond the respect of purely economic and legal objective, looking out the achievement of multiple interests with a wider social scope. Introducing the concept of 'conventional wisdom', Johnson (1971) described a socially responsible company as an entity whose interests are not exclusively referred to the maximization of profits. A sustainable business should balance the interests of its shareholders with those of employees, suppliers, and the local community. This assertation is in line with the stakeholder theory, introduced by Freeman (1984). It represents one of the fundamental pillars on which recent CSR research is based. For this reason, the stakeholder theory will be better analysed in chapter 1.4.3.

In the '70s, the concept of CSR has been enriched by several studies and economic theories, giving rise to a considerable body of research. Thanks to the publication of one of his greatest works, Carroll (1979) gave birth to one of the most relevant definitions of corporate social responsibility and he realized the already mentioned CSR pyramid (see chapter 1.1.1). In addition to this, his paper called "A three-dimensional conceptual model of corporate performance" represents a milestone for the development of the historical narrative related to CSR. His contribution has been fundamental both from the theoretical and historical perspective.

Another noteworthy study is the empirical research accomplished by Eilbirt and Parket (1973). They created a survey to investigate major sustainable activities undertaken by large American companies. This is so meaningful because it describes how firms perceived CSR and which corporate social activities used to be implemented in their strategies at the time. Table 3 depicts the list of practices included in the survey. The most common turned out to be environmental safeguard, hiring and training programs for

minorities, as well as scholarships and educational contributions (Eilbirt and Parket, 1973).

Table 3 – Important CSR issues in the 1970s

CSR activity	Percentage of firms engaged
Minority hiring	100
Ecology – concern for environment	95
Minority training	91
Contributions to education	91
Contributions to the arts	83
Hard-core hiring	79
Hard-core training	66
Urban renewal	62
Civil rights	58

Source: Eilbirt, H., & Parket, I. R. (1973).

Eventually, a paradigm shift took place in the '80s. The literature was no longer oriented toward the research of new definitions but rather to the analysis of concepts associated to CSR. For instance, business ethics. This phenomenon had an interesting implication also in the business world. By the end of the decade, three out of four US Fortune 500 firms disclosed a code of ethics (Pedersen, 2015). Corporations were particularly focused on the reduction of pollution, discrimination on the workplace, and consumers' abuses. At the same time, they attempted to improve health and safety standards as well as the employees work life balance (Carroll, 2008).

Nonetheless, one of the most interesting aspects advanced by the literature is the relation between CSR and corporate financial performance (Griffin and Mahon, 1997). Beyond the direct and indirect impact of social actions, corporate performance started to be assessed in terms of social initiatives. There are several ways to estimate the correlation between CSR and CFP[3]. For instance, business performance could be intended as reputation enhancement. In other circumstances, managers are interested in calculating the

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[3] CFP stands for corporate financial performance.

accounting returns of CSR investments, considering financial measures like ROE or ROA (Mostarda, 2020). The debate on the relationship between CSR and CFP is postponed to chapter 3.

Until the late '80s, the managerial attitude toward CSR could be described by the statement 'more talk than walk'. According to Carroll (2008), socially responsible actions implemented by corporations were substantially lesser than the professed world. Most of the leaders' promises haven't been completely fulfilled yet.

At the same time, philanthropic actions expanded considerably. Muirhead (1999) described this period of corporate initiatives as 'diversification and globalization'. With the fall of the Berlin Wall, more global firms appeared in the economy and corporate giving initiatives began proliferating among major multinational organizations. Business positions like public/community affairs manager or corporate social responsibility director became commonplace.

During the 1990s, the most significant improvements in CSR belong to the realm of business practice. In 1992, an important no profit organization was born in the US. It's called Business for Social Responsibility. BSR aims to support firms and professionals in charge of CSR in their organizations. Specifically, the web page presents the organization in this way: "Business for Social Responsibility (BSR) is a global organization that helps member companies achieve commercial success in ways that respect ethical values, people, communities, and the environment. Through socially responsible business policies and practices, companies can achieve viable, sustainable growth that benefits stakeholders as well as stockholders."[4]

BSR has been the first of a series of organizations to provide customized tools, training and consulting services that allow companies to leverage corporate social responsibility as a competitive advantage. Taking a managerial point of view, this organization asserts that corporate social responsibility is viewed as a complete set of policies, programs and practices that are incorporated into decision-making processes, business operations and supply chains throughout the organization.

On the conceptual front, by the end of the 1990s, Elkington devised the 'Triple Bottom Line' concept. This theory recommends that firms focus on social and environmental

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[4] Source: www.bsr.org/en/about

concerns as well as on profits. Since TBL is one of the most important theories related to CSR, its three dimensions will be deepened in the next section. The attention on People, Planet, and Profit (3Ps) could be intended as a re-elaboration of various existing studies carried out during the 20th century (Carroll, 2008).

Another major trend that was born in the 1990s, and continues today, is the advent of many firms that have developed excellent expertise in CSR practices, leading the way through a more sustainable and ethical business world. Companies such as Patagonia, Ben & Jerry's ice cream, Esprit de Corp represent famous case studies of small companies that enlarged their reputation and their success while embracing cutting-edge CSR practices. At the same time, global companies that leveraged their reputation implementing CSR-related procedures included Coca-Cola, McDonald's, IBM, Johnson and Johnson (Carroll, 2008). However, some of these world-wide known corporations have gotten some skepticism questioning the nature of their practices. The arrival of the new century has been accompanied by a series of ethical scandals. The case of Nike sweatshops represents one of the most notorious controversy in between the 1990s and 2000s. Many strikes and boycott initiatives were guided by students and young citizens in response of abuses and disrespect of human rights reported in manufacturing plants located in East Asia. In this tense atmosphere, increasing pressure for sustainable and ethical development boosted companies' interest toward CSR best practices.

Kotler and Lee (2005) wrote a major book documenting the best initiatives attainable by a business audience. The authors presented 25 key practices that may assist firms implementing their CSR programs. The social initiatives were categorized into 6 major groups and, along with empirical examples, they effectively frame what CSR was all about at the beginning of the 21st century.

In the meanwhile, the literature was not dominated by the research of new CSR concepts but rather empirical studies linking CSR to other variables of interest. A few studies are here presented. In an empirical research of family-friendly brands, Jones and Murrell (2001) investigated how firms' public recognition for admirable social performance may serve as a positive sign of the business performance. Backhaus et al. (2002) examined the relationship between corporate social performance and the attractiveness of the employer. They found that the most important CSR aspects considered by job seekers

were employee relations, community relations, environment, diversity, and product issues.

From the 1980s, but especially in the 2000s, the interest around CSR has reached the global scale, with a stunning growth in the European Community. According to a report realized by the OECD[5] in 2001, "CSR is definitely a global phenomenon, though there are important intra-regional variations in practice" (Carroll, 2008, p.15). Some procedures are more voluntary than others, while some firms have been under regulatory and legal pressure to embrace them. Divergences of management practices and commitment appeared, even in highly regulated areas like labour standards, human rights, and fighting bribery. At the time of the report publication, a first step towards the development of harmony on social norms have been taken, though this process is still ongoing today.

With the advent of the new millennium, the major trends in CSR literature debate became sustainability and globalization (Habisch et al., 2005). The discussion on CSR came out of the business and scientific world it had always been confined to. Corporate social responsibility turned out to be one of the most discussed topics between politicians, NGOs, trade unionists and consumers. In this way, CSR debate increased its centrality in politics agenda.

Since the 2008 financial crisis, in an era of economic instability, the attention of individuals and businesses toward sustainability increased even more. In the last decade of fast changes and dramatic global risks, it is very important for organizations to maintain an equilibrium between financial returns, public welfare, and the environmental preservation (Lu et al., 2019; Park et al., 2014). As Freeman put it, "Stakeholders have names and faces and children. Executives and academics, especially, must understand that business is fully situated in the realm of humanity" (Delbard, 2020, p.276).

The Great Recession that followed 2008 subprime mortgage crisis raised fundamental questions. The shareholder value maximization paradigm has been questioned. This model, exemplified by Friedman's notorious statement, "The sole responsibility of business is to make profits" (Delbard, 2020, p.276), is not socially conceivable anymore. Beyond a component of successfully business strategies, CSR is becoming an inevitably necessity today. Modern organizations must adapt to the globalization process and the

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[5] The Organization for Economic Co-operation and Development.

changing of societal values. In an era in which consumers' awareness has never been so meaningful, companies must be at the sustainability frontier. Nowadays, some of the most popular CSR trends include investments in green technologies, local community and employees' engagement, increased transparency, diversity, and inclusion programs.

What does the future reserve for CSR? The most optimistic standpoint seems prevailing. CSR could become a major secular developing trend, driven by a continuous re-evaluation process of corporations' role in the society. It shall be observed that CSR can be sustainable only as long as it continues to contribute to corporate success. Although it may seem counterintuitive, only a forward looking vision will allow business entities to overcome cyclical crises, adapting to a rapidly evolving scenario. The largest difficulty lies in the capacity to face short term challenges while planning for the long run. Looking beyond 'CSR as usual' practices requires a strong sense of purpose and visionary leadership. For instance, modern challenges necessitate the capability to balance profitability and the 'raison d'être' of firms, contributing at the same time to the planet and people (Delbard, 2020).

1.4   Theoretical frameworks

The previous paragraph has examined the historical development of CSR literature as well as managerial implications connected to it. In this section, the focus is partially shifted on those theoretical models that best explain the principles underlying CSR practices and implementation strategies. Some of these frameworks have already been presented, while others are introduced in this passage.

According to Gray et al. (2010), understanding the reference framework is a fundamental activity. The academic lens allows executives and managers to match CSR theories to the organizational mission, vision, and core values. A scrupulous understanding of theoretical frameworks may lead to consider the CSR practices to be implemented in a more coherent way (Gray et al., 2010).

Fundamentally, there are two major groups of theories which contextualize CSR activities and communication: the economic theories and the social-political theories.

The first group is composed by all those frameworks that consider only the economic aspects of corporate social responsibility. Usually, they solely contemplate shareholders rather than a broader set of stakeholders. On the contrary, social and political theories

have a greater ability to provide in-depth analysis of CSR activities. The theoretical frameworks that are going to be explained belong to the second category. They are presented in chronological order, following the release date.

1.4.1 Impression Management

Impression management is defined as a conscious or subconscious process in which an individual attempts to modify and control the impression others have regarding their personality, behavior, morality, and other characteristics (Sanaria, 2016). It was first theorised by E. Goffman (1959), and it was later expanded in 1967. In other words, it is a goal-oriented practice envisioned to create or safeguard a desired image (Leary and Kowalski, 1990). Even though this theory was first conceptualized to respond to human behaviours, also profit and non-profit entities struggle to influence external perceptions. Organizational impression management is a branch of the original theoretical framework which is defined as "A set of actions that is intentionally designed and carried out to influence an audience's perceptions of the organization" (Bolino et al., 2008, p.1095).

Nowadays, both academics and managers agree that engaging in corporate social responsibility is not the only important thing. It's equally crucial that CSR information is correctly communicated and reported to interested parties. Sometimes, the CSR image perceived by stakeholders is not a correct portrait of the organizational identity (Tata and Prasad, 2014). In this context, Cho et al. (2012) accomplished an impression management research related to sustainability reports. This study aimed to investigate whether companies present a more favourable view of their environmental and social performance through the manipulation of information reported into graphs. The choice of advantageous chart types and the distortion of the scale resulted into a consistent selectivity bias. Besides the creation of a desirable organizational image, research has highlighted other uses of organizational impression management. For instance, it is used to influence the perception of relevant stakeholders, to raise the acceptance around controversial practices or decisions, and to restore legitimacy after a scandal or a period of crisis (Groza et al., 2011).

From an impression management perspective, CSR initiatives are motivated by the desire for social approval and/or the desire for status (Highhouse et al., 2009). These motives are closely related to the next organizational framework: legitimacy theory.

1.4.2 Legitimacy Theory

Legitimacy theory (Dowling and Pfeffer, 1975) is one of the most important frameworks in the CSR literature. It implies the existence of a 'social contract' between a business entity and the society. The terms of this convention could be explicit or implicit. Explicit clauses are represented by legal requirements, while implicit clauses are defined by the community expectations towards a specific organization (Deegan et al., 2000).

Each business entity needs to respect these contractual terms to maintain a good legitimacy state within the society in which it operates (Fernando et al., 2014).

Since the legitimacy theory is concerned with the relationship between enterprises and the society as a whole, organizations need to establish a continuous relationship with the community. This theoretical construct affirms that "Organisations can only continue to exist if the society in which they are based perceives the organisation to be operating to a value system that is commensurate with the society's own value system" (Gray et al., 2010, p.28). Thus, a company's level of legitimacy is of primary importance for its continued survival.

However, an organization may find it difficult to comply with this social contract in a very dynamic context. Nowadays, laws and community expectations are continuously changing and rapidly evolving. As a result, it can emerge the so called 'legitimacy gap'. This could represent a major threat for the company unless it implements an appropriate legitimation strategy. Literature (Lindblom, 1994) suggests four strategic schemes a firm can adopt in order to legitimize its business operations within the society:

- Educate main stakeholders about company's actual performance;
- Change relevant stakeholders' perception about the issue of concern, without changing the firm's behaviour;
- Manipulate or distract stakeholders' attention away from the underlying concern, and attempt to direct their attention to a favourable organizational aspect;
- Try to change external societal expectations about company's performance.

The four legitimisation strategies depicted by Lindblom (1994) can be implemented through CSR disclosure. According to this, the crucial role is played by non-mandatory and sustainability reporting (Gray et al., 2010). As an example, organizations tend to reveal positive CSR news rather than negative ones. The pursuit of legitimation through

CSR reporting leads organizations to change their missions or to use symbols to be identified with social practices by the community (Dowling and Pfeffer, 1975).

The major shortcoming of legitimacy theory is its vagueness in CSR area. Indeed, according to Gray et al. (2010), "It does not really tell us very much about why organisations might choose not to disclose at all or to necessarily tell us why disclosure might be so selective" (Gray et al., 2010, p.29). Nevertheless, this limitation hasn't restricted the application of legitimacy theory in empirical studies. Many scholars employed legitimacy theory to describe CSR practices in diverse industries and in different economic systems (Mahmud, 2019; Dube and Maroun, 2017; Fernando et al., 2014; Yao et al., 2011).

1.4.3 Stakeholder Theory

As the name suggests, stakeholder theory is referred to the relationship between the organization and its stakeholders. It has been developed by Freeman in 1984, and since then it represents one of the most important pillars of CSR literature. The scholar defined stakeholders as individuals or groups that can influence or can be influenced by the achievement of a company's objectives. (Freeman, 1984). Generally, they are shareholders, employees, clients, suppliers, government bodies and local communities. This theory suggests facing multiple expectations from different stakeholders' groups, instead of focusing exclusively on the satisfaction of shareholders' needs.
Beyond the economic responsibility, the company also has social and environmental responsibilities towards its stakeholders. This strong assumption is what differentiates stakeholder theory from purely economic ones (Fernando et al., 2014).

In order to link stakeholder theory to corporate social responsibility, it is worth mentioning the framework developed by Ullmann in 1985. He created a three-dimensional model to explain the correlation between economic, social performance and social disclosure of corporations.
The first dimension is *stakeholders' power*. It tends to be positively correlated to social performance. When stakeholders control critical resources, the firm is likely to promptly respond and satisfy their requests. Conversely, when the power of stakeholders is low, their needs tend to be ignored by the headquarters.

The second dimension of interest is *strategic posture*. It describes how an organization's decision maker responds to social requests. An active posture implies a managerial tendency to influence the corporate relationships with key stakeholders in order to achieve an optimal interdependence level. A passive managerial posture implies neither a continuous monitoring of the relationships with stakeholders nor the development of an optimal strategy to manage those relationships.

As a third dimension, past and current *economic performance* is fundamental because it directly affects the company's financial capability to implement costly social programs. Moreover, past economic results determine the attention and the budget that social initiatives receive from corporate decision makers (Ullmann, 1985).

The outcome is an 8 dimensional framework in which a combination of these three variables leads to manage corporate relationship with stakeholders. The greater stakeholder power, posture, and economic performance, the larger corporate social activity (Mostarda, 2020).

Another powerful element to connect CSR and stakeholder theory is corporate disclosure. Overall, the community has the right to know several aspects of company's operations, beyond those of financial or mandatory nature (Gray et al., 1996). In order to ensure an adequate response towards stakeholders, transparency play a crucial role.

In line with the stakeholder theory, an organization should undertake CSR initiatives supported by an adequate disclosure to fulfil stakeholders' requests. Furthermore, this could also be intended as a precise strategy to improve financial, economic, and reputational returns. Several studies have suggested a positive correlation between financial performance and the goodness of corporate-stakeholder relationships (Waddock and Graves, 1997; Berman et al., 1999).

1.4.4 Triple Bottom Line

The Triple Bottom Line is a sustainability-related concept devised by Elkington in 1994. It provides a paradigm for measuring the performance and success of an organization along three different lines: economic, social, and environment (Goel, 2010).

According to Elkington (1997), TBL is willing to represent the expansion of the environmental agenda in a way that integrates the social and economic dimensions. In the

conceptual definition, the scholar used the terms people, profit, planet (3Ps) as the three lines. Over time, this classification has become commonplace in scientific literature.

It is argued that a deeper analysis of the three lines is noteworthy, since the 3Ps agenda is targeted toward corporations and "It puts a balanced and consistent focus on the economic, social, and environmental value provided by the organizations" (Alhaddi, 2015, p.8).

The first line to be analysed is the economic one. This pillar is referred to the impact of organizational practices on the economic system (Elkington, 1997). The idea is that, in order to survive, evolve and support future generations, an organization needs to tie its growth to the one of the economy. In other words, a company has to generate profit not only for its sustenance, but also for the developed of the society (Alhaddi, 2015).

The social dimension of TBL is referred to conducting fair and beneficial corporate practices to create value which is returned to the community (Elkington, 1997). Examples of these initiatives may include fair salaries and the provision of health care insurance. Beyond the moral aspect of being 'good' to the society, socially responsible activities may affect sustainability and business performance. According to Goel (2010), the social dimension of company results focuses on the interaction between the organization and the community, addressing issues related to employees' welfare and community involvement.

The third and the last pillar of TBL is referred to engaging in procedures and practices that do not compromise natural resources for future generations. The environmental line is about the reduction of greenhouse gas emissions, the efficient use of energy resources, and the decrease of the ecological footprint. Several studies proved the effect of environmental initiatives on business performance. For instance, Kearney (2009) conducted a sustainability-focused empirical analysis in the middle of the regression caused by the 2008 financial crisis. The research turned out that, during the economic downturn, companies with major environmental and green practices were providing value to shareholders while generating social well-being for the community in a larger share in comparison with rivals. These sustainability-focused organizations financially outperformed their competitors. The main sources of competitive advantage have resulted from the reduction of operational costs (water and energy usage) and from

increased revenues, generated by the development of breakthrough green products (Kearney, 2009).

1.4.5 Resource-based View

The Resource-based View is not a conceptual framework developed by a single scholar. It represents a way of thinking that confronts what a company has the ability to do and what it has the chance to do. Considerably, the modern discussion around RBV began in 1998, when E. Penrose suggested viewing the company as a 'pool of resources' (Hodgson, 1998). The RBV examines the relationship between a company's internal characteristics and its performance. The existence of firm-specific resources explains major discrepancies among the results of different businesses. These resources are rare, valuable, inimitable, and non-substitutable.

In particular, these assets are not easily imitated by competitors when they are:
- Path dependent: resources have a particular historical background that leads to highly specialised competences and skills;
- Casually ambiguous: the actions required to create them are totally or partially unknown;
- Socially complex: some resource, like company's reputation or culture, are not easily changeable in the short run.

The resource based view is very useful to understand why corporations engage in CSR activities. According to the RBV perspective, CSR is seen as a provider of internal or external benefits, or both. Socially responsible investments may create internal advantages by helping an organization to develop new capabilities and resources. In particular, investments in CSR have important consequences related to the creation of key intangible resources, like those associated to employees' empowerment. On the other front, CSR provides external benefits linked to firm's reputation enhancement. Companies with good reputation may improve their relationships with external stakeholders. Also, they may attract the best talents on the job market, improving at the same time employees' commitment and motivation.

To conclude. Resource based view fully supports the idea that CSR may be seen as a crucial element of strategic management (Branco and Rodrigues, 2006). In the end, CSR activities perform a vital role, contributing to the development of unique skills, which represents one of the fundamental sources of value for business entities.

Chapter 2

CSR Measurement and Disclosure

In the previous chapter, several theoretical frameworks highlighted the importance of CSR disclosure beyond the implementation of CSR practices. In the last couple of decades, both stakeholders and investors have started asking more accountability and transparency related to ESG corporate aspects. Information disclosed needs to be relevant not only to one, but to a multitude of different business actors. At the same time, investors and shareholders expect a reduction in the informational asymmetry to make socially aware investments (Bisio, 2016). Moreover, CSR information should be comparable among similar companies and across different countries.

The measurement and the consequent reporting activity of CSR commitment is not an easy task. Attempts to define measurement methodologies and reporting schemes multiplied between the 1980s and 1990s. From that period on, two distinct but related phenomena began to develop to meet these needs:
- the establishment of several sustainability indexes, ratings, and rankings to value and compare ESG companies' performance;
- the creation of a series of reporting frameworks and standards useful to verifying corporate compliance with minimum requirements in terms of human and social rights.

2.1 Corporate sustainability systems

Over the last century, corporate social responsibility has evolved from philanthropy to a more complex conceptual framework. In the past, social performance was measured by the amount donated to local projects or ethical causes. Today, the increasing concern toward environmental and social aspects is parallel to the necessity of complex tools to measure CSR.

The new era of CSR is pushing towards the development of Corporate Sustainability Systems (CSSs) in the financial market. They are instruments that rate sustainability aspects of corporate performance. They are primary used by those investors who want to include companies compliant to significant ESG performance in their investment portfolio. This practice is called Socially Responsible Investment (SRI).

Three different types of tools are identifiable among CSSs: indexes, rankings, and ratings (Diez-Cañamero et al., 2020). This section aims at clarifying the major characteristics of these instruments, in order to understand how an organization can potentially measure CSR performance and its contribution to sustainable development. By performing a comparative analysis, Diez-Cañamero et al. (2020) grouped 15 different corporate sustainability tools. The authors categorized the most worldwide known CSSs according to typology and target stakeholders.

Table 4 – Classification of corporate sustainability systems

CSS Name	Typology	Major target stakeholder
DJSI World	Index	Shareholder, investors, executives
ECPI World ESG Equity Index	Index	Shareholder, investors, executives
ESI Excellent Global	Index	Multi-stakeholder, but shareholders, investors and executive principally
Euronext Vigeo Eiris World 120	Index	Multi-stakeholder, but shareholders, investors and executive principally
FTSE4Good Developed Index	Index	Shareholder, investors, executives
GCX	Index	Shareholder, investors, executives
GSLI	Index	Shareholder, investors, executives
MSCI World ESG Leaders Index	Index	Shareholder, investors, executives
STOXX Global ESG leaders index	Index	Shareholder, investors, executives
Sustainalytics' ESG Risk Rating	Index	Multi-stakeholder, but important for the evaluated company
Global CR Reptrak 100	Ranking	Multi-stakeholder
The sustainability Yearbook	Ranking	Multi-stakeholder
World's Most Sustainable Corporations – Global 100	Ranking	Multi-stakeholder
ISS-oekom Corporate Rating	Rating	Multi-stakeholder
Supplier CSR Rating	Rating	Suppliers and purchasing companies, but important information for the evaluated company

Source: Diez-Cañamero et al., (2020).

Table 4 reports just a small number of the existing CSR ratings, rankings, and indexes. Although these tools increase recognition for CSR performance, the chaotic and heterogeneous CSSs scenario has led to some problematic situations.

First of all, CSSs were created with the common objective of measuring and quantifying corporate sustainability performance. However, the proliferation of a large number of different tools interferes with comparability of results. Different companies, even from the same country or sector, that use different tools, do not obtain comparable results. Another issue is related to the nature of CSSs. They were designed as fundamental tools that consider ESG dimensions, beyond financial variables, to shape the investment portfolio of modern investors. This financial market nature may result in an economic bias. When assessing companies' performance, the economic variable may be prioritised over the other CSR dimensions. This may lead to contradicting the TBL philosophy and the stakeholder theory. Only by using a multi-stakeholder approach is it possible to develop CSR measurement tools that respect a multitude of stakeholder interests (Diez-Cañamero et al., 2020).

One more relevant concern is about the geographic localization of companies assessed by corporate sustainability systems. The majority of CSSs qualify companies from developed markets. Even if these tools are conceived as worldwide applicable by nature, providers limit their activities to advanced markets. In many cases, CSR performance of companies located in emerging or undeveloped countries is not assessed. This represents a contradiction. Indeed, firms in emerging or undeveloped countries have a great impact on the worldwide sustainable development. Moreover, the majority of CSR challenges and misleading practices are carried out by organizations operating in poor countries (Diez-Cañamero et al., 2020).

After this introductive topic review, the following subsections will present concrete examples of corporate sustainability measurement tools, one for each type.

2.1.1 Sustainability index – FTSE4Good Index Series

FTSE4Good Series is a collection of ESG indices designed and administered by FTSE Group.

Clearly defined ESG criteria and transparent management make this suite of indices one the most world-wide known tools used by investors when assessing sustainable investment decisions.

The series of FTSE4Good indices can be used in four different ways:
- financial products: as a tool for the creation of financial products focused on sustainable and socially responsible investments;
- research: in order to identify and classify companies on the basis of environmental and social impact;
- reference: as a global evolving standard of sustainability against which organizations can assess their ESG progress and achievement;
- benchmarking – as a benchmark to track the progress of sustainable investments.[6]

There are 4 major FTSE indices based on a geographical grouping structure. These are:
- FTSE4Good All-World Index;
- FTSE4Good Developed Index;
- FTSE4Good North America Index;
- FTSE4Good Europe Index.

Nonetheless, the suite of FTSE indices is constantly growing and improving. For instance, FTSE4Good Emerging Index was launched in 2016. It covers more than 20 emerging countries. A series of national indices is also included in FTSE4Good group, such as the FTSE4Good UK Index, Japan Index, USA Index, Taiwan ESG Index (FTSE Russell, 2021).

In order to enter one of these indices, a company may satisfy a series of requirements. It has to be already listed in the stock exchange, and its business should not belong to unethical sectors like nuclear, weapons, coal, or tobacco production. In case these conditions are satisfied, FTSE Advisory Committee would proceed with a corporate performance assessment based on 5 main areas. Each dimension is valued from 0 to 5.

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[6] Source: www.ftserussell.com/products/indices/ftse4good

The organizational overall ESG rating shall exceed the threshold of 3.3 points to be included in FTSE4Good Index.

The following are the 5 ESG macro areas on which companies are evaluated by the advisory committee (Demiraj, 2020):
- environmental sustainability;
- relationships with stakeholders;
- attitudes to human rights;
- supply chain labour standards;
- the countering of bribery.

2.1.2 Sustainability ranking – Global CR RepTrak 100

Founded in 2004, RepTrak is the company that owns and controls the largest reputational benchmarking database of companies. It is a global platform that provides data-driven insights on brand, corporate reputation and ESG data.

Global CR RepTrak 100 is a ranking which contains the top 100 companies for the best reputation in the world. In addition to this, the platform includes an exclusive and innovative multi-stakeholder ESG scoring system. This allows to measure how stakeholders view a certain company, its management board, and the ESG practices implemented within the organization. A strong drawback of RepTrak is dictated by the fact that this rating system evaluates all firms equally, regardless their activities and their belonging sectors. Thus, since different industries do not tackle the same opportunities, problems, and risks, comparability in sectoral terms is problematic to calibrate.

The relation between reputation and CSR is explained in RepTrak website[7]. They declare a strong and positive statistical correlation between:
- ESG perception score and reputation (R^2 = 0.86);
- ESG perception score and purchase intent (R^2 = 0.90);
- ESG perception score and talent acquisition (R^2 = 0.88).

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[7] Source: www.reptrak.com/reptrak-platform/esg-intelligence/

2.1.3 ESG rating – Thomson Reuters ESG Scores

As nouns, the main difference between ranking and rating is that the former is one's relative position in a list while the latter is a position on a value scale.

Thomson Reuters ESG Scores were designed to objectively measure corporate performance across 10 large themes related to environmental, social and governance spheres. The Thomson Reuters dataset contains ESG ratings for more than 9000 organizations all around the world. Data has been collected since 2002. A strong advantage of this rating system is that it contains more than 630 standardized and comparable ESG measures. There is a monthly information update frequency, and this allows a continuous adjustment of the scores. The Hierarchical structure is represented in figure 4.

Figure 4 – Thomson Reuters ESG Scores
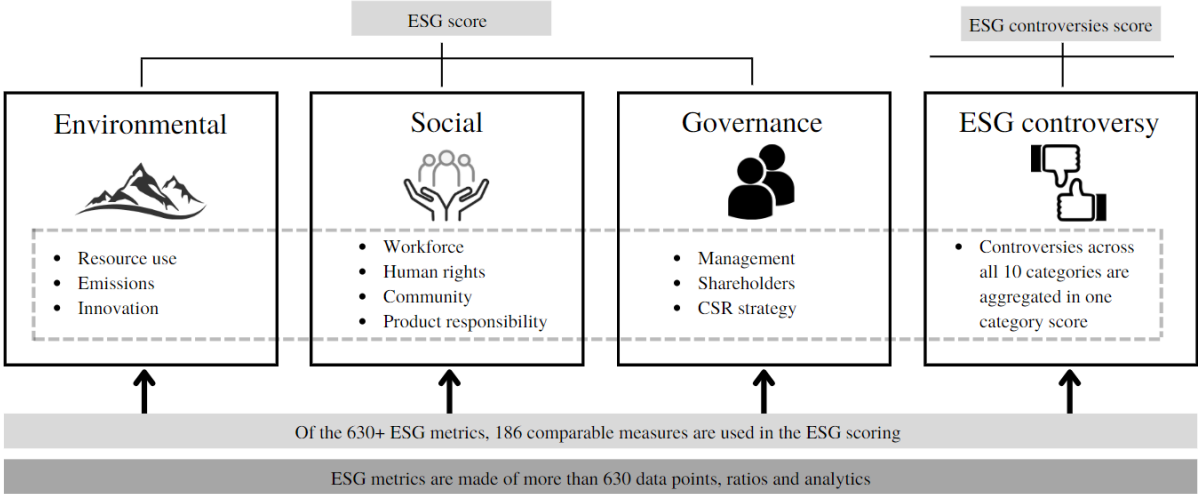
Source: adapted from Refinitiv (2022).

The rating system is expressed both in percentage and letter format (from A+ to D-), in order to meet different measurement systems and business cultures all over the world. This rating classifies companies from ESG leaders to ESG laggards according to their score.[8]

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[8] More details about the Thomson Reuters ESG scores are available at:
www.refinitiv.com/content/dam/marketing/en_us/documents/methodology/refinitiv-esg-scores-methodology.pdf

2.2 Reporting frameworks

Around the globe, the number of firms that have implemented governance practices to assess, analyse and report sustainability activities has considerably risen over the last decade. This trend is the result of both voluntary corporate social actions and a proliferation of new disclosure requirements aimed at encouraging businesses to improve ESG performance (Gatti et al., 2019). Reporting frameworks serve as a guarantee of compliance with ethical, social, and environmental standards.

According to Bisio (2016), a consistent number of guidelines has emerged in recent times. This is the case of IFRS Foundation, which announced the establishment of a new standard-setting institution on November 3, 2021. Its primary intent is the creation of sustainability-related standards to satisfying investors' needs for CSR reporting. It has been called ISSB: International Sustainability Standards Board. On June 17, 2022, SASB[9], the primary American organization for the standardization of ESG practices, announced its transition to ISSB, in response to regulators' call to align the sometimes competing IFRS and SASB standards along environmental, social, and governance practices.

Looking at the European Union, the European Commission is willing to adopt the EU Sustainability Reporting Standards (ESRS), through the implementation of a sustainability reporting directive. EFRAG[10] was requested to provide technical support for the creation of a draft by the end of 2022. The first set of standards required by the Corporate Sustainability Reporting Directive proposal covers the full range of sustainability aspects: environmental, social, governance and cross-cutting standards.

After a brief assessment of the latest advancements in sustainability reporting frameworks, the following subsections will analyse some of the most adopted sustainability standards in detail. Specifically, those of international fame are:
- GRI – Global Reporting Initiative;
- AccountAbility AA1000 Series;
- ISO 26000 Standards.

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[9] Sustainability Accounting Standards Board
[10] European Financial Reporting Group

2.2.1 GRI – Global Reporting Initiative

The Global Reporting Initiative is an international and independent organization which aims to develop and disseminate a set of globally applicable reporting guidelines. It was funded in 1997 by the United Nations Environment Program (UNEP) and by the Coalition for Environmentally Responsible Economies (CERES).

According to last data released, 93% of the 250 world's largest companies adopt GRI guidelines in their reports (Global Reporting Initiative, 2020). Actually, GRI standards can be consulted in more than 15 different languages.

As declared in the official webpage, "GRI helps businesses and other organizations take responsibility for their impacts, by providing them with the global common language to communicate those impacts."[11]

GRI guidelines are built through a global multi-stakeholder process, in which representatives from the business world, as well as auditors and sustainability experts are involved. In 2013, GRI released its fourth version (G4).

Figure 5 – GRI reporting standards
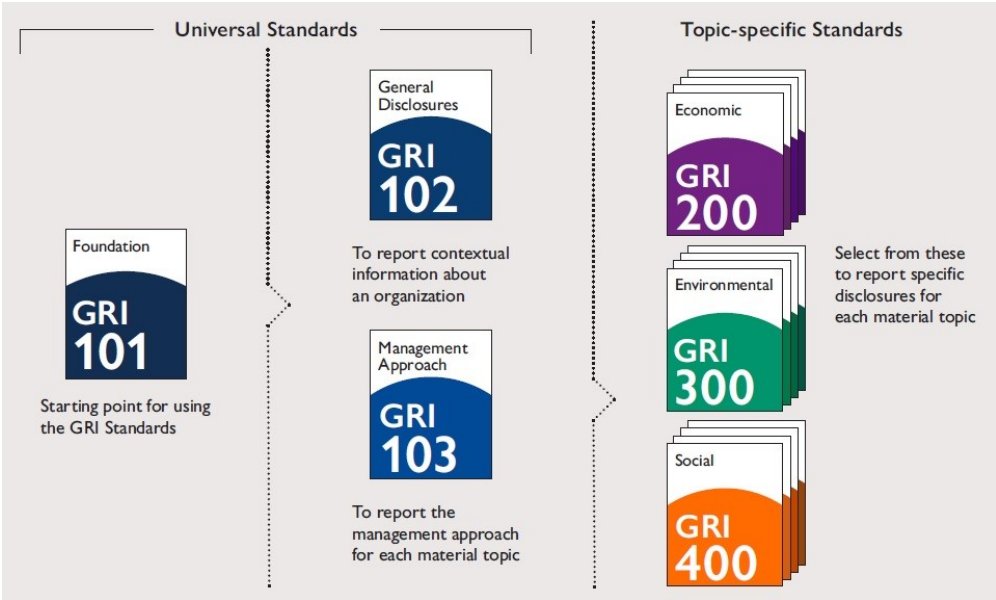
Source: Global Reporting Initiative (2020). GRI Annual Report.

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[11] Source: www.globalreporting.org/about-gri/

Figure 5 depicts the current structure (G4) of Global Reporting Initiatives principles.

As it is noticeable, GRI organized its standards in two main groups and six different series. In particular:

1. Universal standards contains the 100 series: GRI 101, GRI 102, GRI 103;

2. Topic-specific standards contains GRI 200, GRI 300, GRI 400.

GRI 101 series contains general rules for achieving transparency in corporate disclosure. This section distinguishes two categories of fundamental principles:

- principles for defining reporting contents. For example, stakeholder inclusiveness, materiality, and sustainability context;

- principles for defining reporting quality. For instance, comparability, reliability, and timeliness.

Looking more carefully at topic-specific standards (GRI 200, 300 and 400), it is possible to notice that they refer to a large number of CSR issues, categorized in economic, environmental, and social dimensions (see table 5).

The main goal of G4 guidelines is simple: "To help reporters prepare sustainability reports that matter, contain valuable information about the organization's most critical sustainability-related issues, and make such sustainability reporting standard practice. […] G4 also provides guidance on how to present sustainability disclosures in different report formats: be they standalone sustainability reports, integrated reports, annual reports, reports that address particular international norms, or online reporting" (Global Reporting Initiative, 2013, p.3).

Table 5 offers a significant framework to encourage a standardized approach to CSR reporting. It highlights all the relevant sustainability-related topics that shall be considered to make the activity of corporate disclosure useful and credible to investors and stakeholders.

Table 5 – GRI guidelines

Category	Economic – GRI 200	Environmental – GRI 300	
Aspects	- Economic performance - Market presence - Indirect economic impact - Procurement practices	- Materials - Energy - Water - Products and services - Effluents and waste - Supplier environmental assessment - Environmental grievance mechanisms	- Compliance - Transport - Biodiversity - Emissions

Category	Social – GRI 400			
Sub category	Labour	Human rights	Society	Product responsibility
Aspects	- Employment - Labour/Management relations - Occupational health and safety - Training and education - Diversity and equal opportunity - Equal remuneration for Women and Men - Supplier Assessment for labour practices - Labour practices - Grievance mechanisms	- Investment - Non-discrimination - Child labour - Security practices - Forced or compulsory labour - Indigenous rights assessment - Supplier human rights assessment - Human rights grievance mechanisms - Freedom of association and collective bargaining	- Anti-corruption - Public policy - Anti-competitive behavior - Compliance - Local communities - Supplier Assessment for impacts on society - Grievance mechanisms for impacts on society	- Customer health and safety - Product and service labelling - Marketing communication - Customer privacy - Compliance

Source: adapted from Global Reporting Initiative, (2013). G4 sustainability reporting guidelines.

2.2.2 AccountAbility AA1000 Series

AccountAbility is an international consulting and advisory society that works with corporations, governments, investors, and public organizations on ESG matters.

AA1000 is a standard created more than 20 years ago, in 1999. As the name of the company suggests, this standard is based on the principle of accountability. According to

Beckett and Jonker (2002), accountability and sustainability are complementary concepts. A greater accountability level establishes good corporate practices. It enhances transparency, while increasing decision making quality and improving the distribution of responsibilities. This process makes a sustainable outcome feasible.

AA1000 is a private voluntary process standard. Differently from content standards, which are primarily focused on the reporting structure and the information to be included, process standards are more related to the principles underlying the drafting and the procedures to be implemented in order to achieve stakeholder involvement. Despite the fact that AA1000 follows this approach, it can be perfectly integrated with other standards such as ISO or GRI. Another strong feature is that AA1000 is not a certifiable standard. It doesn't require a particular reporting structure or a minimum level of compliance, but it aims at improving the quality of sustainable reporting.

At the moment, AA1000 is formed by three different series of standard:
- AA1000 Accountability Principles;
- AA1000 Assurance Standard;
- AA1000 Stakeholder Engagement Standard.

"Accountability Principles (AA1000APS 2018) is an internationally accepted, principles-based framework that guides organizations through the process of identifying, prioritizing, and responding to sustainability challenges, with the goal of improving long-term performance" (www.accountability.org/).

This section contains 4 basic principles:
- inclusivity;
- materiality;
- responsiveness;
- impact.

Each principle is amply explained and discussed in this document. The AA1000APS framework presents a key definition, a conceptual map, a required agenda criteria, and a final discussion comprehensive of the main relevant aspects for each of the four principles.

"Assurance Standard (AA1000AS v3) is the leading methodology used by sustainability professionals worldwide for sustainability-related assurance engagements, to assess the nature and extent to which an organization adheres to the AccountAbility Principles. The AA1000AS v3 is administered through an e-licensing system for AccountAbility-licensed assurance providers" (www.accountability.org/).

Large space is given to preconditions that the assurance provider must ascertain and comply with. For instance, there should not be any previous relationship between the assurance provider and the organization, or any of its stakeholder, that may result in a conflict of interest. If this and other strict preconditions are satisfied, the assurance provider can proceed conducting the assurance examination. This practice foresees a verification process which culminates with a final report, aimed at evaluating how well an organization manages sustainability.

"Stakeholder Engagement Standard (AA1000SES) is the most widely applied global stakeholder engagement standard, supporting organizations in their efforts to assess, design, and implement an integrated approach to stakeholder engagement, and to communicate fairly and accurately with stakeholders and the public about those efforts" (www.accountability.org/).

The purpose of this standard is to integrate the four principles, presented and explained in the first section, into organizational governance, strategy, and management.

The stakeholder engagement process has four main phases, articulated in a step-by-step approach. It is structured in this way:

1. plan;
2. prepare;
3. implement the engagement plan;
4. act, review and improve.

To conclude, applying these three sets of interrelated AccountAbility standards, the organization may reach an overall and comprehensive view of social performance. This potentially leads to a more coherent management of strategic resources, which in turns benefits both markets and the community (Bisio, 2016).

2.2.3 ISO 26000 Standards

ISO stands for International Organization for Standardization. It is an independent, non-governmental organization funded in 1947 by 65 delegates from 25 different countries. Today, it is formed by 167 national standards bodies from all over the world.

From several years, ISO devotes a specific attention to the social responsibility theme. In 2010, they launched ISO 26000, providing guidelines for socially responsible corporate behaviour.

Table 6 – Outline of ISO 26000

N°	Clause title	Description of clause contents
1	Scope	Defines the scope of ISO 26000 and identifies certain limitations and exclusions.
2	Terms and definitions	Identifies and provides the definition of key terms that are of fundamental importance for understanding social responsibility and for using ISO 26000.
3	Understanding social responsibility	Describes the important factors and conditions that have influenced the development of social responsibility and that continue to affect its nature and practice. It also describes the concept of social responsibility itself – what it means and how it applies to organizations. The clause includes guidance for small and medium-sized organizations on the use of ISO 26000.
4	Principles of social responsibility	Introduces and explains the principles of social responsibility.
5	Recognizing social responsibility and engaging stakeholders	Addresses two practices of social responsibility: an organization's recognition of its social responsibility, and its identification of, and engagement with, its stakeholders. It provides guidance on the relationship between an organization, its stakeholders and society, on recognizing the core subjects and issues of social responsibility, and on an organization's sphere of influence.
6	Guidance on social responsibility core subjects	Explains the core subjects and associated issues relating to social responsibility. For each core subject, information has been provided on its scope, its relationship to social responsibility, related principles and considerations, and related actions and expectations.
7	Guidance on integrating social responsibility through an organization	Provides guidance on putting social responsibility into practice in an organization. This includes: understanding the social responsibility of an organization, integrating social responsibility throughout an organization, communication related to social responsibility, improving the credibility of an organization regarding social responsibility, reviewing progress and improving performance and evaluating voluntary initiatives for social responsibility.

Source: adapted from International Standard Organization, (2018). ISO 26000 guidance on social responsibility.

This standard helps organizations clarify what CSR is and helps them take effective actions. It has become a global leading benchmark for profit and non-profit entities concerned about their environmental and social impact on wider society. What is very peculiar about ISO 26000 is that, differently from other well-known ISO standards, it cannot be certified. It provides recommendations rather than requirements. Furthermore, "Any offer to certify, or claims to be certified, against ISO 26000 would be a misrepresentation of its intent and purpose" (International Standard Organization, 2018, p.8). The Guideline structure is formed by 7 core points, portrayed in the table above.

Chapter 3

The Relationship between CSR and Corporate Financial Performance

3.1 Different relational forms

This dissertation is focused on the empirical relationship between corporate social responsibility (CSR) and corporate financial performance (CFP). In particular, this chapter examines the extensive body of academic literature related to the CSR-CFP nexus.

Despite research on this field started in the 1970s, there is no consensus on the nature of the relationship between CSR and CFP. Unanimity hasn't been reached yet. The outcome of different studies varies from positive, negative, or neutral (inconclusive) relations (Barauskaite and Streimikiene, 2021). Griffin and Mahon (1997) debated the reasons behind 25 years of mixed conclusions. Indeed, even though they found that the majority of studies in the period 1970-1990 supported a positive relationship between CSR and CFP, they identified crucial issues that are still meaningful today. Interestingly, other authors offered similar explanations.

Divergences in literature exist because of:
- Sampling constitution (Griffin and Mahon, 1997) and sampling limitations (Van-Beurden and Gossling, 2008). The construction of multi industry samples could be a reason that leads to discrepancies in results.
- The lack of a clear causality direction (Waddock and Graves, 1997). This point will be further analysed in the course of section 3.1.2.
- The poor theoretical agreement around CSR frameworks (Ruf et al., 2001). Despite the improvements made in the last 25 years, the lack of a unique theoretical framework for social responsibility remains a major limitation to the development of a single measuring approach.

- The omission of key variables in empirical research (McWilliams and Seigel, 2000). Especially for control variables, the absence of a common specification model leads to conflicting findings. Researchers' subjectivity and selection bias profoundly affect empirical evidence (Nizamuddin, 2018).

- Difficulties in measuring and assessing CSR (Griffin and Mahon, 1997; Davidson and Worrell, 1990). Comparability over CSR measures is not always ensured since companies use different assessment methods and reporting frameworks, as remarked in chapter 2.

- Variability related to financial performance measures (Griffin and Mahon, 1997). Although financial return is easier to assess than CSR, different authors use different indicators as a proxy of financial performance. This is another factor that creates mixed results in the literature. The most commonly used methods could be divided in three categories: (1) accounting based measures, (2) market based measures, and (3) both types of measures (Barauskaite and Streimikiene, 2020). They will be further discussed in chapter 4, presenting the regression model.

In 2001, Margolis and Walsh conducted an empirical review comprehensive of 95 scientific studies. The majority of them (53%) reported a positive relation between CSR and CFP, 24% found no connection between the two variables, only 5% stated that CSR has a negative impact on financial returns, while the remaining 18% showed a mixed relationship. A more recent literature review by Lu et al. (2014) proved similar outcomes on a sample of 84 studies in the period 2002-2011. They reached inconclusive results related to the general relationship, but they have also found some clear and interesting trends by decomposing CSR variable into ESG dimensions. This suggests that the decomposition of CSR in more subdimensions is crucial to better analyse the complex relation between social and financial performance. This methodology is in line with stakeholder theory. Indeed, different stakeholders have diverse interests. At the same time, different interests can be referred to singular CSR dimensions, like environmental, social, or corporate governance. This approach is already adopted by numerous scientific studies.

Given the great variety of results reported over time by Margolis and Walsh (2001), Lu et al. (2014) and other scholars, the next paragraph will discuss different CSR-CFP relational forms: from linear to bidirectional and curvilinear one. Section 3.2 will present several studies realized in the last 10 years (2012-2022) divided by geographic area. The last paragraph will provide an insight on the Italian market.

3.1.1 Linear relationship

The primary type of relationship that is usually analysed is the linear one. The association between CSR and CFP could be tested using a linear function, expressed by the general formula:

$$CFP = \beta_0 + \beta_1 CSR + \beta_i X_i + \mu_i$$

Where:

CFP is a proxy of financial performance, the dependent variable;

CSR is a proxy of corporate social responsibility, the independent variable;

X_i is a vector of control variables;

μ_i is the error term.

Three graphs are depicted in figure 6. They represent different linear functions.

Figure 6 – Linear functions
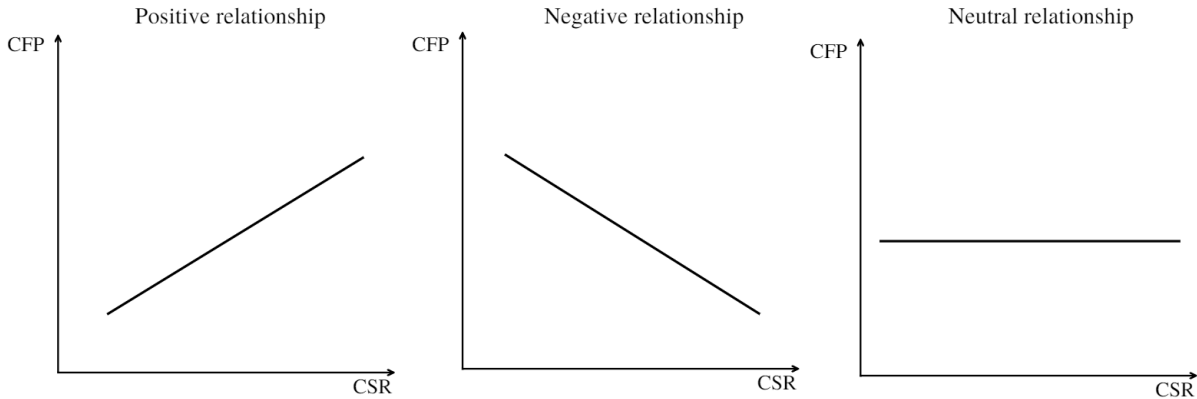

Source: created by the author.

A positive relation has been assessed by many studies. Certainly, this type of function simplifies the nexus between CSR and financial performance. Quoting Nollet et al., "Linearity is typically assumed in the CSR literature, which may be a shortcoming that generates biased results" (Nollet et al., 2016, p.401). At the same time, if a positive relation

is assessed, linear function indicates that the more CSR initiatives are implemented, the higher the financial return. In other words, a higher corporate investment in socially responsible initiatives leads to larger economic returns over time.

One major theoretical framework that supports the existence of a positive connection between corporate social responsibility and corporate financial performance is stakeholder theory. According to it, a positive economic result can be reached if company's actions and stakeholders' interests coincide. At the same time, an element that could have a negative impact on financial performance is stakeholders' frustration (Giannarakis et al., 2016).

Some economists have found a negative linear relationship between CSR and CFP. CSR commitment could be seen as an unfavourable competitive aspect. In these studies, it emerged that CSR is negatively correlated to the price of products, salaries of employees, financial returns, and dividends in the short run. Adopting this point of view, firms should reduce the costs associated to CSR in order to increase their short term profits. (Giannarakis et al., 2016). In many cases, the lack of a long-range vision by executives and/or owners is a determinant factor.

In other studies, an inconsistent link or no connection between CSR and CFP has emerged. This neutral relationship could be represented by a horizontal line. It suggests that a socially responsible attitude neither improves firm's profitability nor deteriorates it. Graphically, it proves that changing the volume of resources invested in CSR doesn't affect financial performance. In other words, corporate social responsibility works independently, and it doesn't have any nexus with the financial dimension (Elmghaamez and Olarewaju, 2022).

3.1.2 Bidirectional relationship

One of the most significant queries in scientific literature is whether financial performance affects CSR or whether CSR affects financial results. Several scholars have studied a bidirectional relationship between CSR and CFP. In line with their hypothesis, not only corporate social responsibility has a significant impact on financial performance, but also economic results affect CSR investments. This assumption emerged from the slack resource theory. Slack resources are those assets that a company does not need to fulfil its operations. They represent the corporate surplus of resources. Waddock and

Graves (1997) declared that an increased availability of slack resources could derive from better financial performance, and they could lead to larger social and environmental investments.

This peculiar interrelationship between CFP and CSR is represented in figure 7. The illustration brings to mind the idea of a virtuous cycle, in which each variable influences the other.

Figure 7 – Bidirectional relation
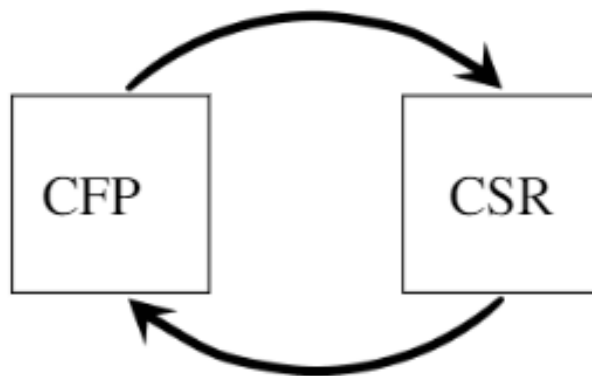
Source: created by the author.

At this point, a fundamental question emerges. Which causality direction should prevail? Most of the empirical studies consider CSR as the independent variable and CFP as the dependent one. Since large part of scientific literature deals with the impact of CSR on CFP, the regression analysis in chapter 4 follows this academic trend.
Nonetheless, the investigation of a bilateral relation between these two dimensions could be considered an interesting additional insight.

3.1.3 Nonlinear relationship

The extensive literature body on the relationship between CSR and CFP examines other types of connections besides the linear one. Various scholars argued that this relation could be represented by a nonlinear function. In particular, by U-shaped or inverted U-shaped curves (Barauskaite and Streimikiene, 2021). In the past, the non-linear relationship had rarely been assessed in comparison to the linear one. Notwithstanding, it's becoming increasingly studied in recent years.

The following equation represents the curvilinear model:

$$CFP = \beta_0 + \beta_1 CSR + \beta_2 CSR^2 + \beta_i X_i + \mu_i$$

Compared to the linear formula, the quadratic term (CSR^2) gives to this function the curved shape.

More precisely, the concavity of the curve is given by the sign of β_2. If β_2 has a positive sign, the curve faces upwards (convex function). On the contrary, if β_2 is negative, then the curve is oriented downwards (concave function). In addition to academic disagreement over linear or quadratic nature, there is also controversy as to whether the function is convex or concave (Miras-Rodriguez et al., 2015).

Figure 8 – Nonlinear functions
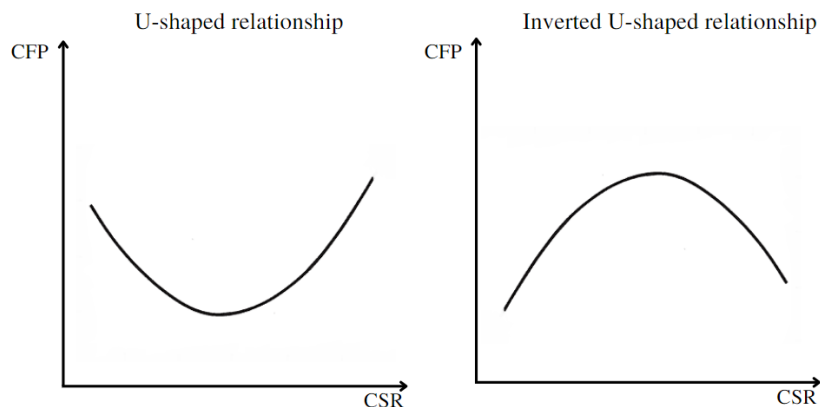
Source: created by the author.

The first model in figure 8 shows a convex function. CSR negatively impacts financial return, which decreases until a certain point. From the vertex of the function the curve begins to grow, and CSR starts having a positive influence on financial returns. In other words, since the initial outputs of CSR investments are intangible, there could be a gap between the establishment of sustainability policies and the manifestation of their effects. The company is expected to face an initial and temporary deterioration of financial performance when it starts to invest on CSR.

On the contrary, the second model shows a concave function, which is represented by an inverse U-shaped curve. The impact of corporate social responsibility on financial performance is positive until a certain point. Investments in CSR provide higher benefits than costs until the curve reaches its vertex. From then on, CSR impact is negatively related to financial performance. In the second part of the curve, costs sustained to

increase the level of social performance are greater than benefits. Wang et al. (2008) demonstrated that is theoretically feasible to assess the optimum level of CSR investments.

To summarize all CSR-CFP relational forms, it can be said that there is not a uniform assessment method and also results are not unanimous. According to Barauskaite and Streimikiene (2021), scholars identify a positive or neutral relation between social and financial performance in most of scientific articles. Negative or alternative relations are less commonly assessed. However, they cannot be excluded from literature review and from further analysis.

3.2   Literature review

This section provides a review regarding the nexus between CSR and financial performance. Evidence is given to empirical studies published in the period 2012-2022. Analyses will be divided in two major groups, according to a country-based taxonomy. Nations are usually labelled as developed or emerging countries to better understand economic and social implications. However, development is a difficult concept to delineate, and the construction of a country-based categorization is a challenging task. Different taxonomies interpret the development level in different ways, by using alternative criteria. The most famous classification systems are provided by United Nations, the World Bank, and the International Monetary Fund. In the following literature review, the UNs taxonomy will be used as a reference.

3.2.1 Developed countries

Table 7 presents some academic articles that analyse the relation between CSR and financial performance in developed countries. In line with previous findings by Margolis and Walsh (2001), the majority of them report mixed outcomes.

Alvarez and Martinez (2022) constructed a very large dataset, comprehensive of 1061 firms. They are located in 16 developed countries distributed around Europe, North America, Asia, and Oceania. The findings of a long lasting observation (2009-2018) highlighted a positive association between CSR disclosure and corporate performance. Same conclusions are reached by several national studies, for instance by Cho et al. (2019), who analysed the Korean market.

Table 7 also reports two outstanding studies from the US. Analysing empirical data of S&P 500 in the period 2004-2015, Mentor (2016) found mixed results. He ascertained a positive relation between CSR and accounting measures but a negative one between CSR and market-based measures. Results indicate that corporate social responsibility positively affects profits while, at the same time, it negatively impacts stocks returns. In a more recent work, Okafor et al. (2021) restricted the sample to panel data of the top 100 tech firms for the period 2017-2019. Even in this case, findings are mixed. On one side, 'big tech' firms like Amazon, Apple, and Microsoft, revealed a significant growth in revenues and profits in line with CSR expenditure. On the other side, contrary to previous research, the authors do not observe a significant evidence supporting the relationship between corporate social responsibility and Tobin's Q.[12]

Despite the majority of studies reveal a positive connection between CSR and CFP, also neutral or even negative relationships are reported in literature. Most of the time, behind the wording 'mixed results' there is an interpolation of positive, neutral, and negative conclusions. It is very difficult to find empirical research that fully supports an exclusive negative link between these two variables.

Fabozzi et al. (2021) analysed 430 Japanese listed companies through OLS estimation. Overall, the authors noticed that the link between social and financial performance may depend by the proxy used for CFP measurement. They reported a positive impact of 'overall ESG' (the aggregate CSR measure) on financial performance (Tobin's Q measure). At the same time, they stated a negative relation between CSR and other indicators of corporate performance, like accounting ones (ROA and ROE).

Elmghaamez and Olarewaju (2022) examined a dataset of 50 product and service-based companies listed on the London Stock Exchange (LSE), spanning 2008-2017. Disentangling CSR in three ESG variables, the authors reached mixed results. They reported a positive relationship between environmental performance and stock price of both product and service-based companies. Contrarily, social activities exhibited a negative impact on stock price for both categories of companies. The authors also found

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[12] Tobin's Q is both an accounting and market based measure. It is calculated as market value of assets/replacement value of assets. See chapter 4.3.3 for more details.

an insignificant connection between corporate governance and stock price for product and service-based firms.

Table 7 – Literature review: developed countries

Authors	Sample	Period of observation	Country of observation	CSR – CFP relationship
Alvarez and Martinez (2022)	1061 firms from Europe, North America, Asia, and Oceania	2009 - 2018	16 developed countries	Positive relationship
Mentor (2016)	Companies listed on S&P 500	2004 - 2015	USA	Mixed results
Okafor et al. (2021)	The top 100 tech companies listed on S&P 500	2017 - 2019	USA	Mixed results
Elmghaamez and Olarewaju (2022)	50 British product and service-based firms listed on LSE	2008 - 2017	UK	Mixed results
Cho et al. (2019)	191 firms listed on Korea Stock Exchange	2015	South Korea	Positive relationship
Fabozzi et al. (2021)	430 Japanese listed companies	2009 - 2016	Japan	Mixed results

Source: created by the author.

3.2.2 Emerging countries

There is an increasing interest in analysing the impact of CSR in emerging countries. However, the relationship between CSR and CFP is not always assessed in developing regions. For instance, there is a consistent research gap in Africa and South America. The majority of empirical studies in emerging countries concern listed companies in East and South Asia.

Starting from the largest emerging market, namely China, various scholars have analysed the impact of socially responsible initiatives on corporate financial performance. Table 8 reports two significant studies on the Chinese economy.

Interestingly, Ang et al (2022) analysed a large sample of Chinese heavily polluting firms in the period 2012-2019. It is observed that CSR positively impacts financial performance. More specifically, the ownership structure has a considerable influence. The empirical analysis of a subgroup composed of non-state enterprises (non-SOEs) showed a better correlation between CSR and CFP, in comparison with state-owned enterprises (SOEs). In addition to this, results revealed that CSR contribution to CFP varies across different

Chinese regions, but the effect is similar for both labour intensive and capital intensive companies.

Wang et al (2020) restricted the research field only to the environmental dimension of CSR. Using panel date of 505 listed companies between 2012 and 2017, the authors analysed the effect of environmental protection expenditure on corporate financial performance. At first glance, it seems to be just a pure cost. Conversely, the authors revealed that environmental protection expenditure improves CFP of Chinese enterprises. Thereby, this empirical research informs that, beyond social activities which enhance reputation or market value through charity and other initiatives, also green investments have a significant influence on firms' performance.

Shifting from East to South Asia, Sekhon and Kathuria (2019) analysed CSR in the rapidly evolving context of India. In 2013, the Companies Act introduced by the national government made investments in CSR mandatory for listed companies. Using pre-reform and post-reform data, this study assessed the evolution of CSR-CFP relationship from 2008 to 2017. The empirical investigation of the 150 best performing listed companies revealed a neutral or negative relationship between CSR and financial performance in India. It is observed that CSR negatively impacts ROE. At the same time, it has a neutral relationship with ROA and Net Profit Margin.

These findings have concrete implications for both policy makers and executives. On the policy side, a forceful approach to enforcing CSR investments does not motivate corporate leaders to contribute towards society, beyond legal obligations. This suggests that policy makers should allow more freedom for enterprises to undertake CSR initiatives in line with their strategies. At the same time, management should only invest in those CSR projects, which could benefit the company in the long term. An adequate cost-benefit analysis can support the correct identification of such beneficial CSR investments, in line with organizational mission and intentions (Sekhon and Kathuria, 2019).

One of the fewest empirical research in the African region was conducted by Chetty et al. (2015). The purpose was to test whether corporate social responsibility is significantly associated with financial performance within industry groups in South Africa. Overall, this study revealed that the CSR-CFP link is sensitive to the type of measure used as a proxy of financial performance. Although mixed results are reported among industries, the authors affirmed that there is no significant impact of CSR activities over financial performance.

Table 8 – Literature review: emerging countries

Authors	Sample	Period of observation	Country of observation	CSR – CFP relationship
Wang et al. (2020)	505 companies listed on Shanghai Stock Exchange	2012 - 2017	China	Positive relationship
Ang et al. (2022)	6306 Chinese heavily polluting listed enterprises	2012 - 2019	China	Positive relationship
Sekhon and Kathuria (2019)	Top 150 firms listed on Indian Stock Exchange	2008 - 2017	India	Mixed results
Maharantika and Fuad (2022)	47 manufacturing companies listed on Indonesia Stock Exchange	2017 - 2019	Indonesia	Mixed results
Resmi et al. (2018)	Top 100 agribusiness organizations	2015 - 2017	Bangladesh	Mixed results
Chetty et al. (2015)	42 firms listed on Johannesburg Stock Exchange	2004 - 2013	South Africa	Neutral relationship

Source: created by the author.

To conclude this section dedicated to international research, some clarifications seem to be necessary. The empirical studies reported in scientific literature review have some characteristics in common:

- They have all been published in the last decade (2012-2022), and they all include recent datasets.
- they are all executed through regression analyses. Even if alternative methods to assess the relationship between CSR and financial performance exist, the econometric approach is considered a highly reliable research practice;
- they all refer to listed companies. Overall, literature on the link between CSR and CFP among non-listed firms is scarce, especially in emerging markets. ESG data may not be publicly disclosed for mid and small companies, and this represents a great research limitation.

These factors increased comparability among selected studies, and they allowed to reach the following conclusions. First, most of the research report positive or mixed results. There are no significant discrepancies in assessing CSR-CFP relation between firms in advanced or emerging economies. Second, the number of studies that proved a negative link between CSR and financial performance decreased over time. Literature reviews

provided by Margolis and Walsh (2001) and Lu et al. (2014) included a considerable number of academic articles indicating a negative CSR-CFP relationship. On the contrary, in this chapter, only partial negative links emerged, in a very limited number of studies.

3.2.3 Focus on the Italian market

The Italian context does not present an extensive literature body on the relationship between corporate social responsibility and financial performance. Most of the studies are focused on the European Union. For instance, Agostinis (2018) accomplished an investigation of STOXX 600 Europe. Eventually, empirical evidence is concentrated on particular industries of the European market, e.g. Demiraj (2021) deepened the relationship between CSR and CFP in the European banking sector. In some cases, only a few Italian companies are included in the European dataset. In others, they are completely excluded from the research sample. Nonetheless, a few studies on the Italian market emerged over the last decades, albeit they are not recent, and they do not fully reflect the current situation.

Fiori et al. (2007) examined the impact of CSR voluntary disclosure on Italian listed companies, in order to assess whether it can somehow increase stock prices. Evidence from a period of three years (2004-2006) suggests that stock market prices were not affected by CSR at the time, even if Italian companies showed an increasing attention to sustainability issues.

A few years later, Cardamone et al. (2012) resumed the investigation of CSR impact on stock prices. Analysing a sample of 178 companies listed on the Milan Stock Exchange, they founded a negative correlation between stock price and the publication of a sustainability report (SR), in between 2002 and 2008. Surprisingly, the stock price of firms with a SR was, on average, € 2.5 lower than companies without a SR. At the time, the authors explained these findings by providing two alternative explanations:

1. the allocation of financial and human resources to social initiatives, not closely related to the core business, is intended by investors as "Diverting resources from more remunerative purposes" (Cardamone et al., 2012, p.10);

2. market agents considered the sustainability report an important document, but they negatively judged both its content and the presentation format.

Even though Cardamone et al. (2012) analysed the impact of CSR almost 15 years ago, this study represents a milestone in literature. Some interesting considerations may be extrapolated from it. If the first explanation is accurate, it means that in 2012 the market was unready or unwilling to fully support corporate social commitment. Exiting the 2008 financial crisis, investors continued to place greater importance and centrality on accounting information.

The second consideration investigated a concrete issue. Sustainability reports have rapidly evolved since the publication of this study. Over time, firms have rethought their SRs, by increasing quantity and quality of information. Nowadays, international reporting frameworks, e.g. GRI[13], have overcome these blocks and they offer a valid arrangement to properly report sustainability, even if complete harmonization hasn't been achieved yet.

Another insightful research was published by Nigro et al., in 2015. Studying the CSR-CFP relationship on a sample of 84 Italian listed companies for the 2012-2013 financial year, the authors concluded that a causal linkage between CSR disclosure and corporate performance could not be supported by empirical results. What is even more remarkable is the final discussion about the centrality and the strategic role of CSR in the Italian firms' agenda. The term 'decoupling' is used to describe the gap between what the firm shows, the organizational façade, and what the firm really does in terms of strategic objectives. According to the authors: "CSR disclosure is 'cheap', while the actions and the effects that are produced in terms of value creation is what really matters" (Nigro et al., 2015, p.12). Companies should engage in CSR activities being conscious that legitimacy and internal efficiency are two strategic objectives that shall be met simultaneously. In support of this thesis, a subsequent research on the Italian manufacturing industry concluded that "The effective implementation of different practices of CSR improves the business processes, enhances the production quality, and gains the support of stakeholders like customers, employees, suppliers, and government" (Feng et al., 2021, p.16). Thus, even if Nigro et al. (2015) do not support a positive relationship between CSR disclosure and better corporate performance, the practical implementation of CSR activities could really favour the improvement of business performance.

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[13] Global Reporting Initiative. See chapter 2.2.1.

Conducting an empirical study on Italian listed companies, Vaccari (2021) demonstrated that the presence of a CSR committee in an organization positively influences the assignment of a better ESG score, which subsequently leads to the achievement of greater financial performance. Generally speaking, a CSR committee may assume other names like sustainable development committee, ethic commission, public responsibility board, or health and safety committee. It is usually a subgroup of the board of directors, and it is responsible of proposing accurate CSR policies and strategies, as well as ensuring the proper functioning of socially responsible practices. This study demonstrates that there are several business constituencies that positively or negatively affect the statistical linkage between CSR and financial performance.

Recently, Romanis (2021) conducted an empirical research to analyse how ESG performance influences financial performance of Italian firms, over the period 2015-2019. The final sample included 35 listed firms selected from FTSE Mib Index, for a total of 175 observations. The study found no meaningful relationship between ESG score and financial performance, represented by ROA and Net Margin. Conversely, it assessed a negative link between CSR and ROE, but this was simply interpreted as an exception. Considering these results, the author denied the existence of a significative link between CSR and CFP in the Italian Stock Exchange.

The empirical study conducted by Romanis (2021) presents some critical limitations. First of all, the dataset does not include the entirety of Italian listed companies but only a small subset of FTSE Mib constituencies. The sample size could be expanded to support more significant evidence. Another relevant issue is the choice of variables in the regression model. Concerning the independent one, the proxy for CSR performance (ESG score) has only been considered as a single element. Its discernment in three different dimensions (E,S, and G) could provide further valuable insights. Regarding the dependent variable, Romanis (2021) only used accounting measures as a proxy of financial performance. Market-based ones could eventually be considered as alternative but valid performance measures. Additionally, important control variables like company age, growth rate, industry type, are not included in the model specification. If included, they could potentially impact the link between CSR and CFP.

These restrictions combined with the presence of scarce, contradictory, and non-contemporary evidence on the Italian market represent the main reasons that lead to the empirical research in chapter 4. The aim is to investigate the relationship between CSR and financial performance of companies listed on the Italian Stock Exchange, while overcoming most of the limitations included in previous literature.

Chapter 4

Empirical Strategy

Up to here, the dissertation analysed several theoretical frameworks related to CSR, and it presented an extensive literature review regarding the CSR-CFP relationship. Keeping the research objectives in mind, this section introduces the hypotheses formulation, the research methodology, and the regression model specification.

4.1   Hypotheses

The following table contains four hypotheses that will be tested in the remainder of this paper.

Table 9 – Description of hypotheses

N.	Hypothesis
H1	There is a linear and positive relationship between overall Corporate Social Responsibility performance and Corporate Financial Performance
H2	There is a linear and positive relationship between Environmental performance and Corporate Financial Performance
H3	There is a linear and positive relationship between Social performance and Corporate Financial Performance
H4	There is a linear and positive relationship between Corporate Governance performance and Corporate Financial Performance

Source: created by the author.

The aim of this research is to test whether there is a certain correlation between changes in CSR performance and the increase or detriment of financial performance, in the context of the Italian Stock Exchange. Each hypothesis refers to the sample of data whose characteristics will be discussed in the next section.

The first hypothesis (H1) is focused on the overall measure of CSR performance, an aggregate variable that includes all ESG dimensions. This is the leading hypothesis because it verifies the total impact of CSR investments on business financial results.

As regards the other hypotheses, they each consider a single ESG dimension:

- H2 deals with the impact of environmental performance on CFP;
- H3 studies the influence of social performance on CFP;
- H4 studies corporate governance and its effect on CFP.

4.2 Sampling and data collection

This work makes use of annual data of Italian listed companies for the period 2018-2020. Constructing the sample, all the firms belonging to FTSE Mib and FTSE Italia Mid Cap indices were considered. The first is the main benchmark index of the Italian equity market. Its 40 constituencies represent the largest companies of the Milan Stock Exchange, and they approximately capture 80% of the Italian market cap. The second index is composed by the 60 largest Italian companies not included in FTSE Mib. Thus, the initial sample counted 100 firms. After accounting for missing information, the final sample is reduced to 88 business entities, for a total of 264 yearly observations.

Table 10 – Sample description

Industry	No. of firms	Proportion
Technology	3	3%
Telecommunications	2	2%
Health care	3	3%
Financials	27	31%
Real estate	0	0%
Consumer discretionary	15	17%
Consumer staples	4	5%
Industrials	19	22%
Basic materials	0	0%
Energy	5	6%
Utilities	10	11%
Total	**88**	**100%**

Source: created by the author.

Table 11 – Industry distribution
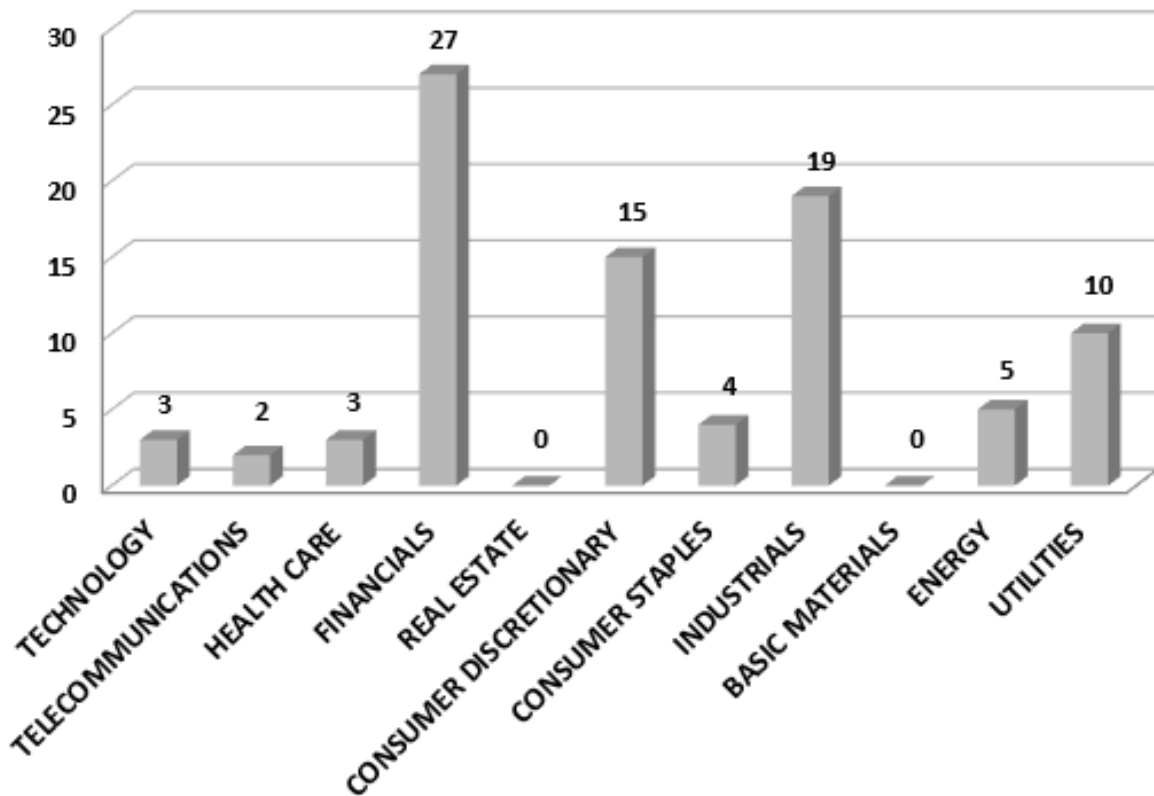
Source: created by the author.

Table 10 and 11 show the sample distribution by industry, according to the Industry Classification Benchmark. ICB categorizes firms into a system of 11 industries, consequently partitioned into super sectors, sectors and subsectors.[14]

As evinced by the graph, the most represented industry in the sample is "financials", made of commercial banks and financial institutions operating in the Italian territory. Some similar research projects (Aggarwal, 2013; Zaiane and Ellouze, 2022) excluded these companies from the final sample "Because of the specificity of their operational activities" (Zaiane and Ellouze, 2022, pag.11). Nonetheless, it is worth mentioning that large corporations like Intesa San Paolo or Generali have become more than simple financial institutions as intended in the past. Actually, they represent real conglomerates, capable of differentiating their activities on different markets and commercial sectors. Taking these considerations, financial companies have not been excluded from the sample as previously done by the studies mentioned. Other highly represented sectors are

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[14] For more information about ICB visit www.ftserussell.com/data/industry-classification-benchmark-icb

industrials (19 firms) and consumer discretionary (15 firms). To be noted is the complete absence of companies belonging to the real estate and basic materials industries.

Data has been collected from two different sources. Corporate financial performance information has been extracted from Aida database, one of the largest dataset of Italian companies. Instead, corporate social responsibility information has been extrapolated from Bloomberg platform.

4.3 Regression model

The general equation for the linear multiple regression model is depicted as follow:

$$Yi = \beta_0 + \beta_1 X1 + \beta_2 X2 + \cdots + \beta_n Xn + ei$$

Where:

- Y_i is the dependent variable;
- β_0 is a constant;
- $\beta_{1,\dots,n}$ are the coefficients related to each independent variable;
- $X1, \dots, n$ represent the independent variables or the control variables;
- e_i is the error term.

The purpose of this study is to analyse whether the increase in corporate social responsibility performance could lead to a significant growth in financial performance at the corporate level. The theoretical model is extracted from this general function:

$$CFP_i = f(CSR_i, C)$$

Where:

- CFP_i is a proxy of corporate financial performance;
- CSR_i is a proxy of corporate social responsibility performance;
- C is a vector of control variables.

To assess the effect that corporate social responsibility has on CFP, two different models will be tested. The first one includes a single regressor, and it tests linear relationship between ESG total score and the proxy of CFP (H1). In addition, a set of control variables complete the equation.

Model I

$$CFP = \beta_0 + \beta_1 ESG\_TOTAL + \beta_2 SIZE + \beta_3 INDUSTRY + \beta_4 LEVERAGE + e$$

The second model contains the three separated ESG dimensions, represented by the corresponding Bloomberg ESG score indices. The same set of control variables of model 1 completes the equation. It will be used to test hypotheses 2,3 and 4, assessing the relationship between a single ESG sub-dimension and CFP.

Model II

$$CFP = \beta_0 + \beta_1 ESG\_ENV + \beta_2 ESG\_SOC + \beta_3 ESG\_GOV + \beta_4 SIZE + \beta_5 INDUSTRY + \beta_6 LEVERAGE + e$$

After having discussed different relational forms (see chapter 3.1), both models exclusively test the impact of CSR performance (independent variable) on financial performance (dependent variable). The studying of a bilateral relationship between these two factors is not part of this investigation and it will be left to future research projects. Next sections will present insightful considerations on dependent, independent and control variables, as intended by the two regression models.

4.3.1 Dependent variable

In this paper, the dependent variable is a proxy of corporate financial performance. As evidenced by Barauskaite and Streimikiene (2021), there are several indicators of performance. Although CFP is easier to measure than CSR, the economic community presents no agreement on which tools are the most representative of business performance. Two main methods are usually applied by researchers for measuring this corporate dimension: the accounting-based approach and the market-based approach. In addition, some authors utilize a mixed approach, and they combine both types of measures. Galant and Cadez (2017) summarized the most commonly used methods in table 12.

Accounting-based tools reflect the internal effectiveness of a business, which is positively or negatively influenced by the organizational performance (Van Beurden and Gössling, 2008). Return on assets (ROA) and return on equity (ROE) are the most commonly assessed indicators. These instruments present both advantages and disadvantages in capturing the business performance. On the positive side, they are easily computable, and they allow comparability among companies. On the other side, a few limitations require the integration of accounting measures with market-based measures. First, accounting methods do not assess the company size. Also, if the research sample contains companies

from different industries or from different markets, a size discrepancy may affect the goodness of the research and the accounting measures may be biased. Second, these accounting ratios are the result of managers decisions. Eventually, they may be affected by policy choices and by personal purposes (Galant and Cadez, 2017).

Looking at market-based measures, these indicators are shareholder centred. Investors look at past, present, and future expected returns and they base their decisions considering stock prices and the presumed market value. One of the greatest strengths of these measures is modernity. Indeed, they are faster in reflecting CFP changes than accounting-based ratios. However, they are only available for listed companies, and they inevitably involve systemic market risk, due to macroeconomic factors like economic crisis or financial bubbles (Galant and Cadez, 2017; Agostinis, 2018).

The third category of indicators is the one composed by "both types" measures. They are also categorized as "harmonized" CFP indicators. The most assessed is Tobin's Q, also called Q ratio.

Table 12 – Corporate financial performance indicators

Accounting based measures	Market based measures	Both types measures
Return on assets (ROA)	Return on shares	Tobin's Q
Return on equity (ROE)	Company market value	Market value added (MVA)
Return on capital invested (ROCE)	Change in return on shares	
Return on sales (ROS)	Earnings per share (EPS)	
Return on investment (ROI)	Share price to earnings ratio (P/E)	

Source: Galant and Cadez (2017).

So far, three different groups of corporate financial performance indicators have been described. The reasoning about their advantages and disadvantages has inevitably underlined the need to use different types of measures as proxy of financial performance in the subsequent econometric study. Differently from past studies, all the three categories of financial indicators will be part of the regression model.

The following variables will be used as proxy of CFP in both empirical models:

- Return on assets (ROA). This is one of the most significant accounting measure utilized among managers, investors, analysts, and researchers. It is calculated as follow:

$$ROA = \frac{Net\ income}{Total\ assets} * 100\%$$

This metric indicates a firm's profitability in relation to its total assets. It allows understanding the efficiency of a business. The higher the ROA, the better the firm uses its assets to generate profits.

- Return on equity (ROE). The formula of this accounting ratio is:

$$ROE = \frac{Net\ income}{Total\ equity} * 100\%$$

It measures a business financial performance by reflecting the investors' return. The higher the ROE, the better shareholders' equity is converted into profits. Both ROA and ROE are usually expressed in percentage format.

- Earnings per share (EPS). This key market-based indicator is calculated as a firm's net profit divided by the number of common shares.

$$EPS = \frac{Net\ income}{Average\ outstanding\ common\ shares}$$

This ratio is widely used to estimating corporate value at shareholders' sight. A higher EPS stands for greater value. Investors will pay more for stocks if they believe the firm has larger capability to generate net income from each share.

- Price to earnings ratio (P/E). This market-based indicator is calculated in the following way:

$$P/E = \frac{Market\ value\ per\ share}{Earnings\ per\ share}$$

To determine the P/E value is requested to divide the current market value per share by EPS (earnings per share). Dealing with historical series, the price per

share (the equivalent of market value per share) could be calculated in different ways. For example, it may coincide with the market value of the first trading day of the year. In other cases, it may correspond to the value registered the last day of the year. In this study, the P/E ratio has been calculated taking into account the average of the stock price between the first and last day of the Milan Stock Exchange opening. A high P/E value could signify that the stock price of a company is overvalued or, in alternative, that investors expect high growth rate of business performance in the future.

- Tobin's Q ratio. It is the only "both types" measure that will be used in the regression analysis. It is usually calculated as market value of a company divided by the replacement cost of its assets. It estimates whether a given organization is undervalued (Tobin's Q < 1) or overvalued (Tobin's Q > 1). When market value equals replacement cost (Tobin's Q = 1), there is equilibrium and the company's value is correctly assessed. Since estimating the total assets replacement cost is complicated, a simplified version of the formula will be used in the regression analysis. Tobin's Q is calculated as:

$$TSQ = \frac{Equity\ market\ value}{Equity\ book\ value}$$

All CFP measures described above will be regressed separately on the independent and control variables included in model I and model II. This means that both models will be tested 5 times each, every time with a different proxy of corporate financial performance.

4.3.2 Independent variables

Independent variables are taken from Bloomberg ESG Data Service. This provides a suite of four different scores. The first represents a comprehensive measure of all ESG aspects, while the others are focused on a single category of ESG issues. Each score ranges from 0 to 100, measuring the extent of CSR information reported by listed companies. By construction, they all consider the sustainability of company's investments; therefore, they are directly associated to the spending of corporate resources in specific CSR areas. Each score is the result of a quantitative analysis based on specific key performance indicators (KPIs) across 120 key sustainability issues (Bloomberg, 2021).

Model I contains one exclusive CSR independent variable, called ESG_TOTAL. This measure captures the overall corporate social responsibility performance of companies included in the sample. On the contrary, Model II is formed by three different ESG variables, one for each CSR dimension. These are:

- ESG_ENV, for corporate environmental performance;
- ESG_SOC, for corporate social performance;
- ESG_GOV, for corporate governance performance.

As evidenced by all the theoretical frameworks presented in chapter 1, CSR is a multidimensional concept. In this regard, the second model was designed for having disaggregated data available. The study of the relationship between single CSR dimensions and CFP, through hypotheses 2,3 and 4, is a central aspect of this research project.

4.3.3 Control variables

Control variables play a primary role in every regression analysis. If appropriately selected, they are correlated with the dependent variable. Thus, they allow to absorb a considerable part of variability that is not explained by the variables of interest. Control variables take particular importance when the regression model is subjected to the Ordinary Least Square (OLS) method. One fundamental assumption of OLS is that the error term must be uncorrelated with the regressor. A violation is caused by the presence of omitted variables, for which the estimated parameter could be biased and inconsistent. Looking at the regression models presented in this chapter, it is clear how CSR level is not the only factor that influence CFP. There are other business aspects that affect financial performance. Hence, the presence of control variables will improve the goodness of the model specification, avoiding biased and inconsistent outcomes. Analysing a large number of studies regarding CSR-CFP relationship, Lu et al. (2014) made a review of the control variables more frequently used. They are all included in the following table.

Table 13 – Control variables in literature review

Control variable	Frequency of appearance
Firm size	50
Industry	38
Capital structure	24
Financial returns	15
Risk	14
R&D intensity	9
Firm age	8
Growth rate	6
Ownership	6
Advertising intensity	3
Community size/Population	3
Country and Country-based features	3

Source: Lu et al., (2014).

Both the regression models described in the previous section include the following set of control variables:

- SIZE. The relationship between company size and financial performance has been extensively studied in previous literature. This control variable is used to reflect the wealth owned by business organizations. Usually, larger firms control more financial resources. Thus, they are able to attract more investors, to pursue greater goals, and to finance larger investments in comparison with smaller economic realities. Firm size could positively affect efficiency of managers and employees, since a large and well defined organizational structure may help in activities like goal setting and monitoring of work activities. On the other side, this variable could also negatively impact the business performance. A rigid structure may limit innovation and it could increase time needed to face new challenges or disruptive changes coming from the external environment.

Focusing on CSR issues, firm size is related to the adoption of socially responsible principles and the quantity of resources available for CSR investments and disclosure. Another relevant factor is visibility. Larger companies usually gather

more public attention and receive more pressure to meet stakeholders demand (Fabozzi et al., 2021).

For all these reasons, firm size is considered a key control variable and allows for better specification of the regression model. In the reviewed literature, size is expressed through different indicators, for instance cash, market cap or ln(total revenues). According to recent studies (Maharantika, Fuad, 2022; Demiraj, 2020; Agostinis, 2018), firm size in the regression model will be indicated by the natural logarithm of total assets.

$$SIZE = \ln(Total\ Assets)$$

- LEVERAGE. This control variable is used as a proxy of risk. The use of debt capital is a common practice for companies that want to increase their profitability. At the same time, it could be a double-edge sword. High levels of debt can undermine the stability and the credibility of business organizations, putting their future survival at risk. Evaluating companies' performance, investors and analysts use leverage as a proxy of specific (unsystematic) risk. Former studies used different measures of leverage. For example, the debt to equity ratio (Romanis, 2021), or the debt to assets ratio (Fabozzi et al., 2021; Demiraj, 2020). In this study, the control variable for leverage has been directly extrapolated from Aida database, as it was calculated by the software.

- INDUSTRY. As previously explained, industry-specific factors have a large impact on corporate financial performance. Underlining the prominence of industry as control variable, Griffin and Mahon (1997, pag.25) stated: "Individual industries operate within distinctively different contexts and with dissimilar social and environmental concerns, and patterns of stakeholders involvement and activism". These authors suggested that the use of a multi-industry sample could mask the real CSR effect on corporate financial performance. For this reason, a considerable number of studies focus on a single industry. This is the case of Miras-Rodriguez (2015), whose research is on the electrical industry, or Demiraj (2020) who focused on the European banking sector.

Despite that, the sample analysed in this study contains a spectrum of companies from different industries. As regression requires numerical input, industry

classification has been converted into a categorical variable. Its code varies from 0 to 10, according to the next conversion table.

Table 14 – Coding system for industry variable

Industry	Numerical code
Technology	0
Telecommunications	1
Health care	2
Financials	3
Real estate	4
Consumer discretionary	5
Consumer staples	6
Industrials	7
Basic materials	8
Energy	9
Utilities	10

Source: created by the author.

The table below summarizes all the variables discussed so far, classifying them according to source and type.

Table 15 – Recap of variables

Variable	Abbreviation	Type	Source
Return on assets	ROA	Dependent variable	Aida
Return on equity	ROE	Dependent variable	Aida
Earnings per share	EPS	Dependent variable	Aida
Price/earnings ratio	P/E	Dependent variable	Aida
Tobin's Q	TSQ	Dependent variable	Aida
ESG total score	ESG_TOTAL	Independent variable	Bloomberg
Environmental score	ESG_ENV	Independent variable	Bloomberg
Social score	ESG_SOC	Independent variable	Bloomberg
Corporate governance score	ESG_GOV	Independent variable	Bloomberg
Firm size	SIZE	Control variable	Aida
Industry	INDUSTRY	Control variable	Aida
Firm leverage	LEVERAGE	Control variable	Aida

Source: created by the author.

4.4   Research methodology

In the following chapter, different statistical and econometric procedures will be used. Descriptive statistics will be employed to derive means and standard deviation considerations from the large sample of quantitative information contained in the dataset. The study will also apply correlation analysis. This allows to determine interrelationships, strength and direction of association between two or more variables. Finally, various linear multiple regression analyses will be performed to test the CSR-CFP linkage, expressed through hypotheses 1-5.

The nature of this research paper implies the use of panel data analysis. Before presenting empirical results, this section clarifies some fundamental econometric aspects. In the book *Introductory Econometrics: a modern approach*, J. M. Wooldridge (2019) described panel data as a combination of cross sectional and time series data:

- Cross sectional data is about a multitude of individuals' (or entities') information, collected at a single point in time.
- Time series information is about a single entity's data, observed at constant intervals over time.

Panel data (also called longitudinal data) consists of a set of observations on the same n entities measured through two or more t periods. Quoting Park (2011, p.4), "A panel may be long or short, balanced or unbalanced, and fixed or rotating." Accordingly, a long panel has few entities (small n) but many time periods (large T), while a short panel has a large set of entities, but few periods of time. When it includes all the observations for each entity at any time, the panel is balanced, and it contains n*T observations. Vice versa, if any value is missing, the dataset is unbalanced, and the contingency table is formed by less than n*T obs. Last point. A dataset is named fixed panel if the same entities are observed throughout various periods. Contrarily, a rotating panel covers a random set of entities that changes from a period to the next (Park, 2011).

As regard the research paper, the panel data set is short, unbalanced, and fixed. Indeed, there is a large set of cross-setting companies (n=88) and few observation periods (T=3), corresponding to FY 2018, 2019, and 2020. Some information is missing, and each firm reports a different number of values. The total number of observations does not

correspond to n*T=267, but it is inferior to this number. The set of companies is permanent, and it doesn't change from period to period.

There are three different estimation models to test panel data (Park, 2011):
- Pooled OLS model;
- Fixed effects (FE) model;
- Random effects (RE) model.

The choice of the most appropriate estimation model is usually given by the execution of three econometric tests through Stata. These are:
- The F test: it compares the pooled OLS model and the fixed effects model. If the F test rejects the null hypothesis, the fixed effects model is preferred to the pooled OLS model. If the null hypothesis cannot be rejected, then the pooled OLS model shall be used.
- The Breusch-Pagan test: it compares the pooled OLS model and the random effects model. If the null hypothesis cannot be rejected, then it is possible to properly use the pooled OLS model. If H0 is rejected, the pooled OLS model is not recommended, and the choice shall be between the FE and the RE models.
- The Hausman test: it compares the random effects model and the fixed effects model. The null hypothesis supports the idea that the RE model is consistent. If H0 cannot be rejected, the final choice is the random effects model. This case presents no risk of biased estimations, and the RE model results more efficient. On the contrary, if H0 is rejected, then the right tool is the fixed effects model (Agostinis, 2018).

To recap. This paper examines two distinct models using panel data regression analysis. Stata software has been adopted to test the relationship between ESG disclosure score and corporate financial performance. Five equations will be assessed for each model, which are as follows:

Model I

$$ROA_{it} = \beta_0 + \beta_1 ESG\_TOTAL_{it} + \beta_2 SIZE_{it} + \beta_3 INDUSTRY_{it} + \beta_4 LEVERAGE_{it} + e_{it}$$
$$ROE_{it} = \beta_0 + \beta_1 ESG\_TOTAL_{it} + \beta_2 SIZE_{it} + \beta_3 INDUSTRY_{it} + \beta_4 LEVERAGE_{it} + e_{it}$$
$$EPS_{it} = \beta_0 + \beta_1 ESG\_TOTAL_{it} + \beta_2 SIZE_{it} + \beta_3 INDUSTRY_{it} + \beta_4 LEVERAGE_{it} + e_{it}$$
$$P/E_{it} = \beta_0 + \beta_1 ESG\_TOTAL_{it} + \beta_2 SIZE_{it} + \beta_3 INDUSTRY_{it} + \beta_4 LEVERAGE_{it} + e_{it}$$
$$TSQ_{it} = \beta_0 + \beta_1 ESG\_TOTAL_{it} + \beta_2 SIZE_{it} + \beta_3 INDUSTRY_{it} + \beta_4 LEVERAGE_{it} + e_{it}$$

Model II

$$ROA_{it} = \beta_0 + \beta_1 ESG\_ENV_{it} + \beta_2 ESG\_SOC_{it} + \beta_3 ESG\_GOV_{it} + \beta_4 SIZE_{it} + \beta_5 INDUSTRY_{it} + \beta_6 LEVERAGE_{it} + e_{it}$$

$$ROE_{it} = \beta_0 + \beta_1 ESG\_ENV_{it} + \beta_2 ESG\_SOC_{it} + \beta_3 ESG\_GOV_{it} + \beta_4 SIZE_{it} + \beta_5 INDUSTRY_{it} + \beta_6 LEVERAGE_{it} + e_{it}$$

$$EPS_{it} = \beta_0 + \beta_1 ESG\_ENV_{it} + \beta_2 ESG\_SOC_{it} + \beta_3 ESG\_GOV_{it} + \beta_4 SIZE_{it} + \beta_5 INDUSTRY_{it} + \beta_6 LEVERAGE_{it} + e_{it}$$

$$P/E_{it} = \beta_0 + \beta_1 ESG\_ENV_{it} + \beta_2 ESG\_SOC_{it} + \beta_3 ESG\_GOV_{it} + \beta_4 SIZE_{it} + \beta_5 INDUSTRY_{it} + \beta_6 LEVERAGE_{it} + e_{it}$$

$$TSQ_{it} = \beta_0 + \beta_1 ESG\_ENV_{it} + \beta_2 ESG\_SOC_{it} + \beta_3 ESG\_GOV_{it} + \beta_4 SIZE_{it} + \beta_5 INDUSTRY_{it} + \beta_6 LEVERAGE_{it} + e_{it}$$

Looking at the representation of these equations, two notations are demanded to account for both the entity and the time of panel data. At this purpose, a system of two subscripts is used: the first, i, refers to the detected entity, while the second, t, refers to the time of observation. Therefore, Yit indicates the dependent variable observed for the i-th of the n entities in the t-th of the T periods (Stock and Watson, 2019).

Chapter 5

Data Analysis and Results

5.1   Descriptive statistics

Table 16 reports the descriptive statistics, summarising in a tabular form the observations number (obs), the mean value, the standard deviation, and the min and max values for each dependent, independent and control variable used in this research. It reveals some interesting statistical outlines around CFP and CSR variables.

Table 16 – Descriptive statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
ROA	256	3.502539	6.795241	-6.09	52.14
ROE	239	10.75347	20.49873	-127.7	148.36
EPS	210	44.93868	283.9616	-4.975	2695.529
PE	188	23.98446	37.00311	.013	339.761
TSQ	221	6.484081	80.91422	0	1203.755
LEVERAGE	243	4.97465	5.147219	1.04	30.14
SIZE	257	15.24143	1.96385	10.79493	20.26398
ESG_TOTAL	253	52.9247	13.30879	8.26	78.8
ESG_ENV	254	42.1222	17.6565	0	79.58
ESG_SOC	253	37.51032	13.80192	3.51	74.79
ESG_GOV	253	79.49688	6.9564	17.13	99.31

Source: elaboration from Stata.

Considering the financial dimension, ROE, EPS, and P/E ratios report min or max values very far from the mean. For instance, earnings per share (EPS) has an average value of 44.93, but a minimum of -4.975 and a maximum of 2695.53. High variability is also expressed by the standard deviation (SD). The SD of EPS is extremely high: 283.96. This indicates that observations are spread over an extremely wide range.

As regard CSR proxies, the overall ESG score (ESG_TOTAL) presents a mean value of 52.92 and a standard deviation of 13.31. At the same time, there is a consistent variability among ESG subcomponents. Environmental and social variables have comparable patterns. They both report very low minimum values, and their means both attest at around 40 points. This implicitly underlines the great effort that Italian firms, on average, still have to make to achieve acceptable and adequate ESG scores. The ESG governance measure shows the highest average value with a score of 79.49 points. This variable also reaches the maximum score among the four ESG indicators, almost touching the threshold of 100 points (99.31). This data shows that Italian companies are on the right track with respect to compliance of governance principles. At the same time, there is always space to improve aspects like gender equality, anti-competitive and anti-corruption practices, and transparency for stakeholders.

The following table contains some further in-depth statistics, divided by ESG variable and by year.

Table 17 – ESG scores by year

Variable	Year	Obs	Mean	Std. Dev.	Min	Max
ESG_TOTAL	2018	81	51.05173	13.53681	8.26	74.11
ESG_TOTAL	2019	84	52.76952	13.06074	18.6	77.84
ESG_TOTAL	2020	88	54.79682	13.22772	16.8	78.8
ESG_ENV	2018	81	40.7158	17.637	0	79.58
ESG_ENV	2019	85	41.56776	17.6075	0	79.58
ESG_ENV	2020	88	43.95227	17.76768	0	79.58
ESG_SOC	2018	81	36.1563	13.53128	3.51	73.22
ESG_SOC	2019	84	38.10393	13.70931	6.38	73.35
ESG_SOC	2020	88	38.19	14.19827	6.38	74.79
ESG_GOV	2018	81	77.08333	10.10395	25	98.62
ESG_GOV	2019	84	78.87905	17.15125	17.13	98.62
ESG_GOV	2020	88	82.30818	16.41283	25.77	99.31

Source: elaboration from Stata.

Deepening the descriptive ESG analysis, it is clear that all the CSR-related dimensions have increased their average values from 2018 to 2020. The greatest progress is showed by the ESG_GOV variable, which improved from 77.08 points in 2018 to 82.30 points in 2020.

This upward trend provides a clear signal of CSR commitment, awareness, and resilience over time. Even though some scores like ESG_ENV and ESG_SOC are still very far from sufficient levels of CSR performance, there is a positive and increasing attitude towards the implementation of CSR practices in the period observed. The last year under scrutiny (2020) has been a tremendously complicated time for corporations. Covid-19 pandemic affected both the operational and the profitability aspects of most businesses. Nonetheless, all the mean values in table 17 confirmed a positive, albeit slow, growing trend.

5.2   Correlation analysis

The correlation analysis allows to determine interrelationships, strength and direction of association between the variables that shape the two regression models. The coefficient of correlation can vary between +1 and -1. The value 1 stands for a perfect positive linear correlation. The value 0 denotes no linear correlation, while -1 indicates a perfect negative correlation. All the intermediate values among -1 and 1 indicate a partial grade of correlation.

The pairwise correlation matrix (see table 18) presents some interesting insights. Looking at financial measures, there is only one dependent variable that is not negatively correlated with CSR dimensions, and this is the price earnings ratio (PE). ROA, ROE and Tobin's Q (TSQ) are slightly negatively correlated with the ESG total score, and its environmental and social subcomponents. This evidence does not suggest the existence of a causal relationship between CSR and CFP. It merely denotes that, in this specific research context, a relationship between the two variables of interest is noticed. On the counterpart, the correlation between ROA, ROE, and Tobin's Q and the corporate governance subdimension (ESG_GOV) is positive but almost equal to zero. The control variable SIZE is positively correlated with ESG total and its sub dimensional scores. This outcome is not surprising, as there is extensive literature holding the view that CSR will increase as corporate dimension increases.

Overall, the majority of coefficients do not exceed 0.70, the threshold upon which multicollinearity issues emerge (Wooldridge, 2019). The only parameters that significantly exceed this level are the ESG scores. The highest pairwise correlation is between ESG_TOTAL and its subcomponents. As regard the research continuation, this

circumstance does not represent a problem for two reasons. First, ESG indices are correlated between each other by definition and by construction. Second, the ESG overall score and its sub-dimensions will never be regressed in the same equation and at the same time. At this scope, two different regression models are set up.

Table 18 – Pairwise correlation matrix

	YEAR	INDUST.	ROA	ROE	EPS	PE	TSQ	LEVER.	SIZE	ESG_TOT	ESG_ENV	ESG_SOC	ESG_GOV
YEAR	1.0000												
INDUSTRY	-0.0989	1.0000											
ROA	-0.1213	-0.1756	1.0000										
ROE	-0.1434	-0.1697	0.3755	1.0000									
EPS	-0.0522	-0.1239	0.0901	0.0149	1.0000								
PE	0.0482	-0.0662	-0.0145	-0.0840	-0.0984	1.0000							
TSQ	0.0732	-0.2322	0.6224	0.4535	-0.1215	0.1290	1.0000						
LEVERAGE	0.1413	-0.3522	-0.1548	-0.0799	-0.1034	0.0715	-0.2755	1.0000					
SIZE	0.0452	0.1133	-0.2784	-0.2850	-0.1852	0.1503	-0.4153	0.5635	1.0000				
ESG_TOT	0.0728	0.4776	-0.0920	-0.1254	-0.1185	0.0667	-0.1680	-0.0004	0.5261	1.0000			
ESG_ENV	0.0172	0.4835	-0.1073	-0.1343	-0.0980	0.0481	-0.1748	-0.0297	0.4420	0.8720	1.0000		
ESG_SOC	0.0470	0.3167	-0.1127	-0.1772	-0.0615	0.0820	-0.2454	0.0558	0.5479	0.8026	0.6458	1.0000	
ESG_GOV	0.0964	0.3476	0.0075	0.0098	-0.1361	0.0290	0.0109	-0.0295	0.2794	0.7281	0.4042	0.3576	1.0000

Source: elaboration from Stata.

5.3   Regression analysis

Before presenting the empirical results, it is crucial to resume the discussion about the research methodology. In particular, the choice of the most appropriate estimation method is essential for the significance of the results obtained. As anticipated in chapter 4.4., three models best fit the analysis of panel data. These are: pooled OLS model, fixed effects (FE) model, and random effects (RE) model. A couple of considerations could be done before selecting the most appropriated among them. First, the pooled OLS model is usually employed when the sample is random. In this research, the set of companies is fixed, since they do not vary over time. Accordingly, the pooled OLS methodology to estimate panel data is excluded, and the final choice is between FE and RE models.

At this point, the Hausman test is computed in Stata. If the null hypothesis is rejected, the fixed effects is preferred, if it cannot be rejected, then the random effects is selected.

When using the FE estimation method, variables that do not change over time are captured by individual fixed effects. Eventually, the variable INDUSTRY is omitted from the linear equation, as reported in table 19 and 20.

The following two subsections include the estimation for ESG total score (Model I) and for ESG separate dimensions (Model II). Information regarding the methodology designated to test panel data has been reported for each specification. After computing the Hausman test, fixed effect has been selected for ROA (1), ROE (2) and Tobin's Q (5), while random effect has been used for EPS (3) and P/E ratio (4).

5.3.1 Model I

Model 1 tests the existence of a positive linear relationship between ESG total score and various proxies of corporate financial performance (hypothesis 1). The general model is recalled here:

$$CFP_{it} = \beta_0 + \beta_1 ESG\_TOTAL_{it} + \beta_2 SIZE_{it} + \beta_3 INDUSTRY_{it} + \beta_4 LEVERAGE_{it} + e_{it}$$

Table 19 shows the results of 5 different estimations, one for each dependent variable. Specifications 1 and 2 report a negative but not significant impact of ESG total score over corporate accounting measures. Even regressions 3 and 4 conclude no significance between ESG and market-based indicators. Contrariwise, the last equation (5) yields a meaningful outcome at the 0.05 level. Indeed, there is a significant linear and positive

relationship between the overall ESG measure and Tobin's Q. In other words, the asset replacement cost ratio (Tobin's Q) is positively affected by an increase in the ESG sustainability index. This allows to state that companies showing a greater ESG performance will in turn report a larger Q ratio, utilized in this research as proxy of corporate financial performance.

Also the control variable SIZE, measured as ln(total assets), is statistically significant. The fifth estimation of model I supports the existence of a negative effect: ceteris paribus, as the size of the company grows, the financial indicator (Tobin's Q) decreases.

Table 19 – Estimation using total ESG score

Model I	ROA (1)	ROE (2)	EPS (3)	PE (4)	TSQ (5)
ESG_TOTAL	-.0217794	-.1555634	-.1445231	.2489157	3.98758**
	(.0797714)	(.2913907)	(2.788349)	(.4087509)	(1.848042)
SIZE	-10.8976***	-5.217487	-36.77396	4.564661	-200.46***
	(1.741627)	(6.337022)	(24.47915)	(3.451812)	(40.57702)
INDUSTRY	0	0	-22.41568	-1.608749	0
	(omitted)	(omitted)	(14.73714)	(1.873964)	(omitted)
LEVERAGE	-.0295533	-3.863134***	-2.804641	-.1651509	-1.222413
	(.1521006)	(.5534364)	(8.623095)	(1.318673)	(6.53417)
_cons	172.1703***	118.5986	754.9662**	-47.36115	2848.431***
	(25.0398)	(90.69803)	(306.3306)	(40.62632)	(577.6062)
Model	fixed	fixed	random	random	fixed
R-squared	0.2597	0.2715	0.0228	0.0493	0.1779
N	234	228	200	179	209

Standard errors in parentheses
Significance levels *** $p<0.01$, ** $p<0.05$, * $p<0.1$

After examining model I, the empirical results attest to only a partial relationship between CSR and CFP. Significance is very limited, and it is just related to the fifth estimation, the one including Tobin's Q as predicted variable. According to this, model II will deepen the analysis, disaggregating ESG total score into its three main dimensions: environmental, social, and corporate governance.

5.3.2 Model II

This section aims to test hypotheses 2,3, and 4 of the empirical research. The set of independent ESG dimensional variables employed in model II allows focusing on one specific aspect of corporate social responsibility at a time. The modus operandi utilized to test the first model has also been applied to this second set of estimations. The general arrangement of model II is reported as follows, while findings are included in table 20.

$$CFP_{it} = \beta_0 + \beta_1 ESG\_ENV_{it} + \beta_2 ESG\_SOC_{it} + \beta_3 ESG\_GOV_{it} + \beta_4 SIZE_{it} + \beta_5 INDUSTRY_{it} + \beta_6 LEVERAGE_{it} + e_{it}$$

Table 20 – Estimation using separate environmental, social, governance (ESG) scores

Model II	ROA (1)	ROE (2)	EPS (3)	PE (4)	TSQ (5)
ESG_ENV	.086876	-.2093325	-1.045667	.0674869	4.068186**
	(.0694571)	(.25904)	(2.334368)	(.3193206)	(1.664419)
ESG_SOC	.0282359	.1878066	3.31424	-.0485052	1.750573
	(.0700814)	(.259597)	(2.62857)	(.3953686)	(1.583356)
ESG_GOV	-.1017908**	-.0628216	-1.625506	.1946728	-.6877714
	(.0474193)	(.1774121)	(1.759736)	(.2724104)	(1.06526)
SIZE	-10.66304***	-5.480231	-42.09961*	4.998801	-196.5189***
	(1.719755)	(6.370655)	(24.75477)	(3.556899)	(39.97544)
INDUSTRY	0	0	-21.23675	-1.621423	0
	(omitted)	(omitted)	(14.87337)	(1.932349)	(omitted)
LEVERAGE	-.055746	-3.910896***	-1.995155	-.235359	-1.504997
	(.1510245)	(.5592506)	(8.620486)	(1.340532)	(6.448172)
_cons	170.9174***	121.5387	870.1616***	-57.02564	2817.988***
	(24.63511)	(90.82454)	(312.9952)	(44.31105)	(567.5776)
Model	fixed	fixed	random	random	fixed
R-squared	0.2892	0.2757	0.0175	0.0513	0.2148
N	234	228	200	179	209

Standard errors in parentheses
Significance levels *** p<0.01, ** p<0.05, * p<0.1

The first empirical estimation provides significant evidence on the nexus between corporate governance and return on assets, at the 0.05 level. For one unit increase in ESG_GOV score, ROA is expected to decrease by 101.80 units[15], holding all other variables constant. However, reporting a negative sign, β_3 does not support the existence of a positive relationship, as previously theorized by hypothesis 4.

In the regressions with ROE (2), EPS (3), and P/E ratio (4) there is no evidence of significant relationship between CFP proxies and CSR dimensional variables. These estimations follow the pattern of Model I, in which a neutral (inconclusive) relationship with ESG total score has been captured. Moreover, specifications 3 and 4 report a minimum R-squared. This indicator attests that the amount of variance of the dependent variable explained by the regressor is very limited and then the estimation is not significant.

In the fifth and last equation, the CSR environmental dimension positively affects Tobin's Q. Instead, no meaningful relationship exists between TSQ and the social or corporate governance variable. Moreover, as already observed in Model I, this specification (5) exhibits a significant negative effect of corporate size over the dependent variable.

As ascertained in model I and II, empirical evidence does not give a strong support to the research hypotheses. In most estimates, the result captured by the regression analysis is inconclusive, while, only in a few cases, there is a significant connection between CSR and CFP. The next section will summarize the empirical findings and concludes on the acceptance or rejection of hypotheses.

5.4 Interpretation of results

Three different kinds of results emerge from the regression analyses of model I and model II. These are represented by the findings of positive, negative, or neutral (inconclusive) relationships between CSR and CFP proxies.

A significant and positive nexus may suggest that an increase in CSR performance could result in better implications for financial returns. This hypothesis is supported by the numerous CSR benefits presented in chapter 1, such as the improvement of the

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[15] Since ROA has been reported in thousands of euros in the dataset, the number obtained in the estimation table shall be multiplied by 1000.

relationships with various stakeholders, a more effective brand management, an increase in reputation, a more effective attraction of talents and retention of best employees.

A negative relationship may be justified by the expensive nature of CSR activities, which do not contribute or enhance both shareholders and stakeholders value. A socially responsible organization resorts to a continuous assessment of ESG frontiers, and this slows down decision-making processes and increases the cost of each business project. Lastly, several reasons can explain the presence of a weak or inconclusive link between CSR and CFP. This neutral effect may derive from greenwashing activities. The reliability of accounting figures is often debated, as some companies manipulate ESG results to show off only positive aspects. This may produce insignificant results when the relationship between ESG performance and financial results is tested (Chetty et al., 2015). Lee et al. (2009) advance an alternative interpretation on why no significant relationship may exist between corporate social responsibility and financial performance. They analyse two subgroups: pioneers/leading CSR firms versus lagging ones. This subdivision emphasizes that the financial benefits experienced by leading companies may not be exploitable by lagging companies. On the other side, latecomers may have an advantage since they may accept profitable projects without the severe sustainability limitations experienced by leading CSR firms. These two conflicting aspects may cancel each other out, then, as a consequence, no significant relationship emerges.

Table 21 contains a brief summary of the results obtained from both empirical models. Testing H1, *"there is a linear and positive relationship between overall CSR performance and CFP"*, the first model reports mixed outcomes. Both accounting and market-based measures are not statistically related with the overall ESG score. Only Tobin's Q supports H1, in the fifth estimation. Thus, the first hypothesis could not be completely rejected but evidence is scarce.

Then, the second model is tested for hypothesis 2, 3, and 4. As regard as H2, *"there is a linear and positive relationship between the environmental dimension and CFP"*, empirical findings indicate a significative output in just 1 over 5 specifications: the one testing Tobin's Q. Again, the second hypothesis is not completely rejected, but there is limited significance.

Looking at the social variable, H3 states: *"there is a linear and positive relationship between social performance and CFP."* In this case, no significant linkage arose at all.

Results of H4, which asserts *"there is a linear and positive relationship between corporate governance and CFP"*, are multifaceted. On one side, a significative nexus between ESG_GOV and ROA exists. However, the sign of β_3 provides evidence for a negative rather than positive relationship. Moreover, no other estimations support this empirical assumption.

Table 21 – Main results

Model	Hypothesis	Results
1	H1 – Linear and positive relationship between overall CSR performance and CFP	It is found a significant general relationship for Tobin's Q. No statistical evidence for both accounting and market-based proxies of CFP.
2	H2 – Linear and positive relationship between Environmental performance and CFP	It is found a positive and linear relationship for Tobin's Q. No statistical evidence for both accounting and market-based proxies of CFP.
2	H3 – Linear and positive relationship between Social performance and CFP	No significant results.
2	H4 – Linear and positive relationship between Corporate Governance performance and CFP	It is found a significant but not positive relationship for ROA. The negative effect is still meaningful. No statistical evidence for other CFP measures.

Source: created by the author.

The uncertain and misleading nature of empirical evidence leads to further evaluations. Since most of the findings are partial significant or even insignificant at all, additional analysis could improve the response to hypotheses questioning. The next section will deepen the empirical research, testing for alternative specifications of models I and II.

5.5 Additional findings

The objective of this paragraph is searching for additional evidence that could eventually support the research hypotheses. One primary aspect that can be further analysed is the nature of companies included in the sample. As declared in other studies (Demiraj, 2020; Agostinis, 2018), specific intra-sector characteristics may affect both CSR investments and financial performance. According to Griffin and Mahon (1997), a sample of companies from different sectors could potentially mask the true impact of CSR on CFP. In theory, the analysis of each individual industrial subset may lead to more significant outcomes.

However, as regard as this specific sample, two problems emerge. First, the hundred Italian companies included in the dataset belong to 11 different industries. A sectorial subdivision leads to the creation of sub samples of too modest dimensions. This directly affects the goodness of regression analysis, as small observations report numerous issues. Second, the categorical control variable INDUSTRY has already been tested in previous models. Since it showed no empirical meaning in any regression, an additional focus on this dimension makes no sense for statistical theory.

To overcome these obstacles, Agostinis (2018) suggests splitting the dataset in two subsamples, rather than in multiple industrial groups. In this way, each analysis conserves a relevant number of observations and further empirical considerations are made possible. According to previous literature (Zaiane and Ellouze, 2022; Aggarwal, 2013), financial institutions shall be divided from industrial and manufacturing firms. Commercial banks and insurance companies have characteristic managerial structures and peculiar internal mechanisms. They often pursue different goals in comparison with traditional companies. Besides this, still today, ESG matters are not core priorities of every financial organization (Demiraj, 2020). In accordance with these indications, the original sample is divided in two subgroups. Both models are tested for the industrial segment, comprehensive of 61 companies, and for the financial one, made of 27 institutions. To avoid any misunderstanding, model III adopts the same structure of model I, and model IV corresponds to the updated version of model II. Differently from what has been previously done, model III and IV will be tested twice: once for the industrial sample and once for the financial sample.

Computing these additional regression analyses, two interesting paths emerge. In some cases, the R-squared measure has definitely improved. This indicates that the goodness of the model has significantly increased. In other estimations, the R-squared has dropped almost to zero. In such cases, the predictive power of the estimated model is very low, and the outcomes cannot be considered significant at any statistical level. This allows to completely discard these results. The full set of estimations is showed in the appendix, while only the most significant results are discussed here.

Model III reports a significant relationship between ESG overall score and ROA, in both sub-samples. The industrial group discloses a negative impact of CSR over ROA, whereas financial institutions unveils a contrary and positive effect. This controversy confirms the

existence of specific intra-sector characteristics. Also, the control variable SIZE is negatively significant in both specifications.

As previous ascertained, the estimation with Tobin's Q (5) confirms the positive effect, but only for the financial subgroup. The remaining specifications are not further discussed because they do not provide significant evidence, or their results are rejected due to R-squared close to zero.

Almost all the results of model IV are null, but some insights emerge. The significant negative relationship between corporate governance and ROA reported by model II is confirmed here, but just for the industrial subset. In previous models, the estimation that get the greatest number of significant correlations was the one with Tobin's Q as dependent variable (5). In model IV, none of the ESG dimensional scores is significantly associated with TSQ, both in the industrial and financial sample. Additional insights are displayed in the appendix.

A further consideration can be made. Overall, strategic planning of CSR initiatives may be used to create additional value for stakeholders or shareholders. In the first case, effective sustainability campaigns may attract new actors, like conscious consumers, in a relatively short period of time. Conversely, a long term strategic planning and continuous investments in ESG initiatives are required to serve the interests of shareholders. CSR expenditure does not pay off immediately, especially for investors, and this is reflected by market based measures. Indeed, all the regression models do not show any linkage between CFP and EPS or P/E ratios. A possible explanation may derive from the short period of observation (3 years) utilized in this research. A dataset with a longer time span may produce more significant outcomes also for what concern market-based measures. This represents one of the constraints of the empirical work, which will eventually complement those included in the next paragraph.

5.6   Limitations and suggestions for future research

As any other study, this empirical work is subject to some limitations. First, the sample size is limited to 100 entities. There is a vast number of Italian listed companies that have not been considered. This choice is dictated by the considerable dimensional difference that exists between firms in the FTSE Mib/Mid Cap Index and those belonging to the Small

Cap index. Analysing the dataset, the control variable SIZE has shown a significant negative effect over financial performance. Adding small cap firms to the same sample may statistically compromise the outcome. Future investigations may focus on various fronts. On one side, they may shift the sample of observation, focusing on SMEs, which are private and both their financial and ESG data are not publicly available. On the other, they may increase the sample size, by including companies from different nations and listed in various stock exchanges. Furtherly, an alternative research avenue may investigate the relationship between CSR and CFP within a sample of start-ups. It might be interesting to investigate how these businesses collect financial capitals and how they invest money in relation to the current ESG challenges.

Even the time frame may be enlarged. Empirical evidence may be gathered by extending the years of observation before 2018, or even after 2020. At present, ESG scores and financial data for 2021 and 2022 are not yet fully disclosed by companies. Future analyses may include these observations to investigate the impact of Covid-19 pandemic over the implementation of CSR activities, and the resulting effect on corporate financial performance.

As regard as the variables' selection, a consistent number of proxies for CFP have been utilized in this research. Market-based measures proved no significant correlations. The main issue is related to the fact that they are not standardized indicators like accounting ratios. At the same time, a further in-depth study of Tobin's Q may improve the understanding of significant results obtained by models I and II. Looking at CSR proxies, it might be interesting to select an alternative source of ESG scores to see if the significance of results changes. Even additional control variables may have significant influence. In this study, firms' age, R&D investments and advertising expenses have been excluded as data was not available.

As previously mentioned, no agreement on the causal direction between CSR and CFP has been reached among scholars yet. In this study, it has been assumed that higher CSR performance may lead to higher financial performance. However, also the opposite effect may be tested. There are several studies analysing various facets of this bilateral relationship (see chapter 3.1.2). In this empirical work, a simple switch between dependent and independent variables is not feasible, as it would be necessary to question

the meaning of control variables. Future empirical works may continue this analysis by focusing on the Italian market, as extensive evidence on bilateral or opposite relationships has not been reported in previous literature yet.

Conclusions

The dissertation aims to analyse the relationship, where it exists, between corporate social responsibility and financial performance on the Italian Market. Before tackling the empirical research, and in order to deepen knowledge around the main topic, the first part of the thesis addresses the following points:

- Provide a conceptual explanation of CSR, its historical development, and major theoretical frameworks;
- Describe how CSR performance is usually assessed and disclosed;
- Present the relationship between CSR and CFP by using different mathematical functions;
- Provide a widespread literature review on the nexus between corporate sustainability and financial results all over the world: from developed to emerging countries;
- Analyse previous empirical works on the Italian Market.

The interest in the Italian Stock Exchange is justified by the presence of scarce and contradictory literature regarding the existence of a linear and positive relationship between CSR and financial performance. To explore this association, a panel data regression is performed. The dataset contains the 100 largest companies listed at Piazza Affari, observed for a time period of three years: from 2018 to 2020.

In this study, several proxies of CFP are adopted as dependent variable: accounting-based ratios (ROA and ROE), market-based measures (EPS and P/E ratio), and Tobin's Q, which is considered a "both types" measure. With respect to the independent variable, ESG scores by Bloomberg Data Service are used as proxies of CSR.

The research findings are contradictory and require an in depth explanation. The first model does not report any significant relationship between ESG total score, a comprehensive proxy of CSR, and both accounting and market-based financial measures. Only the estimation on Tobin's Q suggests the existence of significant evidence. ESG total is positively correlated with the Q ratio, which means that the first measure has a linear positive effect on the second one.

In the second regression model, CSR is expressed through three different variables: environmental, social, and corporate governance. The estimation on Tobin's Q confirms the existence of a linear and positive relationship, but only with the environmental subdimension. As regard as the other specifications, just a significant correlation emerges between the governance score and ROA. However, this finding does not support the research hypothesis since the impact of governance is negative rather than positive.

Empirical models III and IV are constructed to deepen the regression analysis, by discerning the total sample in two subgroups: the industrial and the financial one. Also in this case, results are mixed, and they do not strongly support the hypotheses. The significant relationship between ESG total score and Tobin's Q is confirmed but just for the financial subgroup. At the same time, the governance effect over ROA is significant only for the industrial set of firms.

Nowadays, companies invest heavily in human and financial resources to undertake a substantial number of initiatives related to corporate social responsibility. This economic trend seems to be sufficiently supported by robust theoretical foundations and numerous business case studies. At the same time, the empirical evidence is neither concordant nor definitive. As shown by this paper, the limited and contradictory outcomes do not fully support the research hypotheses, suggesting that literature on the CSR-CFP relationship is still inconclusive. Empirical findings are in line with previous works (Fiori et al., 2007; Nigro et al., 2015; Romanis, 2021) and they shall be interpreted taking into account the limitations discussed in chapter 5. At the same time, future studies shall attempt to overcome them, by carrying out further in-depth investigations in this research area.

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Appendix

Table 22 – Estimation using ESG total score (industrial versus financial companies)

Model III	ROA (1)		ROE (2)		EPS (3)		PE (4)		TSQ (5)	
	Industrial	Financial	Industrial	Financial	Industrial	Financial	Industrial	Financial	Industrial	Financial
ESG_TOT.	-.2197***	.427**	-.0577	.1250	-1.169	-.0389	.252	-.2003	-.001	10.938**
	(.0713)	(.1740)	(.1610)	(.8426)	(3.8085)	(.0319)	(.867)	(1.528)	(.013)	(5.576)
SIZE	-4.182***	-28.3**	-.0567	-23.61	-59.71	.2124	15.760	13.293	-.201	-762.1***
	(1.541)	(3.849)	(1.539)	(18.40)	(35.631)	(.2172)	(20.939)	(11.52)	(.134)	(113.8)
LEVERAG	.0188	.2546	3.77***	-3.23**	-12.567	-.0450	17.87**	-1.571	.002	10.37
	(.1387)	(.3178)	(.4641)	(1.519)	(26.544)	(.0619)	(7.624)	(3.437)	(.091)	(10.61)
_cons	77.563***	458.503 ***	26.349	439.95	1044.7**	-.2574	-271.29	-162.21	4.265**	12047.54 ***
	(21.233)	(61.284)	(18.862)	(291.1)	(432.525)	(2.833)	(288.69)	(147.9)	(1.701)	(1796)
Model	fixed	fixed	random	fixed	random	random	fixed	random	random	fixed
R-squared	0.2234	0.6098	0.3490	0.2115	0.0281	0.0394	0.1302	0.0213	0.0213	0.6508
N	173	61	173	55	157	43	144	35	160	49

Standard errors in parentheses

Significance levels *** p<0.01, ** p<0.05, * p<0.1

Table 23 – Estimation using separate environmental, social, governance (ESG) scores (industrial versus financial companies)

Model IV	ROA (1)		ROE (2)		EPS (3)		PE (4)		TSQ (5)	
	Industrial	Financial	Industrial	Financial	Industrial	Financial	Industrial	Financial	Industrial	Financial
ESG_ENV	-.0273 (.0633)	.2000 (.1924)	.0792 (.1372)	.2261 (.3660)	-1.904 (3.0116)	-.0160 (.0360)	.1685 (.7978)	-1.874 (1.660)	-.0147 (.0105)	5.1793 (6.750)
ESG_SOC	-.0403 (.0566)	.2933 (.2663)	.0316 (.1509)	-.4761 (.3682)	4.6805 (3.2498)	-.0454 (.0391)	-.6046 (.7054)	.6614 (1.585)	.0038 (.0107)	11.618 (9.115)
ESG_GOV	-.1329*** (.0453)	.0384 (.0949)	-.1381 (.1212)	.1386 (.1506)	-2.9004 (2.6346)	.0002 (.0142)	.4719 (.5449)	.0202 (.7286)	.0104 (.0086)	.5612 (2.732)
SIZE	-4.279*** (1.5394)	-27.4*** (3.9050)	-.4489 (1.5726)	-4.455* (2.503)	-68.78* (35.271)	.2813 (.2487)	16.555 (20.974)	21.073 (13.15)	-.1960 (.1339)	-721.9*** (115.2)
LEVERAG	-.0262*** (.1414)	.3223 (.3273)	-3.85*** (.46788)	.0770 (.5930)	-13.741 (26.199)	-.0503 (.0621)	18.37** (7.7364)	-1.758 (3.463)	.0179 (.0914)	8.574 (10.83)
_cons	80.660 (21.190)	443.673 *** (61.970)	35.572* (20.377)	83.177 *** (30.53)	1262.35 *** (448.53)	-1.135 (3.306)	-294.21 (289.77)	-260.54 (165.8)	3.779** (1.7376)	11308.8* ** (1824)
Model	fixed	fixed	random	random	random	random	fixed	random	random	Fixed
R-squared	0.2366	0.6327	0.3566	0.0193	0.0253	0.0281	0.1449	0.0250	0.0005	0.6888
N	173	61	173	55	157	43	144	35	160	49

Standard errors in parentheses
Significance levels *** p<0.01, ** p<0.05, * p<0.1