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**Sustainable Finance and Sustainable  
Development:  
The SDGs and ESG Indicators in  
Sustainable Investment Evaluation in  
Italy**

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## Abstract

Sustainability has become an integrated component of a world society facing unprecedented issues related to pollution and environmental degradation. This trend influenced the finance sector as well, responding to investors' increasing demand for sustainable products and sustainable investment instruments. This thesis proposes to analyse the nature and the evolution of sustainable finance, establishing a trend of integration of the Sustainable Development Goals (SDGs) and the Environmental, Social and Governance (ESG) indicators in sustainable investment evaluations. The data belong to the 2016-2020 period, with a specific focus on Italian asset management companies (AMC) and banks. A survey is the designated tool through which data were collected and analysed. The survey was drafted in partnership with eAmbiente s.r.l.. The first part of this thesis provides an overview of the main aspects involving sustainability and sustainable finance, including the progress towards the SDGs to be obtained by 2030. The final part of the thesis presents the methodology and comments the results of the survey, with the goal of defining a trend representing progress, regress, or steadiness of sustainable investment evaluation in the five designated years.

## Sintesi Introduttiva

I protagonisti del settore della finanza sostenibile ed i business in tutto il mondo hanno posto maggiore attenzione alla necessità di aumentare i profitti e il valore dei loro asset, contribuendo allo stesso tempo a uno sviluppo più sostenibile. Nonostante l'influenza del settore finanziario nell'incentivare o compromettere i progressi globali verso uno sviluppo sostenibile sia innegabile, la ricerca scientifica che si propone di analizzarne l'impatto è ancora relativamente giovane.

Al fine di contribuire alla letteratura esistente sul tema, l'obiettivo della presente tesi è analizzare gli aspetti principali dei concetti di sviluppo sostenibile e finanza sostenibile, e indagare in quale misura gli asset manager integrano gli Obiettivi di Sviluppo Sostenibile (OSS) e le metriche Environmental, Social e Governance (ESG) nella valutazione degli investimenti socialmente responsabili in Italia e in Europa.

Il presente lavoro è stato avviato nel corso di uno stage della durata di cinque mesi presso eAmbiente s.r.l. in Italia: una azienda che si occupa di consulenza ambientale e opera principalmente nel territorio italiano, con sempre maggiori sbocchi internazionali. Durante il periodo di stage, mi sono occupata di redigere e sottoporre a un numero selezionato di società di gestione del risparmio e banche d'investimento un questionario, che è poi stato oggetto di ricerca della presente tesi.

Gli Obiettivi di Sviluppo Sostenibile (OSS) sono 17 obiettivi definiti durante la XXI Conferenza delle Parti dell'UNFCCC tenutasi a Parigi nel 2015, altresì conosciuta come COP 21, i cui membri si sono proposti di delineare un percorso di sostenibilità con primo termine al 2030.

La presente tesi prende in particolare considerazione quattro dei 17 Obiettivi di Sviluppo Sostenibile, quali l'OSS 7 riguardante Energia pulita e accessibile, OSS 9 su Industria, innovazione e infrastrutture, OSS 12 su Consumo e produzione responsabili, e il numero 13 su Agire per il clima.

La prima sezione dello scritto consisterà in una panoramica della letteratura disponibile circa sviluppo e finanza sostenibile. Nello specifico, includerà una definizione di sviluppo sostenibile, una descrizione degli Obiettivi di Sviluppo Sostenibile, e una analisi dei progressi relativi all'implementazione dei quattro OSS selezionati in Europa e in Italia sulla base degli ultimi report disponibili.

Successivamente alla sua introduzione alla fine del XX secolo, il concetto di Sviluppo Sostenibile è diventato un argomento fondamentale per gli esperti e l'opinione pubblica mondiale.

Con l'obiettivo di sostenere le sfide poste dai crescenti problemi ambientali e sociali, nel 1972 le Nazioni Unite hanno tenuto la prima "Conferenza delle Nazioni Unite sull'ambiente umano" a Stoccolma, Svezia. Gli stati membri dell'organizzazione hanno poi preso parte a numerose altre conferenze, tra le quali la COP 21 di Parigi, in cui stati, istituzioni e individui sono stati chiamati per la prima volta a una partnership collettiva per la mitigazione degli effetti della degradazione ambientale. In tale contesto, metodi quali il Triple Bottom Line (TBL) sono stati introdotti per misurare il grado di impegno delle imprese in tutto il mondo.

Il nuovo grado di consapevolezza circa l'importanza di uno sviluppo sostenibile e degli OSS ha influenzato anche imprese e operatori finanziari, inducendo l'introduzione di nuovi benchmark di reporting e investimento. Gli Obiettivi di Sviluppo Sostenibile rappresentano uno strumento cruciale di miglioramento per i business e le realtà finanziarie di tutto il mondo. Infatti, quest'ultime, aprendosi a nuove opportunità economiche più sostenibili, hanno la possibilità di aumentare i loro profitti ed espandere i loro network.

Nonostante gli ultimi report disponibili dichiarino che l'Unione Europea abbia compiuto importanti progressi relativi agli Obiettivi di Sviluppo Sostenibile, per ottenere i target determinati entro il 2030 è necessario che i paesi di tutto il mondo aumentino i loro sforzi singoli e collettivi.

La sezione successiva si focalizzerà sulla recente evoluzione del settore finanziario verso il concetto di finanza sostenibile, iniziando dalla definizione di responsabilità sociale di impresa (Corporate Social Responsibility), con un focus sull'impatto degli investitori istituzionali. Verrà poi approfondito il cambiamento di paradigma a partire dal vocabolario utilizzato, con l'inclusione di nuove terminologie quali investimento socialmente responsabile (SRI), creazione di valore condiviso, ed Environmental, Social e Governance (ESG). Il capitolo si concluderà poi con una overview dell'evoluzione delle politiche finanziarie ambientali in Europa e in Italia dalla definizione degli OSS nel settembre 2015.

Gli aspetti Environmental, Social e Governance (ESG) sono attualmente elementi centrali per il monitoraggio del progresso del mercato verso gli impegni sostenibili, misurando la sostenibilità e l'impatto sociale degli investimenti, e determinando la

performance finanziaria. A partire dalla definizione degli OSS, le politiche finanziarie ambientali sono state in continua evoluzione, e le strategie di investimento utilizzate per allineare gli investimenti socialmente responsabili con le sfide ambientali e sociali sono state diffusamente analizzate. Inoltre, al fine di guidare gli investitori e le compagnie di asset management di tutto il mondo nelle valutazioni degli investimenti, le organizzazioni internazionali stanno collaborando per sviluppare indici e benchmark validi universalmente.

In Europa, la transizione di imprese e investitori istituzionali verso una prospettiva più sostenibile è iniziata a metà degli anni 90 del XX secolo, quando numerosi agenti finanziari hanno introdotto la categoria di investimento socialmente responsabile per perseguire i loro interessi soddisfacendo le aspettative della società. Alcuni investitori lo hanno considerato uno strumento per creare nuovi prodotti finanziari sostenendo la crescita del mercato, mentre altri come un'opportunità per rendere più socialmente accettabile la gestione di risparmi, pensioni ed investimenti.

Introdotta nel 1926, la responsabilità sociale di impresa è un concetto ampiamente dibattuto che sottolinea l'eguale importanza degli obblighi sociali, ambientali ed economici per le imprese. In tale contesto, data la loro influenza nella performance delle imprese e nella loro reputazione generale, gli ideali e le percezioni degli stakeholder sono fondamentali. Pertanto, gli investitori istituzionali ricoprono un ruolo importante nel guidare gli obiettivi e i valori delle imprese. Se tali investitori esprimono il loro interesse in questioni ambientali e sociali, le imprese sono indotte ad adattare le proprie strategie, attualmente categorizzate come "green" o "a impatto sociale".

Tuttavia, le soluzioni orientate alla risoluzione di problemi sociali quali la povertà e la fame sono state ampiamente criticate per il rischio che le imprese tendano a focalizzarsi più sulla loro reputazione che sull'effettivo contributo a risolvere tali problemi.

Infine, l'ultima sezione descriverà gli obiettivi, la metodologia utilizzata e i risultati ottenuti nel questionario di ricerca, il quale obiettivo è fornire una analisi empirica dell'evoluzione dei metodi di valutazione degli investimenti sostenibili in Italia.

In particolare, il questionario di ricerca, proposto a un totale di 80 società di gestione del risparmio e banche d'investimento in Italia, si propone di definire una tendenza dell'evoluzione dell'integrazione degli Obiettivi di Sviluppo Sostenibile e degli indicatori ESG nelle valutazioni di investimento sostenibile dal 2016 al 2020.

Dai risultati dell'analisi condotta, l'attenzione posta dagli asset manager nelle pratiche sostenibili sta seguendo una tendenza generale positiva. Si nota, infatti, un aumento di

considerazione degli aspetti ambientali, quali le pratiche di riduzione delle emissioni CO2, e degli aspetti sociali. Gli aspetti di governance sono invece ancora considerati in modo molto limitato.

In merito agli Obiettivi di Sviluppo Sostenibile, stakeholder e asset manager si sono principalmente focalizzati sugli Obiettivi 3 (Salute e benessere), 7 (Energia pulita e accessibile) e 13 (Lotta contro il cambiamento climatico), mentre gli Obiettivi meno considerati sono stati l'1 (Sconfiggere la povertà) ed il 10 (Ridurre le disuguaglianze). Una possibile causa di queste tendenze potrebbe essere la crisi del Covid che nel 2020 ha altamente influenzato le prospettive globali e spostato l'attenzione verso problemi economici percepiti più impellenti.

A seguito di un raffronto dei risultati del presente questionario con i report che analizzano l'evoluzione degli OSS in Europa e in Italia, i risultati confermano le aspettative. L'unica tendenza divergente è stata determinata per gli Obiettivi 2 (Sconfiggere la fame) e 16 (Pace, giustizia e istituzioni solide), i quali secondo i report sono tra gli obiettivi che sono migliorati di più dal 2015, mentre secondo i risultati del questionario sono stati tra i meno considerati da asset manager e stakeholder. Una possibile spiegazione di tale tendenza può riguardare l'influenza di altri fattori oltre a quelli finanziari negli ambiti coperti dagli Obiettivi sopracitati, come nuove leggi e regolamentazioni, e una maggiore attenzione posta a cooperazione ed interdipendenza internazionale.

Nonostante la ricerca abbia determinato un generale aumento della considerazione degli aspetti ESG e degli Obiettivi di Sviluppo Sostenibile nella valutazione degli investimenti sostenibili, da un campione di 80 soggetti il sondaggio ha ricevuto un totale di 21 risposte a causa di mancanza di dati o di personale adeguatamente preparato sul tema. Inoltre, la maggior parte dei soggetti connettono un numero limitato di pratiche di investimento sostenibile con la mancanza di regolamentazioni universalmente valide e accettate circa il reporting di sostenibilità e le valutazioni di investimento sostenibile.

La analisi presentata e i dati ottenuti in questa tesi possono rappresentare un punto di partenza per ulteriori ricerche sul tema. Successivi approfondimenti potrebbero prendere in considerazione un campione più ampio di soggetti, includendo anche stakeholder e altre realtà finanziarie, e monitorare l'evoluzione degli investimenti sostenibili in un intervallo temporale più ampio, iniziando ad esempio dal Rapporto Brundtland del 1987.

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# 1. Introduction

## 1.1 Background

Human activity on earth has been exploiting natural resources for centuries, but it was only in the last few decades that experts started to weight the consequences of human consumeristic lifestyle on the environment. Since 1966, global ecological footprint has more than doubled and, without significant actions, by 2030 for humanity to pursue such lifestyle we will need the capacity of two Earths (WWF, 2010). The recent trends of human population growth, the consequent increasing depletion of natural resources and air pollution, and the increase in energy demand coped with the extraction of fossil fuels have been exacerbating climate change and environmental depletion. The effects of such actions, mainly performed and benefited by developed countries, are particularly suffered in developing ones such as Africa and India to a point that, according to some scholars, current efforts to increase eco-efficiency to mitigate climate change could be vane (Ehrenfeld & Hoffman, 2013).

Our planet is now more than ever facing increasingly challenging economic, environmental, and social issues placing world's economic, political, and humanitarian organizations at strain. Global challenges such as climate change, environmental catastrophes, humanitarian emergences, and scarcity of natural resources induced the United Nations to approve in September 2015 a global action plan called "Agenda2030". After having thoroughly discussed the actions inducing a shift towards sustainable development, the governments of the 193 nations party to the organization committed to take action and reach the 17 Sustainable Development Goals (SDGs) and the 169 relative targets of the Agenda by 2030 (United Nations, 2014). All parties to the agreement worldwide have committed to contribute reaching the Goals and enhance the participation of actors such institutions, the academic world, and the private sector. In particular, the function of private businesses and the financial sector was deemed of fundamental importance in the implementation of the SDGs. In fact, while increasing its profits, the private sector could identify new business opportunities, enhancing its corporate responsibility and improving the relation with stakeholders.

Although the concept of sustainable finance already existed several decades ago, it was only in the past few years that the importance of Sustainable Responsible

Investing (SRI) was truly acknowledged. The increasing awareness of the world's Environmental, Social and Governance (ESG) challenges has in fact shed a light on the contribution that financial institutional and private sector investments can provide to governments in their shift toward sustainability. To monitor the commitments and the contribution of businesses and investors in the achievement of the SDGs, the United Nations developed a series of reports, also aimed at creating a common organizational framework for the finance and business sectors worldwide (Dupont, 2017). Such reports are an important tool to keep all actors focused on the common Goals. However, there is no generally accepted reporting principle yet and not all socially responsible investors focus their investments on the improvement of current global environmental, social, and economic issues (Dupont, 2017).

The traditional objective of the finance sector is creating a value for shareholders. However, society has been increasingly caring for aspects such as environmental protection, climate change, poverty reduction and humanitarian law. For this reason, the finance sector and businesses in general have been pushed to consider such aspects as well, and take action to improve the situation (Brigham & Ehrhardt, 2011). To pursue their social and environmental commitments while creating value for shareholders, actors in the finance and business sectors have struggled to make the relationship between social and environmental management profitable. A way to “meet the needs of the present without compromising ... future generations” (Brundtland report, 1987, 3, 27) is integrating economic and social issues, thus necessarily implementing environmental and economic development policies intrinsically (Levashova, 2011). As in corporate finance a manager must distinguish which investments its corporation should and should not do and how to finance them, in the environmental sector the administrators must allocate financial resources considering their function in management projects, while promoting environmental improvements. In this regard, environmental managing demands the interaction between social, economic, and environmental aspects.

Scholars worldwide have been stressing the benefits that corporations and financial actors can gain with the establishment of sustainability as a target, including energy-consumption and waste-production reduction. Sustainable finance can provide an indispensable contribution to the functioning of the environment and the society in which it operates. Hence, in the last few years, the integration of ethical values and

sustainable development means in the evaluation of investment opportunities has become a relevant topic for stakeholders.

## 1.2 Thesis Statement

Sustainable finance actors and businesses worldwide have been recently focusing on increasing profits and value while contributing to sustainable development. As the importance of such sectors for the 17 Sustainable Development Goals is progressively increasing, the branch of literature analysing the impact of finance on sustainable development is still relatively young. The aim of this thesis is to analyse the main aspects of the concepts of sustainable development and sustainable finance, and investigate whether, and to what extent, asset managers integrate the SDGs and the ESG metrics in the evaluation of socially responsible investments in Italy.

Concerning the SDGs, this thesis will mainly focus on four of the 17 Sustainable Development Goals of the Agenda 2030, namely number 7 on Affordable and clean energy; number 9 dealing with Industry, innovation, and infrastructure; number 12 on Responsible consumption and production; and number 13 on Climate protection. This research thesis will consist of an overview of the literature on sustainable development and sustainable finance, and one survey submitted to a selected number of banks and Asset Management Companies in Italy, to assess how asset managers integrate sustainable metrics in sustainable investments.

Section 2 offers a definition of Sustainable Development and outlines the Sustainable Development Goals of the Agenda 2030, providing a first overview of the progresses relative to the implementation of the 4 SDGs considered in Europe and in Italy according to the latest reports available. After its introduction at the end of the 20<sup>th</sup> century, the concept of Sustainable Development became a central issue for experts and global public opinion.

To face the challenges posed by environmental and social issues, in 1972 United Nations held the first “United Nations Conference on the Human Environment” in Stockholm. State parties to the organization then engaged in several more conferences, outlining in September 2015 the Agenda 2030 and its 17 Sustainable Development Goals for a social and environmentally sustainable development. For the first time all governments, institutions, and private actors were called in a partnership

for the mitigation process, and methods such as the Triple Bottom Line were introduced to measure the degree of commitment of companies and businesses. The new awareness of the importance of Sustainable Development and the SDGs has influenced businesses and financial actors, introducing new benchmarks of investment evaluation. The SDGs can in fact represent a crucial improvement for global businesses and financial realities, which, opening to new sustainable economic opportunities, will increase their profits and expand their relationships. Although reports assess that in the last years the European Union has made several progresses relative to the SDGs, to reach the targets determined by 2030 all countries worldwide must improve their efforts.

Section 3 focuses on the recent shift from finance to sustainable finance. It first provides a definition of Corporate Social Responsibility (CSR) focusing on the influence of institutional financial investors in CSR implementation, and then outlines the evolution of finance analysing the change in vocabulary with the inclusion of new terminologies, namely Socially Responsible Investment (SRI), Creating Shared Value, and Environmental, Social and Governance (ESG). It then concludes with an overview of the evolution of environmental financial policies in Europe and in Italy since 2015. Corporate Social Responsibility is a widely discussed concept introduced in 1926, when for the first time social and environmental obligations for corporations were to be considered as important as the economic ones.

In the context of Corporate Social Responsibility and corporations' business performance, stakeholders' perceptions are fundamental due to their impact on the corporation's performance and public reputation. Institutional investors account for great influence orienting businesses' goal functions and theories of value. If such investors express their interest in environmental and social issues, corporations are pushed to create new business strategies categorized as *green* or *socially impactful*.

Market-driven solutions to social problems such as poverty have been widely criticized, in that corporations tend to focus more on public image rather than contributing to solve social and environmental issues. Moreover, scholars assessed that there is no empirical proof of the contribution of Corporate Social Responsibility to economic growth or poverty reduction.

In Europe, the transition of businesses and institutional investors towards a sustainable perspective emerged in the mid-1990s, when various financial actors introduced the category of Socially Responsible Investment to pursue their interests while satisfying

society. Some investors considered it a tool to create new financial products sustaining market-growth, while others saw it as an opportunity to make management of savings, pensions, and the financial world in general more acceptable.

Environmental, Social, and corporate Governance (ESG) factors are currently central elements to monitor markets' sustainability commitments and progresses, measuring the sustainability and social impact of investments, and determining the society's financial performance. Since the definition of the Agenda 2030, environmental financial policies have been evolving considerably and the investment strategies applied to align SRI with social and environmental challenges have been thoroughly analysed. Furthermore, to guide investors and Asset Management Companies worldwide in their investment evaluation, several indexes and benchmarks have been outlined.

Finally, Section 4 describes the research motives and methodology used for the survey and the analysis of the data obtained in comparison with the expectations. The research aims at providing a further practical analysis of the evaluation of SRI in Italy from 2016 to 2020.

### 1.3 Literature Review

#### ***Impact of Sustainable Finance on Sustainable Development and the SDGs***

The decision on December 2015 of the United Nation members to adopt the 17 Sustainable Development Goals of the Agenda 2030 finally established a global path for all nations and institutions to achieve sustainable development.

However, the SDGs and the targets are relatively new, and scholars are currently trying to contribute to the research and fill in the gaps of knowledge in the matter.

This literature review aims at collecting relevant research about the role of the financial sector in the global agenda and on the impact of sustainable investments in the achievement of the Sustainable Development Goals. The main goal is to gather information on relevant issues concerning the discourse on the SDGs and the role of sustainable finance to define the basis for this research and further literature on the matter. The works presented will be analysed based on their contribution and purpose to achieve new information on the relatively new subject.

Based on previous experiences, Hitchcock and Willard in 2009 outlined the expected benefits to be obtained after the establishment of sustainability as a target for

corporations and societies in general. These included energy-consumption reduction, waste-production diminution, improvement of the research and development sector, technological and products innovation, creation of new opportunities, and life-quality improvement. To obtain such developments, the contribution of the finance sector is of vital importance. In fact, as Haigh (2012) maintains, sustainable finance can contribute to the correct functioning of the environment and the society in which it operates. As the world civil society's concern on sustainable development increased, the studies about the interaction between the finance sector and sustainability have been increasing, leading to the creation of specialized journals such as the *Journal of Sustainable Finance & Investment (JSF&I)*. The journal focuses on the importance of the interaction between financial investments, and ecological and social improvement. In this regard, the inclusion of socially responsible investment and ethical values in the evaluation of investment portfolios has become a relevant topic among shareholders and investors in the past years.

In 2014, Weber provided a valuable contribution to the literature overview focusing on sustainable finance and the impact of socially responsible investment in sustainable development. This article contributes to the study of sustainable finance by providing different perspectives on the contributions of the financial sector to “positive and negative impacts of business activities on sustainable development” (Weber, 2014, p. 2). The data analysed by the author are based on papers presented during a workshop chaired by representatives of the financial industry and scholars of the field. The workshop focused on the stakeholders' view of sustainable finance, social finance and impact investing, and the new models of evaluation for sustainable financing.

In his work, Weber highlights the influence of financial institutions and markets on society and sustainable development, in that they channel capital to various sectors of society. Scholars and financial actors started to investigate the impact of financial investors on sustainable development especially after the 2007-2008 financial crisis. In fact, as corporations adopted sustainability practices and engaged in Corporate Social Responsibility, the finance sector started including environmental and sustainability indicators in their portfolio evaluation. According to Weber, the interaction between the finance sector and sustainable development outlines three aspects, namely the indirect impact of finance on sustainable development, the effect of environmental regulations to risk management in the finance sector, and the influence of stakeholder sustainable values on the reputational risk of financial institutions and their performance. Weber



explains that financial institutions tend to be reactive to environmental and social challenges rather than proactive, meaning that they introduce practices of risk management after some other organization or institution raised the issue, thus implementing an adaptation technique. If at first the financial sector contributed to the management of sustainability risks focusing on direct impacts, financial investors then started to introduce risk management processes in their investment evaluation. After the introduction of socially responsible investment products and services, focusing on business opportunities and risk management, financial institutions started to influence sustainable development through the management of their assets. As a product of this tendency, the concepts of *social banking* and *impact investing* started to grow among investors, taking distance from SRI in that they focus more on achieving non-financial impacts and positively impact society and the environment.

Similarly, in 2016 de Carvalho Ferreira *et al.* focused on the important role of financial institutions on society and particularly on sustainable development. The authors provided a general literature review on the relationship between the financial and sustainability areas already discussed in previous literature. In doing so, they aimed at showing the main gaps present in the selected articles on the matter published between 2011 and 2014 in the Journal of Sustainable Finance & Investment (JSF&I). The authors chose JSF&I because they deemed it as the first journal presenting extensive arguments regarding investment and sustainability from the perspective of financial markets. To identify the main themes in the articles of the Journal, the authors defined a few topics, namely socially responsible investment, institutional investors, and sustainable development, and identified the main characteristics of the studies. The results outlined by the research showed how most of the studies available in the Journal focus on developed countries, analysing several countries in the same research due to the global nature of the topic. Moreover, most articles on finance and sustainability linked their research to a case study, while few focused only on conceptual concerns. Finally, what emerged was the need to engage in a theoretical debate on the field, linking finance to sustainability and social issues. This article outlined how the topic of sustainable finance is still relatively new, and further research is needed to fill in the gaps of knowledge.

An important aspect tackled by the authors was the role of governance on sustainable investment. Due to the uncertainties involving long-term investment, such practice can

contribute to the efforts toward sustainable development in that they foster long-term planification and mitigation, and the definition of universal standards of consumption, production, and investment. In this regard, an important role is played by the non-renewable extractive industry sector, which, although it produces valuable returns, has various social and environmental negative externalities, and thus considerably impacts the decisions of investors.

The authors argued that the key for fostering sustainable development is considering value creation in the long term. In fact, initiatives on social and environmental issues tend not to show effects in the short run, and only requiring corporations and institutions to provide information and data on sustainability to everyone in the market could enhance awareness on the relevance of sustainability and foster change in the long term.

In 2014 Weber and Wiek analysed the positive and negative influence of the finance sector on sustainable development. Differently from Weber (2014) and de Carvalho Ferreira *et al.* (2016), starting from the example of childhood obesity, the authors presented a framework of analysis suggesting a new approach for defining effective interventions to diffused sustainability problems. The paper started from the assumption that in social and environmental problems such that, scholars usually focus on the effects without analysing the main root-causes. With the aim of overcoming this technique, based on the concept of transformational sustainability research, the paper uses a two-step participatory procedure in which the first step outlines the role of the financial sector in diffused sustainability issues, and the second step helps developing strategies adopted by financial actors to play a proactive role in mitigating the problems analysed. The authors in fact started considering the role of financial investments, which after the Second World War supported the mass production of industrial food, in the creation of childhood obesity. They then analysed evidence for effective financial interventions on the issue. Analysing the potential investment intervention options to mitigate the problem of childhood obesity, Weber and Wiek described two types of intervention, namely incremental and transformational finance. The former consists in modify current finance schemes of financing, while the latter creates new investment practices.

As Weber and Wiek (2014) assessed, this article maintains that financial institutions, which cannot be grouped into a single financial sector as an entity with the same

standards and norms, influence the business market and sustainable development. According to both authors, apart from some specific cases, the general motives behind sustainable investment are risk management purposes, new business opportunities and cost savings. In this sense, the finance sector can be compared to any other business sector. What differentiates the financial sector from other sectors is its role in the human social and environmental system. Institutional and private investors can in fact exacerbate some already-existing issues and, at the same time, provide solutions.

In 2015 Busch *et al.* also explored the role of financial markets for sustainable development. Differently from Weber (2014), de Carvalho Ferreira *et al.* (2016), and Weber and Wiek (2014), Bush *et al.* focused on determining the positive impact of sustainable finance on more sustainable business practices.

The authors started from the fact that in the last years, following the global increase of sustainable investment practices, institutional investors changed their practices of evaluation of investment opportunities, selecting companies and funds based on the ESG principles. They however stated that business practices of production and consumption did not become more sustainable as one would expect to, and social and humanitarian issues did not decrease. This decoupling tendency led them wonder to what extent sustainable financing is a myth. The authors proposed in fact to analyse the paradox existing between the market demand for and supply of sustainable development, focusing on the importance of a long-term paradigm for sustainable investments and a reliable and transparent set of ESG reports.

Defining sustainable investment as the practice of integrating ESG criteria into investment evaluations, combining financial and non-financial objectives, the paper issued that not all investors implement sustainable investment practices with the primary concern of mitigating environmental and social issues, but only focus on improving returns and risks. In fact, they stated that for sustainable investments to influence business practices, the former must be aligned with human social and ecological systems designed to be self-sustaining in the long run, and thus the economic aspect of profitability cannot be ignored.

In this regard, Busch *et al.* explained that a system can be defined human social and ecological if it becomes independent from the steady supply of non-renewable resources and it considers the principles of inter- and intragenerational equity. One reason for which the authors and other scholars analysed the efficacy of sustainable investment is

that in practice it does not exist yet. The authors acknowledged in fact the existence of *more sustainable investments*, which are progressively improving but are still not completely sustainable.

According to the authors, assessing to what extent sustainable investment practices contribute to long-term sustainable development depends “on the sophistication and scope of the individual concept and approach” (Busch *et al.*, 2015, p. 310). The authors also pointed out that the ESG integration on investment evaluation is an increasingly criticized practice in that the efficacy depends on the degree of implementation of such strategies. Moreover, starting from the fact that the evaluation of the process concerning the integration of ESG criteria in investments is not yet clearly defined and that thus assessing their efficiency on a universal benchmark in the long-term perspective becomes difficult, the authors used an overview of some investor types engaging in sustainable investments, also proposed by Chatterji *et al.* in 2009. Investors can be grouped in financial, deontological, consequential, and expressive groups. Although consequential and expressive investors are more likely to engage in long-term investment approaches, their orientation alone is not sufficient for effectively increase sustainable development. The author concluded that:

Sustainable investments are clearly not a myth. A myth is nonexistent; sustainable investments require a methodological redirection. To unlock their full potential, a reorientation toward a long-term paradigm for sustainable investments and enhancements in ESG measurements are vital steps. Essentially, these steps are the foundation for building new avenues on which (more) sustainable investments spur sustainable development. What remains an open question is how specifically these “vital steps” can be aligned with another vital social objective, namely, economic growth. (Busch *et al.*, 2015, p. 320)

In 2018 Bosch-Badia *et al.* analysed the way in which financial markets enhance the applicability of the Sustainable Development Goals and explained the central role of ethics in this process. The authors used a conceptual analysis approach to investigate the relationships among the most relevant concepts of financial investment, to specifically outline their properties and indicate new relationships. To pursue this analysis they focused on environmental, social, and financial pillars of market efficiency, trust, value creation and sustainability. The authors maintained that financial markets and the SDGs

can mutually contribute and support each other long-term viability. After describing short-termism and bubbles as the threats to the contribution, the authors introduced *bounded rationality* as an important factor in determining the information considered by investors (Simon, 1978). Since investors are not rational actors, their decisions can be bound by wrong perceptions. Although investors can count on the prices in efficient markets, for their evaluations, for an *ethical market coordination* to exist, trust and ethics are two fundamental features. For this reason, honouring transactions and a fair use of information are fundamental. However, in a context increasingly focusing on sustainable development, ethical issues become more articulated and controversial, introducing the ethical concepts of externalities and intergenerational impact. In this regard, the Sustainable Development Goals provided a reference point for sustainable development, and financial investments become fundamental to pursue these Goals in the long term. Therefore, in the last years businesses and financial institutions increasingly focused on Socially Responsible Investment (SRI).

The authors defined the connection between financial value and sustainability, having both in common the need for a positive financial surplus and their nature of long-term affairs. They however differ in that while funds for reaching financial sustainability can be raised through taxes or donations, value creation implies that the surplus is directly created by the project. Value creation is thus not a necessary condition for financial sustainability.

According to Bosch *et al.*, the main effects of a sustainability action are a difference between income and expenses, and risk reduction, and another important effect is the creation of new opportunities. In fact, the authors deemed the concept of value creation as a fundamental aspect supporting financially sustainable actions for achieving most of the Sustainable Development Goals. Since prices cannot be considered fair if they do not include the effects of sustainability, investors, who “exchange their money for the future expectations of the corporation” (Bosch *et al.*, 2018, p. 8) must consider the aspects of information related to the SDGs for the evaluation of an investment. Consequently, a standardized and transparent disclosure of information required for financial actors to price assets is fundamental. Being financial market operations long-term in nature, such investments force corporations to start planning and acting in a long-term perspective as well.

As Busch *et al.* (2015), the authors deemed irrational behaviour and short-termism a damage for sustainable development. Behavioural tendencies like overconfidence,

biased judgments, and herd behaviour are some of the main threats to a stable and strong market system. If short termism is a threat to capital markets in general, it is even more dangerous for markets shifting toward sustainable development practices.

Similarly, in their theoretical work, Jones *et al.* in 2016 also studied the role of the financial sector related to the Sustainable Development Goals. Though a report, they provided an outline of the efforts made to encourage business engagement in the achievement of the SDGs. In the report, the authors included an outline of the financial sectors' difficulties in pursuing the SDGs. The report highlighted the need for leading financial services companies to measure their contributions to the Goals, integrating them into sustainability reporting processes and being subject to external monitoring by a designated commission. Moreover, the authors stressed their concerns on the contradicting trends of sustainability, coupled with steady economic growth. In fact, the work outlines the scarcity of the attempts made by the finance industry to define sustainability and/or to acknowledge it as a controversial concept in that it means different things to different people. Consequently, also the effectivity of the concept of shared value creation is to be discussed because such model is considered by many as based on weak conceptions of the companies' role in society.

Contrary from Busch *et al.* (2015), in 2018 Betti *et al.* proposed to assess the negative impact of contributing to SDGs in financial returns for investors. Though a theoretical and quantitative study, the authors took into analysis 30 ESG issues identified by the Sustainability Accounting Standards Board (SASB) relating the SDGs and their targets, showing that some are more material for a relative SDG than others, and analysing the mutual impact of specific sectors on specific SDGs. This study is useful for governments, investors, and organizations in that the main objective was to create a guide for investors and companies to determine how value creating ESG company can contribute to the SDGs, and influence governments' decision-making. Among the various Sustainability Accounting Standards, supply chain management impacts all the 17 SDGs, and each Sustainable Development Goal is impacted by 30 of the SASB issues, varying considerably depending on the nature of the SDG. The authors highlighted the importance of the private sector in the achievement of the SDGs and stressed the fact that private and public sector need to work together to understand the degrees to which they can support each other to achieve the Goals. The article maps the material issues creating value for shareholders regarding the SDG targets and helping

the private sector to support sustainable development. Each sector has a specific degree of impact on each Sustainable Development Goal. Their research highlighted that some sectors, like the financial one, have much more impact than others in the general achievement of the SDGs, meaning that such sectors will mostly determine whether the Goals are met.

### ***Impact Investment***

In the last few decades, the theories on the relationship between capital and its function have been renovated. With the introduction of *impact investing* in 2007, investors started to experience new opportunities in which profits and impact can coexist within a framework of shared values, meaning that they did not have to choose between returns and impact anymore. In the same period the form of finance influenced by social impact, return levels and investment risk was introduced as *impact finance*.

Impact investing has been developing since then and is nowadays applied across the asset classes and at institutional scale, resulting thus in institutional changes. Capital is now used to address social and environmental issues also exacerbated by demographic growth and resource limitation.

Antony Bugg-Levine and Jed Emerson (2011) analysed the impact investing field, highlighting its precursors and main actors, and outlining the conditions for its growth. They especially focused on the impact of microfinance in the development of impact investing, and outlined the challenges faced by microfinance firms when they enter for-profit structures and public markets.

Moreover, the work addressed some issues such as whether impact investment will represent a disruption occurring at important points of inflection and convergence, or if corporations aim at creating long-term organizational alignment as they shift toward mainstream companies. The book starts with the assumption that we are currently at an inflection point, the authors in fact maintained that considering impact investing as blended value has been revolting a world organization based on the competing principle maintaining that for-profit investments should only pursue financial returns, and people caring for social problems should use their money or trust on the government to take action.

The authors especially focused on the use of private equity and capital investments to pursue impact investing. Programs like the “Community Reinvestment Act” and the “New Markets Tax Credit”, with which the US government invested billions of dollars through real estate, infrastructure investment and development into underdeveloped communities, have uplifted disadvantaged communities and enhanced the value of impact finance, bringing together public and private investors, tax incentives and philanthropic funds. However, according to the authors, such programs highlighted that those different types of investors focus on different currencies as a reward, implying thus that returns are defined in different ways.

Maximilian Martin (2013) also analysed the current and potential role of impact investing on the implementation of social and environmental issues, locating it in the general context of the trends presenting new investment opportunities. The trends analysed in the paper are massive pent-up demand, the need for resource efficiency and green growth, the role of the welfare state in driving efficiency, and the increase of the “Lifestyle of Health and Sustainability” consumers. The paper introduces a framework for outlining the concept of impact investing and its forms of capital, obstacles, and incentives. The author also outlined the role of different investors in the impact investing system, namely philanthropic investors, early-stage investors, professional investors, private sector corporate impact venturing, and financial service industry. Subsequently, the author provided suggestions to enhance the role of impact investing, namely intelligent policy actions aimed at increasing the impact of investments and defining social impact measurement to obtain reliable reports in impact investment.

In sum, most studies analysing the impact of the finance sector on sustainable development use financial models rather than sustainability models to assess it and few studies analyse the role of investment decisions in the context of complex sustainability problems. Other studies focus on the influence of sustainable, socially responsible investment on financial returns, but few studies focus on the degree of integration of sustainable metrics in sustainable investment in practice.

This thesis aims at filling in the gap of knowledge concerning the concepts of sustainable investment, sustainable development, and the methods of integration of the Environmental, Social and Governance (ESG) metrics and the SDGs on sustainable investment evaluation.



## 2. Sustainable Development and the Sustainable Development Goals

### 2.1 Sustainable Development

#### 2.1.1 Definition of Sustainable Development

The concept of Sustainable Development was first introduced between the 1970s and the 1980s. In those years experts realized that the current model of production and consumption of industrialized regions of the world was not compatible with the environment anymore, especially in the excessive exploitation of natural resources. The increasing consciousness related to environmental and social issues gave rise to a still-ongoing debate over the future of the planet. On this regard, in 1972 the United Nations held the first “United Nations Conference on the Human Environment” in Stockholm. This was the very first international conference on environmental issues, during which the governments’ leaders outlined a plan for an equal and environmentally sustainable development. The Conference, concluded with the Stockholm Declaration, outlined an action plan containing 109 recommendations and a declaration of 26 principles on human rights and duties over the environment. The Stockholm Declaration was extremely important in that it was the first international document deeming environmental protection equally important to peace and economic development and stressing the necessity of guaranteeing a *sustainable development*.

The very first complete definition of sustainable development was outlined in 1987 in the Brundtland Report of the “World Commission on Environment and Development”, which defined it as a development able to “meet the needs and aspirations of the present without compromising the ability to meet those of the future” (United Nations, 1987, p. 49). This document allowed world institutions to enhance the temporal dimension of development and focus on the upcoming generations. The Report contained several goals, including social progress, environmental protection, and economic growth.

The concept of sustainable development was consolidated in the “United Nations Conference on Environment and Development” (UNCED) in Rio de Janeiro in 1992, where the parties ultimately acknowledged the connection between development and the environment. The UNCED also saw the definition of the “Rio Declaration on Environment and Development”, the Agenda 21, the “Declaration on the Principles for

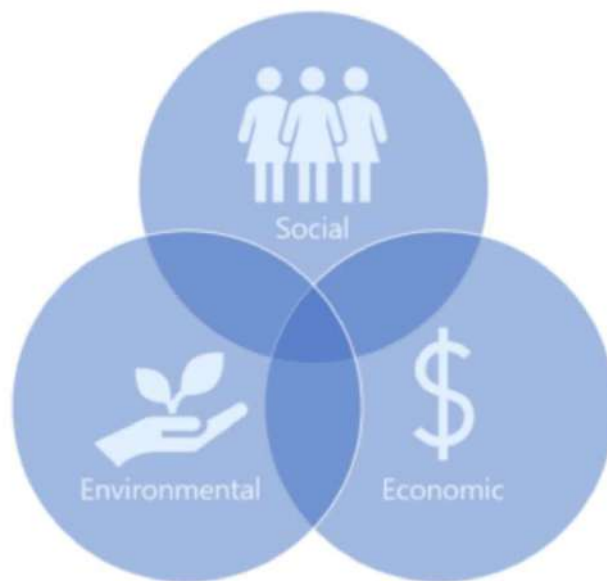
the Sustainable Management of Forests”, and the “Conventions on Environmental Changes and Biodiversity”. Finally, with the aim of overseeing the compliance of the abovementioned treaties, United Nations General Assembly created a Commission on Sustainable Development (CSD). The commission had to notify the issue on sustainable development to the UN system, elaborate political paths for future activities and promote the dialogue and the partnership between governments and social groups. The necessity to allow sustainable development through partnership was further enhanced by the heads of governments when they approved the “United Nation Millennium Declaration” in New York in 2000. This document outlined fundamental values such as solidarity, freedom, and shared responsibility, and approved eight Millennium Development Goals (MDGs) to be reached by states party by 2015.

### 2.1.2 Triple Bottom Line

In the past decade, the concept of sustainable development has been considered a general goal for finance and business sectors all over the world. Among the many systems developed in recent years to measure the degree of commitment of companies and businesses to a sustainable form of development, John Elkington proposed an accounting framework called Triple Bottom Line (TBL). This concept includes environmental and social dimensions, and measures profits, return on investment and shareholder value (Hall & Slaper, 2011). The TBL method proposes to create a connection between the environmental and social influences of a business’ activity and its economic performance, aiming at improving all dimensions abovementioned. In fact, the TBL is a framework used to measure businesses’ performances considering economic, social, and environmental parameters. The main objective is to maximize the effects of the activities of companies and create added social, economic, and environmental value (Elkington, 2004).

The economic measurements are centred on the variables connected to the flow of money, including income, expenditures, taxes, employment, and business diversity factors. Environmental measurements are focused on natural resources including energy consumption, and waste management. Finally, social measurements consider social aspects of regions and communities including access to social resources, quality of life and equity (Hall & Slaper, 2011).

The main logic behind the TBL model is that businesses who focus on economic, social, and environmental aspects will reach more competitive advantage and easily keep profitability high leading to long-term wealth. The TBL framework shows practical benefits both for corporations and for their stakeholders. Several studies stated that, by including sustainable development and the TBL in their strategies, companies can experience several benefits, namely higher retention of top talents, greater employee productivity, reduced expenses in manufacturing and at commercial sites, increased revenue/market share, reduced risks, and easier financing.



*Figure 1 - Triple Bottom Line.  
Source: Accountability International, 2021.*

## 2.2 Sustainable Development Goals (SDGs)

### 2.2.1 Definition of SDGs

Between June 20<sup>th</sup> and 22<sup>nd</sup>, 2012, the United Nations General Assembly started the “United Nations Conference on Sustainable Development” in Rio de Janeiro, formally known as RIO+20. The Conference aimed at renovating the political commitment to sustainable development, monitoring the implementation of international commitments previously taken and orienting governments and civil society’s efforts toward common goals. The Conference was concluded with “The Future We Want”, a document aimed at programming national and international action for critical environmental issues, with

the definition of the new Sustainable Development Goals (SDGs). Recognizing the necessity to consider the green economy in the following Agenda and integrating the three dimensions of sustainable development, namely economic, social, and environmental, the RIO+20 is a milestone in the path toward sustainable development. Moreover, for the first time the discussion over the new Agenda included, other than the member states and the UN System, also actors from the business and scientific worlds. In this regard, to enhance the inclusion of the business and the private sector, the UNTT working group on Sustainable Development Financing outlined the United Nations Global Compact: a network formed by 8.700 enterprises and organizations from more than 160 countries (UNTT, 2014). To increase awareness among citizens and stakeholders worldwide and enhance global inclusiveness, the United Nations Development Group hosted national thematic consultations on the matter.

The path toward sustainable development reached a peak in 2015, when on September 25<sup>th</sup> the United Nations approved the “Transforming our World: the 2030 Agenda for Sustainable Development” to address to the new global challenges by 2030. Although the Millennium Development Goals contributed to important achievements like poverty and child mortality reduction, the final Report of 2015 outlined the inhomogeneity of such progresses. Starting from there, the new Agenda of global development contained 17 Sustainable Development Goals divided in 169 Targets to be reached by 2030 by the 193 signing parties. The Agenda aimed at better considering various crucial aspects, namely fixing goals and adopting solutions for all nations and individuals, integrating the three sustainability dimensions, fighting social inequalities, countering the battle against climate change, and building a global partnership. The Agenda 2030 also considered two tipping points of sustainable development: financing for development and climate change, discussed respectively during the Third International Conference in Addis Abeba in Ethiopia and in the 21<sup>st</sup> Conference in Paris (COP21).

The “Third International Conference of United Nations on Development Financing” saw many high-level political representatives, Ministries of Finance, NGOs, and other actors from the finance sector. The conference was concluded with the Addis Abeba Action Agenda, an action plan containing important measures for financing, including increased involvement of private economy, and the promotion of new mixed private-public financing models (United Nations General Assembly, 2015a). The Action Agenda considered a series of political actions including more than 100 financial

sources to face the new challenges, namely public internal resources, private businesses, and national and international finance (United Nations General Assembly, 2015b).

The agreement on climate, approved during the Paris Conference, recognized the urgency and potential irreversibility of climate change, and demanded high levels of cooperation from the international society (United Nations, 2015). The numerous conferences held from 2015 on showed how sustainable development is impossible to pursue without an adequate financial plan (Carant, 2017).

The adoption of the 17 SDGs of the Agenda 2030 aimed at changing the main paradigm and manifesting the unsustainability of the current developing model. One of the innovating elements of the Agenda was the concept of seeing sustainability not only as an environmental issue but integrating it with different development dimensions. To be sustainable, development had to integrate economic growth, environmental protection, and social and human rights. Moreover, all countries had to contribute to the SDGs, with no distinction between developed and developing ones (ASVIS, 2020).

The Sustainable Development Goals are indivisible and interconnected, meaning that the success of a specific goal contributes to the success of all others, and they revolve around 5 fundamental pillars, namely people, planet, prosperity, peace, and partnership. The objectives are eliminating hunger and poverty, protecting the planet through urgent measures for present and future generations, guaranteeing a satisfying life to all human beings, sustaining peaceful and inclusive societies, and enhancing strong partnerships (United Nations, 2015).

To measure its effectiveness, the Agenda 2030 presented a complex monitoring system, including processes on a global, regional and national level. In this regard, the central follow-up monitoring role was taken by the High-Level Political Forum (United Nations, 2015).

Below are some important targets associated to the Sustainable Development Goals to be reached by 2030 (Global Goals for Sustainable Development, 2015):

1. No Poverty: eradicate extreme poverty, intended as people living on less than \$1.25 a day, for everyone everywhere; achieve substantial coverage of the poor and vulnerable; ensure to all people equal access to economic resources, and basic services.
2. Zero Hunger: end hunger and ensure access to safe and sufficient food; double agricultural productivity and income of small-scale food producers; increase investment in agricultural and rural infrastructure.

3. Good Health: reduce global maternal mortality ratio to less than 70 per 100,000 live births; end preventable deaths of children and epidemics such as AIDS and tuberculosis; ensure universal access to sexual and reproductive healthcare; achieve universal health coverage.
4. Quality Education: ensure equitable and quality primary and secondary education to all; eliminate gender disparities in education; increase the number of scholarships available in developing countries and developed countries.
5. Gender Equality: end all forms of discrimination and violence against all women; eliminate harmful practices such as early and forced marriage; recognize and value of unpaid and domestic work.
6. Clean Water and Sanitation: achieve universal and equitable access to safe drinking water to all; improve water quality by reducing pollution and eliminating dumping; expand international cooperation and capacity-building support to developing countries.
7. Affordable and Clean Energy: ensure to everyone the access to economic, affordable, sustainable and modern energy systems; increase the share of renewable energy in the global energy mix; reduce energetic waste; encourage research, technology and investments in cleaner energy systems.
8. Decent Work and Economic Growth: sustain per capital economic growth according to national circumstances; increase economic productivity through diversification and technological innovation; strengthen the capacity of domestic financial institutions to encourage and expand access to banking, insurance and financial services.
9. Industry, Innovation and Infrastructure: build a resilient infrastructure and promote innovation and equal, responsible and sustainable industrialization; enhance the access to services, financial markets, information technologies and communication.
10. Reduced Inequalities: achieve and sustain income growth of the bottom 40 percent of the population; ensure equal opportunities and reduce inequalities of outcome; improve the regulation and monitoring of global financial markets and institutions.
11. Sustainable cities and communities: make cities and human settlements inclusive, safe, long-lasting and sustainable; ensure safe and sustainable transportation systems; reduce negative environmental per capita impact in cities.
12. Responsible Consumption and Production: guarantee sustainable models of consumption and production; diminish global per person food waste; responsibly manage chemical substances and waste; encourage businesses to implement sustainable practices and report their sustainability.

13. Climate Action: strengthen resilience and adaptive capacity to climate-related hazards and natural disasters; improve awareness on climate change mitigation and adaptation; promote mechanisms for rising capacity for effective climate change-related planning.

14. Life Below Water: by 2020 sustainably manage and protect marine and coastal ecosystems to avoid adverse impacts; prohibit certain forms of fisheries subsidies contributing to overcapacity and overfishing.

15. Life on Land: by 2020, ensure the conservation and sustainable use of terrestrial and inland freshwater; by 2030, combat desertification and halt deforestation; take urgent and significant action to reduce the degradation of natural habitats.

16. Peace, Justice, and Strong Institutions: reduce all forms of violence; end abuse and exploitation; reduce illicit financial and arms flows; develop effective and transparent institutions.

17. Partnership for the Goals: mobilize additional financial resources for developing countries; adopt and implement investment promotion regimes for least developed countries; enhance national, local, and international cooperation and knowledge sharing.



Figure 2 – Sustainable Development Goals (SDGs).  
Source: OECD, 2021.

## 2.2.2 Relevance of the SDGs and ESG Finance for Institutional Investors

The importance of the concept of partnership has been thoroughly stressed in the Agenda 2030. Partnership means favouring connections between the civil society, private and public actors. Such partnership has already led to important results especially in the health field, with an improvement for millions of human lives thanks to new medicines and vaccines (Harrington, 2015). The United Nations have stressed the importance of strengthening such partnership at a global level, involving every individual and organization, without differentiation. This is the only way in which global society can successfully implement the practices of sustainable development and reach the Sustainable Development Goals (United Nations General Assembly, 2015b).

Due to the ambitious nature of the Agenda 2030, the necessity of overcoming common goals and ideas to adopt a transformative approach and reach new competences, technologies and infrastructures aimed at leading all global actors to a new paradigm. In this context the need of going beyond the concept of “business as usual” is of extreme importance.

Businesses and financial actors need to implement long-term investments especially in national, regional, and international developing contexts, where the infrastructures, information and communication technologies and sustainable energy are still scarce. The concepts of enhancing partnership and going beyond a “business as usual” serve thus as the bases connecting and implementing all Sustainable Development Goals. In fact, if businesses as usual mainly focus on pragmatic calculations considering only costs and profits, a business focused on sustainability considers global environmental issues, stakeholders’ necessities, and financial and economic issues. Financial actors and organizations could for instance invest in environmental-focused businesses aimed at improving their production system to make it greener. To create a significant improvement at a global level, such ethical and structural change must involve as much financial and business actors as possible. For this reason, the post-2015 Agenda calls for a new conception of business, which adopts a proactive and transformative approach constituted by non-conventional partnerships, innovative business models, new technologies and infrastructures, and especially recognises an intrinsic relation between business and sustainable development.

If the implementation of the Sustainable Development Goals cannot be sustained without the contribution of financial actors and institutions, the SDGs can enhance global business and financial realities improvement as well. In fact, opening to new



sustainable economic opportunities would increase their profits and business relationships. According to the report “Better Business, Better World” produced by the BSDC, the involvement of businesses in the implementation of the SDGs represents an economic opportunity valued 12 trillion dollars considering companies’ savings and profits by 2030 in the four economic systems examined, namely food and agriculture, urban transformation, energy and materials, and health (Business and Sustainable Development Commission, 2017; Giddens, 2018). Financial actors can invest in building systems, industrial processes, transportation infrastructures and new technologies and software (SDG 12 and 13); and in renewable energy and energy storage, clean fuel production, and emission control technology (SDGs 11 and 13) (PRI, 2017).

The importance of partnerships has been confirmed by several scholars and reports that also introduced the concept of *creating shared value* to show how companies could obtain a competitive advantage and earn healthy profits while at the same time facing the current environmental and social challenges (Agarwal *et al.*, 2019; Kramer, 2014). Connecting private business strategies and global priorities would allow companies to open to new business opportunities, satisfy the big-market demands, redirect global investments increasing company’s sustainability, increase competitiveness, stabilize markets, strengthen relationships with stakeholders, enhance their reputation and reduce business and legal risks, and be more resilient to future challenges.

The role of the private sector is deemed fundamental in various aspects, namely the source of financial and technological development, the source of economic and occupational growth, and especially leadership skills. In this regard, the “United Nations Commission on Trade and Development” (UNCTAD) has estimated that, to reach the SDGs, the financial investment necessary amounts to 5-7 trillion dollars per year from 2015 to 2030, with at least a trillion from the private sector, registering however a deficit amounting to 2-3 trillion dollars (UN News, 2018). To reach this goal, investors will have to re-orient their investments to innovative products and services, looking for innovative solutions.

Another useful tool to guide businesses toward sustainable development is the SDG Compass. This guide, focused on big transnational corporations but useful for all business realities, presents five phases to be implemented by businesses to align their strategic priorities and measure their contribution to the SDGs. The five phases are (Global Reporting Initiative, 2021):

1. Familiarise and understand the SDGs identifying the future business opportunities and develop innovative and effective solutions;
2. Define priorities and select the areas covered by specific SDGs most useful for their business and focus on them, with a prior valuation of potential positive and negative annual impacts of the whole supply chain on the SDGs;
3. Determine and align the business objectives with the SDGs, making a public effort for sustainable development;
4. Integrate sustainability and the SDGs into the core business, the governance and the business roles, while developing the partnership along the value chain and inside the specific working sector with governments and civil organizations;
5. Communicate the SDGs in the report to show to stakeholders the effort and the reached objectives.

The SDG Compass also demands companies and institutional investors to respect the minimal international norms and standards and universal rights outlined in the ten “Principles of the Global Compact of United Nations”.

As stated in “The SDG Investment Case”, a report presented by the PRI association in partnership with Finance UNEP Initiative and United Nations Global Compact in 2017, institutional investors have the fiduciary role and responsibility to act in best-long term interests for their beneficiaries. Such report aims at defining why the SDGs are relevant to institutional investors, helping them to fulfil liabilities and clients’ expectations concerning risk-adjusted returns. Being the SDGs a sustainability framework agreed worldwide, the report introduces the existence of macro and micro risks and opportunities. Macro risks, presented by diversified portfolios of investment in different asset classes and geographies, could expose investors to the SDGs global challenges; macro opportunities are connected to the global economic growth and high financial return driven by the SDGs; micro risks are represented by the specific ethical, regulatory, and operational risks connected to the SDGs; and micro opportunities regard the SDGs as a capital allocation guide creating new opportunities.

Macro risks faced by universal owners depend on the overall market. Universal owners, defined as large institutional investors who adopt the modern portfolio theory, own diversified long-term portfolios that represent global capital markets, so that their returns on investment are strictly dependant on the health of the overall economy (Minow & Monks, 1995). Therefore, it is in their interest to improve and encourage

sustainable behaviours. For instance, the Financial Stability Board (FSB) has identified climate change as a serious potential risk for overall markets, to be added to the other issues presented in the Agenda 2030. Most of the current environmental and social challenges described in the Agenda 2030 are worsened by the companies in which universal owners invest. Since investors' portfolios are influenced by the economic costs of such challenges, re-allocating investments towards companies with low external costs becomes vital to maintain asset values high and profitable. In this regard, scholars introduced the active ownership model, arguing that investors should start integrating the price of externalities in their investment processes, considering the impact of their investments on future generations (PRI, 2017).

Considering the macro opportunities presented by the inclusion of the SDGs into investors' portfolios, the Goals aim to create a real-world future model in which economic growth can be achieved without compromising the environment and societies. The Business and Sustainable Development Commission (BSDC), a group formed by 36 leaders from finance, business, civil society, international organization and labour, explored how business and finance can contribute to the SDGs and stressed the importance of incorporating the Goals into core growth strategies and policy operations to increase efficiency and income opportunities while enhancing their reputations (Business and Sustainable Development Commission, 2017). This could, by 2030, create economic opportunities worth US\$ 12 trillion per year and create 380 million jobs, especially in developing countries. According to the McKinsey Global Institute, focusing on social outcomes like gender equality could add between 12 and 28 trillion dollars to global growth by 2025 (Devillard *et al.*, 2015).

The BSDC research has identified the biggest financial opportunities in the four economic systems, namely food and agriculture, energy and materials, cities, and health and well-being. In food and agriculture, for instance, a financial and economic system aligned with the SDGs would deliver affordable food for the whole world population, generate higher incomes, and help restore ecosystems such as oceans, thus potentially creating an economic value of more than 2 trillion dollars by 2030 and increasing resilience to climate risks. Moreover, aligning with the SDGs would bring new circular models in the automotive sector, making manufacturing more efficient. Finally, expanding renewables would increase the renewables' share of energy generation worldwide to 45% by 2030 generating new working opportunities (Business and Sustainable Development Commission, 2017).

The micro risks faced by investors are influenced by the uncertainties steaming from the timing and the extent to which current external social and environmental costs will be forced into companies' accounts. In this regard, including the SDGs framework can help investors address the misalignment of investors and clients on the definition of sustainable investments. The MSCI "ESG Sustainable Impact Metrics" divided the Goals into five groups, namely basic needs, empowerment, climate change, natural capital, and governance, developing a taxonomy of products and services contributing to find solutions to the SDGs (MSCI ESG Research Inc., 2016).

Finally, micro opportunities regard the SDGs framework as a capital allocation guide. Institutional investors can in fact implement investment strategies that directly target SDG issues and sectors. The Agenda 2030 provided investors of a common language with which they can articulate their investment strategies in a common framework. Such framework can help private investors to engage in public sectors such energy, water, infrastructure, and healthcare, investing alongside development finance institutions and sovereign wealth funds. Moreover, the SDGs can be a driving force enhancing financial product innovation such as the SDG-related bonds, and improving existing financial products such as green bonds and banking products for peripheral groups. This investment concept has become such a popular portfolio selection tool for investors and financial intermediaries, that financial service providers such as Bloomberg and MSCI created custom rating systems analysing companies to help investors to build ESG portfolios. Such tools analyse company's activities and production processes considering their environmental impact, labor management, corporate governance, privacy, gender diversity and data security (PRI, 2017).

As stated above, the outlining of the UN Sustainable Development Goals has made clear how ESG finance and the private sector are necessary elements for long-term value creation in a global system that tends to reward long-term, responsible investment. The Agenda 2030 and its targets are a tool to measure the real-world impact of responsible investors and show their efforts to incorporate contemporary issues as working conditions and climate change into their investments.

Over the last decade the public debate around ESG investing has been increasing. ESG is an acronym that stands for Environmental, Social and Governance and is nowadays used to classify various investment frameworks, financial products and institutions that follow specific criteria divided into three pillars: integrity, value, and impact. In this

regard, ESG integration is defined as the incorporation of such criteria into traditional financial analysis with the main objective of creating a value for investors (PRI, 2017). In the last decade, a new tendency has emerged: PRI signatories and ultimate beneficiaries, such clients of insurance companies and participants in pension funds, have been increasingly considering the long-term and sustainable aspects of their interests. The positive outcomes of responsible investment practices can be divided into three categories, namely the effects of integration of ESG factors into investment practices; the effects of active ownership on the improvement of ESG performance; and the effects of thematic investments. The integration of the ESGs into asset allocation presents lower cost of capital and sometimes better financial performance. Including ESG factors in active ownership will highlight the real-life impact of ESG issues and induce businesses to engage in more sustainable productions (Bassen *et al.*, 2015). Finally, thematic investments such as inclusive finance and renewable energy can lead to increasing inflows and market returns (PRI, 2020).

### 2.2.3 Progress towards the SDGs in Europe since 2015

Before analysing the progresses made from the definition of the Agenda 2030, it is worth considering the current effects of the pandemic caused by the Covid-19. Before the virus outbreak, progresses were uneven, and the pandemic further disrupted the implementation of many SDGs. The most affected are the poorest and least developed countries of the world, which further intensified already existing social and economic inequalities both among and within nations. Nonetheless, the World Bank experts forecasted that the current situation would make the poverty rate increase by 150 million people by the end of 2021, determining the first rise in global poverty since 1998 (The World Bank, 2020). Socioeconomic circumstances after the pandemic will be suffered by all countries for years. Children, women, people with disabilities and older people who already needed further aid are being left behind by damaged governments and institutions.

To face these challenges and keep pursuing the SDGs, members of the statistical community have set up new frameworks of data production adapting them to include policy responses to the crisis and enhance SDGs efforts. The efforts could also contribute to increase the number of comparable data available from all countries,

which, according to the indicators in the Global SDG Indicators Database, are less than half for 4 of the 17 goals (Department of Economic and Social Affairs, 2021).

To provide a more detailed report, this thesis will focus on four SDGs, which are statistically considered the most in the business and finance sector, namely number 7 on Affordable and clean energy; number 9 dealing with Industry, innovation, and infrastructure; number 12 on Responsible consumption and production; and number 13 on Climate protection.

### ***Global Developments***

The 2020 “Sustainable Development Goals Report” outlined the current global developments of the implementations for reaching the 17 Goals using the latest available data (United Nations, 2020). Concerning the Goal of ensuring access to affordable, reliable, sustainable, and modern energy for all, the Report confirms that efforts being made are currently not enough to achieve the Goal by 2030. Deficits in electricity are increasingly concentrated in Sub-Saharan Africa. Although the percentage of global population with access to electricity increased by 7% from 2010 to 2018, more than 750 million people, especially in rural areas in sub-Saharan Africa, still lacked electricity in 2018. Covid-19 made experts worldwide realize how important the Goal of providing reliable and affordable electricity is, and to meet the target by 2030 the annual rate of electrification should rise from 0.82 percent to 0.87 percent by 2030. Access to clean cooking technologies and fuels has increased of to 63% in 2018 showing progresses especially in Asian regions, but progress is rather slow compared with the population rate and is making the health of nearly 3 billion people at risk. The share of renewable energy has increased especially from the electricity sector due to the rapid expansion of solar and wind power, but renewables in heat and transportation end-use sectors, that represent 80 percent of final energy use, negatively outweighed renewable electricity.

Stepped-up efforts in renewable energy in general are needed to achieve the 2030 long-term climate Goal. Energy efficiency, essential to reduce greenhouse gas emissions, has been improving since 1990s, but meeting the target requires an improvement rate of at least 3 percent every year from now to 2030, which represents a rather difficult challenge. Finally, the rise of international financing for renewable energy has been encouragingly increasing, but only 12 percent of these financial investments reached

least developed countries. Therefore, more focused attention is essential to allow financial flows to reach poorer and least developed countries.

The Goal of building resilient infrastructure, promoting inclusive and sustainable industrialization, and fostering innovation is vital to long-term economic development. In this regard, due to governmental restrictions in 2020 the aviation industry, an excellent driver of economic development, has suffered the grounding of around 90 per cent of total fleets. For the aviation industry to recover, and to accelerate the recovery of sectors such as tourism and transnational trade, a coordinated global effort is necessary. The pandemic also induced a decrease in the manufacture sector, which, considered an engine for overall economic growth, had severe impacts in the global economy. The role of financial private and institutional investors is fundamental for small-scale industries and the Research and Development sector (R&D). The access of small-scale enterprises to financial services is fundamental to help them increase their production and job rating worldwide. In fact, R&D represents a fundamental tool to improve and accelerate the progresses towards the achievement of the Goal and nonetheless to cope with Covid-19.

The Goal of ensuring sustainable consumption and production patterns is fundamental to allow global economy growth and reduce environmental damage. From 2017 to 2020 there has been an increase of the global material footprint to 85.9 billion metric tons especially for non-metallic minerals, which are expected to continue growing in areas of infrastructure and construction. Urgent action is needed to decrease our use of raw materials and increase “circular economy” approaches to reduce environmental impact by 2030.

A rather underestimated dangerous factor is the fast-growing amount of e-waste, which refers to the disposal system of electronic and electrical instruments worldwide. Developed countries rely on e-waste management infrastructure, and such items are often recycled and sent to poorer countries. The problem is that such countries do not have e-waste management policies, resulting in extremely polluting disposing techniques. Another critical aspect is that a significant proportion of food is still lost along the supply chain, due to a poorly implemented value chains, which should be improved with targeted interventions. Moreover, the ongoing policy of subsidization of fossil fuel industries by most governments worldwide is becoming rather counterproductive and is undermining the global efforts of sustainable consumption and production patterns. Countries worldwide now need to operationalize the principles of

sustainable economic growth, and businesses must address gaps in the quality of sustainability reporting.

Finally, climate crisis is fast-growing and global commitment keeps lacking in practice. Global temperatures are deemed to keep rising to 3.2 °C by the end of the century. For the 1.5°C maximum target called for in the Paris Agreement, greenhouse emissions must start falling by 7.6 per cent each year beginning 2020. However, according to the latest data, emissions are expected to rise. Overall, the world is way off track to meet the target of net zero emissions, low-carbon, and climate-resilient transition by 2050 and especially of the current level of nationally determined contributions. Although most developing countries begun formulating National Adaptation Plans to better adapt to climate change and the Paris Agreement, progress in meeting the disaster risk reduction target in 2020 has been slow.

All considered, countries at global level have started to apply social, financial, economic, and environmental adaptation and mitigation policies to meet the requirements outlined in the 2015 Paris Agreement. However, such efforts are not homogenous in spatial and political terms, affecting the overall improvement rate. More effective and specific actions are required by all countries if we want to pursue the objective of meeting the Sustainable Development Goals by 2030 (United Nations, 2020).

### ***European Developments***

At a European level, after the Paris Agreement on Climate Change, the von der Leyen Commission defined sustainability as a political priority for its mandate (Von der Leyen, 2019). In December 2019, the Commission presented “The European Green Deal” as the new strategy aimed at transforming the EU into an efficient and competitive economy addressing environmental and climate challenges and performing a just and inclusive transition towards sustainable development (European Commission, 2019a). Furthermore, the 2020 annual cycle started with the Annual Sustainable Growth Strategy aiming at promoting competitive sustainability and inclusive and efficient economy (European Commission, 2019e).

The 2020 edition of the “Monitoring Report on Progress Towards the SDGs in an EU context” presented by Eurostat outlines the progresses made by the European Union regarding the achievement of the 17 Sustainable Development Goals (Eurostat, 2020a).



The Report uses indicator trends based on average annual growth rate of the past five years for the 16 indicators with quantitative EU targets, while all other indicators are assessed according to the direction and speed of change.

Concerning SDG 7 on Affordable and clean energy, the assessment is mixed. The increase in energy consumption since 2014 has worsened EU's progresses in meeting its energy efficiency target of 20% by 2020, also increasing EU's dependence on energy imports from abroad. Primary energy measures energy consumption by end-users such transport, households, industry, and agriculture, including consumption by the energy sector itself for transformation of energies and production. Final energy consumption measures a country's energy end-use covering the energy consumed by end users.

The overall progress made on both the primary and final energy fronts was caused by different factors such as structural transition towards less energy-intensive industries and the end-use efficiency in the residential sector. This notwithstanding, increases in primary and final energy consumption between 2014 and 2017 reflect a return to average heating demand after 2014 and a strong economic growth. If such trend continues, the reduction targets for both energy fronts will be missed. On average, EU's household energy consumption was lower in 2017 than in 2002, and in 2018 the average citizen at home consumed 549 kilograms of oil equivalent (kgoe) compared with the 613 kgoe of 2003. The data provided show that efficiency improvements regarding space heating have balanced the effects of population and dwellings growth.

Both energy productivity and greenhouse gas intensity of energy consumption have improved regularly since 2000. Latest data indicate a decoupling of economic growth measured with gross domestic product (GDP) from energy inputs and their associated greenhouse gas emissions. Energy consumption and its negative contribution to climate change can be decoupled by reducing its GHG intensity, which is the amount of CO<sub>2</sub> equivalent emitted per unit of gross inland consumption in an economy. Moreover, by 2018 the GHG emissions inland consumption in EU decreased by 13.2%.

On the other hand, renewable energy in electricity, heating, transport, and cooling has been increasing putting EU on track with its 2020 target. This increase was driven by a reduction in investment costs, more efficient technologies, competitive support schemes for renewable energy sources and supply chain improvements. The overall use of renewables has increased in the three application areas, namely electricity, heating and cooling, and transport.

Despite a steady growth of renewable energy sources, since 2003 imports of natural gas, crude oil and hard coal have been expanding to meet EU's energy demand. Followed by European countries not part of the EU, Russia remained the main supplier of energy in 2018, providing 40.1% of gas imports, 32% of oil product imports and 42.3% of solid fuel imports.

Positive data emerged from household energy use, and energy is being used more and more efficiently, leading to a decrease in the greenhouse emissions intensity of energy consumption.

The need for affordable energy for social equity and justice is an important task of the 7th Sustainable Development Goal. Since the inability of keeping homes sufficiently warm directly stems from low levels of income, reducing overall poverty rate would improve the access to affordable energy. In this regard the EU has regularly increased access to affordable energy since 2012. According to 21 member states, in 2018 less than 10% of their population was unable to keep their homes adequately warm.

Regarding SDG 9 on Industry, innovation and infrastructure, the report outlined decoupling developments. Although European countries are facing increasing international competition, the EU's R&D intensity has not sufficiently increased to enable the EU to reach the 2020 target of rising R&D expenditure to 3% of GDP. With a research and development expenditure of 295 billion euros in 2018 in absolute terms, EU remains far from its 3% target for 2020. Private expenditure, specifically business enterprise sector and the higher education sector, currently covers two-thirds of total R&D expenditure.

Considering the number of passenger cars and road freight, efforts in making EU transport patterns more sustainable have not produced the expected outcome. Other trends like science and technology and the number of R&D personnel, and patent applications to the European Patent Office have been positive.

Investing in the development of the R&D sector to achieve the Sustainable Development Goals will create new scientific and technical knowledge and stimulate the development of highly skilled labour force. The business enterprise sector, providing jobs for more than half of the research and development workforce in 2018, contributed to increase the share of R&D personnel in economically active population.

As well as the R&D sector, a well-functioning and efficient transport system is fundamental for a competitive economy. This sector is responsible for almost one

quarter of the greenhouse gas emissions in the EU. Improving the transport and mobility sector is therefore essential to reduce emission and reach the 9<sup>th</sup> Sustainable Development Goal. However, the Report shows that cars remain the dominant mode for passenger transport, progress in reducing their CO<sub>2</sub> emissions has halted, and the freight transport still relies on road transport. These factors led to an increase in CO<sub>2</sub> emissions and pushed the EU further from the 2021 target of 95 g CO<sub>2</sub> per km.

Concerning the SDG 12 on Responsible consumption and production, the increases on EU's resource and energy productivity are mainly result of strong GDP and do not reflect more sustainable implementations of the use of natural resources. Overall trends in the environmental goods and services have however been positive.

The Eurostat Report focuses on developments in areas of decoupling environmental impacts from economic growth, green economy, and waste generation and management. On the decoupling field the EU has made progress, however the consumption of toxic chemicals has grown since 2013 and the decrease in CO<sub>2</sub> emissions from new cars has stopped, making it hard for EU to reach the relative target for 2021.

With the European Green Deal, the EU aims at transforming into a fair climate-neutral society with an efficient and competitive economy (European Commission, 2019d). The EU Commission proposes to improve resource and energy use efficiency through restructuring economies to make them produce more using the same resource and energy inputs. The indicators used consider the gross domestic product and the harmful environmental impacts of consumption of toxic chemicals and CO<sub>2</sub> emissions relative to transports.

According to the Report, resource and energy productivity have increased remarkably over the last 15 years. This trend is attributed to the growth of the EU economy, and reductions in domestic material consumption and gross available energy. However, the decrease in domestic material consumption was probably also influenced by the 2008 economic crisis.

Consumption of toxic chemicals have decreased in the long and the short terms. Although the consumption of chemicals significantly contributes to the EU economy, it also presents risks for humans and the environment. Consumption of toxic chemicals has increased by 1.9% between 2013 and 2018.

The decrease of average CO<sub>2</sub> emissions per km for new passenger cars has recently stopped. To reduce the negative impact of emissions of CO<sub>2</sub>, in 2015 the EU has

limited targets fleet-wide average emissions of new passenger cars to 130 grams of CO<sub>2</sub> per km and 95 grams in 2021 (European Parliament, 2009). While the 2015 target has been met two years in advance, in 2018 average emissions increased by 1.6 grams of CO<sub>2</sub> per km with respect to 2017. If the EU members want to reach the 2021 target of 95 grams of CO<sub>2</sub> per km, further progress is required.

The Environmental Goods and Services Sector (EGSS) represents the economic sector concerned in the production of goods and services used in environmental protection activities and resource management. Increasing green economy can also help reducing environmental impacts caused by economic growth, and have important socio-economic benefits in value added and employment. Over the past 15 years, member states have recorded a strong and steady growth of value added in environmental goods and services.

Moreover, improving circular economy practices by reducing the input of materials and the output of waste could be a resource to put more recycling materials back into the economy and minimize waste, inefficiency, and pollution. In the short term, waste generation has increased by 2.6% between 2012 and 2016, while since 2012 the EU circular material use rate has remained unchanged at 11.2%. Such tendencies can be attributed to two structural barriers. A large amount of these materials is used for long-life goods such as buildings and infrastructures and is thus not readily available for recycling. Moreover, most of these materials like fossil fuels are used to generate energy, and for such materials is almost impossible to create a circular economy.

The Report of SDG 13 on Climate action is neutral, since there have been progresses in some areas and negative developments in others. The monitoring process focuses on climate mitigation, climate impacts, and initiatives supporting climate action. Climate mitigation actions focus on reducing emissions of climate-harming greenhouse gasses originated by human activity. The main measures include promoting low-carbon technologies, forest management and environmentally favourable land use. The main goal for Europe related to the Agenda 2030 in this regard is reaching net-zero greenhouse gas emissions by 2050, while pursuing climate adaptation and resilience objectives (European Commission, 2019a).

Since the highest share of emissions in the EU comes from production and consumption of energy, to reach the Goal European members should shift to less carbon-intensive energy systems. The long-term trend has been favourable, measuring a reduction of

GHG emissions by 20% in 2020 compared with 1990. The short-term trend has first seen a rise of emissions between 2014 and 2017, followed by a decline in 2017-2018, resulting in an overall decline in the past five years. However, due to this slowdown the EU is presently not likely to meet its 40% target of emissions reduction by 2030. The reports show that all sectors except transport have contributed to the reduction of the GHG emissions. High emission reduction in fuel combustion and energy efficiency have been offset by the growth in overall traffic. For instance, emissions from international aviation were more than doubled in 2018 compared with 1990 levels. CO<sub>2</sub> emissions per km for new passenger cars have been diminishing since 2007, but due to a slight increase in 2017-2018 the 2021 target of 95 grams of CO<sub>2</sub> per km driven will require more progress.

Economic losses from weather- and climate-related extremes have been considerable over the past decades. In the period 1980-2017 economic weather- and climate-related losses were a total of 425.7 billion euros, with an almost regular increase in climate-related economic losses. In this regard, the EU contribution to climate finance for developing countries has been increasing to 19.4 billion euros in 2017 since 2014, and the number of local governments committed to act for climate protection and adaptation has increased steadily.

In contrast, per capita emissions and GHG intensity of EU energy consumption have fallen almost continuously in most EU countries. This is probably due to a progressive dismissal of GHG-intensive energy sources.

If in 2018 the EU had already reached the 20% greenhouse gas emissions reduction target for 2020, a growth in emissions between 2014 and 2017 furthered the EU from its reduction target for 2030. The overall EU's greenhouse gas emissions intensity of energy has been improving. However, the effects of global warming and climate change have been increasingly perceived all over Europe.

In general, although in different degrees, all EU's members have been implementing the provisions outlined in the Agenda 2030. Since the 1990s, the members of the European Union have made progresses in the implementation of some of the Goals and have experienced drawbacks in some others. The overall Report measures a mixed trend of improvement for all the SDGs considered. The Covid-19 pandemic has for sure exacerbated some already existing environmental issues, urging all countries to enhance the cooperation and further highlighting their interdependence.

#### 2.2.4 Progress towards the SDGs in Italy since 2015

After the ratification of the Paris Agreement on Climate Change in 2015, all countries and institutions worldwide have been called to contribute to the implementation of the 17 Sustainable Development Goals. In this regard, the UN General Assembly adopted the Agenda 2030 as a Global Action Plan to help international governments achieve a sustainable transformation of society, economy, and environment through 17 Sustainable Development Goals and 169 relative specific targets. The SDGs and their targets aim at balancing the three main branches of sustainable development, namely economic, environmental, and institutional. The Goals are universal, indivisible, interconnected, consider each specific territorial reality, and are applicable on global, national and local level. All the above-mentioned SDGs follow one key principle, which is the necessity of leaving no one behind.

With the aim of monitoring the global environmental, social, and institutional progresses made in for the SDGs in all nations, in 2020 the “United Nations Inter Agency Expert Group on SDGs” revised the list of 232 monitoring indicators, defining the third edition of the statistical reference framework worldwide. The latest Report on the Sustainable Development Goals issued by Istat in 2020 took place in presence of the Covid-19 crisis, which exacerbated the emergency situation and increased the necessity for a unified vision allowing global realities to make collective efforts for an economic, social, and environmentally sustainable development. The Report includes an estimation of the emissions’ reduction induced by families and businesses during the lockdown and analyses the linkages between the 17 SDGs and Covid-19. The Report uses a descriptive approach to determine the development of sustainability in relation to the indicators of the previous year (2019) and 10 years earlier.

Concerning Italy, 48.1% of indicators have been improving, 29.7% have remained stable and 22.2% have been decreasing compared to 2018, while, compared to the 10 previous years, 61.1% of indicators have increased, 17.8% have remained the same and 21.1% have worsened (Istat, 2020).



Figure 3 - Performance of SDG Indicators Compared with 10 Years Before and the Previous year.  
Source: Istat, 2020, p. 8.

In specific, Goals 2 and 13, respectively Zero hunger and Climate action, have been improving the most (respectively 71.3% and 66.7%) compared to the previous year, while Goals 12 and 15 on Responsible consumption and production and Life on land have worsened the most.

The Report also outlines the percentages of progress in Italian regions observing their performance through the quintile distribution of the single indicators. In this regard, the Autonomous Provinces of Bolzano and Trento were the most virtuous ones, immediately followed by Valle d'Aosta. On the contrary, Liguria and Piemonte held the worst performance among the Northern regions. Considering the central regions of Italy, Toscana and Umbria presented the best percentage of indicators, while Lazio performed the worst. The southern regions presented the worst percentages of indicators in the whole Italy. The least unfavourable distribution was held by Abruzzo, Molise and Sardegna.

The general tendency of improvement was greater for environmental and social dimensions rather than the economic one. In fact, in the period 2010-2018 the economic dimension kept worsening until 2013, following the evolution of the Italian business cycle (Istat, 2020).

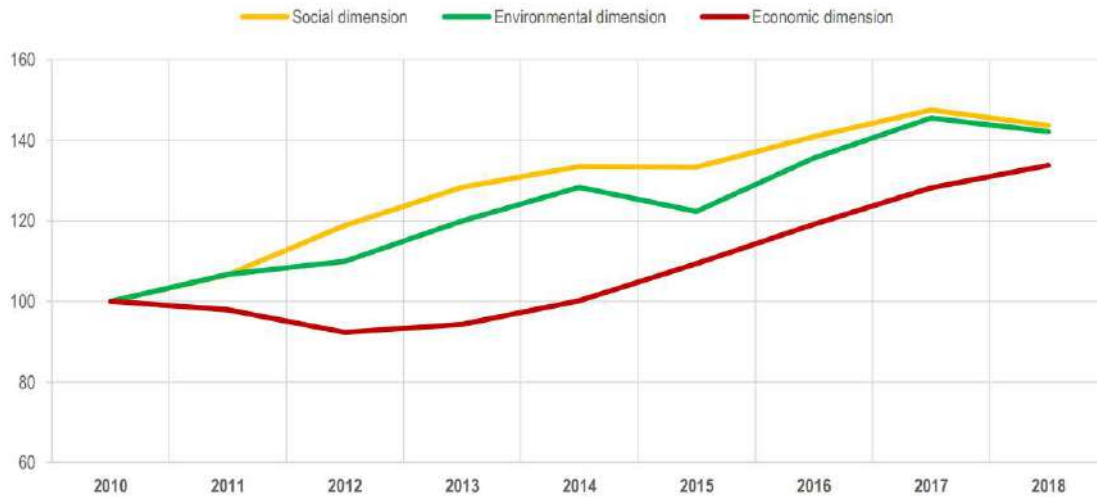


Figure 4 - Composite Indices for the Social, Economic and Environmental Dimensions. Years 2010-2018.  
Source: Istat, 2020, p. 19.

The progresses assessed in the environmental and social dimensions depend on improvements in clean energy and responsible consumption on one side, and health and education on the other. This notwithstanding, such improvements decreased in the last years.

The containment measures needed after Covid-19 have inevitably influenced all actors of world society. The lockdown has strongly influenced the economic performance of businesses, but also positively impacted the environmental situation by reducing polluting emissions by 4%.

The Report also outlines the evolutions made in relation to each specific Sustainable Development Goal of the Agenda 2030. Below will be analysed the progresses made in Italy in the four SDGs considered in this thesis, namely Goals 7, 9, 12 and 13.

Regarding Goal 7 on Affordable and clean energy, Italy is among the European countries that succeeded in reaching the 2020 national target. The renewable energy share in the total final energy consumption has improved by 5% in the last ten years and decreased by 0.5 percentage points in 2018, mainly due to a decrease in production of the photovoltaic sector. The most relevant sector in the contribution from renewables has been the electricity sector, showing an increase to 34.3% in the use of electricity from renewable sources in the gross electricity consumption. The least relevant have been the heating and transport sectors. After a decrease between 2015 and 2017, the use of renewable energy has made progresses increasing by 3.2 percentage points and is still increasing. Considering energy intensity, Italy has improved its ratio between gross



available energy and GDP in the last ten years, reaching 93 tonnes of oil equivalent per million euros in the last year.

Goal 7 is relevant both for enhancing inclusion and equity in access to energetic resources, and for the positive impacts that more affordable and clean energy could have on economic, social, and sustainable development. The statistical data used by Istat to measure the progresses made regarding Goal 7 described a positive trend of the Italian energetic intensity, and of the amount of population with adequate access to affordable energy, which reached the 14.1% by 2018.

The national target of production of renewable resources of 17% was reached in Italy in 2014. In fact, in 2018 the amount of renewable energy on the total final energy was of 17.8%, placing the nation among the favourable countries in EU.

The contribution to renewable energy of Italian regions varied considerably depending on the sector. The regions which most contributed to the renewable energy sector in 2017 were Valle d'Aosta and the Autonomous Region of Bolzano using respectively renewable energy to satisfy the 80% and 65% of their total energy need. The least contributing regions were Sicilia, Liguria, Lombardia and Emilia-Romagna which satisfied 14% of their total energetic need with renewables.

Among the targets of Goal 7 is the doubling of the global tax of energetic efficiency improvement. In Italy, the “Integrated National Plan for Energy and Climate 2020” has defined an indicative target of primary energetic saving of 43% by 2030 (Ministry of Economic Development, 2019). In the last decade, the Report registered a diminution of the gross domestic consumption of energy by 0.9%.

According to the primary energetic intensity to measure Italian energy consumption and general efficiency, the Report outlined that in 2018 the energy intensity was 93 oil equivalent tons per million euros, thanks to the latest financial and fiscal policies encouraging the energetic efficiency at a national level.

Considering Goal 9 on Industry, innovation and infrastructure, R&D intensity on GDP in Italy has been lower compared to the major EU countries, where the average R&D intensity increased to 2.12 in 2018 and researches grew to 40.7 per 10,000 inhabitants, still below the EU 2020 target. In Italy, R&D intensity on GDP increased to 1.39% in 2018 and research grew to 23.1 units per 10,000 inhabitants. The amount of modern and high-tech industry value added in total value added remained unchanged in 2017, and railway network indicators polarized in favour of Northern and Central regions. CO<sub>2</sub>

emission intensity on value added decreased in the last decade, and in 2018 it decreased to 2.4%.

Goal 9 focuses on Infrastructures, innovation, and industrialization, which are essential tools to enhance sustainable development and reach the Goal. Modernizing infrastructures is fundamental to guarantee long-term economic, social, and environmental development. Such innovation is favoured through investments aimed at modernizing infrastructure, technology, research, and development.

Although the Italian number of investments in R&D in relation to the GDP is still lower than the one in the major European countries, in 2018 the investments in R&D reached the 1.30% of total investments, and the number of researchers increased to 23.1 units per 10,000 inhabitants. Indicators on infrastructural investments showed a gap between northern and southern regions, where the indicators are worse. The number of workers in the manufacture sector has been stalling in the last five years, counting in 2019 16 workers on a total of 100. The investments in fixed assets are an essential tool to ensure an increase in productivity and economic progress. In this regard, the “Piano Nazionale Impresa 4.0” issued by the Ministry of Economic Development in 2020 analysed the industrial policies and further digitalized Italian businesses through a vast number of indirect investments for the acquisition of technological equipment.

The Italian railway network, still fundamental to allow national and international transport of people and business products, has made progresses regarding the use of electrified railways from 64.9% to 67% in 2018, enhancing the total sustainability improvements.

Finally, an important target of Goal 9 regarding environmental management is the increase in efficiency of production processes and the use of natural resources, monitored through the intensity of CO<sub>2</sub> per unit of value added, resulting from the ratio between CO<sub>2</sub> emissions and value added. In 2018 Italy was among the countries that counted the least amount of intensity of emissions in EU, diminishing by 21% reaching 164,5 tons per million euros in 2018.

Goal 12 concerns the promotion of Responsible models of consumption and production, inducing the reduction of socio-economic systems' ecological footprint, and an increase in life standards. By 2018, the Report describes an improvement in Italy's waste management, even considering an increase in the total amount of waste production per capita. In fact, in 2018 the national recycling rate has exceeded the 2020 national target

reaching 51%. The percentage of municipal waste in separate collection with respect to all municipal waste also improved. However, in 2018 the domestic material consumption per capita and GDP has increased after ten years of improvement, and the ratio between the number of fossil fuels and GDP increased again.

Between 2009 and 2018, the percentage of urban landfilled waste decreased from 50% to 21,5% in 2018, while the recycling rate went from 36,7% in 2010 to 50,8% in 2018, surpassing the 50% target of 2020.

Separate collection rates presented differences among the Italian regions, showing Northern regions as the most advanced in the sector.

The promotion of sustainable practices concerning public contracts is also important since such practices highly affect the European GDP. In 2015 63 public administrations performed at least one green purchase, with a higher percentage in the Northern regions.

Finally, considering Goal 13 calling for Climate action, reports have outlined how climate change has a role on the increasing natural disasters occurring in Italy and all over the world (Istat, 2020).

In 2018 Italy counted a reduction of per capita greenhouse gas emissions from 7.4 to 7.3, relative to 438.124 thousand tons of CO<sub>2</sub>. Three quarter of the total emissions were generated from the production sector, with the manufacturing sector among the first for emissions. In 2018, the anomalies of medium temperature in Italy have increased to 1.71 degrees.

Overall, as in the general trend described in the Eurostat Report in 2020, the Report on the Sustainable Development Goals released by Istat has outlined in Italy a mixed degree of progress in the four Sustainable Development Goals analysed.

## 3. From Finance to Sustainable Finance

### 3.1 Corporate Social Responsibility (CSR)

#### 3.1.1 Definition of CSR

Corporate Social Responsibility (CSR) is a widely discussed and controversial concept, which has been associated with different definitions. The first definition of CSR in literature was provided in 1926 and maintained that Corporate Social Responsibility implies that corporations have obligations towards society (Freeman & Hasnaoui, 2011). Other scholars defined it as “the continuing commitment by business to behave ethically and contribute to economic development, while improving the quality of life of the workforce and their families as well as of the local community and society at large” (Holme *et. al*, 2000, p. 6).

The engagement of companies in social, economic, and environmental global issues leads to positive outcomes for the competitiveness of enterprises, corporation-customer relationships, human resource management and risk management. In this regard, the European Commission, following the “United Nations Guiding Principles on Business and Human Rights” regarding labour, human rights, environment, and corruption, outlined a list of actions corporations can implement to achieve social responsibility. The actions include enhancing market rewards for CSR, integrating CSR into training, developing education and research, and enhancing the tracking levels of trust in business (United Nations, 2011; European Commission, 2019).

Whatever the definition, most scholars agree on the core values expressed by the concept of Corporate Social Responsibility, which include human and employee rights, environmental protection, stakeholder rights, community development, and supplier relations (Jamali, 2006). In fact, Corporate Social Responsibility provides that a corporations’ ultimate objective is not only profit maximization, and that a company’s stakeholders include customers, world and local societies, suppliers, and shareholders (Davidson, 2009). In that regard, CSR can be considered a means to enhance the private sectors’ ethical and sustainability efficiency in the processes of production and consumption, without losing focus on the objectives of developing new markets and making profits for stakeholders.

An overall description of the functioning of Corporate Social Responsibility was provided by the “Three-domain model of CSR” (Carroll & Schwartz, 2003). The first domain is Economic, focusing on any activity which leads to positive economic impact, defined as “the maximization of profits and/or the maximization of shared value” (Carroll & Schwartz, 2003, p. 508) on corporations. Activities that increase sales or avoid lawsuits are defined as direct economic activities, while indirect economic activities serve to improve workers’ and customers’ image of the corporation. The main actions performed in the economic domain are creating a return on investment to shareholders and owners; engaging in new technological, research and human resources; and increasing jobs’ availability. In general, the activities under the economic domain mainly focus on maximizing profit and minimizing losses (Carroll & Schwartz, 2003).

The Legal domain includes compliance, avoidance of civil litigation and anticipation of law (Carroll & Schwartz, 2003). The main objective in this domain is for corporations to perform their economic purpose in respect of the law. In fact, actions must be lawful, prevent the risk of future lawsuits, and foresee possible evolutions of law.

Finally, the Ethical domain requires ethical objectives and ideals pursued by corporations to follow conventional, consequential, and deontological standards in line with the ethical ideals of stakeholders and society. The actions performed in this domain respect universally accepted standards for the functioning of the business, create positive value for stakeholders and respect the corporations’ commitments (Carroll & Schwartz, 2003).

The concept of Corporate Social Responsibility emerged in a context in which corporations, international organizations and world civil society needed to create an approach to sustainability that went beyond the tendencies of cosmetic greening and included the ideals of stewardship, clean technologies and pollution prevention (Hart, 2005). In this regard, eco-efficiency and eco-effectiveness are to be distinguished, being the former related to the tendency of creating more goods and services using fewer resources and limiting pollution, and the latter meaning that businesses produce social, environmental and economic benefits at the same time for the whole world. To become eco-effective, corporations need to create new adaptable business models, research, and innovations with the aim of developing new market and new technologies. With such new models, businesses could satisfy the needs of the world’s poor while increasing their profits (Hart, 2005). An example in this regard is the tendency of some companies

to engage in a shared access model, in which poor people hire their technological and mechanic devices from the providers, which would be too expensive to buy, on a pay-per use basis. In this way providers manage to increase their revenue per investment dollar and help people in need at the same time (Blewitt, 2018).

Moreover, since corporations rely to various stakeholders, they need to closely manage their relationships with natural environment and society (Hopkins, 2007). In fact, managers who consider and behave in relation to the real necessities of stakeholders tend to have better results, and companies who have lasted longer than the average corporation generally have some similar features, namely conservatism in financing, sensitivity to the world around them, awareness of their identity, and tolerance to new ideas (Collins & Porras, 1994; De Geus, 1997).

### 3.1.2 Reasons for Companies to Engage in CSR

Corporations are affected by social issues in three main aspects: generic social issues, value chain social issues, and social issues in competitive social dimensions.

Generic social issues are not particularly affected by corporations and do not affect their long-term competitiveness; value chain social issues are affected by corporations; and social issues competitive social dimensions affect corporations' competitiveness depending on the context in which they operate (Kramer & Porter, 2006).

The primary reason for companies to engage in CSR is their own long-term positive value determination, maintained by following ethical commitments concerning employees, customers, and society, avoiding pollution and corruption, and keeping balanced relationship with society. If corporations respect these principles their reputation will improve, they will have increasing investments from social and environmental funds and will improve their overall business condition (Paliwal, 2006).

In general, corporations engage in Corporate Social Responsibility due to internal and external drivers. Small enterprises usually engage in CSR to take distance from other enterprises, increase their access to capital and loans, and increase their public reputation and the wealth of their employees (Udayasankar, 2008; Vyakarnam *et al.*, 1997). External drivers are the financial and ethical support of international organizations such as the United Nations, and the respective financial benefits and external pressures are created by stakeholders and civil society's expectations (Jenkins, 2006; Mirvis & Googins, 2006).

To better describe the motives and the outcomes of corporations engaging in Corporate Social Responsibility, Carroll (2016) introduced the Pyramid Model of CSR. The framework maintains that CSR's primary objective is to make profit for the corporation. The techniques used include social and environmental strategies to increase their competitive advantage, the necessity for the business to comply with law and thus to engage in CSR, the need to meet its ethical duties and balance profits with people and the environment, and the possibility to meet its philanthropic options and thus focusing on social welfare (Carroll, 2016).

Due to the general nature of CSR, corporations tend to provide different definitions of what engaging in Corporate Social Responsibility means. Determining how companies define CSR also helps defining how such corporations apply CSR in their business (Graafland *et al.*, 2004). In general, there are more than 60 concrete aspects of CSR activities, all focusing on five main areas, namely environmental protection, philanthropy, involvement in social causes, and urban investment (Balabanis *et al.*, 1998). In this regard, a corporation can contribute through the reduction in emissions and waste, the use of recycling materials, donations to charities, involvement in social causes such as human rights issues, engagement in collaborations with local governments to improve cities' infrastructures, and the increase of their safety standards.



Figure 5 - Carroll's CSR Pyramid.  
Source: Lumen, 2019.

### 3.1.3 From Shareholder Theory to Stakeholder Theory

The introduction of the concept of Corporate Social Responsibility contributed to changing corporations' priorities, inducing them to consider the values and opinions of stakeholders rather than only shareholders. Shareholders are asset owners in a public association as they have financial interests concerning such association, while stakeholders are everyone who contributes to the functioning and existence of the association. Stakeholders are generally categorized into shareholders, customers, suppliers, distributors, employees, and local communities (Freeman, 1984).

A corporation's primary objective is generally profit, but there are two main models describing corporate priorities and values, namely the shareholder and the stakeholder model. The main difference between the two models is that the former mainly focuses on profits, while the latter also considers external factors besides profits (Jones, 2017).

The shareholder theory developed worldwide in 1980s in a capitalistic economic system, which did not consider sustainability at all but only focused on profit and creation of value added (Jones, 2017).

The first subsets of the stakeholder theory can be dated in the same period. They were niche entrepreneurs who "focused on providing market-based responses to the environmental consequences of the huge success of business enterprises in raising productivity and driving growth." (Jones, 2017, p. 13). However, the stakeholder theory gained traction worldwide only from the beginning of the 21<sup>st</sup> century when governments and international organizations started to analyse the dangerous effects of humans' activity on earth. In this context, stakeholders' perceptions started to be deemed fundamental for corporations' business performance and public reputation, and influenced corporations' social and environmental engagement. The term stakeholder refers in fact to people who hold the stake, and businesses can be considered as several relationships among people and groups who have interests and/or are affected by the performance of a corporation. Stakeholders can be either internal or external, including NGOs, governments, and media; and primary or secondary, depending on their degree of influence. (Freeman, 1984, Clarkson, 1995).

The stakeholder theory aims at analysing the influence of morals and values on an organization's management, maintaining that, to be considered socially responsible, a corporation should satisfy the expectations of all stakeholders (Longo *et al.*, 2005). Corporations successfully contribute to sustainable development when they maintain long-term relationships with their stakeholders instead of only caring about their short-



term profits, being able to create environmental and social values while increasing their economic profits (Ambler & Wilson, 1995).

The contribution of responsible investment practices to the broader objectives of society has been increasingly analysed by scholars and corporations worldwide. However, the impact of institutional responsible investment is limited, and contributing to the achievement of the SDGs through Corporate Social Responsibility (CSR) still requires more efforts.

Scholars have outlined three main ways that can induce corporations to engage in Corporate Social Responsibility. The first one is developing voluntary commitments for the reduction of negative externalities such as emissions, the second is regulations outlined at regional, national, or international level, and the third is the influence of institutional investors' investment policies (Crifo & Forget, 2015). The first two influential aspects are hard to assess because their impact is either local, does not assure the true motives of businesses, or can lead to side consequences like introducing competitive biases.

Although also institutional investors' influence on corporations' ethical behaviour is hard to measure, experts are increasingly focusing on their importance in orienting businesses' goal functions and theories of value (Crifo & Reberieux, 2016). In fact, if such investors express their interest in environmental and social issues, corporations are pushed to create new business strategies categorized as *green* or *socially impactful* (Dimson *et al.*, 2016). Moreover, the existence of reports and ratings assessing the conditions and the progresses made in relation to Environmental, Social and Governance criteria, however confusing in some instances, are a useful tool for institutional investors and shareholders to induce corporations to adopt such ESG management processes and implement sustainability strategies (Delmas *et al.*, 2013).

The recent research on the effect of institutional investors on ESG ratings provided evidence that associated shareholder's principles and interests to subsequent increases in ESG practices in corporations. The effectiveness of stakeholder engagement depends on the engagement request, the investor engaging, the company engaged, and the specificities of the process of engagement (Goranova & Ryan, 2014). Moreover, scholars identified three determinants that influence the effectiveness of the engagement, namely the cost of the reform associated with the engagement request, where reforms in the environmental domain are less frequent than social reforms due to

their higher cost; the investor influence, depending on the size of the share he or she holds; and the company's ESG experience (Barko *et al.*, 2017, Dyck *et al.*, 2019).

### 3.1.4 Criticisms to CSR

Although in the last decades firms worldwide have been pushed to engage in Corporate Social Responsibility, the logic of creating market-driven solutions to social problems such as poverty has recently been widely criticized. In fact, some scholars deem such solutions unethical and mercenary, in that they use the unfortunate situation of some people to make profits. They maintain that market-driven solutions to social issues can work only in relation to an investment in education, since only education can guarantee long-term economic and social development (Jaiswal, 2007).

Indeed, corporations tend to be more concerned with publicly demonstrating their engagement in social and environmental issues, rather than being authentically interested in contributing to their solution (Kramer & Porter, 2006). Moreover, philanthropic activities are generally quantified in terms of hours or dollars, justifying CSR thus through reputation rather than ecological and social influence. In this way, business activities fail to be integrated with social and environmental issues that would enhance sustainable development.

Other critics maintain that there is no proof of the contribution of Corporate Social Responsibility to economic growth or poverty reduction (Jenkins, 2005). Moreover, some scholars argue that CSR is used to disguise consequences of deregulated global economy. In fact, although in the last decades corporations have been increasing their Corporate Social Responsibility, aggregate social and environmental indices of global progress have decreased instead of rising (Fleming & Jones, 2013). Reports even presented evidence that some corporations, with governments being aware of their actions, did not respect environmental, social, and human rights, or did not engage in sustainable community development activities in the long term while publicly communicating otherwise.

Such behaviour was thoroughly portrayed by Kimerling (2001) in his description of occidental corporations' activities in Ecuador. The corporation analysed exploited the language of sustainable development to serve its economic ends, and thus perpetuated a fallacious model of development. The local community was basically tricked into accepting the intervention of the company in their territory. While the corporation

performed oil exploitation, its relationship with the locals was instrumentalized in public relations to communicate a different and respectable image to the rest of world civil society.

Although many scholars defend the increasing benefits resulting from engaging in Corporate Social Responsibility, determining the practical benefits obtained by corporations from their engagement comes with its difficulties. The relationship between CSR related actions and subsequent customer engagement is difficult to assess as well.

Experts maintain that CSR does not induce positive effects or could even lead to negatives impacts on corporations (McGuire *et al.*, 1998). Such critics find their bases on the fact that Corporate Social Responsibility undermines the main objective of a corporation, which is profit maximization. Moreover, companies tend to use CSR to attract workers, who consider this aspect mainly when the wage level equals the propositions of the competitors. However, to engage in CSR, businesses tend to balance the costs by reducing workers' wages, thus inducing employers to bear the real costs of this practice (Briscese *et al.*, 2021).

To overcome this vicious cycle, creating an effective positive future for all communities, and a true Corporate Social Responsibility, businesses will have to engage global governance with a sympathetic approach, overcoming the perspective limit of the bottom line and applying the new practices and regulations proposed by international organizations.

## 3.2 The Evolution of Sustainable Finance

### 3.2.1 Evolution of Finance Towards Sustainability

Since the end of the 20<sup>th</sup> century the finance sector has increasingly been incorporating and adapting to sustainable practices. The main issues in this field concern the assessment of environmental benefits and risks, considering that green investments and businesses require a long-term perspective, which investors are not used to consider.

Putting together financial resources to help green businesses grow was one of the most important challenges that early green entrepreneurs had to face. It was during the first Earth Summit in Rio in 1992 that the “United Nations Environmental Programme Finance Initiative” (UNEP) “called for an integration of environmental concerns into

banking strategies” (Jones, 2017, p. 272), introducing for the first time the concept of *sustainable banking* or *social banking*.

One of the early problems in sustainable finance was the definition of the roles of banks and other financial institutions defined as *sustainable*. Olaf Weber described them as institutions which “exclusively offer financial products and services that have a positive impact on society, the environment, or sustainable development.” (Weber, 2015, p. 8). Following this trend, in 2009 the “Global Alliance for Banking on Values” (GABV) was founded as the worldwide association of social banks, microfinance institutions, and NGOs with mixed ecological and social objectives. Most social banks developing in that period in Europe and US were born from catholic and religious groups who connected their ethical principles to profits and provided socially useful goods. They invested in sustainable projects such as solar and wind energy, selecting the investee companies depending on a specific set of sustainable and ethical principles they had to fulfil. Large insurance and reinsurance companies pledged to help reach environmental objectives, but data showed that most US and European banks were still investing on environmentally depleting practices such Arctic drilling, oil sands mining and coal mining.

Facing the low involvement of financial actors, in 2012 the British government launched the UK Green Investment Bank to solely invest in green projects, which contributed to push the UNEP to publish one of the first reports assessing the capacity of the finance sector to mobilize capital into a more sustainable economy (United Nations Environment Programme, 2015). However, this field had to face substantial challenges. Finance institutions investing in green projects depended on green depositors, which had to be willing to accept no interest to do social good, notably limiting the deposit base. Moreover, since positive environmental effects of green projects are only perceivable in long-time scales, to be green investors had to change their portfolio evaluation process considering the long-term effects of their investments. Following social banking, socially responsible investing (SRI) developed in the 1980s from few innovative entrepreneurs tracing their origins from the religious sect of the Quakers. SRI mainly worked through the exclusion of socially irresponsible companies from their investments, engaging from the 1990s in strategies promoting positive changes in society. Differently from social banks, this sector included a great number of American institutions, and the role of women was considerable. Some symbols and reference elements consolidating SRI in the finance industry were the creation of the

“Coalition for Environmentally Responsible Economies” (CERES) in 1989; the launch of the first index of socially screened large companies in 1990; and the Social Investment Forum in 1985, all aimed at providing more rigorous metrics of sustainable investing and reporting, and creating a network of businesses committed to sustainability. The first version of the reporting Guidelines was outlined in 2000, and the GRI (Global Reporting Initiative) was officially born as an independent organization. Following the milestones abovementioned, from the beginning of the 21<sup>st</sup> century financial institutions continued developing and revising integrated reporting, monitoring and certification systems to homogenize and consolidate sustainable finance (Jones, 2017).

Another means through which finance services could support businesses in their attempt of making a positive ecological impact was venture capital, later labelled as *impact investing*, developed with SRI and sustainable banking from the 1980s. Impact investing refers to investment processes seeking financial returns while addressing social and environmental challenges, with the main objective of taking a big stake in start-ups and newly founded companies mostly in developing countries (Jones, 2017).

At present, financial institutions hold a fundamental role in the collective effort of adaptation and mitigation of environmental challenges. Although socially responsible investors and green entrepreneurs existed already some decades ago, mainly emerging from social philanthropic elites and religious societies, they were still a small percentage of the whole investment community. They tackled the issues emerging from the business sector, where corporates, since the first industrial revolution, had been growing and improving without considering their environmental, health and social impact.

After the 2008 global financial crisis the economic and political awareness to the world’s environmental, social and governance (ESG) challenges has increased exponentially. Financial actors have responded to the shift of public opinion toward environmental and sustainable development by renovating old practices and introducing new ones contributing to the achievement of the Sustainable Development Goals. In this regard, financial institutions set the distinction between the use of risk filters, aimed at eliminating the negative externalities of investments, and impact investing focused on producing positive effects.

Among the many factors determining the development of sustainable finance in recent times, there are some pivotal events. The first one is dated 2000, when world’s countries

and main institutions agreed on the definition of the UN Millennium Development Goals (MDGs) providing for the first time a framework for the financial sector to understand its impact on sustainability, and including economic, social and environmental objectives. Following the MDGs, in 2015 the UN introduced the Sustainable Development Goals (SDGs) of the Agenda 2030, which extended the previous Goals to developing countries and engaged in a more ambitious approach.

The major shift that the world is currently experiencing is not only an economic and financial phenomenon. In fact, many scholars consider it first a scientific and cultural acknowledgment of the negative effects of human activity on the environment, placing environmental degradation and the future of the planet at the centre of the international debate. Such unprecedented shift in the paradigm of priorities urged an equal shift in the business and finance sectors.

The definition of global sustainable objectives allowed financial institutions to define more detailed reporting indexes. Their aim was providing investors with useful data describing the commitment and environmental impact of businesses' actions, and principles of investment to guide investors alignment with broader ESG goals. In this regard, important documents are the Global Reporting Initiative (GRI), the Dow Jones Sustainability Index, the 2006 UN Principles for Responsible Investment (PRI), the 2013 International Capital Market Association's green bond principles, and the EU Sustainable Finance Taxonomy.

The GRI aims at providing organizations with a common language to report on their sustainability impacts in a detailed and transparent way. The increasing number of organizations using the GRI standards enables more accurate global comparability and accountability, allowing international institutions to assess the global progresses toward sustainability and the necessary interventions (Global Reporting Initiative, 2021).

The Dow Jones Sustainability Index is the first global sustainability index which, from 1999, has been rating and rewarding companies successfully implementing sustainable practices from the social, economic and environmental perspective. The downside of this system is that the final rating is evaluated from information held by the corporations and aggregated according to the system proposed by the index, rather than the nature of the actual social, economic or environmental contribution.

The Principles for Responsible Investment is the largest global reporting project regarding responsible investment. The project aims at facilitating learning and development, helping signatories to implement their responsible investment practices,

and allowing asset owners to focus on investment activities and capabilities. The aspirational set of investment principles provides investors with possible actions for incorporating ESG issues into investment practice.

The International Capital Market Association for the Green Bond Principles is a collection of voluntary process guidelines for issuing green bonds. Recommending transparency, disclosure and reporting, the guidelines allow the green bond market to develop its key role in the contribution to environmental sustainability.

The 2020 EU Sustainable Finance Taxonomy is a list developed by the European Union outlining economic activities with performance criteria for their contribution to six environmental objectives, namely climate change mitigation and adaptation; sustainable use and protection of water and marine resources; transition to a circular economy, waste prevention and recycling; pollution prevention and control; and protection of healthy ecosystems. In particular, the Taxonomy proposal demands corporations to contribute to at least one of the six environmental objectives; to do no significant harm to any of the other five environmental objectives; and to comply with minimum safeguards. The contributions presented in this document are numerous, including a common language for investors, issuers, policymakers and regulators; a translation of the Paris Agreement and the SDGs; and the introduction of environmental data in the economic context. In practice, for each relevant product, financial market participants will disclose if and how the Taxonomy has been used to determine the sustainability of the investment, and the proportion of investments funding Taxonomy-eligible activities (EU Technical Expert Group on Sustainable Finance, 2020).

Finally, the most rigorous effort to provide structure to the market is the “Final Report on draft Regulatory Technical Standards” pursuant to the context, methodologies and presentation of sustainability-related disclosures of EU Sustainable Finance Disclosure Regulation (SFDR) 2019/2088. The EU Sustainable Finance Disclosure Regulation 2019/2088 is the latest regulation regarding sustainable finance, published on 10 March 2021, imposing ESG disclosure obligations to financial actors and advisors. This regulation is deemed to produce a significant impact on disclosure obligations, investment, organizational and compliance processes, aiming at countering harmful practices such as greenwashing, thus hindering companies’ promotion of environmental concerns as an advertising gimmick. Moreover, it addresses a more diversified public, including credit institutions, investment companies, insurance companies, and asset management companies. The relative Technical Standards assess the specific technical

organization of companies' disclosures, including the sections, the deadlines of publications, and the information and data to be included (Joint Committee of the European Supervisory Authorities, 2021).

Another major booster of this global shift towards sustainability is the current crisis caused by Covid-19. Since February 2020, when the virus started to be strongly perceived in Europe and United States as well, public opinion and international institutions took in serious consideration the striking reality of the climate change and environmental depletion. In fact, since April 2020, after the first lockdown, investments in sustainable and social assets spiked compared with conventional assets. Moreover, both investment evaluations provided by asset management companies and banks, and ratings provided by rating agencies routinely considered ESG indicators and the SDGs. Since attitudes among the public and policymakers shifted, the finance sector responded. In the last years sustainable finance has become a hot topic for investors and corporations worldwide. In fact, the Global Sustainable Investment Review reported that global sustainable-investment assets reached \$30.7 trillion in 2018, with an increase by 34% from 2016 (IISD, 2019). Along with the definition of the sector, international financial institutions have outlined new frameworks, initiatives, and financial products, increasingly acknowledging the distinction between the use of risk filters and impact investing, relatively concerned on doing no harm and do actively good.

The role of governments and industries is crucial in allowing sustainability gain traction, but individual financial institutions also play an important role, spreading the concept of sustainable development at all levels of society. The acknowledgment of the positive effect of the integration of ESG factors to risks and profits attached to financial investments, and the long-term predictability of ESG investments increased public and private financial actors' interest in sustainable investing.

In particular, financial institutions like banks and asset management companies hold the ever-growing power of promoting change in the business and social sectors, through investments. They can blacklist industries with excessive negative externalities on the environment or on society, and they can support microfinance, sustainable energy, and other activities actively contributing to sustainable development. For the finance sector to be effective in the shift toward sustainability, private and public actors all over the world must collectively strive to define and comply to universal standards, thus



allowing all levels of society to engage in the global effort of mitigation and adaptation, and avoid counterproductive practices such as greenwashing.

Although Europe has been implementing important policies such as the Green Deal, inducing financial and business actors to adapt to the shift towards sustainability, global partnership for a greener future need to be enhanced. In fact, the actions implemented by developed countries could serve no improvement if heavily industrializing countries such as China, India and Brazil do not move in the same direction. In this regard, global partnership includes incentives from developed countries to developing ones, enabling them to implement the same policies and reach homogenous global standards.

The concept of partnership involves not only countries, but also financial institutions and scientists. In fact, for financial actors worldwide to take effective action for sustainable development, they need punctual and exhaustive information to implement operations for a greener future.

Hence, the global shift sees new generations as protagonists, being environmental depletion and climate change necessarily among their priorities. The real change at an institutional level will be perceived when such generations will cover decision-making roles worldwide, taking distance from the conventional ways to consider finance, businesses and development in general, and focusing on the long-term risks and benefits of human actions.

### 3.2.2 New Terms in Sustainable Finance: ESG, SRI and Shared Value Creation

As mentioned in the previous sections, sustainability has become a mainstream element for the finance sector, exemplified by the success of green, social and sustainability bond markets. Policy makers and regulators have also increased their attention on the topic launching several initiatives and regulations on the matter. This unprecedentedly rapid development highlights however the need for global markets participants and regulating institutions to converge on terminology. In fact, because this sector is still in its infancy, common terminology, references and standards are missing. Technical language requires specific glossaries to be effective, and correctly defined terms can help consumers, producers, and rating institutions to communicate more effectively and efficiently, maintaining a high level of accuracy and consistency. In fact, the use of *climate*, *green* and *sustainable* as interchangeable terms may confuse and undermine

their significancy, thus clouding the urgency of acting for climate mitigation and the Sustainable Development Goals. Recently, several institutions have been outlining a lexicon of sustainable finance in the attempt of defining the most frequently used terms and developing a consensus around them (International Capital Market Association, 2020).

During the last few years, particularly after the Paris Agreement in 2015, global finance actors have assisted the introduction of new terms referring to financial and business practices, and labelling societies and institutions. After a thorough research and an interview aimed at defining which the most important terms in current sustainable finance are, this section will outline the most frequently used terminology. An important function of the definition of a common lexicon is the explanation of such terms to avoid their inappropriate usage and the consequent loss of significance.

As mentioned by the professional journalist expert in sustainable finance, pension funds and insurance funds, and editor for the Italian journal “Sole 24 Ore” Vitaliano D’Angerio during an interview on the topic, the most important acronyms and terms emerged in the field of sustainability are SRI, ESG and Creating Shared Value. It is important to notice that high-key definitions such as sustainable finance usually incorporate narrower ones, namely ESG investing, Socially Responsible Investment (SRI), and impact investing.

The term *sustainability* is the exemplification of a semantic transition occurred in the last decade. Between the end of the 20<sup>th</sup> century and the beginning of the 2000, the finance sector related to the term *ethical funds*, which indicated a fund investing in companies whose business was not considered harmful to society or the environment. This term was then substituted by *sustainable funds* and *sustainability* because it was considered too vague and subjective. Differently from ethics, sustainability is not necessarily linked to a religious basis. In the finance sector sustainability lies above investment values, but does not imply the elimination of profits, which must however be contextualized in current times. For instance, the current historical context is influenced by the information shared by scientists and experts warning world society on the limitation of natural resources and the harms caused by humans to the environment. Profit must take this information into account, leading financial actors to line the interests of consumers, managers and workers.




## *Environmental, Social and Governance*

From the introduction of sustainability practices, Environmental, Social and Governance (ESG) has recently become the most used acronym in the business and finance sectors. Scholars attribute this radical shift to three main factors, namely investors' demand for such products and companies' adaptation, the introduction of norms and regulations integrating sustainability criteria into the regulatory framework from above, and the capacity for ESG research to avoid some investment risks and increase returns. In the last years, individuals have started to place environmental issues, job quality and businesses' social responsibility at the centre of their concerns.

The origins of ESG factors are generally attributed to the Triple Bottom Line theory, introduced in 1994 by John Elkington, which maintained that corporations should base their business strategy on the variables Profit, People and Planet to generate results and have competitive advantage.

*Environmental* refers to the impact a business has on nature, *Social* indicates the respect of human rights, gender politics and working standards, and *Governance* refers to governmental and administrative control practices. In specific, the "E" of ESG concerns risks associated with climate changes (greenhouse gasses), nuclear energy (CO<sub>2</sub> emissions), air and water pollution, biodiversity, deforestation and waste. The Social variable focuses on the treatment of employees in the workplace, and requires human rights compliance, health and safety to reduce workplace accidents. The Governance universe is associated with the financial aspects of a company, namely the managers' compensation policies, the composition of the board, company's compliance with laws and ethics, remuneration, corruption and independence.

The ESG tag is nowadays used to classify various investment vehicles, financial products and institutions presenting specific criteria, namely integrity, value and impact.

 <b>ENVIRONMENTAL</b>	 <b>SOCIAL</b>	 <b>GOVERNANCE</b>
<ul style="list-style-type: none"> <li>• Climate change</li> <li>• Greenhouse gas emissions</li> <li>• Resource depletion, including water</li> <li>• Waste and pollution</li> <li>• Deforestation</li> </ul>	<ul style="list-style-type: none"> <li>• Working conditions, including slavery and child labour</li> <li>• Local communities, including indigenous communities</li> <li>• Conflict</li> <li>• Health and safety</li> <li>• Employee relations and diversity</li> </ul>	<ul style="list-style-type: none"> <li>• Executive pay</li> <li>• Bribery and corruption</li> <li>• Political lobbying and donations</li> <li>• Board diversity and structure</li> <li>• Tax strategy</li> </ul>

*Figure 6 - Examples of ESG Factors.  
Source: UNPRI, 2019, p. 1.*

By incorporating the ESG criteria into traditional financial analysis, investors have been increasingly considering ESG funds with the long-term objective of creating value. In the last years, ESG investing set several records, seeing investors placing unprecedented amounts of capital into sustainable funds using the ESG as a portfolio selection tool, asset managers launching new products, and researchers indicating that such investments outperformed conventional rivals. Important financial service providers started creating rating systems for corporations to help investors build ESG portfolios by analysing their processes considering aspects such as environmental impact, labor management, corporate governance, privacy, and gender diversity. Environmental, Social and Governance are essentially criteria of positive investment which financial investors attempt to integrate into the investment analysis process. Such screening process can be positive or negative, and an investment manager can choose between increasing investments to strong ESG performers or limiting them to worst ESG performers. In other words, ESG represents one of the most important shifts in a generation, and its growth is forecasted to continue.

However, this acronym has been extensively used as a synonym for most elements connected to sustainability and markets, increasing confusion on its real meaning. This resulted in many funds using ESG label without being as sustainable as they declare. For instance, various widely known ESG funds still invest in the world's largest carbon emitters. Therefore, it is fundamental for global investors to continue pursuing the way

of sustainability and police the use of the ESG concept, thus avoiding its reduction to a marketing tool. In this regard, the ratification of regulations, monitoring and reporting protocols such as the Taxonomy and the definition of the Sustainable Finance Disclosure Regulation (SFDR) in the European Union have highly contributed to standardize sustainable investment practices.

However, the lack of universally defined regulations monitoring and enforcing ESG investments prevents institutions from fairly engage with the framework. Financial monitoring institutions are adopting tighter controls to avoid the use of the “ESG” label merely as a marketing tool, while regulators are insisting on the importance of showing the required characteristics to be defined as ESG investors or products. In this process, ESG ratings provided by specialized rating agencies are playing an important role, developing scores and screening tools to label funds as sustainability leaders, average, or laggards. Agencies assess the ESG score of portfolio components comparing them with other similar ones, and integrating controversy scores with the aim of holding companies responsible for operations against sustainability principles.

An issue concerning the ESG indicators regards whether the market recognizes and rewards ESG values. One of the main arguments presented by sceptics in the last years is that the stock market tends to undervalue them due to their intangible nature and the lack of short-term results. this concern seems to be limited by real-life market results, which in the last few years have shown high evaluations of intangible products and R&D projects, due to their long-term growth potential.

Moreover, scholars criticize the potential lack of diversification induced by ESG investment styles like exclusion, that removes from portfolios ESG-laggards, thus reducing the universe of potential investments.

As a response, the American index provider MSCI investigated the direct financial benefits of sustainable investment for investors and described how this downside is counterbalanced by the consequent benefit of lowering investment risks, which could be represented by tail events concerning non-sustainable firms and funds, such as corporate scandals and regulatory adjustments. Moreover, the advocates of sustainable investment argue that since ESG popularity has been increasing exponentially, ESG assets are likely to be affected by a growing demand which would increase their prices over time. Between 2016 and 2018 the global volume of sustainably managed assets has grown by 34%, which indicates the unprecedented expansion of such market (DWS, 2019). In February 2020, the total assets managed by UN Principles for Responsible Investment

(UNPRI) signatories was nearly \$89 trillion, meaning that the total addressable market size is large and increasing (Moody's Investors Service, 2020).

More recently, studies regarding ESG investment styles show that there is not much attention on the interaction between the "ES" and "G" factors. While most investors are active investors but passive owners, active owners tend to directly engage with management and have a voice in decisions regarding issues related to ESG. Such investors tend to actively impact firm value instead of identifying and excluding undervalued and laggard firms. One of the main issues regarding Governance, and undermining its consideration, depend on what some define "managerial myopia". Matters such as managerial career concerns often lead managers to focus only on short-term results, without considering long-term value creation. Active engagement by investors could alleviate such issue by pushing management to take a long-term perspective in line with the nature of ESG investments (Hvidkjær, 2017).

Although ESG investment has become a factor influencing current market transactions, lack of standardization and market fragmentation could hold this growth back for some time. For this reason, scholars and experts are currently focusing on standardization of regulations, norms and reporting processes to enable ESG investment to grow, significantly contributing to sustainable development.

### ***Socially Responsible Investment (SRI)***

Socially Responsible Investment, as defined by the European Sustainable Investment Forum (Eurosif),:

is a long-term oriented investment approach, which integrates ESG factors in the research, analysis and selection process of securities within an investment portfolio. It combines fundamental analysis and engagement with an evaluation of ESG factors in order to better capture long term returns for investors, and to benefit society by influencing the behaviour of companies. (Eurosif, 2018, p. 8)

Socially responsible investing pursues two main goals, namely financial gain and social impact, with or without good returns for investors. In fact, social responsibility allows investors to shift from passive exclusion investment styles to active engagement on issues including the environment, society and corporate governance (ESG). ESG

indicators are therefore included in the portfolio construction process integrating them with conventional business practices. Socially Responsible Investors aim at achieving financial returns while respecting specific ethical, environmental and social criteria. In other words, SRI aims at integrating financial and social objectives, creating value both for investors and for the society itself.

If the origins of ethical investment are commonly set in the 15<sup>th</sup> century and connected to the practices of religious sects such as the Quakers, who mainly practiced exclusion of unethical companies producing tobacco, alcohol or weapons, the issue acquired relevance during the 1960s when social movements increased awareness on the social consequences of investments. In the 1990s SRI became an increasingly considered phenomenon spreading in Europe, US and the rest of the world. People started to be more conscious about ethical issues and tended to buy products from companies that respected their values. This investment practice traditionally attempted to screen out investments in businesses whose values did not align with the clients' values. It is thus defined as a negative screening process. More recently this tendency has shifted towards the active preference for "good" organizations and funds.

Reflecting the increasing importance given by investors to the ESG factors in socially responsible investment practices, in 2006 the United Nations with an international group of institutional investors published the Principles for Responsible Investment (PRI) (UNPRI, 2020). The Principles for Responsible Investment are six and can be considered as the first global benchmark guiding responsible investment. They encourage businesses to:

(...) incorporate ESG issues into investment analysis and decision-making processes; (...) be active owners and incorporate ESG issues into policies and practices; (...) seek appropriate disclosure on ESG issues by the financed entities (...); (...) promote acceptance and implementation of the Principles within the investment industry; (...) work together to enhance effectiveness in implementing the Principles; (...) report on (...) activities and progresses towards implementing the Principles. (PRI, 2017, p. 2)

SRI investment portfolios can incorporate from one to four main categories, namely Environmental Issues, Social SRI, Ethical investments and Corporate governance. Environmental Issues provide the exclusion of non-environmental companies or the

inclusion of firms that contribute to improve the environment; Social SRI focus on human and labor rights on companies; Ethical investments are the most subjective category in that the investments depend on religious beliefs and morals; and Corporate governance selects companies willing to be managed in cooperation with investors and shareholders.

Socially responsible investors do not focus merely on financial components, but also on non-financial ones. Incorporating social and environmental criteria into their investment evaluations, they also consider the quality of the funds in which they allocate their investments.

The diffusion of sustainable practices and the ESG in the finance sector led to the implementation of new investment styles that took into consideration environmental, social and governance factors while pursuing long-term sustainable returns. In the latest published SRI Report of 2018, the European Commission and the High-Level Group of Expert on Sustainable Finance (HLEG), defined seven different SRI strategies used in most evaluation frameworks, which are described in the figure below.

Eurosif	GSIA-equivalent	PRI-equivalent	EFAMA-equivalent
Exclusion of holdings from investment universe	Negative/exclusionary screening	Negative/exclusionary screening	Negative screening or Exclusion
Norms-based screening	Norms-based screening	Norms-based screening	Norms based approach (type of screening)
Best-in-Class investment selection	Positive/best-in-class screening	Positive/best-in-class screening	Best-in-Class policy (type of screening)
Sustainability themed investment	Sustainability-themed investing	Sustainability themed investing	Thematic investment (type of screening)
ESG integration	ESG integration	Integration of ESG issues	-
Engagement and voting on sustainability matters	Corporate engagement and shareholder action	Active ownership and engagement (three types): Active ownership Engagement (Proxy) voting and shareholder resolutions	Engagement (voting)
Impact investing	Impact/community investing	-	-

Figure 7 - SRI Strategies According to Different International Financial Organizations.  
Source: Eurosif, 2018, p. 12.

The first strategy is “Best-in-class”, which provides for the selection of the best performing assets within a specific investment reality, evaluated though the ESG and conventional financial metrics. According to the Eurosif 2018 Report, France was the European country which used this investment style the most (Eurosif, 2018).



Another investment style is “Impact investing”, according to which investments are directed to companies or funds aiming at creating a positive social and environmental impact while obtaining positive financial outcomes.

“ESG integration” is one of the essentials: according to Eurosif, between 2015 and 2017 it has been the fastest growing strategy. Based on the integration of ESG metrics alongside conventional financial metrics in financial analysis, it aims at assessing the impact of Environmental, Social and Governance practices on companies’ performance, and the effects of investment decisions.

The oldest SRI strategy is “Exclusion”, which does not take into consideration companies, sectors or regions from the potential investment choices because considered unethical or environmentally harmful. According to Eurosif, as showed in Figure 8, the most excluded activities have been controversial weapons and tobacco, followed by other weapons and gambling.

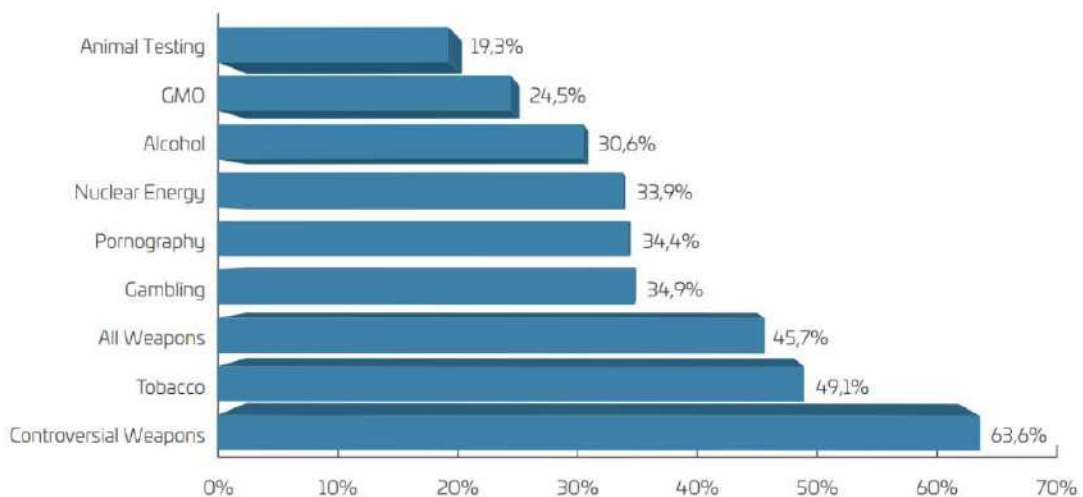


Figure 8 - Top Exclusions Criteria 2018.  
Source: Eurosif, 2018, p. 24.

“Sustainability-themed” is considered the opposite investment style than “Exclusion”, and encourages investments in assets or companies related to sustainable development, addressing issues such as climate change and health. This approach has been increasingly used due to the emergence of new products and the attention on new themes, with the important contribution of the new investment policies promoted at the EU member state level. According to Eurosif, in recent years investors mainly focused on climate and social sensitive topics such as climate change and water management.

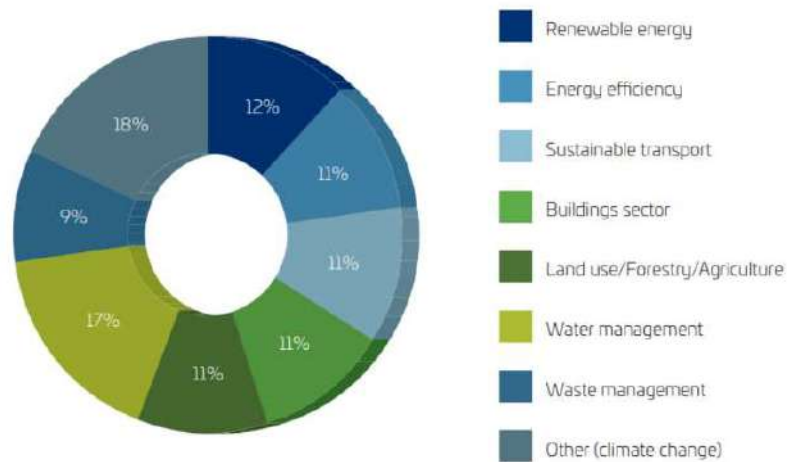


Figure 9 - Sustainability Themed Investments 2018.  
Source: Eurosif, 2018, p. 18

Another important investment style is “Norms-Based Screening”, which allows investors to analyse and select funds and companies that respect international standards and norms related to the ESG indicators, including the 17 Sustainable Development Goals (Serafeim & Zadeh, 2017). In this regard, international organizations have been setting out guidelines to be followed by investors, such as the “OECD Guidelines for Multinational Enterprises”, the “UN Global Compact”, the “ILO Tripartite Declaration of Principles” concerning Multinational Enterprises and Social Policy, and the recent “Guiding Principles on Business and Human Rights”. According to Eurosif, the UN Global Compact represented the most considered set of guidelines in Europe between 2015 and 2017.

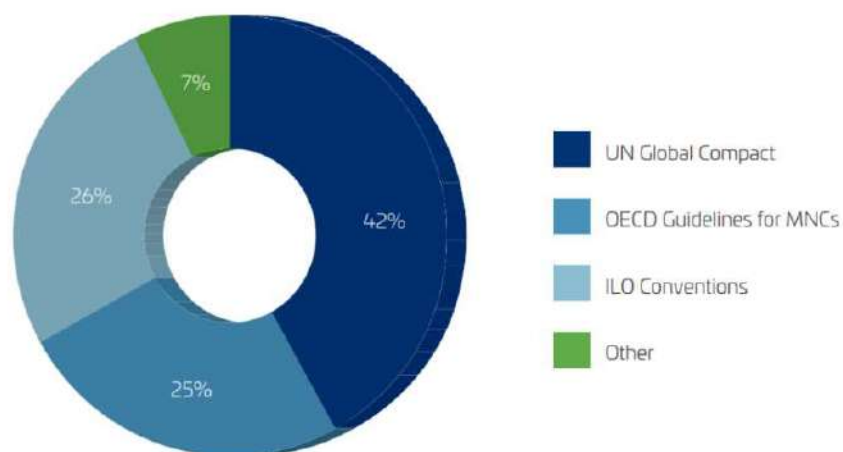


Figure 10 - Application of Norms as part of Norms-Based Screening 2018.  
Source: Eurosif, 2018, p. 21.

Finally, “Engagement and voting” concerns the relation between shareholders and their accountability toward beneficiaries. This investment style requires investors to monitor the companies they select for their portfolios, taking an active position in their management.

According to the research carried in 2017 by Serafeim and Zadeh, although the SRI investment styles abovementioned are employed in similar frequency, “Negative screening” is considered the least beneficial while “ESG integration” is regarded as most contributing to sustainability. ESG investment practices, such as “Norm-based screening”, are motivated by ethical considerations, while “ESG integration” is more focused on investment performance.

In its latest report analysing the recent developments on ESG approaches’ trends, the Global Sustainable Investment Alliance (GSIA) in 2018 provided an interesting insight for the period 2016-2018 (the 2018-2020 report is due for late 2021).

As Figure 11 shows, exclusion has been the most widely used strategy, resulting in \$19.8 Trillion assets, while the second most considered tool was ESG integration, which in the last years grew at a faster rate, reaching it management to 17.5\$ trillion assets.

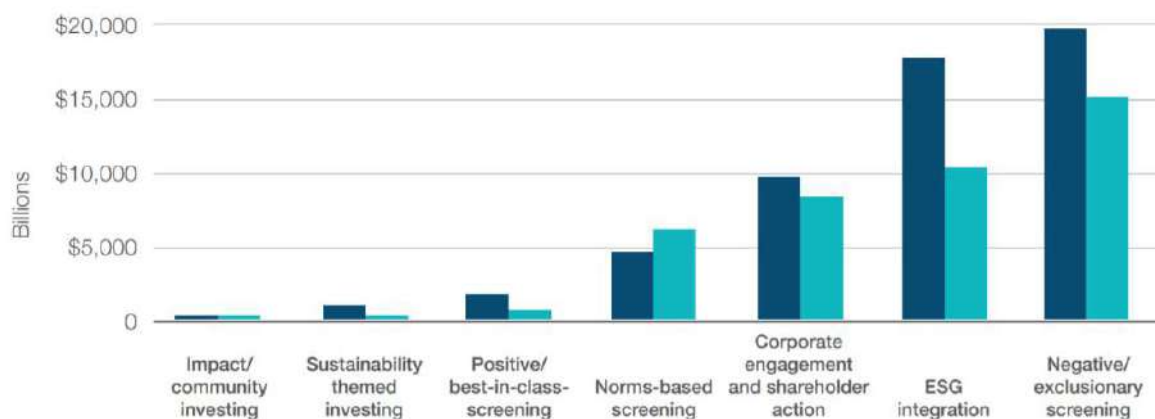


Figure 11 - Global Growth of Sustainable Investing Strategies 2016-2018.  
Source: GSIA, 2018, p. 10.

Although Social and Responsible Investments have been growing exponentially in the past years, an important challenge the SRI market must face is the capacity of understanding how to satisfy future investors. The issue particularly affects the sustainable finance sector in that in the future investors are likely to develop different needs concerning social, political and economic areas.

## *Shared Value Creation*

The concept of Shared Value Creation was first introduced in 2006 by Mark Kramer and Michael Porter in their Harvard Business Review article “Strategy & Society: The Link Between Competitive Advantage and Corporate Social Responsibility”. In their work, starting from the reasons holding CSR back, the authors introduced a new way to look at the relationship between business and society, which does not consider corporate growth and social welfare as a zero-sum game. In doing so, they outlined a framework that corporations can use to assess the social impact of their actions, to discover the positive contribution they can provide to society, and to determine the Corporate Social Responsibility (CSR) initiatives they could/should engage with. The authors maintained that considering social responsibility as an opportunity, rather than an obstacle to control, needed a shift in mindset, which would have soon become an important tool for business competitiveness (Kramer & Porter, 2006). For these reasons, they argued that, following the global trend, corporations ought to shift from mere profit maximization to the objective of creating shared value, using win-win strategies both for companies and for the community.

The concept of shared value creation can be considered as the basis for a framework analysing the relationship between business and society. Scholars argue that the pursuit of creating shared value can lead to a reinvention of capitalism itself, inducing a company to advance the social and economic conditions where it operates, while increasing its profit and competitiveness. The essence behind the theory is connecting profitability with Corporate Social Responsibility, making profits and social values intersect (Aakhus & Bzdak, 2012). Creating shared value can be defined as practices that increase the competitiveness of a business while enhancing the economic and social situation of local communities (Kramer & Porter, 2006).

Although some questioned this concept arguing that corporations may use it to hide some shady side of their businesses, shared value creation dialogues with the currently more popular Environmental, Social and Governance indicators. Moreover, scholars argue that technology and technological innovations are fundamental tools in the shift towards sustainability, and must not be considered as an unnecessary cost, rather an added value.

With the aim of better explaining the meaning of shared value, Kramer and Porter introduced the concept of Fair Trade, which, differently from shared value creation,

concerns on redistributing values rather than expanding the already present economic and social values. According to their example, if Fair trade can increase incomes in developing countries by 10-20%, a shared value approach can increase them by over 100%.

Although the theory lying behind the concept of shared value can be a valid ally in the shift towards sustainability, the tools to implement such practice are still in their infancy. Even the most advanced companies lack the adequate data to measure and optimize results, especially concerning social impact. The framework directly linking social progress with business success is still missing. In this regard, adequate measurements could make shared value strategies tangible for investors, and thus more widely implemented. With this purpose, scholars started drafting reports on the measurement techniques adopted by companies worldwide.

Shared value creation can be performed in three different ways, namely reconceiving products and markets, redefining value-chain productivity, and building supportive industry clusters at the company's locations. Reconceiving products and markets concern with adapting company's actions and products to the changing demands and values of society. Companies can bring competitive advantage while addressing societal needs in various areas, especially in developing countries.

The first step for companies to create shared value is the identification and analysis of all needs, benefits, and harms that its own productive activities can bring society. Redefining productivity in the value chain is strictly connected to the idea that productivity and efficiency can be enhanced through innovation and technology, while responding to societal and environmental issues. Shared value can be created with the transformation of some interdependent factors in the value chains, namely energy use and logistics, resource use, procurement, employee productivity and distribution. Finally, enabling local clusters development provides for the inclusion of institutions, trade associations, schools and universities in the local clusters of a corporation. Local clusters are geographic concentration of businesses, firms, infrastructure and suppliers in a particular field, which, being mutually proactive, concur to each other's' success (Hawkins *et al.*, 2012).

LEVELS OF SHARED VALUE	BUSINESS RESULTS	SOCIAL RESULTS
<b>Reconceiving product and markets:</b> How targeting unmet needs drives incremental revenue and profits	<ul style="list-style-type: none"> <li>• Increased revenue</li> <li>• Increased market share</li> <li>• Increased market growth</li> <li>• Improved profitability</li> </ul>	<ul style="list-style-type: none"> <li>• Improved patient care</li> <li>• Reduced carbon footprint</li> <li>• Improved nutrition</li> <li>• Improved education</li> </ul>
<b>Redefining productivity in the value chain:</b> How better management of internal operations increases productivity and reduces risks	<ul style="list-style-type: none"> <li>• Improved productivity</li> <li>• Reduced logistical and operating costs</li> <li>• Secured supply</li> <li>• Improved quality</li> <li>• Improved profitability</li> </ul>	<ul style="list-style-type: none"> <li>• Reduced energy use</li> <li>• Reduced water use</li> <li>• Reduced raw materials</li> <li>• Improved job skills</li> <li>• Improved employee incomes</li> </ul>
<b>Enabling cluster development:</b> How changing societal conditions outside the company unleashes new growth and productivity gains	<ul style="list-style-type: none"> <li>• Reduced costs</li> <li>• Secured supply</li> <li>• Improved distribution infrastructure</li> <li>• Improved workforce access</li> <li>• Improved profitability</li> </ul>	<ul style="list-style-type: none"> <li>• Improved education</li> <li>• Increased job creation</li> <li>• Improved health</li> <li>• Improved incomes</li> </ul>

Figure 12 - Illustrative Business and Social Results by Level of Shared Value.  
 Source: Hawkins et al., 2012, p. 3.

Due to its features, shared value creation leads to new forms of capitalism defending the more inclusive and sustainable idea that not all profits are equal, and a profit that also benefits society generates greater social advancement and economic growth (Kramer & Porter, 2006).

To be effective, the shared value measurement process must be integrated with the business strategy, and is generally composed by four steps, namely identify the social issues to target, make the business case, track progress, and measure results using insights to unlock new value. The identification of social needs and gaps, and the analysis to assess how they overlap with the company across the levels of shared value is the starting point defining the strategy targets. The following step is defining a thorough business case outlining the targets, the activities and the costs involved, as well as the expected results. Tracking progress against the desired targets is then fundamental to link social and business benefits. Finally, companies need to validate the anticipated link between social and business results (Hawkins *et al.*, 2012).

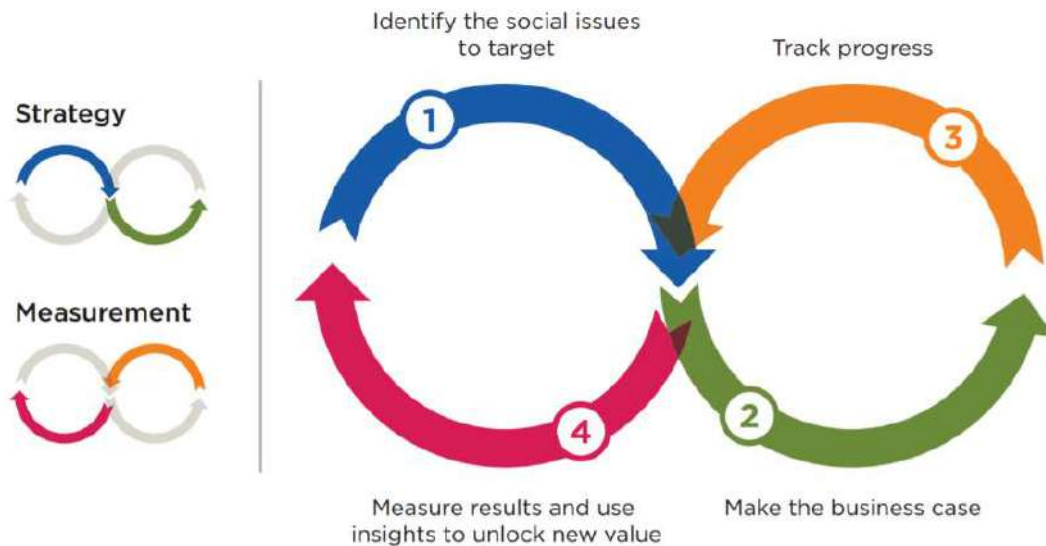


Figure 13 - Integrating Shared Value Strategy and Measurement.  
 Source: Hawkins et al., 2012, p. 4.

### 3.2.3 Sustainability as a Measurable Strategy: SRI Sustainability Indexes, Portfolio Selection and Reporting Sustainability

In the last years, sustainability indicators have spread worldwide. 80 percent of the world's largest companies systematically report according to the Global Reporting Initiative (GRI) standards, and more than 5000 organizations have used the GRI standards to report on their environmental, social and governance (ESG) performance (FBRH Consultants, 2020). Companies worldwide started to focus and provide measurements regarding various aspects of their business, including impact assessments, reputation and compliance measurements. Impact assessments are issued to prove the positive social and environmental impact of businesses' actions to shareholders and stakeholders. These specific assessments do not usually consider the business performance along with the ESG performance, but they prove useful in their contribution to shared value strategy measurements. Reputation measurements differ from shared value measurements in that they assess how their environmental, social and governance efforts improve their brand and reputation, amplifying their overall business value created. Compliance measurements are used to indicate how companies comply with regulations, standards and policies.

MEASUREMENT FOCUS	WHAT TO MEASURE?	WHY MEASURE?	FOR WHOM?
<b>Shared Value</b>	Joint business and social value creation	<ul style="list-style-type: none"> <li>• Grow the total shared value created</li> </ul>	<ul style="list-style-type: none"> <li>• Primarily for management</li> <li>• Targeted communication to external stakeholders</li> </ul>
<b>Sustainability</b>	Efficiency in the use of input factors (e.g., natural resources and labor) and improved product and community impacts	<ul style="list-style-type: none"> <li>• Minimize negative externalities and augment positive impacts</li> <li>• Maintain a license to operate</li> </ul>	<ul style="list-style-type: none"> <li>• Management</li> <li>• Communication to external stakeholders</li> </ul>
<b>Impact Assessment</b>	The long term social and economic development impacts of operations and/or philanthropy	<ul style="list-style-type: none"> <li>• Track progress on social and economic development impact</li> <li>• Maintain a license to operate</li> </ul>	<ul style="list-style-type: none"> <li>• Communication to external stakeholders</li> </ul>
<b>Reputation</b>	How societal impacts contribute to company reputation	<ul style="list-style-type: none"> <li>• Manage reputation</li> </ul>	<ul style="list-style-type: none"> <li>• Primarily for management</li> </ul>
<b>Compliance</b>	Compliance with laws and voluntary policies, standards, and codes	<ul style="list-style-type: none"> <li>• Ensure adoption and compliance</li> <li>• Maintain a license to operate</li> </ul>	<ul style="list-style-type: none"> <li>• Management</li> <li>• Communication to external stakeholders</li> </ul>

Figure 14 - Understanding the Purpose of Measurement.  
Source: Hawkins et al., 2012, p. 12.

Further research is needed to perfect the analysis of the relation between social, environmental and business impacts, and allow financial investors to better address their investments. For this reason, with the development of the sustainable finance sector, institutions have introduced new terms and acronyms connected to the reporting and monitoring practices of sustainability. Financial giants such as BlackRock, the world’s largest American Asset Management Corporation, at the beginning of 2021 confirmed their participation to reporting and monitoring initiatives such as the TCFD, the CDSB and the SASB. This decision exemplifies the change in the consideration of climate change not only as a financial risk, but as an investment opportunity.

The “Task Force on Climate-Related Financial Disclosures” (TCFD) was founded in December 2015 by the Financial Stability Board, who works to monitor the global financial system. Following the path of the many transparency regulations developed in the last decades such as the GRI of 1997, the main objective of the TCFD was to collect and coordinate the information on the environmental impact of business activities provided by the same businesses. The Task Force outlined four main thematic areas concerning the economic and financial transparency of information provided, namely governance, strategy, risk management, and metrics and objectives (Marro, 2020).



The “Climate Disclosure Standards Board” (CDSB) is an international consortium on environmental and business NGOs founded in 2007 at the World Economic Forum and committed to aligning the global corporate reporting model equating natural and financial capital. The Board offers a common framework for reporting environmental information with the same rigour as financial information, providing investors with useful data to evaluate investments. The contribution of the CDSB is of building trust and transparency, that are fundamental to foster resilient capital markets and contribute to sustainable social, economic and environmental systems (Climate Disclosure Standards Board, 2021).

Finally, the “Sustainability Accounting Standards Board” (SASB) is an independent organization founded in 2011 with the aim of improving transparency on sustainability of market and capitals. The Board develops and actualizes rigorous accountability standards covering various business sectors to provide the investor with detailed information at sustainability level of each society. The 77 Industry Standards provide a complete set of universally applicable standards to identify the minimal amount of financial sustainable topics and their metrics associated with the typical company in an industry (Marro, 2020).

Due to the lack of global standards of reporting and bonds certification, the three frameworks are constantly working together to homogenise and harmonize the various standards worldwide.

Considering green and social impact bonds, the only international guidelines are currently provided by the “International Capital Market Association” (ICMA), calling for a careful selection of the investee projects, an identification of the destination of capital, transparency, and publication of reports (International Capital Market Association, 2020).

The need for more monitoring tools and institutions is exemplified by the exponential growth of green and social impact bonds, which, since their creation in 2007, have been the symbol of responsible investment in the era of climate change. Green and social impact bonds are fixed-income instruments designed to support specific climate, environmental or social projects, which increased from 1,5 to 174 billion dollars from 2007 to 2017. This unprecedented growth raised the interest of small and medium issuers and some concerns among the monitoring institutions. In this regard, a Report presented by the asset management company Insight, which in 2019 defined a rating system to assess the sustainability of 83 green bonds and 96 social impact bonds from

the global financial market, revealed that more than 15% of green bonds and 16% of impact bonds analysed lacked transparency in the declaration of the use of green funds (Marro, 2019).

For this reason, investors struggle to see the connection between companies' social and environmental performances and economic value creation. Therefore, international organizations such as the "International Integrated Reporting Committee" (IIRC) have defined integrated reporting practices to link companies' social and environmental impact to business results. The approaches proposed are various and can be grouped into three main categories, namely correlating ESG performance to market value, monetizing ESG performance and creating national financial statements, and connecting shared value measurement's role with investors (Hawkins *et al.*, 2012).

Recently, scholars have been assessing a positive correlation between sustainability indicators and overall stock performance. However, they struggle in defining which specific social or environmental aspects mainly affect business performance. Hence, the amount of investment funds selecting companies based on the ESG performance is still much smaller than conventional criteria. To address this issue, some of the most advanced companies pointed out specific correlations between the ESG indicators and business performance, guiding investors towards more specific portfolio selections.

With the aim of monetizing ESG performance, investors introduced the concept of social return on investment (SROI), which considers the total value resulting from investments in social or environmental outcomes. However, such method tends to combine notional and actual economic value, calling for a subjective estimate of social change monetary value. Instead, connecting shared value measurement's role with investors provides a direct connection between social and business outcomes. Therefore, shared value measurement and measurement through the ESG indicators must be differed, in that the ESG indicators reflect companies' strive to improve their impacts on society with a cost as a matter of responsibility.

An important tool to help investors selecting assets for their portfolios are sustainability indexes, which are investment indexes built integrating environmental, social and governance factors with conventional financial criteria. Such indexes influence the universe of investment, which is the number of assets suiting a possible investment that satisfy specific criteria. Moreover, to evaluate their portfolios' performance, investors

must check how specific sustainability indexes performed in comparison with their respective benchmarks.

With the purpose of providing comparable data to investors, ESG rating agencies provide ESG Ratings. ESG Ratings are non-financial responsibility ratings evaluating entities such as businesses, governments, and international organizations. Non-financial ratings are a valuable tool for companies or private investors who want to invest in sustainable and responsible businesses but do not have the resources to analyse their performances and practices. They also contribute to the selection of companies to be included in SRI sustainability indexes.

The methodologies used by ESG rating agencies are various, as well as the means to gather information. For this reason, a common issue concerning ESG and conventional ratings regards their reliability, in that investors cannot be certain about the impartiality and independency of the rating agencies they address. To partially solve this problem and the lack of a universal rating method, international financial institutions recently developed a standard that ESG rating agencies worldwide can follow. The last version of such standard is the ARISTA 3.0®: a quality assessment standard with voluntary subscription with the objective of promoting quality, integrity and transparency on responsible investment; encouraging research groups to join organizational structures assuring their independence and objectivity; stimulating SRI research projects and adopting complete quality monitoring systems; and increasing responsibility through the implementation of audit mechanisms of safety and verifiability (Association for Responsible Investment Services, 2012).

The most known SRI sustainability indexes that assess the financial performance of selected companies depending on social, ethical or environmental criteria, are the Dow Jones Sustainability Index (DJSI), the Domini 400 Social Index, and the Ftse4Good. Other than their financial performance, these indexes provide an analysis of the social and environmental objectives of businesses, and can be used as benchmarks to measure the profitability of financial products in ethical investment funds.

The DJSI was established in 1999, and mainly uses the Best-in-class approach. The sustainability criteria according to which they rank companies are transparency, distribution of wealth, quality of life, awareness of environmental risk, use of resources, global warming, valuation of natural resources, advancement of technology and innovation, and corporate learning (Barata *et al.*, 2014).

The Domini 400 Social Index is the most used SRI index in the US since 1990. It combines the Exclusion approach with social criteria such as environment, employee relations, risk management procedures, and diversity to help investors introduce social and environmental factors in their investment decisions.

Ftse4Good was created in 2001 to measure the performance of companies considering the ESG factors and risk levels. Such index can be used as a financial product for the creation of financial instruments for responsible investment, to select socially conscious and sustainable companies, as a reference for companies evaluating ESG factors with a global ESG standard, and as a benchmark index to analyse the performance of SRI portfolios.

Due to their nature, these indexes exclude from the investment universe companies that produce unethical products such as armaments, alcohol, tobacco, and firearms.

Despite the increasing attention on the issue, the road towards sustainable reporting and sustainable investment standardization is still long and full of challenges, international organizations must implement collective action to homogenize and outline a universal set of reporting and monitoring standards for social, environmental and governance management.

### ***Portfolio Selection***

In the selection of portfolio assets, investors undergo a portfolio selection process which analyses risks based on portfolio selection models. In this regard, the most known model is the Modern Portfolio Theory (MPT) developed by the Nobel Prize H. M. Markowitz in 1952 (Markowitz, 1952). His theory maintains that to select the best portfolio, rational investors should identify a combination of titles to minimize the risk and maximize the overall performance. Markowitz focused on selecting several possible assets to compose a portfolio, having the expected return and portfolio variance fixed in advance. The theory thus stands on two characteristics generating demand and supply of financial assets, namely risk and return. According to this theory, a portfolio is considered efficient if it provides the greatest return for a given risk, or vice-versa, the lowest risk for a given expected return.

Since portfolio options can be infinite and tailored for each investor, Markowitz provided five main assumptions defining his theory: investors want to maximize the ultimate wealth and are risk averse; the investment period is unique; the transaction

costs and tax costs are zero, and activities are perfectly divisible; the expected value and standard deviation are the only parameters that guide the choice; and the market is perfectly competitive (Markowitz, 1952).

Following the recent increasing interest for social, environmental and economic problems induced by conventional business-making, the finance sector implemented new portfolio selection theories considering ethical and moral values. Hence, scholars have been trying to estimate the environmental and social dimension of investment decisions, mainly focusing on the performance of SRI funds. To select their portfolios, now investors use ESG Ratings of responsible and irresponsible corporate behaviour issued by independent ESG rating agencies such as Moody's and Standard & Poor's, and consider SRI indices presenting companies pursuing social and environmental policies.

The ability of comparing conventional and socially responsible investments is an increasingly important factor in the selection of SRI portfolios. Hence, several studies have been analysing the performance of the ESG factors in relation with the financial performance. In their studies, scholars usually compare the performance of SRIs and conventional investments (CIs), assessing an outperformance, underperformance, or neutral performance of the SRIs with respect to the CIs.

A neutral performance of sustainable investments is confirmed when the risk-adjusted returns of SRIs and CIs are not particularly different, and both investment opportunities are classified as equivalent (Host *et al.*, 2008).

Outperformance of SRIs versus CIs can have several causes, including the minor risk of potential costs caused by environmental pollution or climate change.

Underperformance of socially responsible investments compared with conventional investments occurs when the former show poorer risk-adjusted returns. In this case too, the different performance can have several reasons, such as the limited number of investment opportunities and diversification, and the additional costs represented by the selection process of ethical funds.

Two main issues concerning ESG and SRI investment funds in comparison with conventional funds is the lack of standardization and the perceived return trade-off. Although ESG investing has become a mainstream topic worldwide, definitions within this topic are not standardized, which impedes product growth. The market providing ESG products is still on its early stage, and although some institutions such as the

United Nations and the Forum for Sustainable and Responsible Investment are working to create universal standards, this process will take some time. Moreover, ESG investment suffers the variability of the extent to which the ESG aspects are incorporated into investment processes. This factor increases the risk of greenwashing in funds when funds labelled as “ESG” apply minimum ESG investment judgment. Moreover, retail investors often consider the process of upholding sustainability principles to their investments too risky. Hence, investors prefer not to integrate the ESG factors in their portfolio selection process.

Such concerns are however often misplaced, since constrains such the ESG ones are just one of the various possible constrains in investment processes. Furthermore, several studies demonstrated that ESG products present similar risk/reward characteristics to other products (Moody’s Investors Service, 2020).

The new techniques of portfolio selection considering the performance of SRIs compared with CIs can be valuable tools in sustainable investments, but investors must beware of the risks posed by some investment types. In fact, it is important to notice how the recent tendency of excluding assets relative to non-ethical companies, such as tobacco and alcohol producing ones, could lead to an outperformance of the relative funds compared to the market. Hence, investors might become more incline to invest in such companies to have a greater profit, and the logic lying behind sustainable investment would not only result unproductive, but even counterproductive (Wigglesworth, 2021).

### ***Reporting Sustainability***

The definition of corporate sustainability relies on the concept of Triple Bottom Line (TBL), maintaining that businesses should consider Environmental and Social aspects other than economic ones. Moreover, in 1999 the Institute of Social and Ethical Accountability defined sustainability as an organizations’ capacity of continuing its activities ad infinitum, while considering their impact on human, social and environmental capital. Hence, any business and corporation must define its long-term objectives and constantly measure them throughout time. Measuring, managing and reporting sustainability are three fundamental steps in a corporate strategy.

The first step in the definition of a sustainable business policy is mapping all the potential and actual aspects connected to sustainability. The most important principle in this regard is materiality, which provides that only some specific aspects of businesses

must be taken into consideration when measuring sustainability performances, selected according to their significancy and influence on the Triple Bottom Line (Baglieri & Fiorillo, 2014).

The second step is the definition of the objective for improvement, such as the reduction of CO<sub>2</sub> emissions or the improvement of life quality of workers.

In the measurement process, the most important part is the selection of the appropriate monitoring indicators, generally known as Key Performance Indicators (KPI). The KPI are simplified information that function as measuring, management and reporting tools imposed by the sustainability strategy. The definition of Key Performance Indicators is not as immediate as one could think. The very literature on the issue often provides ambiguous and contradicting definition of the concept of indicator. Some scholars agree on the definition of indicators as variables and operative representations of an attribute of a system (Gallopín, 1997). Behind the indicator are the performance metrics, which can be various for each indicator. Metrics can be classified as qualitative if based on a semantic definition, quantitative if they consider empirical data, absolute if they are based in a definite dimension, and relative if they are defined by another variable.

To guide businesses in the organization and evaluation of the efficacy of their indicators, the Lowell Centre for Sustainable Production (LCSP) provided a framework dividing the indicators in 5 levels based on the sustainability principles. The first level is conformity and includes the indicators that evaluate the conformity of the business with respect to local, national or international norms and the standards of the sector. The second stage regards the use of materials and performance, measuring input, output and performance of the business based on energetic, hydric, waste, emissions, etc. Third are the effects, which regard the metrics relative to the impact of the business activities on natural and human environment. The fourth level is supply chain and product life cycle, which comprehends indicators of categories 1, 2 and 3 that go beyond the company boundaries. The last level is the sustainable system and contains the indicators explaining how a company introduces itself in the social and economic environments without acting as an isolated reality (Baglieri & Fiorillo, 2014).

To improve this process international organizations such the Global Reporting Initiative and the World Business Council on Sustainable Development (WBCSD) are currently working to establish a reliable and complete set of sustainability KPIs.

The Global Reporting Initiative is probably the most accredited initiative concerning sustainability reporting. The guidelines provided by the GRI establish the economic,

environmental, and social indicators for businesses' performance. The indicators are divided into 6 specific categories depending on the measurement sector, namely economy, environment, human rights, workers and working environment, product and society. These categories together compose a set of 70 indicators. The upside of the Global Reporting Initiative is the comparability of results at inter-company and inter-sectorial level through the definition of a globally recognized common framework. On the other hand, to select and monitor such a wide range of indicators, businesses must use a significant amount of resources, which could lead to a loss of precision in the evaluation process. Moreover, due to its general nature, the GRI could present scarce relevance for some stakeholders.

The World Business Council for Sustainable Development introduced another important sustainable reporting methodology, known as Eco-efficiency. This concept can be described as the correlation between value produced and impact generated. The main objective is creating a win-win situation in which profitability and sustainability coexist without opposing each other. This method only refers to two sustainability dimensions, namely the economic and the environmental one. Recent developments tried to include the social sustainability dimension, but their applicability is still limited. The strengths of this methodology are the facility in which businesses can detect and correct key issues, and the production of both general and specific indicators. However, not all the indicators of the WBCSD method must be reported, making inter-sectorial and inter-company comparability less reliable.

#### 3.2.4 Evolution of Sustainable Finance Policies in Europe since 2015

As mentioned above, the term sustainable finance indicates the process of integrating environmental, social and governance (ESG) aspects in investment decision processes, contributing to long-term investments in sustainable economy. The ESG aspects include climate change adaptation and mitigation, pollution prevention, inclusiveness, labour relations, and governance of public and private institutions.

In the context of the European Union, sustainable finance policies aim at supporting economic growth while countering environmental degradation and considering social and governance aspects. They must be transparent and followed by compliance to the ESG factors and regulations, including the definition of risks related to the three aspects.



Since 2015, the European Union underwent a deep and significant revolution concerning sustainable finance policies. The first landmarks defining a set of Sustainable Development Goals (SDGs) to be obtained by 2030 at UN level, and recognizing the need for countries worldwide to limit global warming and climate change were the UN 2030 agenda and the Paris Climate Agreement (European Commission, 2021).

“Transforming our World: the 2030 Agenda for Sustainable Development” is an action plan for people, planet, peace and prosperity directed to all countries and stakeholders worldwide in active partnership. The main challenge, recognized by the United Nations in 2015, was eradicating poverty in all its forms and dimensions: a necessary requirement for sustainable development for leaving no one behind. The second indispensable objective of the Agenda2030 was to heal and secure the planet, taking revolutionary steps to shift the world onto a sustainable and resilient path.

The UN 2030 agenda and the Paris Climate Agreement were milestones in the acknowledgment of the importance of issues such as climate change and global warming at a global level, introducing the need for a collective shift towards sustainability, and thus setting the scene for the development and diffusion of the practice of sustainable finance.

The 17 Sustainable Development Goals (SDGs) and the 169 aggregate targets, built on the Millennium Development Goals and balancing the three economic, social, and environmental dimensions of sustainable development, are the tool to reach the objectives abovementioned. A fundamental requirement held in the Agenda 2030 is the responsibility of all Governments to follow-up and review their progresses in the implementation of the Goals and targets. The United Nations and the European Union addressed the High-Level Political Forum with the purpose of overseeing follow-up and review worldwide (United Nations, 2015).

The Paris climate conference (COP21), held in December 2015, saw the adoption of the Paris Agreement as the first-ever legally binding global climate change agreement. The COP21 set out a framework to limit global warming to below 2°C while pursuing efforts to limit it to 1.5°C, to induce a peak in global emissions, undertake rapid reductions thereafter, and to increase Governments’ resilience and adaptation capacities to climate change. The Paris Agreement acquired its reputation thanks to the high number of parties, close to 190 worldwide, which agreed on coming together every 5 years from the ratification to assess the collective and national progress towards the

goals. The European Union formally ratified it on October 5<sup>th</sup>, 2016 making it enter into force on November 4<sup>th</sup>, 2016, and as required by the Agreement issued an EU Action Plan for Financing Sustainable Growth on March 2018 (European Commission, 2020).

The Action Plan on Sustainable Finance was adopted by the Commission in March 2018 based on the High-level expert group on sustainable finance. The plan presented a comprehensive strategy to enhance the connection between finance and sustainability, including ten key actions divided into three main categories.

The first category, aiming at reorienting capital flows towards a sustainable economy, included establishing an EU Taxonomy as the classification system for sustainable activities, an EU Green Bond Standard with labels for green financial products, a Sustainable Europe Investment Plan to foster investment in sustainable projects, a set of draft rules on how investment advisers and distributors should take sustainability factors into account, and a set of sustainability benchmarks.

The second category, pursuing to mainstream sustainability into risk management, included a set of Guidelines to integrate sustainability in ratings and market research, a Regulation on sustainability-related disclosures in the financial services sector to clarify asset managers' and institutional investors' duties on sustainability, and introduced "green supporting factor" in the EU risk assessment rules for banks and insurance companies.

The last category, to foster transparency and long-terminism, comprehended a set of guidelines and directives to strengthen sustainability disclosure and accounting rulemaking, and advice from the main financial institutions to foster sustainable corporate governance and attenuate short-termism in capital markets (Financial Stability, Financial Services and Capital Markets Union, 2018).

In particular, the EU Taxonomy for Sustainable Activities and the EU Green Bond Standard represent two fundamental instruments through which the European Union is managing to standardize and enhance sustainable finance practices. The EU Taxonomy, entered into force on 12 July 2020, is a classification system through which the EU established a list of environmentally sustainable economic activities with the aim of scaling up sustainable investment and implementing the European Green Deal. The document provided appropriate definition to companies, investors, and policymakers on how to consider an environmentally sustainable economic activity. With this purpose, it established six environmental objectives, namely climate change mitigation and adaptation, sustainable use and protection of water and marine resources, transition to a

circular economy, control and prevention of pollution, and protection and restoration and biodiversity and ecosystems (European Commission, 2020a).

The EU Green Bond Standard, included in the 2018 Commission Action Plan on Financing Sustainable Growth and assessed by the “Commission’s Technical Expert Group on Sustainable Finance” (TEG), aimed at enhancing effectiveness, transparency, credibility and comparability of the green bond market to boost investments in EU green bonds and assets needed for the low-carbon transition (European Commission, 2018).

The EU Green Bond Standard was also outlined in the European Green Deal Investment Plan of January 14<sup>th</sup>, 2020 and part of the European Green Deal of December 11<sup>th</sup>, 2019, a plan to make the EU’s economy sustainable by transforming climate and environmental challenges into inclusive opportunities for all (European Commission, 2019b). The Action Plan proposed in the EU Green Deal provided to enhance an efficient use of resources to move to a circular economy, and restore biodiversity to cut pollution. With these aims, the EU outlined a set of investments and financial tools, and financial and technical support to help businesses’ shift towards green economy, mobilizing at least €100 billion from 2021 to 2027 (European Commission, 2019b).

Concerning the mobilization of private capital towards sustainable financial investments, on October 2019 the European Union contributed to the launch of the International Platform on Sustainable Finance (IPSF). The IPSF developed sustainable finance regulatory measures to help investors in the identification of sustainable investment opportunities and to promote best practices (European Commission, 2019c).

Furthermore, in September 2020 the European Commission increased the EU’s ambitions on reducing greenhouse gases, by setting a new 10-years 2030 Climate Target Plan. The main objectives included achieving climate neutrality by 2030 toward a more ambitious path, stimulating the creation of green jobs and cutting greenhouse gases, and encouraging international partners to increase their efforts to limit the rise of global temperature to 1.5 °C (European Commission, 2020c).

The latest policies issued by the European Union to promote sustainable finance and sustainable development include the Sustainable Finance Disclosure Regulation (SFDR) of March 2021, the EU Taxonomy Climate Delegated Act of April 2021, and the Task Force on Climate-related Financial Disclosures. Each policy aimed at improving and increasing reporting of climate-related financial information, and regulating the universe of ESG investments. With the same purpose, at the beginning of 2021, four leading

ESG standards organizations, namely the GRI, the Sustainability Accounting Standards Board (SASB), the Carbon Disclosure Project (CDP), the Carbon Disclosure Standards Board (CDSB), and the International Integrated Reporting Council (IIRC), declared their intent to increase the collaboration (Mohin, 2021).

The European Union is perhaps the organization that by far mostly contributed to the development of a greener economy and a more sustainable framework of investment, and several more initiatives are bound to be issued in the near and far future. However, the road towards improvement will present important challenges that will involve all countries in the world. In fact, sustainability added another level of complexity for investors worldwide, that are not yet provided with universally valid reporting and evaluating sustainable metrics, increasing the risk of improper actions and greenwashing practices (Eurosif, 2018).

### 3.2.5 Evolution of Sustainable Finance Policies in Italy since 2015

The recent developments concerning the sustainable finance sector in the European Union and the United Nations influenced Italian financial actors as well, especially since the definition of the Sustainable Development Goals in September 2015. In 2017, Italian SRI funds grew and the use of Socially Responsible Investment strategies such as Exclusion and Norms-Based Screening to evaluate investments increased as well.

To analyse the recent evolution in the sustainable finance sector in Italy since the Paris Agreement on Climate Change, some important figures working on the matter were interviewed, namely the European Commission and Ecological Transition Ministry expert Greti Lucaroni, the Professor in Bologna University Silvia Grandi, and the members of the CONSOB Anna Genovese, Nadia Linciano, and Antonio Mazzilli.

Concerning the recent evolutions of the sustainable finance sector in Italy since 2015, the interviewees pointed out that the current Covid-19 crisis at first hindered the number of sustainable investments, because most funds were directed to sectors and activities considered more necessary, namely the medical and the pharmaceutical sectors. Due to the fragmented nature of Italian politics and territories, and considering that many Italian businesses are family-run, the expert Greti Lucaroni underlined the necessity of adapting the EU initiatives at local and regional levels with ad-hoc implementations. Moreover, the expert maintained that in Italy the environment is still considered a luxury good, reducing the amount of private and public sustainable investments.

Professor Silvia Grandi confirmed that sustainable finance spread in Italy around 2019-2020, following the new EU directives. At public level, the most significant initiative presented in the matter is the Green Bond financial regulation, introduced in 2020 with the financial law by the Italian Ministry of Economy. This regulation is an important tool enhancing the formulation and usage of sustainable finance instruments.

At a private level, Italy has been following the international trends set by the European Union and the United Nations since 2015. However, the interviewees stressed the need for a generational change in Italian decision-making roles, which, as exemplified in other European countries, would shed a light on the importance of environmental and social regulations. The members of the CONSOB Anna Genovese, Nadia Linciano, and Antonio Mazzilli stressed the importance of the Non-Financial Reporting institution, which, since 2018, increased the monitoring of compliance performed by businesses, and the impact of governance of such societies. Transposing the EU Directive 2014/95, the Non-financial Reporting Regulation (legislative decree n° 254/2016) shed a light on SRI investments (Eurosif, 2018), and currently in Italy most initiatives aim at defining a new regulatory framework for sustainability reporting and monitoring.

Regarding the adaptation of the Italian finance sector to the definition of the 17 Sustainable Development Goals, the interviewees confirmed that the change has not been radical, but financial institutions such as banks and asset management companies are gradually adapting to the new trends and regulations set by the EU. The most influential factor in this shift is the change in mentality and public opinion, increasingly considering the environmental and social impacts of businesses and investments.

Following the recent introduction of the EU Taxonomy and the SFDR, also Italian financial institutions asked for a more precise definition of the ESG factors and an extension of the implementation timeline to allow banks and asset management companies to correctly adapt to this new regulation framework (PWC SpA, 2019).

Other important Italian initiatives concerning sustainable finance are the ESG Guide proposed in 2017 by The London Stock Exchange Group and Borsa Italiana to outline more specific guidelines on ESG reporting; law n° 106/2016 reforming the Third Sector and social enterprises regulation, enhancing the role of impact investing on the Third Sector; the 2016 “Italian Budget Law of the Banking Act” defining the criteria for an “ethical” bank; and the 2018 regulation n° 38/2018 requiring corporations’ identification, evaluation and management of their environmental and social risks. Furthermore, in 2018 the Ministry of Environment founded the Italian Observatory on

Sustainable Finance to promote, coordinate and monitor SRI related activities (Eurosif, 2018).

## 4. Empirical Research and Findings

The last section of this thesis presents the research conducted, introducing the subjects selected, the questions proposed and the relative expected results, and analysing the empirical data collected.

The aim of this study is analysing the method used by asset managers in the evaluation of sustainable investments. The data collected through the survey provide a description of the investment strategies used and the point of view of asset management companies and investment banks, allowing to answer to the research questions of the present study.

The main research questions are:

1. Which are used sustainable investment strategies most used by asset managers?
2. To what degree are the Sustainable Development Goals (SDGs) and the ESG indicators considered in sustainable investment evaluation?
3. Have sustainable investment evaluation tendencies changed from the definition of the Agenda 2030 until 2020? If so, does the considered portion of sustainable investment techniques homogenise with the progresses presented in the SDG Reports?

Following the current focus placed on sustainability, scholars have conducted several studies with the aim of assessing the impact of sustainable finance on sustainable development. With the same aim, international institutions have developed reports analysing the role of finance in sustainable development. An instance is the report “Scaling Finance for the Sustainable Development Goals” published in January 2019 by the UN Global Compact, which highlighted the importance of the finance sector in the efforts to achieve the SDGs (United Nations Global Compact, 2019). Moreover, in 2015 the International Monetary Fund (IMF) outlined the urgent necessity for more funding in developing countries, highlighting a gap in investment of around USD \$2.6 trillion in sanitation, health, education, water, roads, and electricity (IMF, 2015). Since sustainable development and the Sustainable Development Goals call for an international level of cooperation, the lack of funding in developing countries on the main issues covered by the SDGs could possibly lead to a drawback for all countries in the world.

In the last years, particularly after the 2015 Addis Abeba conference on Financing for Development, the issue of domestic resource mobilization, development, and the fundamental role of financial markets has been considered crucial. In the “Global Risks Report 2021”, the World Economic Forum underlined the urgency of issues such as the human and economic cost of the Covid crisis, threatening to scale back all progress made regarding the SDGs until 2020 (World Economic Forum, 2021). To this extremely discussed matter, the Global Risk Perception Survey (GRPS) added a general increase in concerns on extreme weather conditions, climate action failure and other environmental issues, and economic stagnation (World Economic Forum, 2021).

As outlined by the International Monetary Fund in 2019, climate change directly affects the financial system, increasing risks, lowering economic growth and reducing collateral values (IMF, 2019). The finance sector is intrinsically connected to environmental and social issues as any other sector, and in contexts of crisis such the one we are currently experiencing, it acquires a particular significance in that it must facilitate the road to recovery of developed and developing countries. Global cooperation and international partnership, especially in the finance and economic sectors, become fundamental in increasing available resources for international finance organizations and suspend debt payments (World Economic Forum, 2021). Recent research outlined how the more sustainable the finance model, the better the results for countries in the achievement of the SDGs. In fact, where sustainable finance models are well organized and thoroughly implemented, progresses regarding the Sustainable Development Goals are more evident (Bak *et al.*, 2021).

In the last years, the general discourse on sustainable investment has mainly covered the lack of criteria of practice and investment evaluation recognized by all governments and institutions. Governments and institutions worldwide are constantly working to develop a defined and clear set of rules to be followed by businesses and investors at a global level.

In addition to the steps outlined above, the most acknowledged principles used by asset managers in the evaluation of sustainable investments are the SRI investment principles outlined in Chapter 3, namely Best-in-Class, Engagement, ESG Integration, Exclusion, Impact Investing, Norms-based Screening, and Sustainability-themed. They concern respectively the consideration of best-performing investments within a category or defined class depending on the ESG criteria; engagement activities and active ownership aimed at influencing behaviour; the inclusion of ESG risks and opportunities

into conventional financial analysis; the exclusion of specific investments from the investible universe based on specific criteria; investments made into companies or realities with the aim of generating social and environmental impact; screening of investments depending on their compliance with international regulations; and investment in assets related to sustainable development.

A recent study performed by Battiston *et al.* published in May 2021 underline the importance of the financial system in climate mitigation and sustainable development. However, as also many other scholars maintain, if poorly managed it can also have a counterproductive role. In fact, if investors and asset managers perceive a low degree of risk in missing an investment opportunity, and scarce opportunities from engaging in a transition, reallocation of capital into more sustainable practices fails. This tendency can contribute to delaying the path towards the achievement of the Sustainable Development Goals in 2030 and a more sustainable lifestyle in general. A fundamental consideration in this regard is that investors worldwide select their sustainable investment opportunities based on projections and scenarios constructed to indicate the best path towards the given targets by the next decades. Such projections acquire a fundamental role in the process of risk assessment of an investment, since investment decisions are based on their assessment of risk (Battiston *et al.*, 2021).

The risks and threats posed by environmental issues to citizens' investments and savings have been widely assessed in the last years. For this reason, the global platform "Network of Central Banks and Supervisors for Greening the Financial System" (NGFS) recommended the delineation of a climate risk assessment regarding financial portfolios with different scenarios; orderly transitions introducing climate policies early and having financial markets price predictability and climate risks; and a disorderly transition not fully anticipating the impact of climate policies by investors. With these recommendations, according to the NGFS, firms and investors have either time to plan and manage their capital in time, or to face losses that increase the instability of markets and societal costs in general. In such scenarios, non-environmentally regulated firms, such as high-carbon ones, would lose in the second scenario, while low-carbon firms would present more benefits. Scenarios showing how earth might be in a several-years timeline can shift present investors' expectations, and therefore lead the market towards different paths (NGFS, 2020b).

Inducing investors to adjust their expectations would make them adopt a behaviour which could facilitate a smoother transition of businesses and societies worldwide to



new policies, in some cases even anticipating them. In contrast, if investors' perception does not follow policies direction, their investments would lead businesses to wrong implementations, slowing down and increasing the cost of adaptation (Battiston *et al.*, 2021).

### ***The survey***

The research questions which this survey focused on followed a period of thorough research on the matter of sustainable finance and sustainable investment practices, including both theoretical and empirical research.

The survey is divided into two parts: one referred to 2016 and one referred to 2020. Both sections present the same questions with the variation of the year of reference, with the aim of assessing the progresses made in the considered years. The first section is composed by 13 multiple-choice questions and one open question; the second section presents 12 multiple-choice questions and one open question. The first section, referred to 2020, contains one additional question regarding the introduction of the Taxonomy, a set of rules published in 2020 for the first time, thus non-existent in 2016 yet.

The questions proposed investigate the most frequently used strategies in the evaluation of sustainable investments; the degree of consideration of the Environmental, Social and Governance (ESG) indicators and their relative aspects; the percentage relative to the consideration of the Sustainable Development Goals (SDGs) in sustainable investment evaluations and relative to specific economic sectors in Italy and Europe; and the economic sectors relative to SDGs number 7, 9, 12 and 13 which were considered most critical before and after the introduction of the Taxonomy. The research focused especially on SDGs 7, 9, 12 and 13 in that they focus respectively on Affordable and clean energy for all; Industry, innovation and infrastructure; Responsible consumption and production; and Climate action, which are related to the economic sectors that mostly developed in the last decades and that receive the greatest number of investments. The open question at the end of the sections investigates the barriers or risks that influenced sustainable investments in both years of consideration.

Some of the questions proposed focus on specific economic sectors, namely infrastructures, technology, renewable energy, Research and Development (R&D), industrial production, telecommunications, waste management and disposal, chemicals production, tourism, policies of governance, and environmental protection. This

decision was made based on reports provided by the Business and Sustainable Development Commission and the UN Environment Programme. In the report “SDGs & Sectors: A Review of the Business Opportunities”, the Corporate Citizenship Company for the Business and Sustainable Development Commission outlined the correlation between the Sustainable Development Goals and the relative industrial sectors (Corporate Citizenship Company, 2016). According to the report, renewable energy, fossil fuels, and industrial production are mainly connected to SDG 7 on Affordable and clean energy; infrastructures impact on SDG 9 on Industry, innovation and infrastructure; industrial and chemicals production, and renewable energy are related to SDG 12 on Responsible consumption and production; and environmental protection is closely connected to SDG 13 on Climate action (Corporate Citizenship Company, 2016). The UN Environment Programme in its “Strategic Approach to International Chemicals Management and the 2030 Agenda for Sustainable Development” underlined the importance of the connection between the chemicals industrial sector with SDG 7 on Affordable and clean energy, and SDG 12 on Sustainable consumption and production (UN Environment Programme, 2021).

All other sectors, especially telecommunications, technology, and R&D, are considered as cross-cutting in that they impact and are related to all 17 Sustainable Development Goals.

The questions and possible answers were presented as follows:

#### Part 1(2): Sustainable Investment Evaluation – 2020 (2016)

1. Select the most frequently used strategies in sustainable investment evaluation in 2020 (2016). Possible answers: ESG Integration, SDGs Integration, Exclusion, Sustainability-Themed, Best-in-Class, Norms-Based Screening, Impact Investing, Engagement and Positive Carbon Impact.
2. Select the most considered Environmental, Social and Governance indicator in sustainable investment evaluation in 2020 (2016). Possible answers: Environmental, Social, Governance, all indicators above were equally considered.
3. Select the most considered “Environmental” indicator in sustainable investment evaluation in 2020 (2016). Possible answers: CO2 emissions reduction,

- energetic efficiency, natural resources usage efficiency, all indicators above were equally considered.
4. Select the most considered “Social” indicator in sustainable investment evaluation in 2020 (2016). Possible answers: working environment quality, trade union relations, supply chain control, respect for human rights, gender parity, all indicators above were equally considered.
  5. Select the most considered “Governance” indicator in sustainable investment evaluation in 2020 (2016). Possible answers: presence of independent advisors, use of diversity politics in the Management Board, Top Management’s wage dependant on Sustainability Goals, all indicators above were equally considered.
  6. In what percentage of the Sustainable Investment evaluations did you integrate the Sustainable Development Goals (SDGs) in 2020 (2016)? Possible answers: The SDGs were integrated in 0% to 25% of our Sustainable Investment evaluations, the SDGs were integrated in 25% to 50% of our Sustainable Investment evaluations, The SDGs were integrated in 50% to 75% of our Sustainable Investment evaluations, The SDGs were integrated in 75% to 100% of our Sustainable Investment evaluations.
  7. Which of the 17 Sustainable Development Goals (SDGs) were most used in your sustainable investment evaluations in 2020 (2016)? Possible answers: 1. No Poverty, 2. Zero Hunger, 3. Good Health and Well Being, 4. Quality Education, 5. Gender Equality, 6. Clean Water and Sanitation, 7. Affordable and Clean Energy, 8. Decent Work and Economic Growth, 9. Industry, Innovation and Infrastructure, 10. Reduced Inequalities, 11. Sustainable Cities and Communities, 12. Responsible Consumption and Production, 13. Climate Action, 14. Life Below Water, 15. Life on Land, 16. Peace, Justice and Strong Institutions, 17. Partnerships for the Goals, No SDG was used in sustainable investment evaluation.
  8. In which of the following industries did your Sustainable Investment agendas focus the most in 2020 (2016), depending on the geographical area in Italy? Possible answers: Infrastructures, technology, renewable energy, Research and Development, industrial production, telecommunications, waste management and disposal, chemicals production, tourism, policies of governance, environmental protection, no sustainable investment in this geographical area.

9. In which of the following industries did your Sustainable Investment agendas focus the most in 2020 (2016), depending on the geographical area in Europe? Possible answers: Infrastructures, technology, renewable energy, Research and Development, industrial production, telecommunications, waste management and disposal, chemicals production, tourism, policies of governance, environmental protection, no sustainable investment in this geographical area.
10. Which of the 17 Sustainable Development Goals (SDGs) were most relevant for your stakeholders in 2020 (2016)? Possible answers: 1. No Poverty, 2. Zero Hunger, 3. Good Health and Well Being, 4. Quality Education, 5. Gender Equality, 6. Clean Water and Sanitation, 7. Affordable and Clean Energy, 8. Decent Work and Economic Growth, 9. Industry, Innovation and Infrastructure, 10. Reduced Inequalities, 11. Sustainable Cities and Communities, 12. Responsible Consumption and Production, 13. Climate Action, 14. Life Below Water, 15. Life on Land, 16. Peace, Justice and Strong Institutions, 17. Partnerships for the Goals, No SDG was considered by our stakeholders.
11. To which of the 17 Sustainable Development Goals (SDGs) did your sustainable investments contribute the most in 2020 (2016)? Possible answers: 1. No Poverty, 2. Zero Hunger, 3. Good Health and Well Being, 4. Quality Education, 5. Gender Equality, 6. Clean Water and Sanitation, 7. Affordable and Clean Energy, 8. Decent Work and Economic Growth, 9. Industry, Innovation and Infrastructure, 10. Reduced Inequalities, 11. Sustainable Cities and Communities, 12. Responsible Consumption and Production, 13. Climate Action, 14. Life Below Water, 15. Life on Land, 16. Peace, Justice and Strong Institutions, 17. Partnerships for the Goals, we did not measure the impact of our sustainable investments.
12. Which industries, after (before) the definition of the Taxonomy, were evaluated most critical with respect to the ESG indicators in 2020 (2016)? Possible answers: Technology, transports, fossil fuels extraction, fossil fuels processing and transportation, nuclear fission, energetic plants with high CO2 emission levels (included biomasses), mining activity, pharmaceuticals, tourism, Research and Development.
13. Which industries deemed critical in relation to the ESG metrics modified their business model the most after your sustainable investment flow shifted towards less risk-related funds? Possible answers: Technology, transports, fossil fuels

extraction, fossil fuels processing and transportation, nuclear fission, energetic plants with high CO<sub>2</sub> emission levels (included biomasses), mining activity, pharmaceuticals, tourism, Research and Development.

14. Which barriers/risks affected your Sustainable Investment evaluations the most in 2020 (2016)?

The results of the survey are presented in bars and charts representing the percentages of response and the variations.

#### 4.1 Research Method and Sample Selection

The designated tool chosen to perform the research was Google Forms, an application produced by Google and available in the Google Drive platform. Google Forms was chosen thanks to its logic and intuitive layout, which allows all subjects to easily understand the structure and the questions of surveys.

After a thorough research, the subjects were first contacted via telephone to allow a more direct engagement, and then the link of the questionnaire was sent to the indicated contact via email. The survey was sent and available to the subjects on April 8, 2021, with the request of filling it in by the end of the month.

Asset management companies and investment banks were considered the most adequate subjects for a research aiming at assessing the tendency regarding sustainable investment evaluation, in that they represent the most important actors channelling institutional, corporate and individual investments both in Italy and in Europe. The designated subjects belong to different geographic areas, mainly in Northern Italy, where most financial institutions are situated. In fact, 68 percent of the total population to which the survey was sent is in Milan, Lombardia: a north-western region of Italy which is the financial centre of the country and one of the most important financial centres in the world. Hence, it is safe to assume that a similar percentage of the subjects that answered the questionnaire is in the region. The rest of the subjects are mainly in Turin, the capital of Piemonte Region; Genoa, the capital of Liguria Region; Florence, the capital of Toscana Region; and Rome, the capital of Lazio Region and Italy.

The subjects to the survey were recruited from several professional entities that provide the services of asset management for and investment counseling, generally known as asset management companies (AMCs) and investment banks.

To provide a more representative set of results, the subjects of this research were selected among the most-known and most-widespread asset management companies and investment banks in Italy, such as Anima SGR and Azimut Asset Manager. In fact, such actors engage in most of the Italian investments in Italy and abroad, setting a trend also for smaller companies spread all over Italy.

Moreover, smaller asset management companies are likely not to have the available data or personnel able to answer to questions regarding sustainable investment practices. In fact, around the 7 percent of the contacted subjects refused to answer due to either lack of adequate personnel, lack of consultable data, or corporate policies impeding them to engage in such practices. A possible reason for this is the delicate matter regarding the survey. Although sustainable investment is an increasingly discussed and performed practice, regulations and standards are still being developed. Therefore, many institutions practicing sustainable investment do not retain fully developed business units and personnel able to exhaustively handle new regulations and provide updated data. For this reason, an intended choice was to allow the subjects to remain anonymous, so to ensure them a safer environment and thus permit a higher degree of transparency in the answers.

More in specific, a total number of 81 institutions were contacted. The response rate amounted to the 26 percent of the total subjects, resulting in 21 answers. The response rate is relatable to different variables, including the delicacy of the matter, and the lack of personnel dedicated to such activities. Among the 21 surveys received, 20 were completed in both sections. One of the subjects could not complete all sections due to the lack of available data in the requested year. However, this subject was included in the number of respondents in that it completed half of the survey. This specific survey was excluded from the aggregated data, but considered in the analyses referred to the specific questions to which it answered.

As outlined above, asset management companies and investment banks were selected in that they represent the most influential actors in the matter of sustainable investment practices.

An asset management company, colloquially referred to as money management firm, is a joint stock company that manage pension funds, wealth funds, and collective assets. Asset management companies can create and manage both collective and individual funds (FTA Online News, 2020). Since AMCs, such as Anima SGR S.p.A. and Amundi

SGR CPR, dispose of a larger set of resources than an individual investor can access alone, they can provide individual investors with more diversification and investment options. Their main activity is helping their clients evaluate and buy investments, based on professional research and data analytics, hence they are referred to as buy-side firms. Responding to high legal standards, asset management companies are fiduciary firms that act in the best interest of the client necessarily avoiding all conflicts of interest (Chen, 2019).

If asset management companies are created with the only aim of creating and managing assets, many well-known banks are developing asset management divisions as well. Investment banks are generally considered as sell-side firms that sell services to companies and investors. As asset management companies, they provide investors with thorough market analyses defining trends and creating projections (Chen, 2019).

Investment banks, such as Deutsche Bank, perform fundamental economic actions, namely financing joint-stock companies signing and allocating new stock emissions, operating as intermediaries in securities markets, and providing counseling on financial activities such as bonds emission, purchase, and sale. Moreover, they are mainly concerned with long-term investments (FTA Online News, 2008). Although investment banks do not perform the activity of funds creation, they can perform all other activities related to the management of funds and investment counseling for a wide range of investors including institutions and individuals.

As mentioned above, asset management companies and investment banks mainly manage pension funds, wealth funds and collective assets.

Pension funds are funds saved by depositors during their working lifetime with the aim of constituting an integrating pension income. Wealth funds are individual funds collecting savings of each client of the asset management company and managing it according to specific mandates previously agreed with the depositor.

Collective assets are financial intermediary institutions such as mutual investment funds, whose aim is investing the capital collected from savers with the objective of creating a value both for asset managers and investors. The parties of mutual investment funds are the depositors who invest their savings in the fund's activities thus acquiring a few of its quotas, asset manager companies that create and manage the fund, and custodian banks that physically hold the fund and retain the cash correspondent. At present there are three main types of mutual investment funds, namely equity funds,

bond funds, and balanced funds. Equity funds mainly invest in stocks and are generally considered risky but with higher potential revenues. Bond funds principally invest in ordinary and government bonds, or credit titles, and generally have a low level of riskiness but provide less return. Balanced funds aim at balance the various investment forms to obtain portfolios with medium risks (FTA Online News, 2007).

Among the activities that asset managers perform for investors, investment evaluation is a fundamental one. The main steps involved in the evaluation of an investment are estimation of cash flows, estimation of the relative required rate of return, and application of a decision rule to make the selection.

When evaluating an investment, asset managers analyse investment risk and anticipated return, balancing the former against the latter. The main question directing this activity is whether the expected return justifies the risk analysed. While examining a future investment, asset managers compare its cost and revenue, namely the cash outflow required to perform the investment and the future income forecasted. Asset managers then generally choose the investment proposals that provides the highest marginal return. Some of the features that must be considered in the definition of a decision rule for a thorough investment evaluation are: it should consider all cash flows to assess the actual profitability of the project; it should provide an unambiguous criterion for separating good and bad funds; it should help ordering funds depending on their profitability; it should consider that bigger, early cash flows are preferable to more limited, later ones; it should help in the selection of mutually exclusive funds maximizing shareholders' wealth; and it should be applicable to any potential investment project (Porterfield, 1965).

The principles for a safe investment evaluation described above are valid for investments of any kind, including the relatively new trend of sustainable investments. In finance, a sustainable investment is generally defined as an investment approach coherent with the principles of sustainable development and the Environmental, Social and Governance (ESG) criteria. The “United Nations-Supported Principles for Responsible Investment” (UNPRI) provided a thorough definition of this practice, labelling it as an investment approach that incorporates environmental, social and governance elements in investment evaluations, with the aim of managing risk and creating sustainable and long-term results (UNPRI, 2019).



Responsible or sustainable investment is concerned with tradable sustainable investments, defined as stocks, bonds or funds connected to sustainability matters.

The sustainable investment financial market has become a mainstream topic, especially since the 2015 Paris Agreement on Climate Change and the definition of the Agenda 2030. In 2015, the European sustainable investment market underwent a growth by 42% with respect to 2013, reaching a value of EUR 23 trillion (Eurosif, 2016). Moreover, by 2018 the total value of assets of European sustainable investment funds amounted to EUR 496 billion in assets on the responsible investing market, having doubled from 2012, when it was approximately EUR 252 billion (Eurosif, 2018).

Sustainable or responsible investment are particularly considered in current financial market also due to the forms of value creation that they provide, namely financial value deriving both from capital allocation and management, and non-financial value. Financial value created by sustainable investments can derive both by ESG-driven capital allocation and engagement. ESG-drive capital allocation is the direct financial value profited by shareholders and stakeholders, and can be composed by returns in excess of a benchmark, limited short-term and long-term risk, lower price volatility, and a stable and long-term shareholder base. These factors enable ESG companies to better develop their activities, resulting in real environmental and social benefits such as a decrease in emissions and an increase in resource productivity (Investment Leaders Group, 2014).

The engagement-driven financial value is perceivable through increased returns and reduced risk thanks to a better sustainability performance of businesses, and improved returns concerning the market totality due to an internalization of externalities. Finally, sustainable investment creation of non-financial value can be appreciated thanks to improved ESG performances of businesses including lower emissions, increased compliance to human rights and environmental concerns; improved ESG performance of the market in general resulting from increased engagement and corporate disclosure; and, given that sustainable investment involves a sufficiently wide advocacy, increasingly stable markets (Investment Leaders Group, 2014).

## 4.2 Empirical Findings

### *Expected Results*

International institutions such as the Network for Greening the Financial System, the Italian Forum for Sustainable Finance, and the European Sustainable Investment Forum, have been performing surveys and research regarding the tendencies of sustainable and responsible investments in Europe, especially since the definition of the Agenda 2030 in 2015. The aggregate data collected by all research analysed indicate a general positive trend concerning the progresses towards sustainable investment practices of central banks, institutions, investors and corporations both in Europe and in Italy.

In 2019, the Italian Forum for Sustainable Finance published the fourth edition of the yearly survey on the “Sustainable and Responsible Investment Policies of Investors”. With a constantly increasing response rate, particularly regarding pension funds, the survey testifies a growing sensibility on the socially responsible investment (SRI) practices. Although not all SRI practices were applied across all asset classes, in 2019 the most used SRI practices in comparison to 2018 were Norm-based screening, Exclusion and Engagement, with an increase in the use of Impact investing. Moreover, the Forum for Sustainable Finance measured an increased attention to the ESG aspects (Forum per la Finanza Sostenibile, 2019a). Another survey proposed in 2019 by the Forum for Sustainable Finance is the survey on Italian Savers and Climate Change, aimed at examining the attitudes of Italian savers and investors to understand if and how environmental themes can impact their investment decisions. (Forum per la Finanza Sostenibile, 2019b).

With risk, flexibility and reputation as main investment drivers, the survey assessed a still limited propensity to invest on SRI funds, due to limited knowledge on the matter, absence of adequate publicity and insufficient promotion of sustainable investment practices. According to the survey, by 2019 Italian savers were still generally unaware of Corporate Social Responsibility (CSR) practices (Forum per la Finanza Sostenibile, 2019a). In general, as the research on sustainable and responsible investment policies of Italian investors, this survey confirmed a limited but continuous progress regarding the number of sustainable investment practices of investors.

In December 2020, The Network for Greening the Financial System published its “Progress Report on the Implementation of Sustainable and Responsible Investment

Practices in Central Banks' Portfolio Management". The report aimed at contributing to the definition of environment and climate risk management of the finance sector and enhancing the shift of conventional finance towards sustainability. The report presented confirmed the effect of the Covid crisis on the concerns of the finance sector regarding the effects of climate change and environmental depletion of investments. As the surveys on Italian savers and climate change, and sustainable and responsible investment policies of investors, this report presents a positive tendency regarding the attention of the finance sector on socially responsible investment practices. Most respondents have taken initial steps towards more sustainable practices, including central banks' monitoring and reporting practices. However, also this report confirms that the progress is limited, and there is still much work to be done at a global level (NGFS, 2020a).

Finally, in its latest SRI Study in 2018, the European Sustainable Investment Forum confirmed the tendencies presented by the other surveys, assessing a growth in the consideration of socially responsible investment practices at a European level in the past years. Moreover, the report assessed an increase in the consolidation of sustainable investment styles, especially Exclusion, ESG Integration and Corporate Engagement (Eurosif, 2018).

Based on previous literature and research on the matter, the expected results of the present survey were the definition of a limited but positive trend concerning aggregate data on the practices involved in the evaluation of socially responsible investments from the year 2016 to 2020. According to the surveys and reports analysed above, Italian and European levels of information and regulation regarding sustainable practices and responsible investments were expected to be scarce. However, some progresses were expected to be assessed due to the increasing attention of international institutions to sustainable practices and greenwashing operations.

Moreover, an increase on the use of some specific sustainable investment styles, namely Exclusion, ESG and SDGs Integration, and Engagement was expected. In addition, an increase in the consideration of Environmental, Social and Governance indicators on the evaluation of sustainable investments was likely to be assessed.

Concerning the aspects related to each indicator, including CO2 emissions reduction, quality of the working environment, and Top Management's wage dependant on Sustainability Goals, a slow but steady increase on the consideration of environmental

aspects, and a slight increase of the Social and Governance aspects was expected. An increase of at least 25% was expected also concerning the percentage in which the Sustainable Development Goals were considered. Considering the impact of the Covid crisis and the recent developments regarding international regulations on sustainability, a growth on importance of SDGs 7, 9, 12 and 13 on the evaluation of socially responsible investments was forecasted, due to the increasing attention posed to universal access to sustainable and clean energy, the innovations related to a more sustainable industry system and infrastructures, a more responsible consumption and production aimed at reducing the waste rate, and the promotion of actions to reduce climate change and environmental depletion.

Following the forecasted rise in consideration of SDGs 7, 9, 12 and 13, and given the differences of the general tendency of development between Northern, Southern and Central Italy, expectation was that sustainable investments would have risen in Northern Italy in most of the industrial sectors provided, while increasing in a limited way in Central and Southern Italy. Given the reports provided by institutions such as the National Institute for Statistics (Istat), in the last years the Italian sectors whose competitiveness decreased the most are tourism and industrial production. In contrast, the sectors that increased in competitiveness the most are technology, telecommunications and environmental protection (Istat, 2020a). Hence, the industrial sectors in which sustainable investment was expected to decrease the most in 2020 with respect to 2016 were tourism and industrial production, while the sectors in which sustainable investment was expected to rise the most were technology, telecommunications, and environmental protection.

Similarly, expectation was that the same trend would have been assessed in Europe, defining an increase in socially responsible investments mainly on Western Europe. According to reports provided by the statistical office of the European Union (Eurostat) the general rate of industrial production suffered a significant reduction in 2020, and the sectors that recovered the fastest were technology and telecommunications (Eurostat, 2019). Therefore, expectation was that sustainable investment in the industrial sectors abovementioned would increase.

The increase in consideration of the SDGs and ESG aspects was forecasted also regarding stakeholders, due to the general tendency of including environmental depletion and social issues in daily narrative. This trend, regarding both stakeholders and asset managers, was forecasted also due to the striking increase of investments on

the ESG bonds related to environmental and social impact in what is considered the “Covid year”. In fact, in 2020 the yield in Euros relative to ESG and sustainable bonds was 4.4%, outperforming the yield of conventional bonds by 2.6%, which experienced a yield in Euros by 1.8% (Monti, 2021). Another aspect that was expected to influence a steady increase of sustainable and responsible investment practices especially in Europe are the regulations that the European Union has been defining and implementing since the definition of the Agenda 2030. In fact, regulations such as the European Taxonomy officially issued by the European Technical Expert Group on Sustainable Finance on March 2020 are expected to induce an alignment of corporations and investors on more sustainable practices.

Following the increasing consideration of environmental and social aspects, the Covid crisis, and the growing attention on climate change, expectation was that stakeholders and asset managers would mainly focus on SDGs 3, 7, 9, 12, and 13, respectively on Health and well-being; Clean and sustainable energy; Industry, innovation and infrastructure; Responsible consumption and production; and Climate action.

According to several important studies, the introduction of the EU Taxonomy on March 2020 would induce a change in the sustainable investment tendencies in Italy and Europe. The European Technical Expert Group appointed to outline the regulations held in the document focused on seven specific macro-sectors that contributed the most to CO2 emissions, including electricity, fossil fuels, heating, and transports.

According to the Technical Expert Group, the sectors considered most critical regarding the CO2 emission levels would have been excluded from the universe of sustainable investments. However, industrial activities part of such sectors that either demonstrated to be already low-carbon impact, or demonstrated their active engagement for a transition towards more sustainable energy sources and the elimination of any environmental impact, could be included into the financing programme for climate change mitigation (Cerved Group SpA, 2020). Therefore, the sectors that in 2020 were expected to be considered more critical after the introduction of the EU Taxonomy were electricity, fossil fuels, heating, and transports. Following such reasoning, industrial sectors that were expected to be considered critical before the introduction of the EU Taxonomy were transports, fossil fuels extraction and processing, and energy.

The data presented below were analysed based on percentages relative to each question, and graphs were used to show the results. To define the positive or negative trends of

sustainable investment evaluation, the graphs showing the percentages of the single questions relative to 2016 were compared with the graphs representing the result of the same questions relative to 2020. Finally, a graph showing and comparing the aggregate data relative to 2016 and to 2020 was defined.

## ***Results***

The results of the present survey were compared to the expected results and the assessments relative to the SDGs progress by 2020. The aim of this process was determining whether the obtained data on sustainable investment evaluation followed the same trend as the general progresses of regresses relative to the SDGs in Italy and in Europe. Four specific Sustainable Development Goals were taken into consideration, namely SDG 7 on Sustainable and clean energy; SDG 9 on Industry, innovation and infrastructures; SDG 12 on Responsible consumption and production; and SDG 13 on Climate action.

The results are presented following the same order of the questions in the survey.

The most frequently used strategies for the evaluation of sustainable investments in 2020 were in order Integration of ESG indicators (76,2%), Integration of SDGs (47,6%), and Exclusion (33,3%). In 2016 the most used strategy was Integration of ESG indicators (45%), followed by Best-in-Class (30%), and Exclusion, Sustainability Themed and Positive Carbon Impact with the same percentage (25%). As expected from previous research and tendencies, the ESG Indicators' Integration and SDGs Integration were subject to an increase in percentage from 2016 to 2020, rising respectively by 31,2 and 42,6 percent. The general results respect the expectations in that the use of the SDGs and the ESG indicators spiked since the Paris Agreement and the definition of the Agenda 2030.

However, according to the 2016-2018 Report of the Global Sustainable Investment Review, between 2016 and 2018 there was a tendency of increasing the use of the Exclusion investment strategy rather than ESG integration, which does not show in the present research. Moreover, an increase in the use of Engagement was expected, which did not occur, probably because the timing of adaptation for economic sectors in Italy could be slower than in other European countries. A possible reason could be the rising number of regulations and publications issued by international organizations calling for

the attention of the finance and business market on sustainable development, thus inducing an increase in the consideration of the ESG aspects.

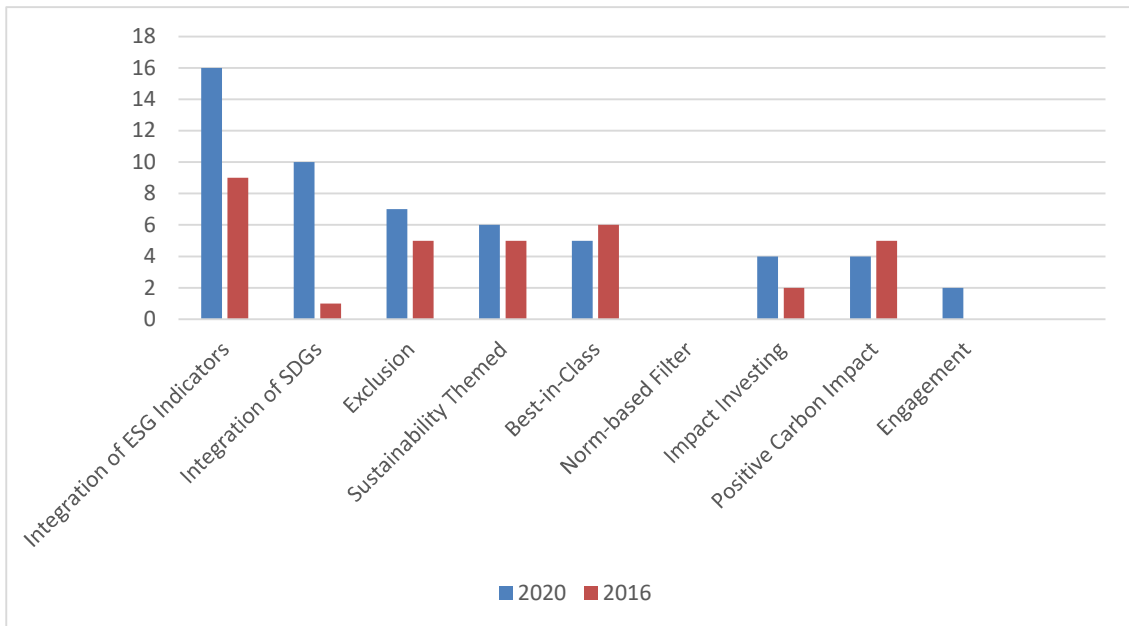


Figure 15 – Sustainable Investment Evaluation Strategies.

Concerning the use of the ESG metrics in investment evaluation, there has been a homogenization on the consideration of the three aspects, seeing all aspects considered in the 47,6% of cases in 2020, compared with the 30% of 2016. The environmental aspect remains more considered than the social and governance ones, that are subject to a decrease in consideration. The results to this question respect the expectations based on previous research and literature.

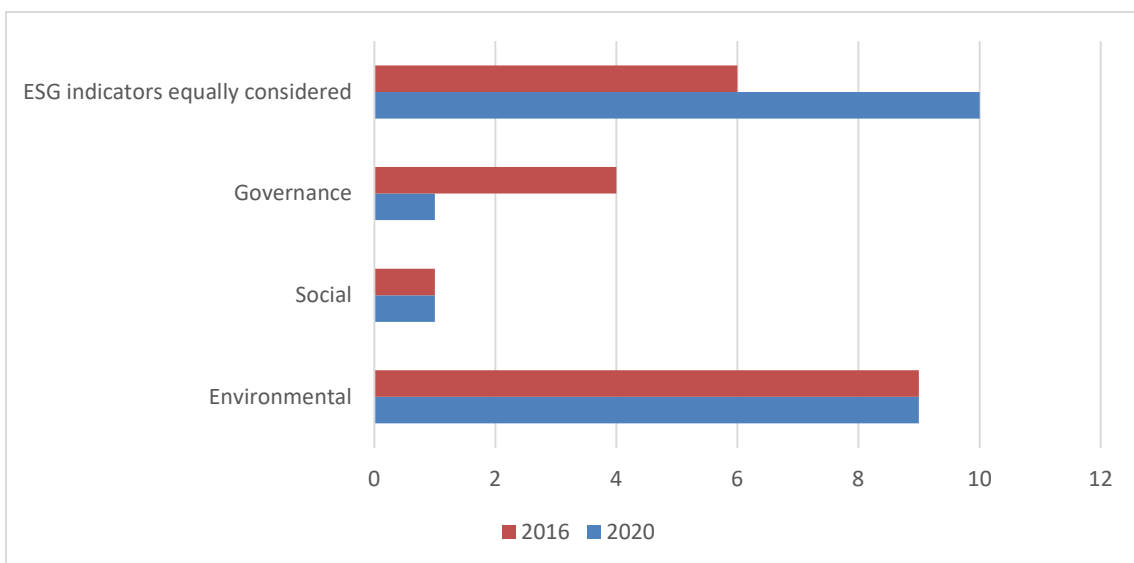


Figure 16 – Consideration of ESG Indicators.

Furthering in detail the analysis on the consideration of the ESG aspects, both in 2016 and in 2020 the most considered Environmental aspects were in order CO2 emissions reduction and Energetic efficiency, with a general increase of the consideration of all aspects by 8,6 percent. For the Social indicators, both in 2016 and in 2020 the most favoured ones were Quality of working environment and Respect for human rights, while the consideration of all aspects increased by 22,9 percent in 2020.

Finally, the Governance metric was the one subject to more development in time, with a decrease in the consideration of the Presence of independent advisors by 20,7 percent from 2016 to 2020, and an increase in the rest of the aspects. Interestingly, the consideration of all aspects decreased from 35 to 33,5% from 2016 to 2020. The results generally respect the expectations, in that a steady increase in the consideration of all Environmental aspects, and a slight increase in the Social indicators were expected. However, although expectations included a limited but steady increase in the consideration of aggregate Governmental aspects, the results show otherwise, probably due to the presence of emergencies considered more compelling by governments and institutions in the context of the Covid crisis.

Although the Social and Governance aspects remained less considered in 2020 with respect to the Environmental ones, the consideration of their components changed strikingly more with respect to the Environmental indicators. This could represent an ongoing shift in the consideration of the Social and Governance aspects, following the present tendency of focusing more on such aspects, while the environmental consideration could undergo a period of stall. This could be the result of a common tendency regarding the introduction of new considerations in public opinion discourse. In fact, if environmental concerns became extremely popular in a relatively small amount of time, and particularly after the definition of the Sustainable Development Goals, they already existed decades ago in a less popular fashion. T

he first famous environmentalists in the west can in fact be dated in the 19<sup>th</sup> century when the elite started to concern about the environmental situation in the West. From that moment on, environmentalists continued their advocacy but remained a niche philosophy, silenced by the rampant consumeristic development. For environmentalism to become a central discourse humanity had to wait almost two centuries, since it was only at the end of the 20<sup>th</sup> century that governments and prominent institutions worldwide publicly acknowledged the issue, issuing programmes such as the United Nations Environment Programme in 1972. Many theories argue that Social and



Governance discourse could be following a similar path, being introduced in the global narrative with some delay in comparison with the Environmental factor.

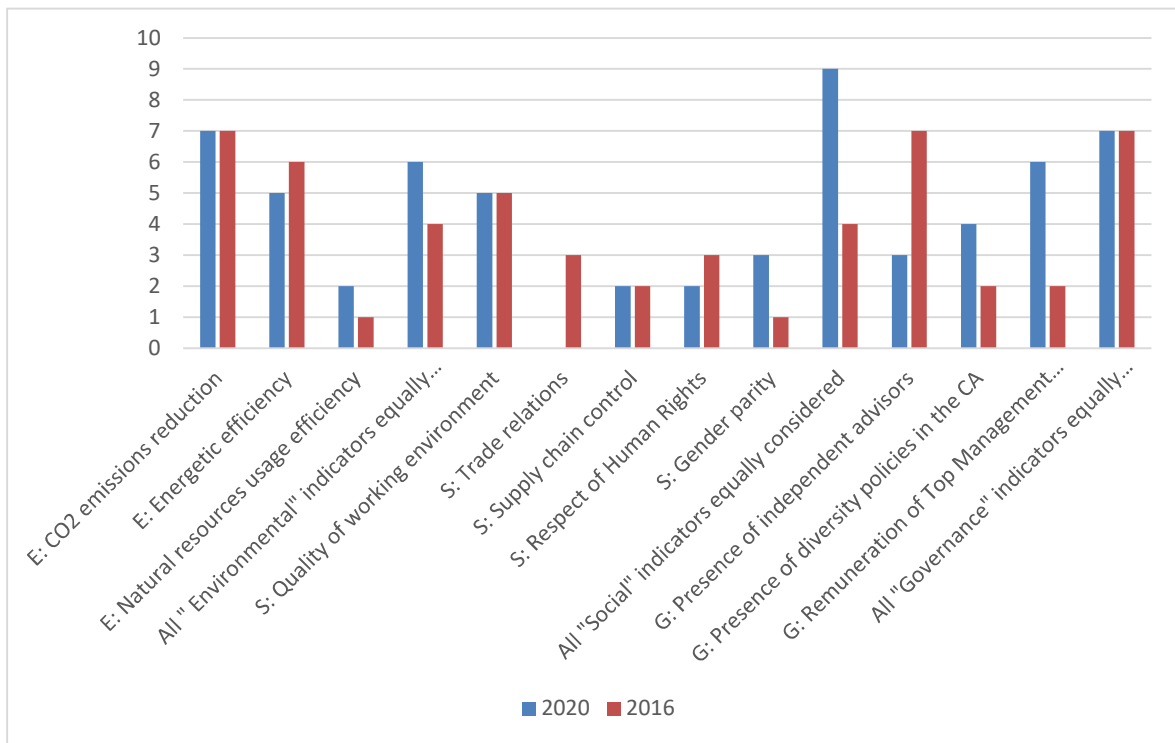


Figure 17 – Consideration of Environmental, Social and Governance Aspects.

Concerning the consideration of the Sustainable Development Goals in the investment evaluation process, as expected, the consideration increased, seeing SDGs considered between the 0 and 25% in 2016 and between 25-50 and 50-75% in 2020. This increase confirms the expected tendency, also backed by the data obtained in the first answer, confirming an increase in the Integration of SDG Indicators in the evaluation of sustainable investments.

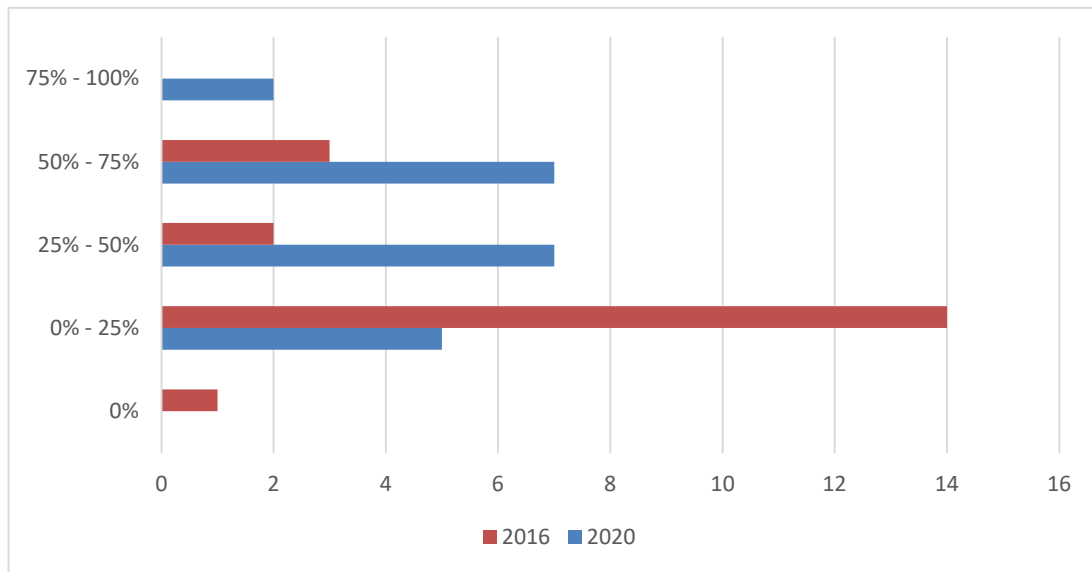


Figure 18 – Percentage of Sustainable Investment Evaluations with SDGs Integration.

More in detail, the most considered Sustainable Development Goals in sustainable investments in 2016 were in order SDG7 on Affordable and clean energy (45%), SDG 13 on Climate protection (35%) and SDG3 on Good health and well-being, SDG8 on Decent work and economic growth, SDG9 on Industry, innovation and infrastructure, SDG11 on Sustainable cities and communities, and SDG12 on Responsible consumption and production with the same percentage (25%).

In 2020, the most considered Goals were in order SDG7 on Affordable and clean energy (66,7%), SDG 13 on Climate protection, SDG9 on Industry, innovation and infrastructure, and SDG11 on Sustainable cities and communities with the same percentage (52,4%), and SDG3 on Good health and well-being (57,1%). As expected, sustainable investments in SDG7 and SDG9 remained high. Probably due to the recent developments regarding international regulations on sustainability and the current Covid crisis, the investment in SDG3 increased with respect to the investments on SDG13. Moreover, as forecasted by the World Bank in 2020, probably also as consequences of the Covid crisis, the concern over SDG1 on No poverty, SDG2 on Zero hunger, and SDG8 on Decent work and economic growth decreased.

Overall, the data presented are in line with the overview of EU progress towards the SDGs presented by Eurostat in 2020, where almost all SDGs show a moderate progress (Eurostat, 2020b). Interestingly, while the Eurostat Report 2020 assessed a significant improvement of SDG16 on Peace, justice and strong institutions, SDG1 on No poverty, and SDG2 on Zero Hunger, the results presented in the survey show a decrease in the

investments in the Goals abovementioned. A possible explanation could be the fact that such SDGs depend on different factors and developments other than the financial ones, such as improvements in medicine, infrastructures, and education.

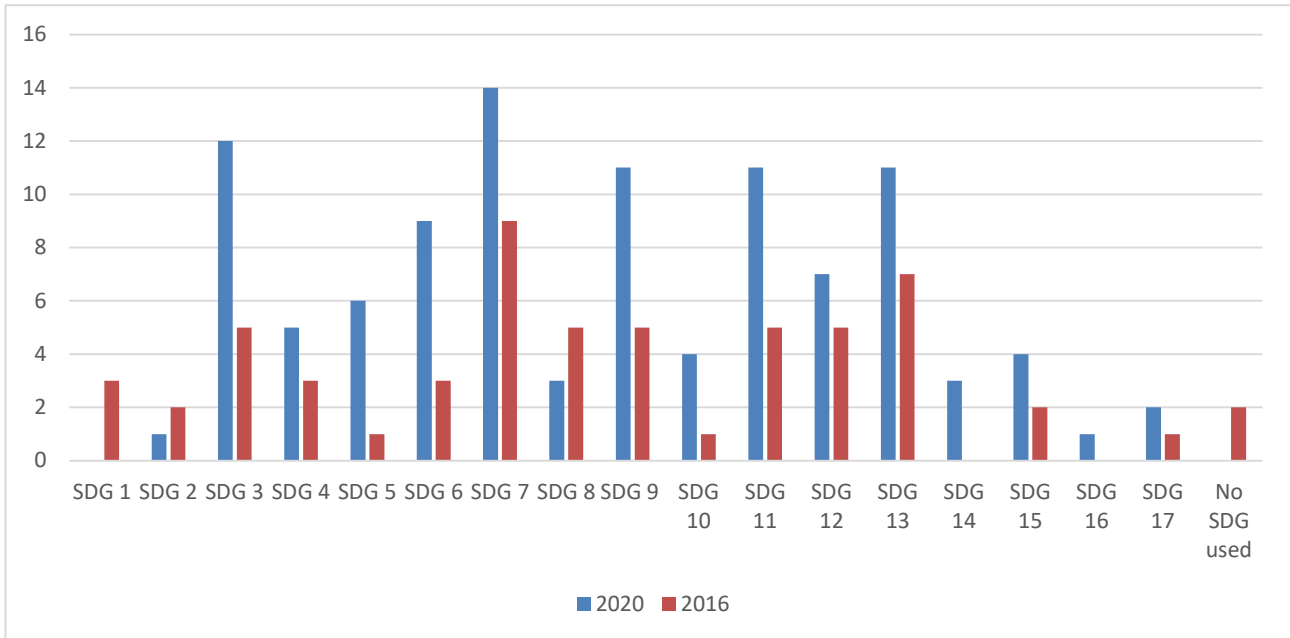


Figure 19 – Use of the SDGs in Sustainable Investment Evaluation.

The most considered industrial sectors by asset managers in 2016 in Italy were in order Technology, Infrastructures, and R&D, Telecommunications and Environmental protection with the same number of answers. While in 2020 the most considered industrial sectors were Energy, Technology and Telecommunications. From 2015 to 2020, there was an increase and homogenization in investments in Technology, Renewable energy particularly in Central Italy, Telecommunications, Waste management and Environmental protection especially in Southern Italy. The only sector in which investment decreased is Chemicals production, as expected by the general tendency of limiting industrial production of environmentally harmful products. This tendency reflects the one outlined in the Istat SDGs Report (2020) describing the progress of the Sustainable Development Goals in Italy.

Asset managers focused more on Technology, Telecommunications, and Environmental protection, mirroring the progresses made regarding SDG13 on Climate action. In contrast, although the increase in consideration on Telecommunication, Waste and Technology, SDG12 on responsible consumption and production was the one that worsened the most in 2020, probably also due to a decrease in investments in Chemical

production, as shown by the survey. The tendency of considering Energy, Technology and Infrastructures the most in 2020 reflects the trend outlined by Istat in 2020 regarding the progresses on SDG7 on Affordable and clean energy and SDG12 regarding Responsible consumption and production.

Moreover, as expectations forecasted, the higher number of investments were directed to sectors in Northern Italy in comparison to sectors in Central or Southern Italy, seeing an increase in investment especially in Infrastructures and Technology.

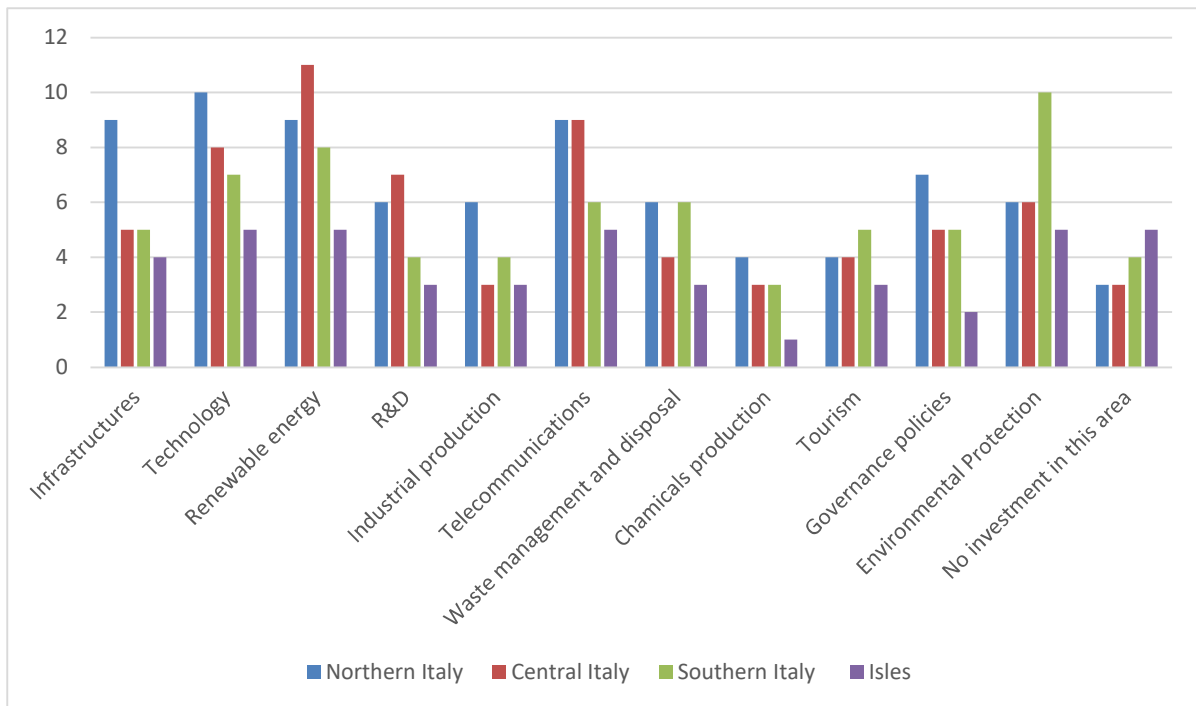


Figure 20 – Sustainable Investments in Italy in 2020.

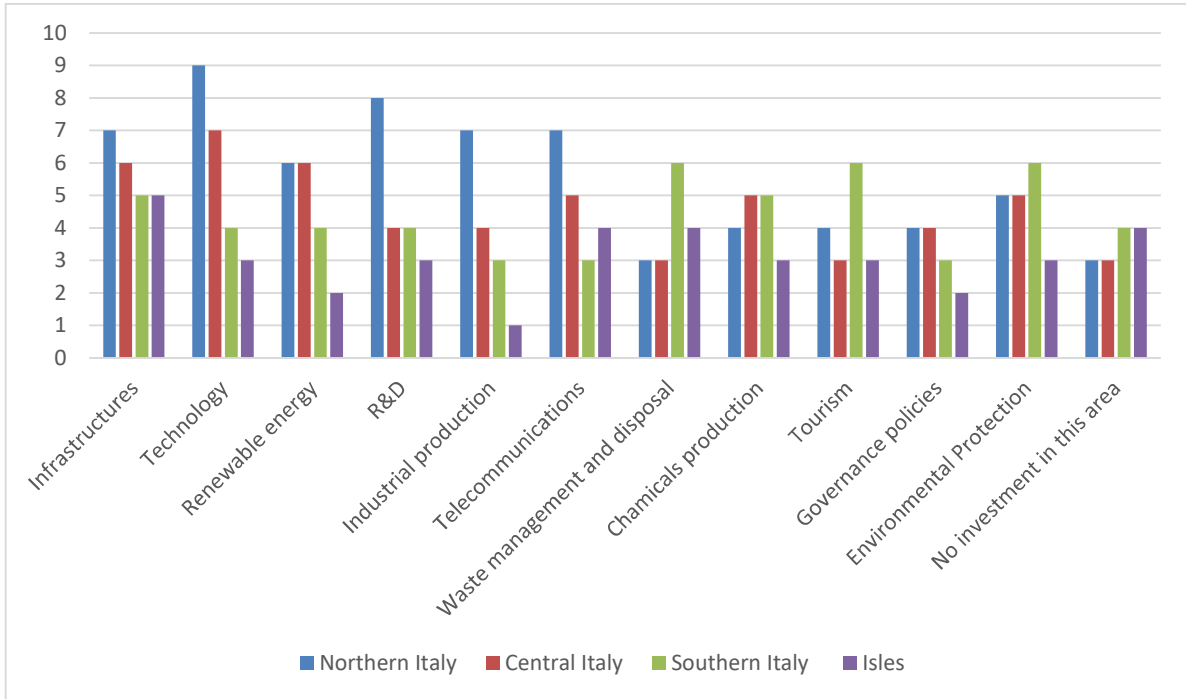


Figure 21 – Sustainable Investments in Italy in 2016.

Concerning sustainable investment evaluations in the European context, the most considered sectors by asset managers in 2016 were in order Infrastructures, Technology and R&D with the same amount of answers, and Telecommunications. While in 2020 the most considered sectors were Energy, Infrastructures and Technology. Since 2015, there has been a considerable increase in investments in all sectors, except from Tourism, probably also due to the recent Covid crisis.

The sectors in which investments increased the most are Energy, Environmental protection, and Governance politics. The trends outlined in the survey respect the progress described in the Eurostat SDG Report (2020), describing a mixed rate of progress for SDG7 on Affordable and clean energy, which remained a priority for asset managers, and whose relative 2020 target was reached; decoupling developments for SDG9 on Industry, innovation and infrastructure that saw an increase in research and development on the matter, but too limited results to reach the 2020 relative targets; positive overall trends for SDG12 on Responsible consumption and production, but mainly due to a strong GDP rather than more sustainable investments or implementations; and a neutral progress on SDG13 on Climate action, which since 2016 increased, but remained overall at the same level as the other SDGs.

The tendencies of investment in Italy and Europe in the last 5 years are similar: both in Italy and in Europe investments have decreased in the Chemical sector, and particularly increased in the Renewable energy and Environmental protection sectors.

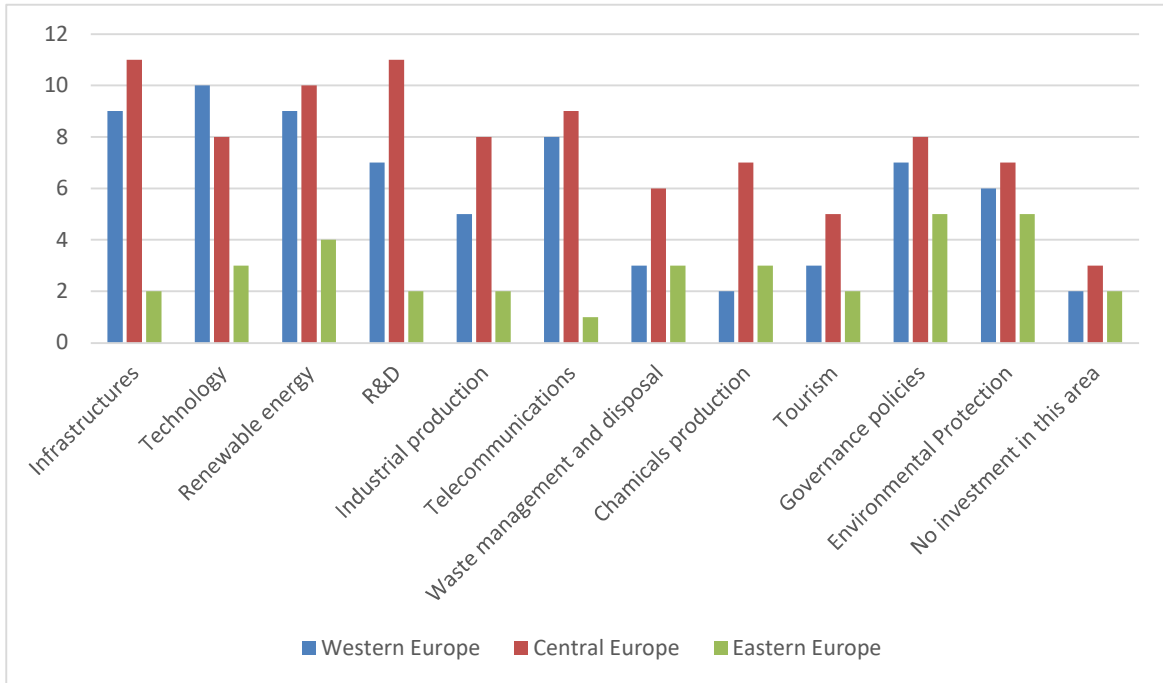


Figure 22 – Sustainable Investments in Europe in 2020.

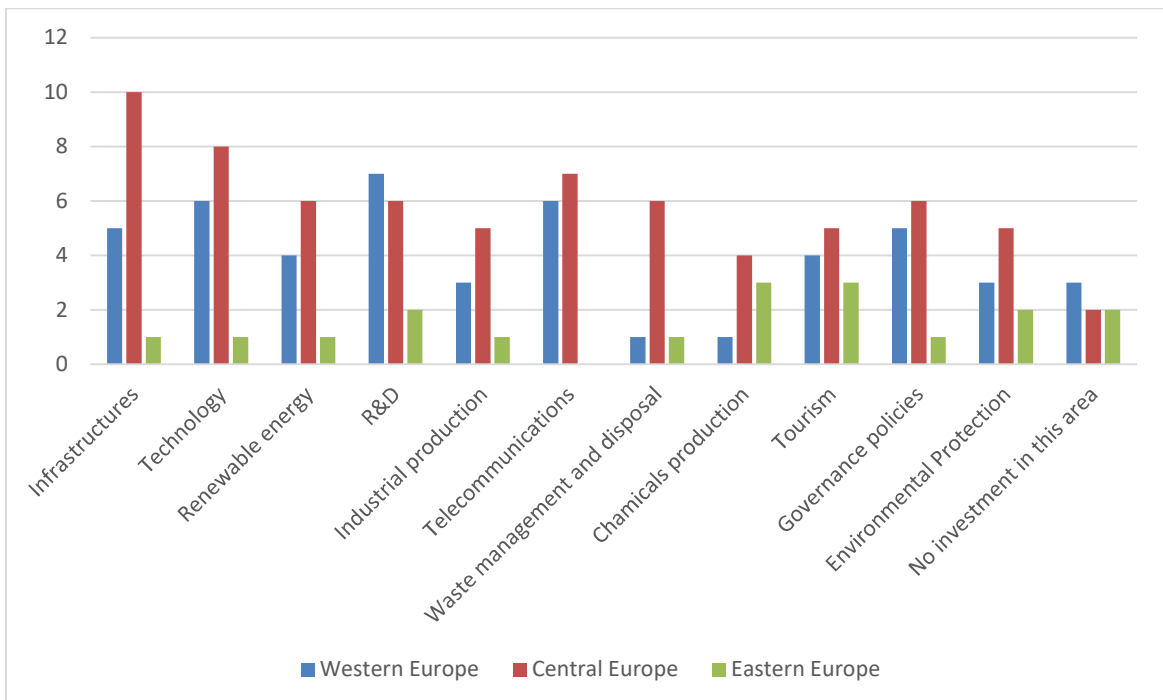


Figure 23 – Sustainable Investments in Europe in 2016.

With no doubt, stakeholders expectations and values highly influence the development of sustainable investment practices. According to the perceptions of the subjects of the survey, the Sustainable Development Goals that stakeholders considered the most in 2016 were SDG13 on Climate action (45%), SDG6 on Clean water and sanitation (30%), and SDG9 on Industry, innovation and infrastructure (25%). In 2020 the most considered Goals were SDG7 on Affordable and clean energy (66,7%), SDG13 on Climate action (61,9%), and SDG9 and SDG6 with the same percentage (38,1%).

In general, the consideration of the SDGs has increased in most cases in 2020 compared with 2016, except for SDG1 on No poverty, which slightly decreased. The SDGs that increased the most in importance are SDG3 on Good health and well-being, SDG7, SDG10 on Reduced inequalities, and SDG11 on Sustainable cities and communities.

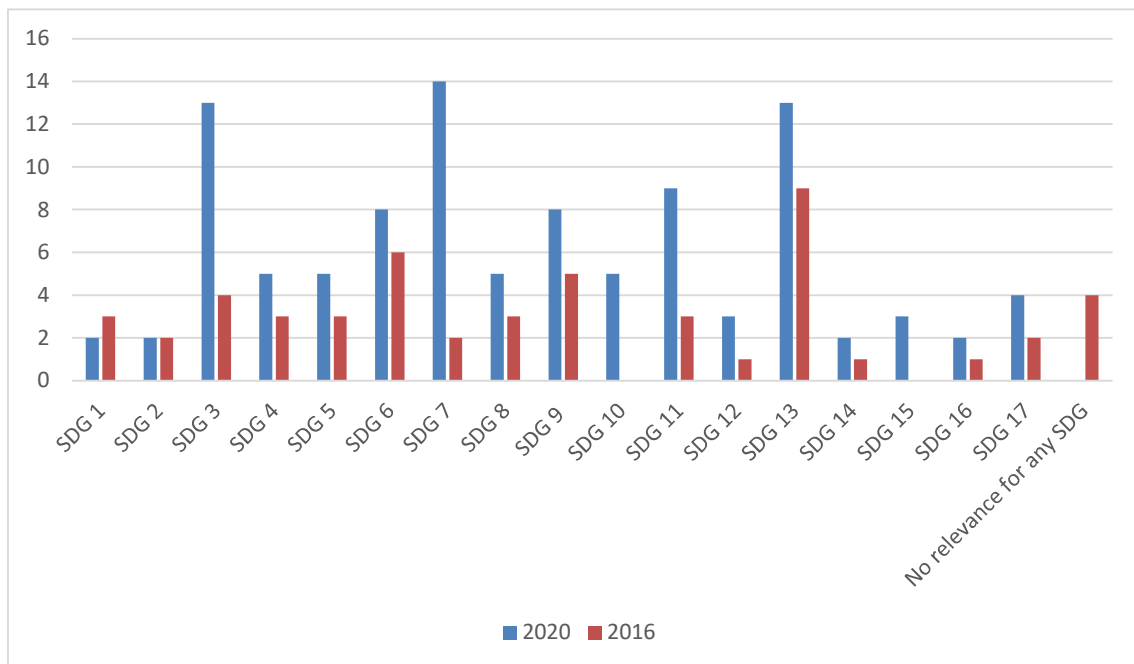


Figure 24 – Relevance of the SDGs for Stakeholders.

In contrast, the SDGs to which sustainable investments contributed the most in 2016 were SDG7 on Affordable and clean energy (45%), SDG13 on Climate action, SDG10 on Reduced inequalities and SDG3 on Good health and well-being with the same percentage (30%), and SDG9 on Industry, innovation and infrastructure (25%). In 2020, sustainable investments mostly contributed to SDG3 (62,9%), SDG7 (52,4%) and SDG12 on Responsible consumption and production (47,6%). In general, the contribution of sustainable investments to the SDGs increased in 2020 compared with

2016, expect from SDG10 on Reduced inequalities, which slightly decreased. The SDGs that experienced the higher number of investments from 2016 to 2020 are SDG3, SDG6 and SDG11. The fact that all subjects to the survey assessed the impact of their sustainable investments to the SDGs exemplifies the general increase in consideration of environmental, social and governance aspects in all financial and economic sectors. When compared, the tendency of growth of the preferences of stakeholders and the contribution of investments to the SDGs are similar, except from the limited number of contributions to SDG10, which was among the Goals most considered by stakeholders. Regarding the reports analysing the progresses made in Italy and Europe in the last 5 years concerning the Sustainable Development Goals, an interesting divergence is the improvement showed by SDG16 on Peace, justice and strong institutions showed both in Europe and in Italy, which is not backed by the data obtained in the survey.

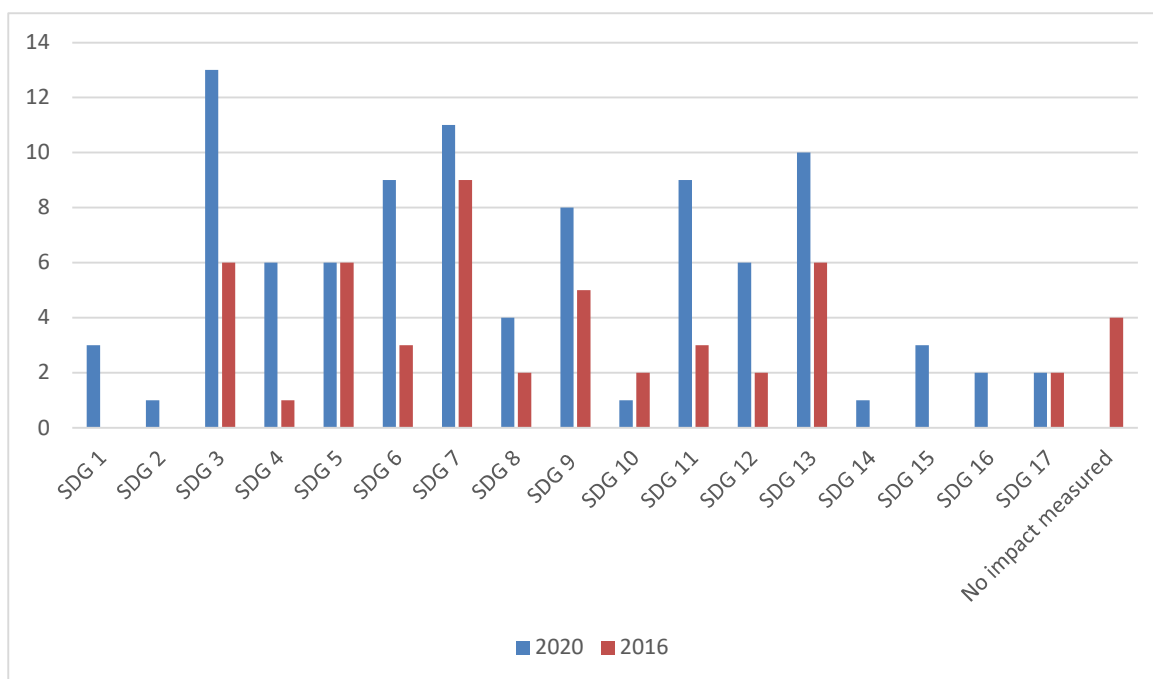


Figure 25 – Contribution of Sustainable Investments to the SDGs.

In 2016, before the introduction of EU Taxonomy, the industrial sectors considered most critical by asset managers were Transports (52,9%), Mining activity (47,1%) and Processing and transportation of fossil fuels and Nuclear energy in the same percentage (41,2%).

In 2020, after the introduction of EU Taxonomy, the sectors considered most critic were Extraction of fossil fuels (65%), Energy plants with high CO2 emissions (60%) and



Processing and transportation of fossil fuels (40%). In general Technology, Extraction of fossil fuels and Energy plants with high CO2 emissions have been considered more critical with respect to 2016, before the introduction of the regulatory format.

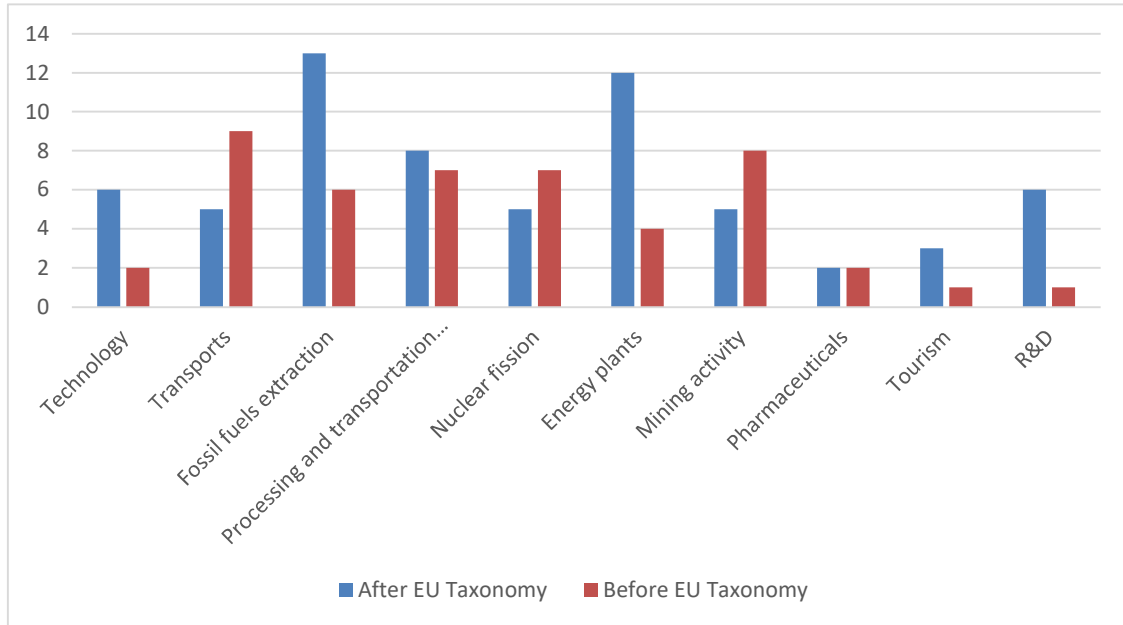


Figure 26 – Most Critical Sectors with Respect to ESG Indicators Before and After EU Taxonomy.

According to asset managers, in 2020 the sectors that started working the most to change their critical situation after the definition of the EU Taxonomy were Transports (45%), and Technology, Processing and transportation of fossil fuels and Energy plants in the same percentage (35%).

The tendencies outlined above respect the expectations based on previous research and literature, and the trends assessed by SDGs Reports in Europe and Italy, in which SDG7 on Affordable and clean energy was among the Goals that improved the most.

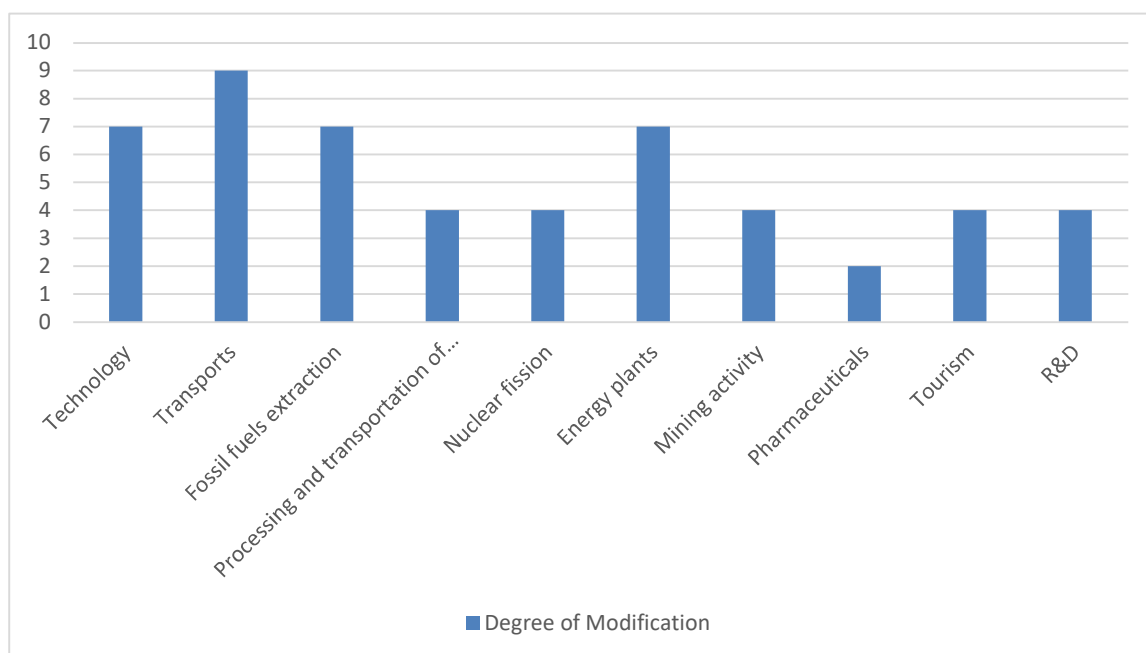


Figure 27 – Critical Sectors with Respect to ESG Indicators that Modified Their Business the Most.

Finally, both in 2016 and 2020 the barriers or risks connected to sustainable investment evaluation by asset managers were bureaucracy, lack of adequate standards, lack of detailed data, simplistic investment approaches such as Exclusion, and lack of trained personnel. These answers reflect the urging need outlined throughout the thesis of defining and applying thorough metrics, regulations, and monitoring institutions to allow investors and businesses to contribute to sustainable development.

In general, the data obtained confirm the initial expectations based on previous literature and reports. The presence of a limited but positive trend concerning the practices of sustainable investment evaluation is clear. Overall, the Renewable energy, Technology, Environmental protection, and Telecommunication sectors have been considered the most both in Italy and Europe by asset managers and stakeholders.

The tendency outlined by the results described above assess a general increase in consideration and investment on SDGs 3, 6, 7, 9, 11 and 13, while, according to the SDG Reports in Italy and Europe, the SDGs that improved the most in the past years are SDGs2 and 16. These decoupling results can be explained due to the influence of many factors other than financial investments concerning improvements on world hunger and peace and justice. The significant decrease in investments in the consideration of SDG12 matches with the SDG Reports, that assess a worsening of this Goal at a European level. As expected, both in Italy and Europe the lack of detailed practices and regulations hinders a potential increase of sustainable investments to a more sustainable

development. Moreover, the general tendency is to continue focusing on environmental concerns, still underestimating the importance of social and governance aspects and their contribution to sustainable development.

### 4.3 Future Research and Perspective

The research survey confirms a growing attention on the adoption of sustainable and responsible investment policies by asset managers and shareholders. The comparative analysis with previous data and research on the matter shows encouraging results regarding the integration of the ESG indicators and the SDGs in sustainable investment evaluations. However, at present the improvements are still limited and asset managers lament the lack of universally recognized regulations on sustainable investment practices.

The present research has provided a contribution in the increasingly discussed field of sustainable finance, assessing the evolution of sustainable investment evaluation policies in Italy in the last few years, since the definition of the Sustainable Development Goals of the Agenda 2030.

The research mainly focused on companies and organizations based in Northern Italy, being most financial institutions located in Lombardy, a north-western Italian region. Therefore, further research could take into analysis different Italian regions and provide a comparison of the implementation of sustainable investments in different contexts. Another interesting comparison could involve sustainable investment policies in different European countries, such as Germany, France, and the Netherlands.

Moreover, the present survey covered a 5-years period and selected its subjects from asset management companies and investment banks. Hence, further research could take into consideration different aspects of the sustainable finance sector and analyse their evolution in a longer period, starting for instance from the publication of the Brundtland Report by the World Commission on Environment and Development in 1987, and including a wider number of institutions.

Finally, an interesting comparison could involve the general trend of sustainable investment in the European Union and in other international political and economic organizations.

## Conclusion

The objective of the present thesis was that of contributing to the research on the evolution of sustainable finance and sustainable investment practices. Since sustainability and sustainable development have become integrated components of a society currently facing unprecedented issues concerning climate change and environmental degradation, investors are increasingly demanding sustainable products and investment practices. The first sections of this thesis analysed the evolution of sustainable finance through history, focusing on the very concept of sustainable development and the Sustainable Developing Goals (SDGs), assessing the progresses made since the definition of the Agenda 2030 in the 2015 Paris Conference on Climate Change, and exploring the development of finance towards sustainable finance in the past decades.

In view of the important role that asset managers cover in the capital market, it is interesting to analyse the attention that they pose on sustainability practices and sustainable investment evaluation. The final section of this thesis analysed the evolution of such practices, establishing a trend of integration of the Sustainable Development Goals (SDGs) and the Environmental, Social and Governance (ESG) indicators in sustainable investment evaluations. The analysis, performed through an online survey, focused on the period between the years 2016-2020, with a specific focus on Italian asset management companies (AMC) and banks.

From the results of the analysis conducted, the attention posed by asset managers on sustainable practices is following a general positive trend, posing increasing attention especially on the environmental aspects, such as CO2 emissions reduction practices, with a rising focus also on social aspects, leaving governance elements still behind. Concerning the Sustainable Development Goals, both stakeholders and asset managers mainly focused on SDGs 3, 7 and 13 regarding respectively Good health and well-being, Affordable and clean energy, and Climate action, while the less considered Goals were SDG 1 and 10 respectively on No poverty and Reduced inequalities. A possible reason explaining the evolution is the heavy influence of the Covid crisis, which in 2020 highly affected global perspectives and shifted the attention towards different economic issues. Compared with the SDG Reports assessing the evolution of the Goals in Europe and Italy, the results of the present research confirm the expectations based on previous literature and reports. The only decoupling tendency was assessed on SDGs 2 and 16

respectively on Zero hunger and Peace, justice and strong institutions, which, according to the Reports, improved the most since 2015, while according to the present results were among the less considered Goals by asset managers and stakeholders. A possible explanation could regard the influence of different factors other than financial investments in the improvement of these specific SDGs, such as law, regulations, and an increasing attention posed on international cooperation and social interdependency.

Although the research assessed a general growth in consideration of both Environmental, Social and Governance (ESG) aspects and the SDGs in sustainable investment evaluation, from a sample of 80 AMCs and investment banks the survey collected 21 answers, either due to the lack of available data or properly trained personnel on the matter. Moreover, most subjects connect limited sustainable investment practices to the lack of universally accepted and valid regulations concerning sustainable reporting and sustainable investment evaluation.

The overview presented and the data obtained in this research can represent a starting point for further research on the matter. Further inquiries could involve a wider range of subjects in a more expanded time horizon, to provide data concerning sustainable investment evaluation from a new perspective.

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