LUISS

Corso di laurea in Global Management and Politics

Cattedra Climate Justice and ESG Investing

The strategic value of sustainability: the crucial need to implement the role of the Chief Sustainability Officer to fit the change.

Prof. Mauro Bombacigno

RELATORE

Prof. Gianfranco Pellegrino

CORRELATORE

Cecilia Chiappa Matr.768491

CANDIDATO

Anno Accademico 2023/2024

Table of Contents

INTRODUCTION

This dissertation aims to demonstrate the centrality of the Chief Sustainability Officer's role in ensuring consistency in the company strategy and not just a marketing approach in the company's ESG tactic. The company's whole strategy is marked by this development related to ESG and sustainability values because if it were not, anything you do could be interpreted as greenwashing.
It is essential that the Chief Sustainability Officer's position is imprinted in a specific way and has power within the company to direct the company toward particular goals. The Chief Sustainability Officer must have certain characteristics, background and training. This centrality of the role and the need for specific traits emerges from the research conducted through semi-structured qualitative interviews, which this thesis analyses and discusses.

Sustainability is strategic and it is impacting the private sector. Businesses need to respond to this rising need, which derives from the climate crisis and the growing attention to social issues. The new challenges that sustainability deploys have required companies to adjust with trained individuals to facilitate transitions to greener solutions. These figures are depicted by the Chief Sustainability Officers, who are the conductors of sustainable actions within the company.
Over the years, this role has grown and gained momentum in large and small companies; and the goal of this work is to study and better understand its positioning and tasks.

This dissertation starts by discussing the importance of sustainability in today's world and how the world is changing. The significance of the climate crisis is well-known and extensively examined in all fields of study. Certainly, the climate crisis also significantly affects the company's operations. This dissertation starts with an overview of the actions being taken at the international level and the current status of climate change-related legislation. It then delves into a more local level by examining climate-related policies mandated by the European Union that directly impact decisions at the national level.
The legislative landscape in Europe is constantly changing: over the years, more specific limits and action measures have been implemented and this thesis provides a detailed analysis of these ordinance. Understanding these directives is important as they directly impact the actions and decisions that businesses must make to comply with regulations and rules. As the laws continue to evolve, businesses can expect more specific demands in the coming years, with the primary goal of promoting sustainability and ESG consciousness.

The following section of the first chapter tries to analyse the impact of sustainability measures on businesses and how sustainability is becoming a priority for companies. Two examples of the company's response to the new European directives are provided.

The second chapter delves deeper into the private sector and its evolution over the years, especially in the context of increasing environmental consciousness and regulatory compliance. The analysis begins by emphasizing the significance of a company's purpose and how it underpins its actions, particularly in environmental, social, and governance (ESG) issues: the company's mission and what it strives to promote are crucial considerations, as it's important for these values to align with contributing to a more sustainable world.

As sustainability concerns become more and more important, businesses must adapt to new market needs. Once a company has established a more sustainable purpose, its business model should also evolve to align with that purpose. Directives require businesses to respond to certain sustainability issues and report on their actions that have influenced the evolution of their business models. In recent years, companies paying more attention to sustainability have embraced sustainability reporting, allowing them to define and communicate the sustainable actions they have implemented within the company.
The concept of double materiality, developed from non-financial reporting, will be the cornerstone of sustainability reporting in the years to come. Double materiality acknowledges that it is no longer sufficient to consider only the company's profit-related elements as material; environmental and social factors are also crucial and interconnected. In the private sector, it is important to thoroughly analyze the role of finance as a driver towards better and more sustainable practices. Green finance is evolving in response to the changing world, and the finance industry is introducing new standards and regulations to provide investments to companies that need to comply with certain rules. These rules and limitations are part of what is commonly referred to as sustainable finance.

Sustainability requires a change in management and the company's priorities. To answer this demand, there is an urgent need to implement new competent figures in the organisation chart and these figures are the Chief Sustainability Officers. The third chapter analyses the role and evolution of Chief Sustainability Officers as an introduction and study before delving into the in-depth research conducted in the fourth chapter.

In conclusion, the research analysis conducted in this dissertation is explained in chapter four. The inquiry was conducted to understand the positioning and the role of the Chief Sustainability Officer through some semi-structured qualitative interviews with the professionals covering this role in some important and international companies. The interviews were analysed and the results are presented in the fourth chapter. The main outcome is the understanding of the orchestration role that this figure has inside the company and how it is a growing job that will be more and more needed in the years to come inside big and small companies.
There are still some significant challenges and developments in the future, but businesses are adapting and responding to the urgent need to prioritize ESG values in their core operations. Sustainability is no longer a secondary concern; it is increasingly important in shaping business strategies. Therefore, it is crucial for companies to invest in well-trained and skilled professionals who can make strategic and informed decisions that will determine the future of the company.
The key focus is to understand the pivotal role that these professionals play within the company and recognise that this role will become even more essential in the years to come for both large and small companies.
The main outcome is the comprehension of the orchestration role that this figure has inside the company and how it is needed that it is in direct contact with the C-suit and how the Chief Sustainability Officer is a growing role that will be needed more and more in the years to come inside big and small companies.

CHAPTER 1: THE GLOBAL CHALLENGE OF SUSTAINBAILITY

1. Climate change and sustainability as a global challenge

1.1. An overview of climate change

The times we are living in are one of the most uncertain, full of challenges and changes that have ever been in history. There are new ways of doing things and new technologies developing every day but at the same time, we are currently facing a time of a huge ecological crisis due to climate change.[1] Global warming is something that is impacting any fields, from politics to energy to management development. As a matter of facts, the 21st-century global economy is characterised and will be characterised by various megatrends, but the megatrend of climate change is the one that is able to dictate the fate and influence all the others.[2] Unfortunately, climatic changes have the potential to be disruptive, unsafe, and unpredictable, and climate change is currently responsible for temperature anomalies and spikes in air pollution, along with the occurrence of extreme weather events such as droughts, wildfires, severe tropical storms, prolonged heat waves, rising sea levels, intense rainfall, and flooding.[3]

By the second decade of the 21st century, the Earth's temperature has risen by 1.1°C compared to the period between 1850 and 1900, as reported by the United Nations Intergovernmental Panel on Climate Change (IPCC)[4].

The heightened intensity of climate events can be attributed to the continuous escalation of greenhouse gas (GHG) emissions. These emissions trap the sun's heat in the atmosphere, leading to a continual increase in Earth's temperature. The growth of these emissions has been consistent since the pre-industrial era, with a notably rapid acceleration observed since the 1970s[5] , and carbon dioxide (CO2), methane and nitrous dioxide are the three main GHGs responsible for the temperature rise. The past decade witnessed consistently elevated growth rates, leading to CO2 levels that have now reached a point 50% higher than their pre-industrial levels.[6]

---

[1] J. Hickel, *Less is more: How degrowth will save the world*, Random House, 2020, p. 121

[2] World Economic Forum (WEF) *Quantifying the Impact of Climate Change on Human Health*, 16 January 2024, p. 6

[3] *Ivi*, p. 7

[4] Intergovernmental Panel on Climate Change, Climate Change 2022: Impacts, Adaptation and Vulnerability, 2022, https://report.ipcc.ch/ar6/wg2/IPCC_AR6_WGII_FullReport.pdf.

[5] World Economic Forum (WEF) *Quantifying the Impact of Climate Change on Human Health*, 16 January 2024, p. 6

[6] *Ibidem*.

The Intergovernmental Panel On Climate Change (IPCC)[7] , which is the United Nations body for assessing the science related to climate change, has recently determined that the most probable projection for emissions by the year 2100 would result in Earth's temperature surpassing pre-industrial levels by more than 2.7°C. This exceeds the 80% limit beyond the 1.5°C threshold nations committed to uphold in 2015 as part of the Paris Agreement on climate[8].

Global warming is a threat firstly to human being's survival as all mammals need to cool off and live at a specific temperature to survive and to allow the body to refrigerate. If the temperature rises by eleven or twelve degrees of warming, direct heat could be the cause of death for 4 billion people.[9]

Secondly, climate change has a huge impact on food; every plating has its needs, but it is known that harvest will decline by 10 per cent[10] for every degree of warming. For instance, without a drastic cut in emissions by 2080, Southern Europe could become a permanent drought, which would have a crucial impact on feeding the growing population.[11] Moreover, the problem of hunger is not only just deriving from climate change. Still, it is already a big international problem, so starvation from climatic change will add to the existing crisis.

Additionally, fossil fuel burning could worsen the quality of the air the population will breathe. Our lungs need oxygen, but the level of carbon dioxide contained in the air we breathe is always increasing; already every year more than 300,000 people die from the small particles derived from the burning of fossil fuels[12]. Finally, as far as the oceans are concerned, the rising level of water is a threatening scenario for many major cities and at the same time the problem of ocean acidification, which is a phenomenon deriving from the capacity of water to absorb more than a third of the emitted carbon, will have a big impact on the marine life and coral bleaching. [13]

---

[7] IPCC, 2022: *Climate Change 2022: Impacts, Adaptation and Vulnerability. Contribution of Working Group II to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change* [H.-O. Pörtner, D.C. Roberts, M. Tignor, E.S. Poloczanska, K. Mintenbeck, A. Alegría, M. Craig, S. Langsdorf, S. Löschke, V. Möller, A. Okem, B. Rama (eds.)]. Cambridge University Press , Cambridge, UK and New York, NY, USA, 3056 pp., doi: 10.1017/9781009325844.
[8] World Economic Forum (WEF) *Quantifying the Impact of Climate Change on Human Health*, 16 January 2024, p. 6
[9] D. Wallace-Wells, "The uninhabitable earth." *The Best American Magazine Writing 2018*. Columbia University Press, 2018, p. 276.
[10] *Ivi*, p. 278.
[11] *Ivi*, p. 279.
[12] *Ivi*, 2018, p. 281
[13] *Ivi*, p. 282.

It is important to point out that numerous mitigation efforts are presently in progress to prevent these phenomena from happening, including the advancement of technologies, products independent of fossil fuels, new policy measures, industry development, and evolution in business management. The implementation of these measures has the potential to reduce greenhouse gas (GHG) emissions, improve global health, and fortify economic and political stability.[14]

1.2. The impact on global activity

The rise in emissions is a direct consequence of the growing expansion of human economic activities, like the burning of fossil fuels, consumption and production patterns, and deforestation which are contributing to the alteration of global land use.
The geologic era we are living in has been defined as the "Anthropocene,"[15] which is explained as the most recent period in the Earth's history, when human activities have a very important effect on the Earth's environment and climate.[16] This geological era and its definition perfectly explain the correlation between human activity and ecology.

Jason Hickel, an anthropologist and professor at the Autonomous University of Barcellona, in his book 'Less is More'[17] analyses the capitalistic economic system and how it is imperative to rethink the economy to address the climate crisis. Hickel underlines how the interlink between ecology and economy is evident and can not be ignored, and he defines this interconnection as a change in paradigm. This paradigm shift has been defined as revolutionary as it was the explanation of the theory of evolution of species by Charles Darwin.[18] The interlinked connection of ecology and economy is the new paradigm of the 21st century.

Increasing temperature will inevitably negatively affect global activity overall. All regions and populations have played a role in contributing to climate change to varying extents and the consequences of climate change will have a huge impact on all regions of the planet.[19] Even though there will be winners and losers: for example, developing countries will feel the effects of climate change more than developed economies. Despite this limited distinction, at any level

[14] World Economic Forum (WEF) *Quantifying the Impact of Climate Change on Human Health*, 16 January 2024, p. 6
[15] Definition of Anthropocene from the Cambridge Advanced Learner's Dictionary & Thesaurus Cambridge University Press
[16] *Ibidem*.
[17] J. Hickel, *Less is more: How degrowth will save the world*, Random House, 2020.
[18] *Ivi*, p. 121-122
[19] World Economic Forum (WEF) *Quantifying the Impact of Climate Change on Human Health*, 16 January 2024, p. 8

rising temperature and its effects will be widespread and as the temperature rises, the balance between winners and losers turns incredibly low.[20]

Property and infrastructure, lost productivity, mass migration and security threats will be the aspects that will be primarily influenced by global warming. The initial response might also be positive, but this will cause permanent future damage in the long run, and the world economy will face an immeasurable challenge.[21]

A recent research conducted by the WEF[22] has highlighted the crucial role played by companies that decide to embrace a strategic blend of digital and environmental investments; this type of attention and strategic decision has shown greater profitability compared to those lacking this dual focus.[23] These companies become more competitive because they prioritise the needs and requests of the stakeholders. The implementation needs to be horizontal throughout the whole company and systematically implemented throughout the companies' value chains. Adopting a strategic implementation of good environmental practices is crucial for the company's survival in the long run. To achieve this scenario, businesses need to invest in managers or new figures that will help the company shift through this company purpose change and implement more sustainable practices.[24]

1.3. Multinational and international actions on climate change and the response of the International Community

The issue of climate change is not a recent topic as it has just been explored in the past few years; the concept of 'Sustainable Development' dates back to 1983 to the World Commission on Environment and Development[25] which defined 'Sustainable Development' as "Development that meets the needs of the present without compromising the ability of future generations to meet their own needs".[26] It invited the reconciliation of economic development with the protection of social and environmental balance.[27] The idea back in the 20th century was to maximise both the biological, economic, and social system goals having in mind a sustainable

[20] K. Wade, *The impact of climate change on the global economy*, Schroders, 2016, p.2.
[21] *Ibidem*.
[22] World Economic Forum (WEF) *Innovating for the European Green Deal*, White paper, January 2023
[23] Ivi,p. 5-6.
[24] *Ibidem*.
[25] Brundtland, Gro Hariem. "World commission on environment and development." *Environmental policy and law* 14.1 (1985): 26-30.
[26] *Ibidem*.
[27] Eur lex, sustainable development definition https://eur-lex.europa.eu/EN/legal-content/glossary/sustainable-development.html#:~:text=Sustainable%20development%20was%20defined%20in,to%20meet%20their%20own%20needs'.

society that could persist throughout generations and would have been flexible and wise with the goal of guaranteeing future generations the same environmental capacity of that period of time.[28]

Internationally, since 1995, some actions have been taken to address the global issue of climate change. The United Nations Framework Convention on Climate Change (UNFCCC) constituted a decision body that reunites every year to measure the effects of policies introduced by the parties to limit global warming. This decision body takes the name of COP, which means "Conference of the Parties" and as mentioned above is a part of the UNFCCC, an agreement between 197 countries of the United Nations and signed by the European Union.[29] The goal of the agreement is to stabilise a level of GHG concentrations that would prevent dangerous human-induced interference with the climate system.

The Conference of the Parties is an annual appointment in different signatory countries' different cities. The aim is to negotiate and debate the progress made to achieve the overall goal of limiting climate change. Often, after these meetings, agreements or treaties are produced, such as the Kyoto Protocol of 1997[30]. The most important agreement by now produced by the COP was the Paris Agreement of 2015[31], which is the first legally binding global treaty on climate change. The most pivotal decision taken in the Paris Agreement was to limit the rise in global average temperature up to 2°C and ideally under 1.5°C[32]. In addition, countries have also committed to harmonising financial flows with a trajectory toward reduced greenhouse gas emissions and the development of climate-resilient infrastructure. Countries individually decide how much they will reduce their annual emissions based on a bottom-up approach.[33]
The Paris Agreement stands as a pivotal milestone in the global effort against climate change, marking the first instance where a binding accord unites all nations in the fight against global warming and the adaptation to its consequences[34]. The execution of the Paris Agreement

[28] T.N. Gladwin, J.J. Kennelly, & T.S. Krause, Shifting paradigms for sustainable development: Implications for management theory and research. *Academy of Management Review*, *20*(4),1995 p. 877.
[29] UNFCCC, United Nations Framework Convention on Climate Change
[30] Protocol, Kyoto. "Kyoto Protocol." *UNFCCC Website. Available online: http://unfccc.int/kyoto_protocol/items/2830. Php (accessed on 28 March 2024)* (1997): 230-240.
[31] Agreement, Paris. "Paris agreement." *Report of the conference of the parties to the United Nations Framework Convention on Climate Change (21st session, 2015: Paris). Retrieved December*. Vol. 4. No. 2017. Getzville, NY, USA: HeinOnline, 2015.
[32] Ibidem.
[34] Cambridge Institute for Sustainability Leadership (CISL) What is COP? https://www.cisl.cam.ac.uk/cop-climate-change-conference (last visited 28 March 2024)
[34] United Nationts Climate Change (UNFCCC) The Paris Agreement, What is the Paris Agreement? https://unfccc.int/process-and-meetings/the-paris-agreement (last visit 28 march 2024)

necessitates a fundamental economic and social transformation guided by the most advanced scientific knowledge available.[35] Since 2020, nations have been presenting their national climate action plans, termed Nationally Determined Contributions (NDCs). Each successive NDC aims to embody a heightened level of ambition compared to its predecessor.[36]

The most recent Cop was the COP28, which was held from November 30 to December 13, 2023, in Dubai, UAE. The main themes discussed during these meetings were global budget, mitigation, adaptation, and climate finance, including the loss and damage fund.[37]

The EU is one of the member states of UNFCCC and participates in the events with its 27 Member States as Parties to the United Nations Framework Convention on Climate Change (UNFCCC)[38]. The European Union is an active participant in the annual meetings of COP because one of the main goals of the European Green Deal[39] is to become the first net zero continent by 2050[40] . This underlines the active role that the European Union has and wants to have in combating global warming.

1.3.1. Sustainable Development Goals

In 2015, the United Nations General Assembly formally embraced "The 2030 Agenda for Sustainable Development," aiming to outline a comprehensive strategy for the betterment of humanity, the planet, and prosperity[41]. This agenda encompasses two primary objectives: firstly, urging all UN Member States to embrace 17 Sustainable Development Goals (SDGs) alongside 169 associated targets for their accomplishment, and secondly, pledging to diligently pursue the fulfilment of these objectives within a mere 15-year timeframe[42]: "We pledge ourselves to pursue the complete implementation of this Agenda by 2030 tirelessly"[43]. The 2030 Agenda builds upon prior initiatives by the UN, in 2000, Member States proposed eight

---

[35] United Nationts Climate Change (UNFCCC) The Paris Agreement, What is the Paris Agreement? https://unfccc.int/process-and-meetings/the-paris-agreement (last visit 28 march 2024)

[36] *Ibidem.*

[37]Consilio dell'Unione Europea Cop 28 https://www.consilium.europa.eu/it/policies/climate-change/paris-agreement/cop28/

[38] The United Nations Framework Convention on Climate Change (UNFCCC)

[39] European Commission, The European Green Deal, Brussels, 11.12.2019 https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=COM%3A2019%3A640%3AFIN

[40] United Nations Climate Change, The Paris Agreement. What is the Paris Agreement https://unfccc.int/process-and-meetings/the-paris-agreement

[41] United Nations (UN). 2015b. Transforming Our World: The 2030 Agenda for Sustainable Development. New York: United Nations. https://sustainabledevelopment. un.org/post2015/transformingourworld/publication, p3

[42] Barbier, E. B., & Burgess, J. C. (2021). *Economics of the SDGs*. Springer International Publishing. Chapter 1 pag 3- 13

[43] *Ivi*, p 4

overarching objectives, collectively called the Millennium Development Goals (MDGs)[44]. Each MDG was accompanied by specific targets set for the year 2015, such as reducing the proportion of individuals living on less than one dollar per day by half between 1990 and 2015 and decreasing the under-five mortality rate by two-thirds between 1990 and 2015[45].

The UN 2030 Agenda represents a bold endeavour to embrace sustainable development as the overarching objective for all Member States. This new agenda took effect on January 1, 2016, and as stated by the UN, "will shape the decisions we make over the next 15 years" at national, regional, and global levels[46]. These goals encompass a broad spectrum of environmental, social, and economic concerns, such as climate change, energy, water management, marine preservation, biodiversity, poverty reduction, food security, sustainable consumption and production, gender parity, and economic expansion. The UN urged governments to create national approaches to pursue the SDGs, while recognising the critical role of the private sector, including micro-enterprises, cooperatives, and multinationals, in achieving these objectives.[47]

The 17 Sustainable Development Goals (SDGs) within the 2030 Agenda are designed to offer direction on accomplishing the core aim of sustainable development. Jeffrey Sachs, a prominent figure in crafting the 2030 Agenda, underscores that the SDGs "seek to blend economic advancement, environmental preservation, and societal inclusivity"[48].

Additionally, SDGs emphasise the involvement of the private sector, particularly through initiatives like SDG17[49] (Partnerships for the Goals), SDG12[50], and, notably, SDG target 12.6[51]. This target urges member states to incentivise companies, especially large and multinational ones, to embrace sustainable practices and integrate sustainability into their reporting processes[52]. Underline the pivotal role of governments in enacting new regulations to promote the adoption of sustainable business practices. Meanwhile, advocate for the introduction of market incentives to encourage the adoption of more sustainable business models. The

---

[44] United Nations (UN). 2015 a. The Millennium Development Goals Report 2015. New York: United Nations. https://www.un.org/millenniumgoals/2015_ MDG_Report/pdf/MDG%202015%20rev%20(July%201).pdf

[45] Barbier, E. B., & Burgess, J. C. (2021). *Economics of the SDGs*. Springer International Publishing. Chapter 1, p. 3- 13

[46] United Nations (UN). 2015b. Transforming Our World: The 2030 Agenda for Sustainable Development. New York: United Nations. https://sustainabledevelopment. un.org/post2015/transformingourworld/publication, p.8

[47] Jones, Peter ORCID: 0000-0002-9566-9393, Hillier, David and Comfort, Daphne (2016) The sustainable development goals and business. International Journal of Sales, Retailing and Marketing, 5 (2). pp. 38-48.

[48] Sachs, J.D. 2012. From Millennium Development Goals to Sustainable Development Goals. Lancet 379: 2206–2211

[49] SDG 17: Partnership for the Goals

[50] SDG 12: Responsible consumption and production

[51] SDG 12.6: Sustainable business

[52] Pizzi, S., Rosati, F., & Venturelli, A. (2021). The determinants of business contribution to the 2030 Agenda: Introducing the SDG Reporting Score. Business Strategy and the Environment, 30(1), 404-421.

transition of private firms towards sustainable business practices is seen as a critical step towards achieving the SDGs[53]. Regulatory measures, such as Directive 2014/95/EU[54] introduced by the European Union, are aligned with SDG target 12.6[55] and regulate non-financial reporting in many member states[56].

An immense challenge in implementing the Sustainable Development Agenda lies in transforming business mindsets towards embracing new sustainability practices, technologies, and business models[57]. The adoption of these practices, technologies, and models may stem from various factors, including competitive advantages and threats, adherence to regulations, and pressure from both internal and external stakeholders. To achieve societal acceptance, organisations are required to act responsibly and sustainably in cooperation with their internal and external stakeholders.[58] Similarly, stakeholder theory asserts that successful business operations necessitate organisations to consider the perspectives and expectations of their stakeholders.[59]

The promotion of the SDGs within the global business community is likely to be a long and challenging journey due to their wide-ranging and ambitious nature. However, the Global Reporting Initiative (GRI)[60], which is widely recognised as the leading global framework for sustainability reporting, along with the United Nations Global Compact (UNGC)[61] and the World Business Council for Sustainable Development (WBCSD)[62], has developed the 'SDG Compass'[63]. This guide is designed to help businesses maximise their contribution towards achieving the SDGs.

---

53 Pizzi, S., Rosati, F., & Venturelli, A. (2021). The determinants of business contribution to the 2030 Agenda: Introducing the SDG Reporting Score. Business Strategy and the Environment, 30(1), 404-421.

54 Directive 2014/95/EU of the European Parliament and of the Council of 22 October 2014 amending Directive 2013/34/EU as regards disclosure of non-financial and diversity information by certain large undertakings and groups

55 SDG 12.6: Sustainable business

56 Pizzi, S., Rosati, F., & Venturelli, A. *The determinants of business contribution to the 2030 Agenda: Introducing the SDG Reporting Score*. Business Strategy and the Environment, 30(1), 2021, p.404.

57 Rosati, F., & Faria, L. G. D. *Business contribution to the Sustainable Development Agenda: Organizational factors related to early adoption of SDG reporting*. Corporate Social Responsibility and Environmental Management, *26*(3), 2019, p.588.

58 *Ibidem*.

59 M. Friedman, A Friedman doctrine-- The Social Responsibility of Business Is to Increase Its Profits, The New York Tymes, 1970

60 Global Reporting Initiative (GRI)

61 United Nations Global Compact (UNGC)

62 World Business Council for Sustainable Development (WBCSD)

63 Jones, Peter ORCID: 0000-0002-9566-9393, Hillier, David and Comfort, Daphne (2016) The sustainable development goals and business. International Journal of Sales, Retailing and Marketing, 5 (2). p. 39

2. The EU climate policy

2.1. European Union Climate Law general outlook

The European Union (EU) has been at the forefront of international climate policy for several decades, taking significant steps to reduce emissions and shaping global institutional arrangements to tackle climate change. Climate action has quasi-constitutional status in EU law, with combating climate change being one of the core objectives of its policy on protecting the environment. In 2019, the EU launched the European Green Deal, aiming to reduce net emissions to zero by mid-century while addressing environmental and social goals.[64] With a population of 450 million and a €14.5 trillion economy, the EU is not a sovereign state or an international organisation but a complex multi-level institutional landscape comprising 27 Member States with varying interests, political dynamics, and willingness to act collectively[65].

Recognising this context, the EU has long tried to act as a leader in international climate policy, shaping evolving international institutional arrangements and developing policies and measures to reduce its emissions. Although the EU's founding treaties do not explicitly define climate policy, Article 191(1) of the Treaty on the Functioning of the European Union (TFEU)[66] refers to combating climate change as one of the core objectives of its policy on protecting the environment.[67]

The European Union has been a proponent of incorporating climate change goals into other policy domains through Climate Policy Integration (CPI). However, the success of implementing CPI across different policies, programs, and sectors has been inconsistent.[68]

---

[64] Jones, Peter ORCID: 0000-0002-9566-9393, Hillier, David and Comfort, Daphne (2016) The sustainable development goals and business. International Journal of Sales, Retailing and Marketing, 5 (2). p. 38

[65] T. Rayner et al. The global importance of EU climate policy: an introduction *Handbook on European Union climate change policy and politics*. Edward Elgar Publishing, 2023 p.1

[66] Article 191(1)TFUE

1. *Union policy on the environment shall contribute to pursuit of the following objectives:*
preserving, protecting and improving the quality of the environment,
protecting human health,
prudent and rational utilisation of natural resources,
promoting measures at international level to deal with regional or worldwide environmental problems, and in particular combating climate change.

[67] Stoczkiewicz. M. The climate policy of the European Union from the Framework Convention to the Paris Agreement, Journal of European Environmental & Planning Law, 2018, 15: 42–68.

[68] C. Dupont, & A. Jordan (2021). Policy integration. In Environmental Policy in the EU: Actors, Institutions and Processes (Fourth Edition, pp. 203–219). London: Routledge. and Jordan, A., & A. Lenschow (2010). Environmental policy integration: a state of the art review. Environmental Policy and Governance, 20 (3), 147–158.

Climate Policy Integration (CPI) emerged in the 2000s, particularly in energy, agriculture, and transport policies, alongside its incorporation into the EU budget starting in 2014. Initially rooted in broader concepts of policy integration and environmental policy integration (EPI), CPI gained momentum in the EU in the 2000s with efforts to develop integrated policies across multiple sectors. The European Green Deal, introduced in 2019, further emphasises the necessity for all policies and projects to align with the objective of achieving climate neutrality by 2050 and bolstering climate resilience in the EU.[69]

European Union, since 1990, has developed and worked on climate policies, building up a broad portfolio of mitigation policies, measures and governance tools. The portfolio of domestic climate mitigation[70] developed by the European Union is considered one of the most advanced in the world. Limited progress characterised the 1990s, highlighted by the Commission's unsuccessful carbon/energy tax proposal, which member states obstructed[71]. The 2000s established an increasing politicisation of climate change, leading to the formulation, execution, establishment, and subsequent revision of the Emissions Trading System (ETS)[72]. This system was pivotal in establishing a European carbon market for greenhouse gas (GHG) emission allowances. A comprehensive climate policy portfolio emerged during this period, explicitly linking climate and energy policies. The initial half of the 2010s experienced a deceleration in climate policy development, with patchy implementation and sporadic, incremental advances. This was particularly challenging given the broader EU financial crisis and austerity context.[73] However, in the latter half of the 2010s, renewed policy initiatives gained traction, particularly concerning target-setting, policy measures for 2030, and the unveiling of the European Green Deal (EGD).[74]

---

[69] K. Rietig and C. Dupont, Climate policy integration and climate mainstreaming in the EU budget, ch. 17 of Handbook on European Union Climate Change Policy and Politics, 14 July 2023, p. 246-258

[70] Dupont, C., Moore, B., Boasson, E. L., Gravey, V., Jordan, A., Kivimaa, P., Kulovesi, K., Kuzemko, C., Oberthür, S., Panchuk, D., Rosamond, J., Torney, D., Tosun, J., & von Homeyer, I. (2024). Three decades of EU climate policy: Racing toward climate neutrality? *WIREs Climate Change*, 15(1), e863. https://doi.org/10.1002/wcc.863

[71] *Ibidem*.

[72] Directive (EU) 2023/959 of the European Parliament and of the Council of 10 May 2023 amending Directive 2003/87/EC establishing a system for greenhouse gas emission allowance trading within the Union and Decision (EU) 2015/1814 concerning the establishment and operation of a market stability reserve for the Union greenhouse gas emission trading system (Text with EEA relevance)

[73] Dupont, C., Moore, B., Boasson, E. L., Gravey, V., Jordan, A., Kivimaa, P., Kulovesi, K., Kuzemko, C., Oberthür, S., Panchuk, D., Rosamond, J., Torney, D., Tosun, J., & von Homeyer, I. (2024). Three decades of EU climate policy: Racing toward climate neutrality? *WIREs Climate Change*, 15(1), e863. https://doi.org/10.1002/wcc.863

[74] Communication from the commission to the European parliament, the European council, the council, the European economic and social committee and the committee of the regions The European Green Deal, Brussels, 11, Dec, 2019

Nevertheless, the most impactful and ambitious policy framework was published in 2019 by the European Commission, the executive arm of the EU: the European Green Deal (EGD)[75]. The European Green Deal's primary goal is to achieve climate neutrality by 2050, and it aims to push the European Union's policy and state members' governments to make more policy decisions with this goal in mind.[76]

2.2. The European Green Deal

In December 2019, the European Green Deal (EGD)[77] was published, and it presented the new growth strategy of the European Union with the primary goal of achieving climate neutrality by 2050. The scale and the approach offered by the European Green Deal regarding climate governance were unseen before.[78] The European Green Deal aimed to extend the policy to all sectors and systems and pursue a "just transition"[79]. The European Commission defined the "just transition" as the idea that no one should be "left behind in the transition to climate neutrality"[80]. This "just transition" concept perfectly describes the integrated approach that the EGD wanted to give to the deal, connecting the EU climate mitigation policy with the social and financial policy[81].

Over the years, the goals set by the European Green Deal have been trying to be put into practice, firstly with the entry into force of the European Climate Law[82], which aims to write into law the objectives of the EGD. The European Climate Law, combined with the Regulation

---

[75] Communication from the commission to the European parliament, the European council, the council, the European economic and social committee and the committee of the regions The European Green Deal, Brussels, 11, Dec, 2019

[76] Dupont, C., Moore, B., Boasson, E. L., Gravey, V., Jordan, A., Kivimaa, P., Kulovesi, K., Kuzemko, C., Oberthür, S., Panchuk, D., Rosamond, J., Torney, D., Tosun, J., & von Homeyer, I. (2024). Three decades of EU climate policy: Racing toward climate neutrality? *WIREs Climate Change*, 15(1), e863. https://doi.org/10.1002/wcc.863

[77] Communication from the commission to the European parliament, the European council, the council, the European economic and social committee and the committee of the regions The European Green Deal, Brussels, 11, Dec, 2019

[78] Dupont, C., Moore, B., Boasson, E. L., Gravey, V., Jordan, A., Kivimaa, P., Kulovesi, K., Kuzemko, C., Oberthür, S., Panchuk, D., Rosamond, J., Torney, D., Tosun, J., & von Homeyer, I. (2024). Three decades of EU climate policy: Racing toward climate neutrality? WIREs Climate Change, 15(1), e863 https://doi.org/10.1002/wcc.863

[79] Communication from the commission to the European parliament, the European council, the council, the European economic and social committee and the committee of the regions The European Green Deal, Brussels, 11, Dec, 2019

[80] European Commission, Proposal for a REGULATION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL establishing the Just Transition Fund, 2019

[81] Dupont, C., Moore, B., Boasson, E. L., Gravey, V., Jordan, A., Kivimaa, P., Kulovesi, K., Kuzemko, C., Oberthür, S., Panchuk, D., Rosamond, J., Torney, D., Tosun, J., & von Homeyer, I. (2024). Three decades of EU climate policy: Racing toward climate neutrality? WIREs Climate Change, 15(1), e863 https://doi.org/10.1002/wcc.863

[82] European Commission: Definition of European Climate Law: *The European Climate Law writes into law the goal set out in the European Green Deal for Europe's economy and society to become climate-neutral by 2050. The law also sets the intermediate target of reducing net greenhouse gas emissions by at least 55% by 2030, compared to 1990 levels.*

on the Governance of the Energy Union and Climate Action[83], aims to set the goals of climate neutrality into law and monitor and report other legal acts.[84]

Within the EU's EGD framework the European Union legislation is swiftly and profoundly evolving it domains to the corporate sustainability governance. This sphere influences companies' oversight of environmental, social, and governance (ESG) issues[85]. Several EU laws have been enacted in this realm, emphasising significant directives like the Corporate Sustainability Reporting Directive (CSRD) [86] and the Taxonomy Regulation[87].

Other legal acts within the European Green Deal framework are the ETS directive[88], the Effort Sharing Regulation (ESR)[89], the Renewable Energy Directive[90], the Regulation on Land, Land Use Change and Forestry (LULUCF)[91], and the Regulation of the Energy Taxation Directive (ETD). These are legal acts that operationalise the accomplishment of the gaols. [92]

2.3. From the Non-financial Reporting Directive to the Corporate Sustainability Directive and the Taxonomy Regulation

Businesses must consider the role of government regulations and guidelines: boards and senior management must establish a connection between business and the environment for the firm's

[83] European Commission, Energy, Climate change, Environment, Governance of the energy union and climate action https://climate.ec.europa.eu/eu-action/climate-strategies-targets/governance-energy-union-and-climate-action_en (last visited may 2024).

[84] Dupont, C., Moore, B., Boasson, E. L., Gravey, V., Jordan, A., Kivimaa, P., Kulovesi, K., Kuzemko, C., Oberthür, S., Panchuk, D., Rosamond, J., Torney, D., Tosun, J., & von Homeyer, I. (2024). Three decades of EU climate policy: Racing toward climate neutrality? WIREs Climate Change, 15(1), e863 https://doi.org/10.1002/wcc.863

[85] Kettlewell, Niejahr And Galdino European Union: the new Corporate Sustainability Due Diligence Directive has been provisionally agreed upon- what does this mean for companies? , Global Compliance News, feb 2024

[86] Corporate Sustainability Reporting Directive (CSRD) Directive (EU) 2022/2464 of the European Parliament and of the Council of 14 December 2022 amending Regulation (EU) No 537/2014, Directive 2004/109/EC, Directive 2006/43/EC and Directive 2013/34/EU, as regards corporate sustainability reporting (Text with EEA relevance)

[87] Taxonomy regulation: Regulation (EU) 2020/852 of the European Parliament and of the Council of 18 June 2020 on the establishment of a framework to facilitate sustainable investment and amending Regulation (EU) 2019/2088 (Text with EEA relevance)

[88] European Commission, Energy, Climate change, Environment, Sistema per lo scambio delle quote di emissione dell'UE (ETS UE) https://climate.ec.europa.eu/eu-action/eu-emissions-trading-system-eu-ets_it (last visited may 2024).

[89] European Commission, Energy, Climate change, Environment, Effort sharing 2021-2030: targets and flexibilities https://climate.ec.europa.eu/eu-action/effort-sharing-member-states-emission-targets/effort-sharing-2021-2030-targets-and-flexibilities_en (last visited may 2024).

[90] European Commission, Energy, Climate change, Environment, Renewable Energy Directive, https://energy.ec.europa.eu/topics/renewable-energy/renewable-energy-directive-targets-and-rules/renewable-energy-directive_en (last visited may 2024).

[91] European Commission, Energy, Climate change, Environment , Land use sector, EU rules on land use, land use change and forestry (LULUCF) https://climate.ec.europa.eu/eu-action/land-use-sector_en#eu-rules-on-land-use-land-use-change-and-forestry-lulucf (last visited may 2024).

[92] S. Schlacke, et al. "Implementing the EU Climate Law via the 'Fit for 55'package." *Oxford Open Energy* 1 (2022): oiab002.

long-term viability.[93] The new economic regulations require compliance with the goals of the European Green Deal. New reporting requirements are being developed to expand the scope and application of the Non-Financial Reporting Directive.[94]

The Corporate Sustainability Reporting Directive (CSRD) proposal aims to improve sustainability reporting to better utilize the potential of the European Single Market and contribute to the transition to a wholly sustainable and inclusive economic and financial system, complying with the European Green Deal and the UN Sustainable Development Goals (SDGs).[95]

Shifting from the use of "non-financial information" to "sustainability information" aims to acknowledge the financial significance of such data[96]. This initiative seeks to enhance the quality of companies' data regarding their sustainability risks and impacts. The goal is to enhance the reliability, comparability, and relevance of the information provided by companies concerning their opportunities and impacts[97].

The proposed changes to sustainability reporting in the European Union entail several key elements. Firstly, reported information must be audited and digitally tagged for machine-readability, facilitating its integration into a single access point as part of the Capital Markets Union Action Plan[98]. This proposal revises existing sustainability reporting requirements outlined in the Non-Financial Reporting Directive (NFRD)[99] to align them more closely with broader sustainable finance regulations, such as the Sustainable Financial Disclosure

[93] Villiers C. New Directions in the European Union's Regulatory Framework for Corporate Reporting, Due Diligence and Accountability: The Challenge of Complexity. *European Journal of Risk Regulation*. 2022;13(4):548-566. doi:10.1017/err.2022.25

[94] NFRD Directive 2014/95/EU of the European Parliament and of the Council of 22 October 2014 amending Directive 2013/34/EU as regards disclosure of non-financial and diversity information by certain large undertakings and groups Text with EEA relevance

[95] Deloitte Analysis, Da Non-Financial Reporting a Corporate Sustainability Reporting, 2021.

[96] Villiers C. New Directions in the European Union's Regulatory Framework for Corporate Reporting, Due Diligence and Accountability: The Challenge of Complexity. *European Journal of Risk Regulation*. 2022;13(4):548-566. doi:10.1017/err.2022.25

[97] *Ibidem*.

[98] Capital Market Union Action Plan, Communication from the commission to the European parliament, the council, the European economic and social committee and the committee of the regions a Capital Markets Union for people and businesses-new action plan, Brussels, 24.9.2020.

[99] NFRD, Directive 2014/95/EU of the European Parliament and of the Council of 22 October 2014 amending Directive 2013/34/EU as regards disclosure of non-financial and diversity information by certain large undertakings and groups, 22 October 2014.

Regulation[100] and the Taxonomy Regulation[101], as well as the objectives of the European Green Deal[102]. The amendments also extend to the Audit Directive[103], the Audit Regulation[104], and the Transparency Directive[105].[106]

The EU Taxonomy[107] is a fundamental aspect of the EU's sustainable finance framework, aimed at directing investments towards activities that support the transition to a greener economy. It provides a standard classification system for identifying environmentally sustainable economic activities, helping to scale up sustainable investment and prevent greenwashing.[108] The Taxonomy Regulation, which became effective in July 2020, establishes the basis for the EU taxonomy by outlining four conditions that economic activities must meet to be considered environmentally sustainable[109]. The Commission is responsible for defining technical screening criteria for each environmental objective to create a comprehensive list of sustainable activities.[110]

The implementation of these measures involves multiple layers of legislative instruments, amending and complementing existing directives with an extended scope covering approximately 49,000 companies. Overall, these changes signify a relevant advancement in sustainability reporting within the EU, albeit with complex technical and legal considerations.[111]

---

[100] Sustainable Financial Reporting Regulation, Regulation (EU) 2019/2088 of the European Parliament and of the Council of 27 November 2019 on sustainability-related disclosures in the financial services sector.

[101] Taxonomy Regulation, Regulation (EU) 2020/852 of the European Parliament and of the Council of 18 June 2020 on the establishment of a framework to facilitate sustainable investment and amending Regulation (EU) 2019/2088

[102] European Green Deal, Communication From The Commission To The European Parliament, The European Council, The Council, The European Economic And Social Committee And The Committee Of The Regions The European Green Deal, Brussels, 11.12.2019.

[103] Audit Directive, Directive 2014/56/EU of the European Parliament and of the Council of 16 April 2014 amending Directive 2006/43/EC on statutory audits of annual accounts and consolidated accounts.

[104] *Ibidem*.

[105] Transparency Directive Directive 2004/109/EC of the European Parliament and of the Council of 15 December 2004 on the harmonisation of transparency requirements in relation to information about issuers whose securities are admitted to trading on a regulated market and amending Directive 2001/34/EC, 15 December 2004.

[106] Villiers C. New Directions in the European Union's Regulatory Framework for Corporate Reporting, Due Diligence and Accountability: The Challenge of Complexity. *European Journal of Risk Regulation*. 2022;13(4):548-566. doi:10.1017/err.2022.25

[107] Taxonomy Regulation (EU) 2020/852 of the European Parliament and of the Council of 18 June 2020 on the establishment of a framework to facilitate sustainable investment and amending Regulation (EU) 2019/2088

[108] European Commission, EU Taxonomy for sustainable activities. https://finance.ec.europa.eu/sustainable-finance/tools-and-standards/eu-taxonomy-sustainable-activities_en (last visited may 2024)

[109] *Ibidem*.

[110] *Ibidem*.

[111] Villiers C. New Directions in the European Union's Regulatory Framework for Corporate Reporting, Due Diligence and Accountability: The Challenge of Complexity. *European Journal of Risk Regulation*. 2022;13(4):548-566. doi:10.1017/err.2022.25

2.4 *"Fit for 55"*

On July 14, 2021, the European Commission introduced the "Fit for 55" package. This package consists of a set of proposals to revise and update EU legislation and introduce new initiatives to ensure that EU policies align with the climate objectives concurred upon by the Council and the European Parliament.

Initially, the package included 16 legislative and strategic proposals to implement the European Green Deal and increase the target for lowering greenhouse gas emissions by 55% by 2030 in comparison with the levels of 1990.[112]

The package of proposals aims to provide a coherent and balanced framework for achieving the EU climate targets. These recommendations mean to ensure a fair and social transition while maintaining and strengthening innovation and competitiveness in the EU industry. In addition to that, the goal is also to provide an equity playing field with third-country economic operators supporting the EU's leading position in the global fight against climate change.[113]

The official paper presented some practices to be executed to achieve the objectives in the "Fit for 55" package.

Firstly, the implementation of the EU Emissions Trading Scheme (EU ETS)[114], which is a carbon market based on an emission trading and limitation system for energy-intensive industries and the energy production sector. It is the EU's main instrument for tackling emission reductions. Since its introduction in 2005, EU emissions have fallen by 41%.[115]

Secondly, there is also the proposal of a Social Climate Fund[116], which aims to address the social and distributive impact of the new emissions trading scheme for the construction and road transport sectors.[117]

---

[112]S. Schlacke, et al. "Implementing the EU Climate Law via the 'Fit for 55'package." *Oxford Open Energy* 1 (2022): oiab002.

[113] European Council, Fit for 55 https://www.consilium.europa.eu/it/policies/green-deal/fit-for-55-the-eu-plan-for-a-green-transition/#what

[114] ETS directive: Directive (EU) 2023/959 of the European Parliament and of the Council of 10 May 2023 amending Directive 2003/87/EC establishing a system for greenhouse gas emission allowance trading within the Union and Decision (EU) 2015/1814 concerning the establishment and operation of a market stability reserve for the Union greenhouse gas emission trading system (Text with EEA relevance)

[115] European Council, Fit for 55 https://www.consilium.europa.eu/it/policies/green-deal/fit-for-55-the-eu-plan-for-a-green-transition/#what

[116] Social Climate Fund, Regulation (EU) 2023/955 of the European Parliament and of the Council of 10 May 2023 establishing a Social Climate Fund and amending Regulation (EU) 2021/1060

[117] Fit for 55: Communication from the commission to the European Parliament, the council, the European economic and social committee and the committee of the regions 'fit for 55': delivering the EU's 2030 climate target on the way to climate neutrality, Brussels, 17 July 2021.

Thirdly, the Carbon Border Adjustment Mechanism (CBAM)[118] aims to ensure that increased emissions outside its borders do not offset the EU's emission reduction efforts by relocating production to third countries or through increased imports of carbon-intensive products.

In addition to that, the directive "Fit for 55%" also includes a proposal to revise the Directive on the promotion of renewable energy. The proposal aims to increase the current EU objective's share of renewable energy sources in the total energy mix from at least 32% to 40% by 2030.[119]

The Effort Sharing Regulation (ESR) [120], last revised in 2018, is another regulation that has been put into place. It establishes mandatory annual targets for reducing greenhouse gas emissions for Member States in categories that are not covered in the EU Emissions Trading Scheme (EU ETS) [121] or the Land Use, Land Use Change and Forestry Regulation (LULUCF)[122].

Through the "Fit for 55" package, European climate legislation aims to achieve the EU's climate target of reducing emissions by at least 55% by 2030. This objective becomes a legal obligation through all the abovementioned regulations and other policy measures.[123]

2.5. Corporate Sustainability Due Diligence Directive (CS3D)

Another crucial directive in European climate law might be the Corporate Sustainability Due Diligence Directive (CS3D), provisionally agreed upon at a political level in December 2023. However, it still needs to formally enter into force throughout the adaptation of the European Parliament and the Council of Europe. At the time of writing, the discussion about the CS3D is still ongoing, and the Directive has not yet been put into force. This section will analyse

[118] CBAM, Regulation (EU) 2023/956 of the European Parliament and of the Council of 10 May 2023 establishing a carbon border adjustment mechanism (Text with EEA relevance), 10 may 2023.

[119] European Council, Fit for 55 https://www.consilium.europa.eu/it/policies/green-deal/fit-for-55-the-eu-plan-for-a-green-transition/#what

[120] Effort sharing regulation, Regulation (EU) 2023/857 of the European Parliament and of the Council of 19 April 2023 amending Regulation (EU) 2018/842 on binding annual greenhouse gas emission reductions by Member States from 2021 to 2030 contributing to climate action to meet commitments under the Paris Agreement, and Regulation (EU) 2018/1999 (Text with EEA relevance), 19 April 2023.

[121] ETS directive, Directive (EU) 2023/959 of the European Parliament and of the Council of 10 May 2023 amending Directive 2003/87/EC establishing a system for greenhouse gas emission allowance trading within the Union and Decision (EU) 2015/1814 concerning the establishment and operation of a market stability reserve for the Union greenhouse gas emission trading system.

[122] LULUCF, REGOLAMENTO (UE) 2018/841 DEL PARLAMENTO EUROPEO E DEL CONSIGLIO del 30 maggio 2018 relativo all'inclusione delle emissioni e degli assorbimenti di gas a effetto serra risultanti dall'uso del suolo, dal cambiamento di uso del suolo e dalla silvicoltura nel quadro 2030 per il clima e l'energia, e recante modifica del regolamento (UE) n. 525/2013 e della decisione n. 529/2013/UE, 30 may 2018.

[123] European Council, Fit for 55 https://www.consilium.europa.eu/it/policies/green-deal/fit-for-55-the-eu-plan-for-a-green-transition/#what

what it could mean for a company if this development of the European Green Deal would enter into force.
It is crucial to analyse and clearly understand the implications of entering into the force of CS3D because it would have a significant impact on business. This Directive will conceal some different types of EU and non-EU companies, and these will be differentiated into four distinct categories: "very large" companies, ultimate parents of "very large" groups, companies with franchising or licensing business models and finally, companies in the "high impact sector". This
differentiation will impact the level and moment of implementation of the practices provided by the Directive[124].
These covered companies will be required to adopt and execute robust due diligence policies to detect, prevent, alleviate, and address both existing and potential human rights and environmental risks within their operations, those of subsidiaries, and in collaboration with business partners across their 'chain of activities,' which refers to specific segments of the value chain. In addition, companies will be required to prepare a transition plan for climate change mitigation that will align with the goals set during the Paris Agreement[125]. Without compliance with these requests, the company will be imposed some significant administrative and financial penalties.[126]
According to the CS3D, companies falling within its scope must establish and execute efficient due diligence policies[127]. These policies should aim at recognising, preventing, mitigating, and resolving both potential and actual "adverse impacts" defined by reference to international treaties ratified by the member state and comply with adverse impacts on human rights and environmental issues[128]. This obligation extends to the companies' internal operations, their subsidiaries, and the specific operations of their business partners. The concept and interpretation of what will be considered and what will constitute an "adverse

[124] Kettlewell, Niejahr And Galdino European Union: the new Corporate Sustainability Due Diligence Directive has been provisionally agreed upon- what does this mean for companies? , Global Compliance News, feb 2024
[125] Paris Agreement "Paris agreement." Report of the conference of the parties to the United Nations Framework Convention on Climate Change (21st session, 2015: Paris). Retrieved December. Vol. 4. No. 2017. Getzville, NY, USA: HeinOnline, 2015.
[126] Kettlewell, Niejahr And Galdino European Union: the new Corporate Sustainability Due Diligence Directive has been provisionally agreed upon- what does this mean for companies? , Global Compliance News, feb 2024
[127] CS3D, Proposal for a Directive Of The European Parliament And Of The Council on Corporate Sustainability Due Diligence and amending Directive (EU) 2019/1937, Brussels, 23.2.2022.
[128] Kettlewell, Niejahr And Galdino European Union: the new Corporate Sustainability Due Diligence Directive has been provisionally agreed upon- what does this mean for companies? , Global Compliance News, feb 2024

impact" will be interesting, relevant and sensitive legal issues correlated with this Directive.[129]

Companies will have to adopt policies that go beyond their traditional scope of responsibility and must also consider the operations of their direct and indirect business partners. Commercial and non-commercial agreements, as well as the upstream and downstream value chains, will be contemplated.[130]

The schema of entering into force this Directive when and if it is discussed by both the Parliament and the Council of Europe will be as follows: the Directive will be compulsory for 'very large' EU and non-EU companies after three years of entering into force; after four years it will start applying to the other 'very large' companies and companies with franchising or licensing business models; finally, after five years of entering into force it will be compulsory for smaller EU companies in high impact sectors.[131]

In conclusion, the Corporate Sustainability Due Diligence Directive has the potential to play a pivotal role in the development of the European Green Deal. If it is put into force, companies will need to take greater responsibility for their impact on the environment and society. This would require them to conduct due diligence on their supply chains and take steps to address any negative consequences.

3.The Impact of Sustainability Measures on Business

3.1. Sustainability and Business Strategy

In modern times, economies are undergoing changes that prioritise environmental causes. The growing awareness of the importance of climate change and the impact of new regulations at the European and national levels fuels this shift in perspective. The environment is gaining legitimacy in civil society and is increasingly considered in business projects and C-suites.[132] Being sustainable has become a priority for businesses in the last decade, and Professor Mike Rosenberg published a book called Strategy and Sustainability,[133] analysing this phenomenon.

---

[129] *Ibidem*.

[130] Kettlewell, Niejahr And Galdino European Union: the new Corporate Sustainability Due Diligence Directive has been provisionally agreed upon- what does this mean for companies? , Global Compliance News, feb 2024

[131] Kettlewell, Niejahr And Galdino European Union: the new Corporate Sustainability Due Diligence Directive has been provisionally agreed upon- what does this mean for companies? , Global Compliance News, feb 2024

[132] M. Rosenberg, A Strategic Approach to Sustainability IESE Insight Review.pdf https://www.iese.edu/insight/articles/sustainability-environmentalism-managers/

[133] M. Rosenberg, *Strategy and Sustainability: A Hardnosed and Clear-Eyed Approach to Environmental Sustainability For Business*, IESE Business Collection, 205 chapter 1-2

He explains why, in the business world, the environmental problem is being addressed so late compared to other fields like activism, journalism, or politics.[134]
Firstly, environmentalists often argue that businesses prioritise profit over social and environmental well-being, resulting in negative impacts. However, business leaders have a different perspective. They consider themselves entities that contribute positively to society and are responsible for the advancements of modern civilisation[135].
Secondly, usually, businesses operate on a short-term outlook of three to five years, driven by factors such as financial considerations, shareholder demands, and strategic planning cycles. This approach can limit the scope of longer-term goals, which concerns stakeholders who prioritise environmental sustainability over immediate gains. Such stakeholders think in terms of decades while business leaders' view tend to be more short-term oriented than long-term, even though more attention to the environment will require a long-term view. [136]
Thirdly, senior executives and board members were primarily concerned about their company's financial performance. Consequently, environmental issues might not receive much attention or could emerge as an unexpected outcome of a firm's efforts to reduce costs. This emphasis on financial performance significantly differs from the priorities of the people concerned with environmental sustainability.[137] Still, some scenarios are changing, and finance is evolving in a way that is becoming greener and more sustainable.
Fourthly, business leaders typically rely on the government to establish regulations and guidelines for their operations. Everyone prefers to operate within clear and concise rules. The belief that a company should be held responsible for actions that were legal in the past is widely discussed in the business.[138]
Due to their differing starting points, it is understandable that boards and senior management may struggle to connect business and the environment. However, it is crucial that they do so for day-to-day operational matters and strategic issues that can significantly impact the firm's long-term viability, financial performance, shareholder returns, and business size and scope in terms of market segments and geographies.[139]

---

[134] M. Rosenberg A Strategic Approach to Sustainability IESE Insight Review.pdf https://www.iese.edu/insight/articles/sustainability-environmentalism-managers/
[135] M. Rosenberg, *Strategy and Sustainability: A Hardnosed and Clear-Eyed Approach to Environmental Sustainability For Business*, IESE Business Collection, 205 chapter 1-2
[136] M. Rosenberg A Strategic Approach to Sustainability IESE Insight Review.pdf https://www.iese.edu/insight/articles/sustainability-environmentalism-managers/
[137] Ibidem.
[138] M. Rosenberg, *Strategy and Sustainability: A Hardnosed and Clear-Eyed Approach to Environmental Sustainability For Business*, IESE Business Collection, 205 chapter 1-2
[139] M. Rosenberg A Strategic Approach to Sustainability IESE Insight Review.pdf https://www.iese.edu/insight/articles/sustainability-environmentalism-managers/

In addition, businesses must consider the environment due to the new economic regulations that imply and require compliance with the goals of the European Green Deal.
Operating corporate structures globally and through supply chains is a complex task. To ensure sustainability, a significant effort is underway to shape new laws. The Sustainable Finance Initiative[140] and the Initiative Include Sustainable Corporate Governance [141]are working towards developing new reporting requirements to expand the scope and application of the 2014 Non-Financial Reporting Directive (NFRD)[142] and the updated and most recent CSRD[143] and to change directors' duties to consider stakeholders' needs and environmental and human rights due diligence requirements[144]. These measures align with the United Nations (UN) 2030 Agenda[145] and the UN Guiding Principles on Business and Human Rights (UNGPs)[146] to strengthen the regulatory framework and drive the agenda for sustainable business and finance under the European Union's (EU) Green Deal.[147]

3.2. The implication of CSRD: Biesse Group and Tauron Capital Group case discussion

Around the world, organisations are recognising the importance of disclosing information related to environmental, social, and governance (ESG) aspects through sustainability and integrated reports. However, there have been concerns regarding the quality of voluntarily reported information. The European Union (EU) Directive 2014/95 was implemented to tackle this issue, requiring large companies to disclose non-financial and diversity information. This Directive clearly aims to enhance corporate accountability, transparency, and the comparability

[140] The Sustainable Finance Initiative, https://www.sustainablefinance.hk/ (last visited may 2024).

[141] Sustainable Corporate Governance, European Commission, 2022.
This initiative aims to improve the EU regulatory framework on company law and corporate governance. It would enable companies to focus on long-term sustainable value creation rather than short-term benefits.
[142] NFRD, Directive 2014/95/EU of the European Parliament and of the Council of 22 October 2014 amending Directive 2013/34/EU as regards disclosure of non-financial and diversity information by certain large undertakings and groups, 22 October 2014.
[143] Corporate Sustainability Reporting Directive (CSRD) Directive (EU) 2022/2464 of the European Parliament and of the Council of 14 December 2022 amending Regulation (EU) No 537/2014, Directive 2004/109/EC, Directive 2006/43/EC and Directive 2013/34/EU, as regards corporate sustainability reporting
[144] Villiers C. New Directions in the European Union’s Regulatory Framework for Corporate Reporting, Due Diligence and Accountability: The Challenge of Complexity. *European Journal of Risk Regulation*. 2022;13(4):548-566. doi:10.1017/err.2022.25
[145] UN 2030 Agenda
[146] UN Guiding Principles on Business and Human Rights (UNGPs)
[147] Villiers C. New Directions in the European Union’s Regulatory Framework for Corporate Reporting, Due Diligence and Accountability: The Challenge of Complexity. *European Journal of Risk Regulation*. 2022;13(4):548-566. doi:10.1017/err.2022.25

of information for stakeholders. Investors and consumers are among the primary beneficiaries of this Directive.[148]

On April 21 2021, the European Commission (EC) published its proposal for a Corporate Sustainability Reporting Directive (CSRD), following the review process of the Non-Financial Reporting Directive (NFRD). The CSRD proposal is a key element of the EU sustainable finance package, which includes a comprehensive set of measures to improve the flow of capital to sustainable activities across the EU.[149]

The Directive presupposes companies will adhere to ESG disclosure standards to enhance their reputation or for financial gain. As a result, companies are expected to adjust their practices to comply with the new regulations.[150]

Companies must comply with these new regulations and standards, which are the new requests of the European Union or national law. Indeed, the transition is not immediate and has some effects on the company itself.

Two case studies will be presented, one from Biesse Group, an Italian company, and the other from Tauron Capital Group Poland, that analyse the impact of the directives derived from the European Green Deal and its goals on the activities of the companies.

3.2.1. Biesse Group

Biesse Group is a family-owned business headquartered in the central-west Italian region of Marche. The founder and his family possess 51% of the ordinary share capital, and the company has several subsidiaries worldwide. With around 4,000 employees, Biesse Group is a major wood and glass processing industry player and is listed on the Milan Stock Exchange.[151]

Biesse Group was analysed in a study conducted by Aureli et al. (2019)[152] , and it will be discussed because, despite being a large and multinational firm, the Group had never disclosed

[148] Aureli S, Del Baldo M, Lombardi R, Nappo F. Nonfinancial reporting regulation and challenges in sustainability disclosure and corporate governance practices. Bus Strat Env. 2020; 29: 2392–2403. https://doi.org/10.1002/bse.2509

[149] Deloitte Analysis, Da Non-Financial Reporting a Corporate Sustainability Reporting, 2021.

[150] Aureli S, Del Baldo M, Lombardi R, Nappo F. Nonfinancial reporting regulation and challenges in sustainability disclosure and corporate governance practices. Bus Strat Env. 2020; 29: 2392–2403. https://doi.org/10.1002/bse.2509

[151] *Ivi*. 2394.

[152] *Ivi*, 2392–2403. https://doi.org/10.1002/bse.2509

social and environmental information before Legislative Decree 254/2016[153]. Although some initiatives were present, they were isolated and related to specific policies like safety policies.[154] The board viewed the new reporting obligation as an opportunity to enhance the company's social-environmental sensitivity and care for the local community. The board believed that the company had already possessed these qualities, and the decree provided the opportunity to implement them.[155]
However, Biesse Group also has Chinese and Indian subsidiaries, where they it had social activities before implementing the Directive. In the Indian factory, a CSR manager has been appointed since 2013 due to local government regulations.

According to Doshi et al. (2013)[156], different organisational responses may emerge within complex organisations on an international scale, such as Biesse Group, due to different institutional pressures faced by its units, depending on local embeddedness and organisational size.[157] In the case of Biesse Group, local embeddedness and the concentration of factories in one specific area of Italy led the organisation towards 'implicit' CSR strategies in favour of local communities but did not affect ESG reporting. The Indian unit, however, began disclosing ESG information independently from the parent company due to mandatory obligations.[158]
Consequently, the company had to introduce some changes to the Directive but also plans to develop a sustainability strategy for the future. The study conducted found that various factors influence a company's response to sustainability pressures and vary depending on aligning organisational values and practices with different constituents' demands[159]. The reasons for a company's behaviour can change over time, and mandatory regulations can serve as an

[153] Legislative Decree 254/2016, Attuazione della direttiva 2014/95/UE del Parlamento europeo e del Consiglio del 22 ottobre 2014, recante modifica alla direttiva 2013/34/UE per quanto riguarda la comunicazione di informazioni di carattere non finanziario e di informazioni sulla diversita' da parte di talune imprese e di taluni gruppi di grandi dimensioni. (17G00002) (GU Serie Generale n.7 del 10-01-2017), note: Entrata in vigore del provvedimento: 25/01/2017.
[154] Aureli S, Del Baldo M, Lombardi R, Nappo F. Nonfinancial reporting regulation and challenges in sustainability disclosure and corporate governance practices. Bus Strat Env. 2020; 29:p. 2396 https://doi.org/10.1002/bse.2509
[155] Aureli S, Del Baldo M, Lombardi R, Nappo F. Nonfinancial reporting regulation and challenges in sustainability disclosure and corporate governance practices. Bus Strat Env. 2020; 29:p. 2396 https://doi.org/10.1002/bse.2509
[156] Doshi, A. R., Dowell, G. W. S., & Toffel, M. W. (2013). How firms respond to mandatory information disclosure. Strategic Management Journal, 34, 1209–1231.
[157] *Ibidem*.
[158] Aureli S, Del Baldo M, Lombardi R, Nappo F. Nonfinancial reporting regulation and challenges in sustainability disclosure and corporate governance practices. Bus Strat Env. 2020; 29: p. 2396https://doi.org/10.1002/bse.2509
[158] Legislative Decree 254/2016.
[159] Aureli S, Del Baldo M, Lombardi R, Nappo F. Nonfinancial reporting regulation and challenges in sustainability disclosure and corporate governance practices. Bus Strat Env. 2020; 29:p. 2400. https://doi.org/10.1002/bse.2509

opportunity. Implementing sustainability reporting can help a company better understand its strategic priorities, and the IA function may play a crucial role in cultivating a culture of sustainability.

3.2.2. Tauron Capital Group

Another example on how the European Green Deal goals are affecting the operating activities of single companies can be the example and the study conducted on Tauron Capital Group.

Poland is currently undergoing a transformation in its energy sector due to adopted economic regulations. The National Energy and Climate Plan[160] emphasises the need to make optimal use of the country's own energy resources while also recognising that coal will continue to play a significant role in the structure of energy carriers. The government's goal is to expand the variety of energy sources by steadily raising the proportion of renewable energy sources, specifically wind fuel and solar energy, and integrating nuclear energy into this mix. [161] The energy and climate strategies developed at the national level in Poland align with the fundamental principles of the European Union's energy policy.

Poland's energy and climate objectives and actions may be viewed differently from a European perspective, but their implementation will cause significant changes in how energy companies operate in Poland[162]. The European Green Deal's measures will lead to the adoption of many sustainable business practices and the transformation of existing business models. The study conducted by Samborski (2019)[163] explicitly analyses Tauron Capital Group's business model and how it aligns with the climate protection requirements outlined in the European Green Deal. The Tauron Capital Group is an energy company that is vertically integrated. It comprises independent companies with one primary entity. The group's business model encompasses all aspects of the value chain.[164]

The Tauron Group's business model is based on six pillars, which include environmental protection[165]. The Tauron Group is implementing sustainable business practices to build a sustainable future in response to the European Green Deal and the National Energy and Climate

[160] Poland's National Energy and Climate Plan for years 2021-2030 (NECP PL) along with attachments has been developed in fulfilment of the obligation set out in Regulation (EU) 2018/1999 of the European Parliament and of the Council of 11 December 2018 on the Governance of the Energy Union and Climate Action.

[161] A. Samborski, *The energy company business model and the European green deal*. Energies, 15(11), 2022 p. 6

[162] *Ibidem*.

[163] A. Samborski, *The energy company business model and the European green deal*. Energies, 15(11), 2022

[164] Tauron Capital Group https://raport.tauron.pl/en/conditions-of-activity/competitive-environment/#:~:text=TAURON%20Capital%20Group's%20distribution%20grids,revenue%20from%20the%20distribution%20operations.

[165] A. Samborski, *The energy company business model and the European green deal*. Energies, 15(11), 2022 p. 9

Plan. They are investing in renewable energy sources such as wind and photovoltaic power plants and modernising hydroelectric power plants. They are also carrying out distribution network modernisation and expansion programs to reduce energy losses and increase the possibility of connecting more renewable sources to the network. The Tauron Group has launched modern units, such as coal, gas, and steam, with high energy efficiency based on the latest technological developments, which will eventually replace more emission-generating assets based on customary technologies.

In conclusion, economic regulations like the CSRD are the result of societal expectations and technological advancements and require changes inside the companies to comply with the regulations. Economic Regulation encompasses control over various aspects of businesses and employs policy instruments such as hard law, soft law, incentives, information policies, and directions for change. It has an impact on business activities and can restrict certain activities and encourage companies to align with the regulator's expectations. Economic Regulation plays a vital role in the efficiency and distribution of profits in economic activities. Its primary objective is safeguarding society, correcting inefficient or unfair market practices, and addressing environmental issues.[166]

---

[166] A. Samborski, *The energy company business model and the European green deal*. Energies, 15(11), 2022 p. 12

CHAPTER 2: COMPANY PURPOSE, SUSTAINABLE BUSINESS AND GREEN FINANCE

The rise of globalization has led to the emergence of powerful multinational corporations, some of which surpassing national governments in revenue generation. However, as the World Economic Forum highlighted[167], this expansion has coincided with escalating environmental and social risks, such as biodiversity loss, climate change, and social disintegration whereby the COVID-19 pandemic situation has played a relevant role. The world situation continues to be complex due to political tensions in different countries, the increase in internal violence and the weakening of democracy. These factors have increased mistrust in public institutions and the private sector; these are the reasons why, the purpose of the company must transcend its centralism and be able to satisfy the needs of its internal and external stakeholders[168].

The difficulties generated by the global crisis make it necessary to invoke the private sector. In the management of resources, the independence of action, the interest in operating in stable scenarios and the need to have a positive relationship with their clients. Companies are in an ideal position to generate initiatives that positively impact their community, promoting mutual growth and reciprocity. [169]

In light of these crisis, there is a growing expectation for large companies to play a more significant role in addressing sustainable development challenges as emphasized by the Sustainable Development Goals (SDGs) adopted in 2015[170]. While countries are primarily responsible for implementing the SDGs, the United Nations recognizes the crucial contribution of businesses to achieving these goals. Consequently, large companies are expected to adapt their approaches to sustainable development, redefining their corporate purposes beyond profit maximization to benefit stakeholders and society.[171]

1. Company Purpose

A company's reason for existence is known as its purpose, distinct from its mission; while the mission is what a company does, the purpose is why it does it.

---

[167] World Economic Forum (WEF) Quantifying the Impact of Climate Change on Human Health, 16 January 2024.
[168] R. Rodrich-Portugal, M. Marino-Jiménez, G. Mayurí-Aguilar., & S.A. Abad-Neyra. The purpose of the company beyond its position in the market: The new agent of social development. *Business Strategy & Development*, 6(4), 2023, 931–941. https://doi.org/10.1002/bsd2.288
[169] *Ibidem*.
[170] K. Sasaki, W. Stubbs, & M. Farrelly, The influence of the sustainable development goals on large companies' adoption and implementation of a broader corporate purpose. Corporate Governance: The International Journal of Business in Society. https://doi.org/10.1108/CG-04-2023-0167
[171] *Ibidem*.

There is a famous story about President John F. Kennedy and a NASA janitor that helps understand the power of purpose. When the President saw the janitor, he asked him what he was doing, to which the worker replied that he was helping to put a man on the moon. This anecdote demonstrates that a company's purpose is more significant than individuals' job roles and daily activities. A vital purpose motivates employees, fosters a robust company culture, and encourages everyone to work towards the best results.

Some examples of company purposes could be Coca-Cola aspiration to refresh the world and make a difference, while United Airlines aspire to connect people and unite the world.

Purpose is why a company exists and how it positively impacts the world. Companies driven by purpose tend to achieve more and reach higher goals[172]. Companies with a genuine purpose provide value to customers, suppliers, partners and investors. Senior leaders allocate capital and resources with purpose, while employees consider purpose when making decisions. Leaders must build dynamics centred around purpose to embed purpose throughout the organisation.[173]

McKinsey's analysis of 2020[174] identifies five critical elements that are linked to a company's purpose:

1. Portfolio Strategy and Products: the company's products, services, and choices to serve customers best.

2. People and Culture: the talent and talent management deployed by the company.

3. Processes and Systems: the operational processes adapted to meet purpose-related targets and how the company ensures that behaviour up and down its value chain aligns with its purpose.

4. Performance Metrics: the target metrics and incentives used to measure progress and how the company creates and distributes incentives to make its purpose tangible.

5. Positions and Engagement: the company consistently aligns its external positions and affiliations to deliver its defined purpose.[175]

---

[172] S. Leape et al., More than a mission statement: How the 5Ps embed purpose to deliver value November 5, 2020, Article McKinsey Quarterly
[173] *Ibidem*.
[174] *Ibidem*.
[175] *Ibidem*.

An example on how to define the purpose of a company was given by Hubert Joly who was the former chairman and CEO of Best Buy; in an Harvard Business Review he described and analyzed how to create a meaningful corporate purpose, proposing the graph below that simply explains all the aspects to consider when looking for company purpose in a company. In his opinion, the company's purpose concerns the world's needs, the passions of the people working in the company, and what the company is uniquely good at, without forgetting how the company can create economic value.

Figure 1: Looking for company Purpose[176]

Purpose-oriented organisations are emerging as the future's leaders: a recent global survey exploring consumer preferences revealed that 42 per cent of Millennials and 39 per cent of Gen Z individuals are willing to invest more in sustainable products and services, compared to 31 per cent of Gen X and 26 per cent of Baby Boomers. Furthermore, 85 per cent of consumers are highly interested in environmentally conscious purchasing[177].
Influential figures like Larry Fink, the head of BlackRock, the world's largest investment firm, wrote a letter to the CEOs of companies advocating to embrace a social purpose[178].

[176] H. Joly, Creating a meaningful corporate purpose, Harvard Business Review, 28 Oct, 2021.
[177] University of Cambridge Institute for Sustainable Leadership (CISL), net zero business transformation A framework for accelerating change in an era of turbulence and complexity. Cambridge, UK, 2022, p.12
[178] Larry Fink letter to CSO's The Power of Capitalism https://www.blackrock.com/corporate/investor-relations/larry-fink-ceo-letter

However, the market is full of organisations claiming to prioritise social causes and having a company purpose, even if evidence suggests otherwise. Prioritising social purpose is not easy for a company.
Firstly, even prominent entities within the corporate sustainability sphere remain entrenched in the shareholder value model. Secondly, companies striving to achieve dual purposes—balancing social and environmental objectives with profitability—may encounter challenges in aligning with sustainability due to the inherent conflict between shareholder-driven and purpose-driven ideologies.
These difficulties underscore the importance for businesses to clearly define their purpose and assess its compatibility with a sustainable future.[179]
Having a strong company purpose is become more and more mandatory nowadays with the global idea that a company exists more than just to make profit and have a crucial role in the climate action. Company purpose links with the global action companies are expected to pursue.

Although much of the path towards global deep decarbonisation remains uncertain, one thing is clear for all corporations: the demands for climate action will escalate. At the same time, external systemic shocks will become more frequent and severe[180].
Companies must cultivate the capability to perceive, learn, and adapt, enabling them to continuously evolve themselves and their ecosystem in the ongoing change. This necessitates a fresh set of 21st-century skills that range from personal leadership—centred on traits like empathy and active listening—to organisational leadership, which involves a firm's proficiency in analysing the dynamics of change within social and environmental systems.[181]
At the core of this challenge lies a crucial shift in organisational mindset: companies must move away from self-centred approaches and embrace the broader ecosystem[182]. Ecosystem-embracing organisations acknowledge their interconnectedness with the broader industry and economy, recognising their limited control over specific outcomes. These organisations actively seek external learning opportunities, continuously experimenting, learning, and adapting to navigate forward. Consequently, there's an urgent demand for individuals who comprehend the system and can lead such transformations rather than perpetuate existing

[179] University of Cambridge Institute for Sustainable Leadership (CISL), net zero business transformation A framework for accelerating change in an era of turbulence and complexity. Cambridge, UK, 2022, p.12
[180] *Ivi*, p.14
[181] *Ibidem*.
[182]*Ivi*, p.15

practices. This underscores the necessity for enhanced change leadership capabilities. Foremost, such a shift doesn't entail completely relinquishing competitive market dynamics but rather prioritising long-term value creation and market positioning over short-term gains while being open to collective achievements through collaborative efforts around shared objectives.[183]

To successfully navigate the complexities of modern business, it is essential for all stakeholders to actively participate in an ecosystem that prioritizes good corporate social responsibility practices linked to the Sustainable Development Goals. Call for a strategic and systemic model that encourages companies to question their societal role and reformulate their purpose accordingly. Such a comprehensive proposal requires a deep understanding of economic circularity, community commitment and positive relationships with various sectors.[184]

2. Sustainable Business Model

Business model concept depicts how value flows and the interactions among value elements within an organizational entity unfold. These value elements, central to organizational operations, encompass proposition, creation, delivery and capture of value. Simplifying the communication of these elements' interconnections and roles is crucial for any enterprise's success. Thus, the genesis of the business model concept was created to facilitate a more efficient explanation of intricate business concepts. If a business model is used, detailed insights into the business workflow are swiftly conveyed to investors. Indeed, the efficacy in representing the planning, analysis, communication, and implementation of complex organizational units' performance stands out as a primary driver behind the widespread adoption of business models.[185]

Teece (2010)[186] defines a good business model as more generic than a solely business strategy and defines the business model as something that "articulates the logic, the data, and other evidence that support a value proposition for the customer, and a viable structure of revenues and costs for the enterprise delivering that value. In short, it is about the benefit the enterprise

---

[183] University of Cambridge Institute for Sustainable Leadership (CISL), net zero business transformation A framework for accelerating change in an era of turbulence and complexity. Cambridge, UK, 2022, p.15

[184] R. Rodrich-Portugal, M. Marino-Jiménez, G. Mayurí-Aguilar., & S.A. Abad-Neyra. The purpose of the company beyond its position in the market: The new agent of social development. *Business Strategy & Development*, 6(4), 2023, 931–941. https://doi.org/10.1002/bsd2.288

[185] S. Nosratabadi; A. Mosavi; S. Shamshirband; E. Kazimieras Zavadskas.; A. Rakotonirainy; K.W. Chau, Sustainable Business Models: A Review. *Sustainability* 2019, *11*, 1663. https://doi.org/10.3390/su11061663, p. 2

[186] Teece D. (2010). Business models, business strategy and innovation. *Long Range Planning*, 43, 172-194.

will deliver to customers, how it will organise to do so, and how it will capture a portion of the value that it delivers”.[187]

For decades critical sustainability issues with profound societal and environmental implications for humanity and nature have not been the priority for most business models. However, in the last decades there is a pressure for business models to evolve into more sustainable economic systems to address companies' sustainability objectives.[188] The process of internationalisation, coupled with the imperative to adhere to sustainable development goals, has intensified global competition among firms, placing conventional business models in a dilemma as they struggle to find suitable solutions. In response, the sustainable business model has emerged as a viable alternative concept, furnishing organisations with a competitive edge by enabling traditional business models to align with sustainable development goals while preserving productivity and profitability.[189] Consequently, the primary aim of sustainable business models has been to create value across the triple bottom line—economic, societal and environmental dimensions. These models possess significant potential to imbue sustainability principles into businesses' core activities, including value proposition, creation, and capture, thereby fostering the simultaneous pursuit of economic and sustainability objectives. Sustainable business models leverage multi-stakeholder management, innovation and a long-term outlook to advance sustainability goals. As a result, they have proven effective in mitigating the adverse impacts of business operations on the environment and society by offering solutions that enable firms to address both their economic and sustainability imperatives concurrently.[190]

Schaltegger et al.(2016)[191] defined the business model for sustainability as a model that helps analyzing and managing the company’s value proposition of its stakeholders while creating and delivering sustainable value and maintaining the creation of economic value while regenerating natural, social and economic capital. [192]

Sustainability is all about companies’ need to change, innovate and adapt to their environments. Businesses require the ability to innovate within sustainability, whether it be incremental

---

[187] Teece D. (2010). Business models, business strategy and innovation. *Long Range Planning*, 43, 179

[188] S. Nosratabadi; A. Mosavi; S. Shamshirband; E. Kazimieras Zavadskas.; A. Rakotonirainy; K.W. Chau, Sustainable Business Models: A Review. *Sustainability* 2019, *11*, 1663. https://doi.org/10.3390/su11061663, p.2

[189] *Ibidem*.

[190] *Ibidem*.

[191] Schaltegger, S., Hansen, E. G., & Lüdeke-Freund, F. (2016). Business Models for Sustainability: Origins, Present Research, and Future Avenues. Organization & Environment, 29(1), 3-10. https://doi.org/10.1177/1086026615599806

[192] *Ibidem*.

changes or radical transformations. Firms must have an integrated thinking approach to achieve sustainability and reconfigure various business elements.[193] These include wider capabilities, stakeholder relationships, knowledge management, leadership, and organizational culture. Measuring sustainability performance requires looking beyond the firm's boundaries and considering the broader concept of enterprise sustainability.

It is important to note that measuring a firm's success should not be limited to creating value solely for shareholders. Instead, it should encompass all critical stakeholder relationships that contribute to the firm's long-term success and resilience.[194]

2.1. Sustainability Reporting

For companies that have embarked on a path of corporate sustainability it is important to demonstrate stakeholders the consistency of their commitment, through qualitative and quantitative information that give account of the performance achieved in the environmental and social field, the quality of management systems adopted, the relevance of plans and improvement objectives. For stakeholders, the access to information on the impacts generated by enterprises can be an important element of assessment and choice for example of consumption or investment that requires credibility of sources and the possibility of making comparisons.[195]

The link between supply and demand for information on corporate sustainability can be realized in various forms: company websites, organization of meetings with stakeholders, dedicated publications; among these, sustainability reporting, identified by various names such as social report, sustainability report or report, non-financial statement, integrated report, with specific methodological references, expressed in guidelines and drafting standards. These references have in common the guideline of making possible the assessment of the social and environmental performance of enterprises through the use of indicators, qualitative and quantitative, as far as possible objective and comparable and published annually. Hence the analogy with the annual financial reporting that has behind it a methodological development and a structuring of international principles that sustainability reporting has only recently started.[196]

---

[193] Abdelkafi N, Täuscher K. 2015. Business models for sustainability from a system dynamics perspective. Organization and Environment https://doi.org/10.1177/1086026615592930 p. 598, 599, 604
[194] *Ibidem*.
[195] F. Rossi, Libro la sfida inevitabile, la sostenibilità e il futuro dell'impresa, Il mulino, 2022, p. 204
[196] F. Rossi, Libro la sfida inevitabile, la sostenibilità e il futuro dell'impresa, Il mulino, 2022, p. 205

In recent years, the sustainability reporting scene has been characterized by a progressive growth in the number of companies, especially of large dimensions, that publish a report. Directive 2014/95 on Non-Financial information introduced a Non-Financial Reporting obligation for larger companies in Europe. The directive was transposed by Italian law with Legislative Decree n°254 of 30 December 2016 that has compromised the obligation to draw up a non-financial statement.[197]

At the beginning the sustainability reporting was a voluntary initiative, then in the nineties the need for some particularly advanced companies, was to account for a management approach attentive to the governance of impacts, and then to find tools to make known in a non-arbitrary way the characteristic elements. The growing recognition of the role of companies as co-responsible for environmental and social problems, but also as possible architects of their solution, pushed for greater transparency towards stakeholders, going beyond financial information.[198]

There were no guidelines that allowed companies to orient themselves in the selection of sustainability issues to be reported by relying on reconfigured criteria; the *Green Paper* on European Community CSR, published in 2001, was the first step in that direction. The most significant statement on the international scene concerned the guidelines drawn up by GRI-Global Reporting Initiative, which became the most followed reference worldwide and especially in Italy.
The contribution to GRI reporting is multi-stakeholder, both in the definition of materiality, better analyzed in the next paragraph, both in the destination of information: a sustainability report drawn up according to GRI is addressed to all stakeholders interested in the activities and sustainability performance of the company that publishes it.[199]

Enterprises will soon need to disclose comprehensive details regarding sustainability. The new ruling will extend the scope of companies responsible for their societal impact and steer them towards an economy that serves both people and the environment. Simultaneously, the updated reporting standards will be tailored to accommodate the size of the company and, as they are phased in gradually, will afford companies an adequate transition period to conform to the new

[197] *Ibidem*.
[198] *Ivi*, p. 207
[199] *Ivi*, p. 211

regulatory mandates. In practical terms, companies will be required to assess how their business model influences sustainability and how their operation is impacted by outward sustainability elements, such as climate change or human rights issues (known as "double materiality"). This will equip investors and other stakeholders with better tools to make well-informed decisions on sustainability matters.[200]

The proposal of CSRD (Corporate Sustainability Reporting Directive) was presented on 21 April 2021 by the European Commission in the framework of the European Green Deal and the Sustainable Finance Agenda in order to fill gaps in existing rules on sustainability information and to supply financial markets with dependable, pertinent, and comparable environmental, social, and governance data, facilitating the direction of private capital toward financing the green and social transition outlined in the Green Deal.

Subsequently, on 24th February 2022, all EU Member States reached a unanimous agreement on the Council's stance regarding the CSRD proposal. Following this, on 21st June 2022, an interim agreement on the CSRD was reached by the Council and the European Parliament, which was then approved by the EU Member States' representatives on 30th June 2022. The CSRD aims to enhance the regulations on reporting non-financial information outlined in the Non-Financial Reporting Directive (NFRD Dir. 2014/95/EU) and establishes a new framework for sustainability reporting.[201]

The Regulation will be rolled out in four stages: reporting in 2025 for the year 2024 for companies already covered by the Non-Financial Reporting Directive (NFRD Dir. 2014/95/EU); reporting in 2026 for the year 2025 for large companies not currently covered by the NFRD; reporting in 2027 for the fiscal year 2026 for catalogued SMEs (excluding micro-enterprises), small and non-complex credit institutions, and captive insurance undertakings; and reporting in 2029 for the financial year 2028 for non European companies with a net turnover exceeding EUR 150 million in the EU, provided they have at least one subsidiary or branch in the EU that meets certain thresholds.[202]

2.2. Materiality And Double Materiality

What sustainability represents today within a company evokes a series of critical underlying issues that influence market choices, regulatory frameworks, the expectations of many

[200] Consiglio dell'UE, Comunicato stampa, 28 novembre 2022, 10:30
[201] *Ibidem*.
[202] *Ibidem*.

stakeholders, risk perspectives, opportunities, and, ultimately, business strategies related to the environmental, social, and governance dimensions of the company's operations, the well known ESG.[203]

These are not abstract issues far from the entrepreneurial reality but concrete and daily issues that influence companies' longer-term market strategies and on which they are called to practice with different skills and responsibilities.[204]

For some companies, those more global and therefore more exposed to international markets but also present with their operations in critical geographical areas, the manifestation of impacts due to global risks and the climate crisis is more direct and immediate. For small or medium enterprises, the impact of the crucial issue of climate change will be indirect, such as the demands and more prescriptive standards of investors and customers. However, for all types of companies, the concept of risk or opportunity is defined as "material" or with a potential real impact on the company in all the dimensions we have exposed.[205]

The concept of "materiality" is borrowed from financial accounting and translated into sustainability with declination and value.

In accounting, materiality is the concept relating to the importance of an amount, transaction, or discrepancy. Accounting materiality is too narrow of a concept because it applies only to a tangible asset. Consequently, there were also introduced the concept of market materiality that refers to what moves the stock market price of a company, and business materiality that concerns the ability of the business to operate and generate future cash flows[206].

In addition to that, the Encyclopedia of the UN Sustainable Development Goals[207] also gave a definition of materiality: "Materiality is the concept that defines why and how certain matters or issues are important for a specific company or within a business sector. When an issue is material, it has major impacts on the financial, economic, reputational, and legal dimensions of a company, as well as on the system of internal and external stakeholders of that company".[208]

Materiality is a crucial principle for understanding business sustainability. In its original sense, materiality defines which information is helpful for making decisions. For example, from a

[203] M.Stampa, D.Callace, N.Ferro, La sostenibilità è un'impresa, Hoepli Milano, 2022, chapter 3, p 52
[204] *Ibidem*.
[205] *Ibidem*.
[206] D.Schoenmaker and W. Schramade, principles of sustainable finance, oxford university press, 2019, chapter 5, page 129
[207] Encyclopedia of the UN Sustainable Development Goals. Sustainable Cities and Communities (Section Editor) in W. Leal Filho, U. Azeiteiro, A.M. Azul, L. Brandli, P. Gökcin Özuyar and T.Wall (eds) Encyclopedia of the UN Sustainable Development Goals - Volume 3. Cham (Switzerland): Springer.
[208] M.Stampa, D.Callace, N.Ferro, La sostenibilità è un'impresa, Hoepli Milano, 2022, chapter 3, p.53

shareholder’s perspective, information concerning the undertaking’s ability to remunerate the investment provided is material, while from the point of view of a potential employee, it concerns the corporate practices and policies for employees.[209]
In the field of sustainability, materiality is a useful principle for navigating the vast ocean of issues relating to different environmental, social and governance dimensions[210]. It can be both impractical and potentially detrimental for companies to attempt to address every sustainability issue. For example, a company in the Minero-metallurgical industry would not be making the most effective use of its resources if it focused on consumer data protection rather than on water pollution and environmental impact. Some sustainability issues are more significant and require greater attention when constructing a sustainability strategy, implementing initiatives and actions, and identifying risks and opportunities for the business.[211]

In the field of corporate sustainability, however, the materiality perspective changes substantially, as it is aimed at identifying, even in the very long term, which issues can impact the company's ability to create value and what impacts business activities have on the natural environment and social fabric.

The complexity given by the double implication for the company and the context of the external actors translates into the idea of double materiality, which today represents the theorisation of something that has always existed but that is being stated for the first time, giving it substance, by the European Commission in 2019, as part of the non-binding Guidelines on Non-Financial Reporting (today Corporate Sustainability Reporting Directive - CSRD) which all European companies will be required to adapt in the coming years.[212] “According to the Non-Financial Reporting Directive, a company is required to disclose information on environmental, social and employee matters, respect for human rights and corruption to the extent that such information is necessary for an understanding of the company’s development, performance, position and impact of its activities.”[213]
The Non-Financial Reporting Directive takes a two-fold approach to materiality. The first aspect pertains to the company's development, performance, and position, which determines its

---

[209] M.Stampa, D.Callace, N.Ferro, La sostenibilità è un’impresa, Hoepli Milano, 2022, chapter 3, p.53
[210] *Ivi*, p. 54
[211] *Ibidem*.
[212] *Ivi*, p. 57
[213] "Guidelines on non-financial reporting: Supplement on reporting climate-related information, European Commission, 2019

financial materiality and ultimately impacts its value.[214] The second aspect pertains to the impact of the company's activities on the environment and society and is considered its social and environmental materiality. In this case, climate-related information should be included if it helps stakeholders comprehend the company's external impacts. This perspective is typically of interest to a wider range of parties, such as citizens, consumers, employees, business partners, communities, and civil society organizations. However, it's worth noting that an increasing number of investors are also seeking knowledge of investee companies' climate impacts to better understand and measure the climate impacts of their investment portfolios.[215]

The double materiality perspective of the Non-Financial Reporting Directive in the context of reporting climate-related information

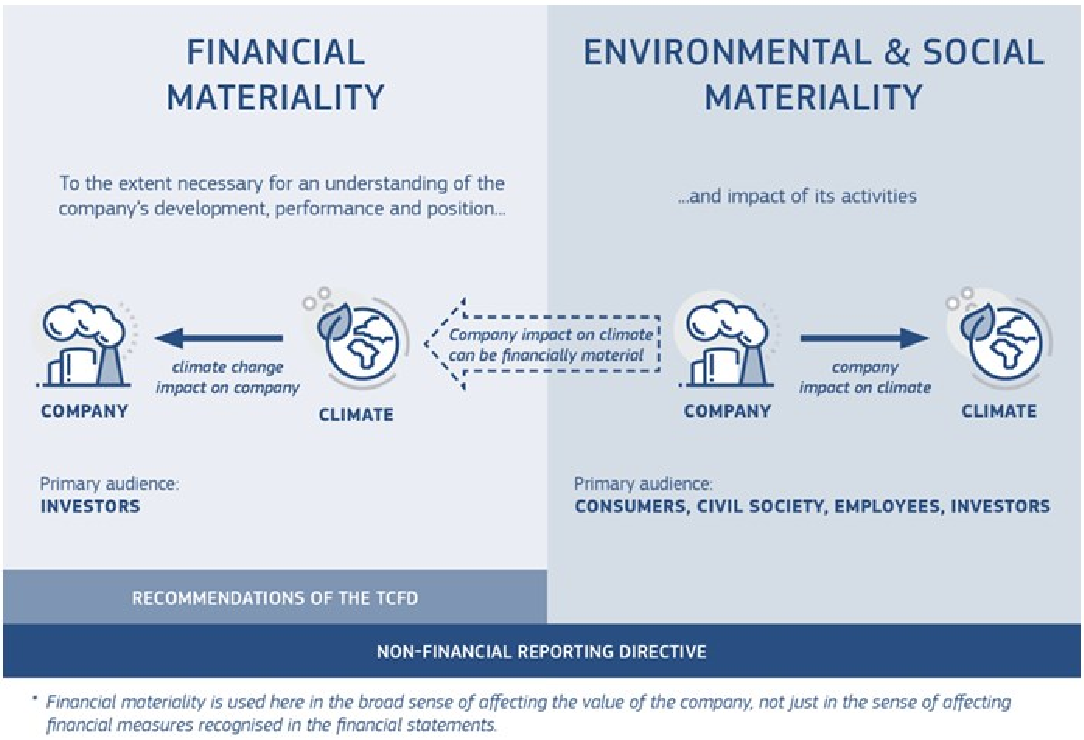

Figure 2: Guidelines on non-financial reporting: Supplement on reporting climate-related information, European Commission, 2019 p. 7

From a dual materiality perspective, ESG issues give rise to risks and opportunities that are financially relevant and impactful (on the social and governance environmental dimensions). For this reason, as the draft revision of the European Non-financial Reporting Directive

[214] "Guidelines on non-financial reporting: Supplement on reporting climate-related information, European Commission, 2019
[215] *Ibidem*.

explains, companies must report on how sustainability issues affect their business and their own impact on people and the environment[216]. Rather than being two isolated points of view, the so-called financial materiality and materiality of the impact are dynamically related: issues or information that are material from an environmental and social point of view can already have financial implications or develop them over time in the constant evolution we are witnessing.[217]
Materiality is, therefore, destined to be increasingly central to corporate sustainability and a matter of leadership competence - C-suite and Board - which often finds itself sidetracked by the prospect of overseeing this process to meet stakeholder expectations (including the regulator).[218]
By introducing the concept of 'double materiality,' sustainability is integrated into the company's objectives. This projection outlines the business context as policies need to be formulated, strategies formalized, and a business model adopted for every relevant issue identified.[219]

Here follows a concrete example of a double materiality matrix presented in the integrated report of the bank BNP Paribas[220], where the bank says that to enhance the understanding of stakeholder expectations, they utilize a materiality matrix to identify and rank the key challenges confronting the Group. Initially developed in 2018 and revised in 2021, the matrix evaluates the significance of 21 non-financial concerns by gathering input from internal employees and external stakeholders. Through this assessment process, they categorize issues into three groups: critical, major, and important.[221]

---

[216] M.Stampa, D.Callace, N.Ferro, La sostenibilità è un'impresa, Hoepli Milano, 2022, chapter 3, p.58
[217] *Ibidem*.
[218] *Ivi*, p. 57
[219] P. Rota, S. Caristia, La Doppia Materialità e il processo di materiality assessment in pratica, Sostenibilità aziendale, il sole 24 ore in collaboration with KPMG, nov. 2023 p. 26
[220] BNP Paribas, Integreted report of 2022 https://integrated-report.bnpparibas/2022/article/21/
[221] *Ibidem*.

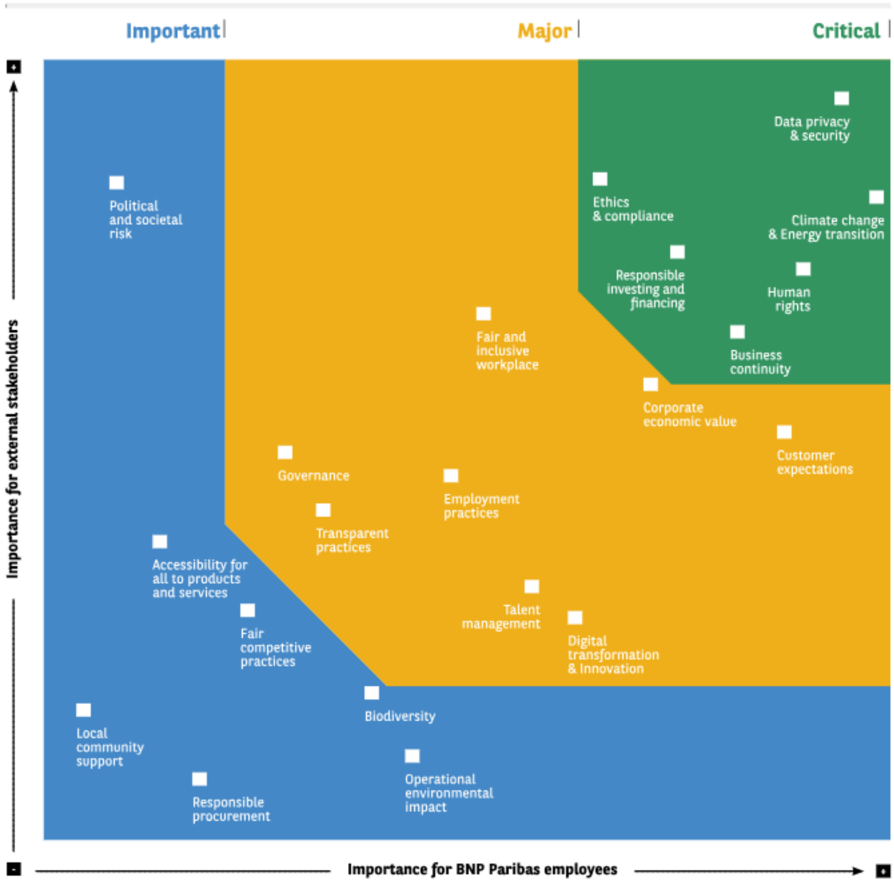

Figure 3: Example of materiality matrix integrated report BNP Paribas, 2022

2.3.ESG Ratings

ESG ratings have become a significant topic in sustainable reporting and also in sustainable finance, which will be better analyzed in the following paragraphs, generating much attention and interest. Accompanied by sustainability stock indices, this practice has gained traction among companies and investors alike. ESG ratings utilize a variety of methodological solutions and have experienced exponential growth in recent years, filling financial chronicles and business agendas.[222]

The appeal of sustainability ratings in financial markets and the economic system is understandable. Given the complex nature of corporate sustainability, having access to a ranking that distinguishes the "best" from the "worst" and provides a synthetic assessment of sustainability performance (ESG) is highly sought after. This has become a sort of Holy Grail for many, particularly decision-makers within companies. It is not uncommon for top-level

[222] M.Stampa, D.Callace, N.Ferro, La sostenibilità è un'impresa, Hoepli Milano, 2022, chapter 8, p.187

executives to focus on ratings when it comes to defining strategies and allocating resources for sustainability. In essence, ratings promise to integrate sustainability in a tangible way by translating it into language that the corporate world is familiar with, such as performance, best in class, best practices, KPIs, deviations, and so on - all of which have been used for centuries.[223]

It is important to note that during the process of translation, there is a risk of betraying the original concept. This risk cannot be neglected. Ratings are often accused of promoting an "incremental" vision of corporate sustainability. Ratings only show who has improved their ranking and who has dropped down, but always in a relative perspective. There is a risk that highly positive ratings will not reflect how much a company contributes to sustainable development.[224] Another critical aspect of ratings is the inconsistency of results. Numerous studies have shown that the ratings attributed to the same organisation by different agencies are often very different, even sometimes opposed. Certainly, at least in part, this phenomenon is attributable to different methodologies and points of view adopted by each rating agency.[225]

Academic research has shown that companies that adhere to positive ESG principles and therefore with positive ESG rating have lower capital costs and higher valuations and are less vulnerable to systemic risks[226].

A study conducted by Giese et al.[227] explained how ESG affects companies' financial profiles. The study highlighted how companies with firm ESG profiles are more competitive because they use resources more efficiently, are better at developing human capital and managing innovation, have better long-term planning, and have better incentives for senior management. All these factors lead to more competitiveness for the company, enabling it to generate more profitability, which, in conclusion, provides more dividends. The study also found that businesses with high ESG scores have better compliance with standards and better risk management. These factors lead to fewer extreme events like fraud, corruption or litigations.

[223] M.Stampa, D.Callace, N.Ferro, La sostenibilità è un'impresa, Hoepli Milano, 2022, chapter 8, p.187
[224] *Ivi*, p.188
[225] *Ibidem*.
[226] *Ibidem*.
[227] G. Giese, et al. "Foundations of ESG investing: How ESG affects equity valuation, risk, and performance." *The Journal of Portfolio Management* 45.5 (2019): 69-83.

Better risk management leads to a lower risk of severe incidents, ultimately leading to low tail risk[228].

The scholars also underlined how a company with an improving ESG profile is less susceptible to systematic risks, and this diminution of systematic risks leads to a reduction of the company's cost of capital, leading to an increase in valuation[229]. The analysis shows how ESG affects the valuation and performance of companies, both through their systematic risk profile, which means lower costs of capital and higher valuation and their idiosyncratic risk profile, which means higher profitability and lower exposure to tail risk.[230]

3. Is there a Sustainable Finance?

3.1. Green and greening finance

The urgent and severe effects of climate change and damage to the environment have made it imperative to prioritise the development of a more sustainable economy. To achieve this goal, significant investments are required, particularly to facilitate a green and low-carbon transition. Since the public sector alone can not finance these needs, there is a need to engage the private sector in finding solutions. Green finance is a strategy aimed at raising funds to tackle climate and environmental issues (green financing) and enhancing the management of financial risks relating to climate and the environment (greening finance). Sustainable finance is an advancement of green finance, as it considers environmental, social, and governance (ESG) risks and issues, aiming to increase long-term investments in sustainable economic activities and projects.[231]

Greening finance and green financing are driving the shift towards a more environmentally friendly financial system. Greening finance aims to incorporate climate and environmental factors into the financial system to better identify and manage financial risks associated with the environment and climate change. Green financing aims to attract private capital to support environmentally friendly investments.[232] These factors are also important aspects of sustainable

[228] G. Giese, et al. "Foundations of ESG investing: How ESG affects equity valuation, risk, and performance." *The Journal of Portfolio Management* 45.5 (2019): 69-83.
[229] *Ibidem*.
[230] L.E.Swedroe and S.C. Adams, Your essential guide to sustainable investing, Harriman House, 2022, cap. 7 p. 117.
[231] S. Spinaci, Green and Sustainable Finance, Breefing EPRS | European Parliamentary Research Service, Members' Research Service PE 679.081 – February 2021
[232] *Ibidem*.

finance. Sustainable finance takes into account ESG (Environmental, Social and Governance) factors when making investment decisions; by doing so, investors can consider a broader range of investment opportunities and can better manage financial risks.[233]

The term 'green financing' refers to the financial support of the green economy and the green transition. It involves increasing the flow of finances towards investments in environmentally friendly projects. The significance of finance in the green transition and its role in climate action is acknowledged in Article 2.1c of the Paris Agreement[234]. This article calls for finance flows to be consistent with a pathway towards low greenhouse gas emissions and climate-resilient development. To achieve sustainability goals, substantial investments are required: green financing is rapidly growing through various financial instruments, such as green bonds, sustainable bonds, green loans, social bonds, blue bonds, and sustainability-linked bonds and loans. While social bonds might not directly contribute to green financing, they can positively impact the environment in certain instances (e.g., investment in sustainable food systems). Additionally, social bonds can support green transformation projects (e.g., social bonds for a just transition).

Green bonds are a type of bond created to fund environmental or climate-related projects. They support investments in renewable energy, energy efficiency, pollution management, biodiversity, sustainable water resources, climate change adaptation, eco-friendly products, and sustainable production technologies.[235]

Sustainability bonds are committed to financing a combination of green and social projects. Some green projects have social co-benefits, while certain social projects also have environmental co-benefits. Most of the time, the funds are committed to social or green impact projects that align with the UN sustainable development goals (SDGs). Sustainability bonds comprise corporate SDG (non-financial), SDG bonds by banks and financial institutions, asset-backed and project SDG bonds, sovereign SDG bonds, and municipal SDG bonds.[236]

---

[233] S. Spinaci, Green and Sustainable Finance, Breefing EPRS | European Parliamentary Research Service, Members' Research Service PE 679.081 – February 2021

[234] Article 2.1c of the Paris Agreement: Article 2.1(c) of the international Paris Agreement on climate change aims to do just that by "making finance flows consistent with a pathway towards low greenhouse gas (GHG) emissions and climate-resilient development."

[235] S. Spinaci, Green and Sustainable Finance, Breefing EPRS | European Parliamentary Research Service, Members' Research Service PE 679.081 – February 2021

[236] *Ibidem*.

Sustainability-linked bonds are a type of bond where the financial or structural components, such as the coupon rate, can change depending on the issuer's achievement of specific sustainability targets. This bond is a relatively new addition to the market. The first bond linked to Sustainable Development Goals (SDGs) was issued in September 2019 by ENEL, an international energy company based in Italy.[237]

Green loans are loans specifically designated for initiatives that manage environmental concerns, such as climate change, natural resource shrinkage, loss of biodiversity, and pollution of air, water, and soil. An important aspect of green loans is that the borrower must regularly update the lender on how the funds are being utilized. This reporting should include both qualitative and quantitative measures of performance, such as electricity generation and reduction or avoidance of greenhouse gas emissions.[238]

Sustainability - linked loans are loans tied to sustainability performance indicators, such as carbon emissions or ESG targets, are called sustainability-linked loans. The borrower pays these loans, and the interest rate is variable, depending on the borrower's sustainability performance. If the borrower achieves sustainability targets, they can benefit from lower interest rates, but if they fail to meet the targets, they will pay higher interest rates. This mechanism provides financial incentives for achieving sustainability goals.[239]

Governments, development banks or other entities issue *blue bonds* to fund projects related to marine and ocean-based activities. Blue bonds are a type of bond instrument that can be used for this purpose.

Investors can finance social projects through *social bonds*, a type of bond instrument. These projects may involve creating sustainable food systems and ensuring food security, supporting vulnerable groups after natural disasters, or addressing unemployment caused by socioeconomic crises. Although the use of social bonds is not as widespread as green bonds, there has been an increased interest in them among investors. In October 2020, the European Commission released the first EU SURE social bonds emission.[240]

[237] S. Spinaci, Green and Sustainable Finance, Breefing EPRS | European Parliamentary Research Service, Members' Research Service PE 679.081 – February 2021

[238] *Ibidem*.

[239] *Ibidem*.

[240] *Ibidem*.

3.2. Sustainable finance

One of the main goals of the European Green Deal is to create a plan to make the EU's economy competitive and sustainable. The European Commission believes this can be done by turning the climate challenges into opportunities.

To reach this goal, massive public investment is envisaged, as well as a reorientation of the financial system and private investment towards projects that reduce carbon externalities and lead to positive environmental externalities. Member state governments, business communities, and European citizens have welcomed these intentions.[241]

The European Commission and the Member States of the European Union must act as guarantors for public-private investors and ensure that they are effective in achieving environmental objectives and in terms of macroeconomic and sectoral effects.[242]

Financial regulation is moving on a green political terrain. Investor demand for ESG investment products is growing strongly. Banks and businesses are often under pressure from their governments and are committed to refocusing their attention on activities with greater focus on the environment.[243]

In recent years, one of the most characteristic traits of business sustainability (or perhaps the business of sustainability) is the linkage between finance and corporate sustainability. "Milton Friedman is dead"[244], proclaims former Unilever CEO Paul Polman (a giant among the prophets of corporate sustainability) in his book Net Positive[245]. Bloomberg estimates that within the next five years, ESG financial products will exceed $50 trillion—equivalent to about one-third of total assets under management (AUM).[246]

For comparison, global (nominal) GDP in 2020 is estimated at around $84.54 trillion. These numbers should be read in the light of the very high bill that is expected to reach the SDGs - estimated by the UN itself between 5 and 7 trillion dollars per year, with the bill for climate change alone around 50 trillion dollars, according to Morgan Stanley[247]. There are various

---

[241] Dragomir, Voicu D.: Financial and competition implications of the European Union's Green Deal, Amfiteatru Economic Journal, ISSN 2247-9104, The Bucharest University of Economic Studies, Bucharest, 2022, Vol. 24, Iss. 61, pp. 593 https://doi.org/10.24818/EA/2022/61/593

[242] *Ibidem*.

[243] S.Kammourieh and S. Vallèe, *The political economy of green financial regulation*, E3G, 03 Sept 2021

[244] Milton Friedman's idea was that the social responsibility of a Business was to increase its profits and the relationship with its shareholders. (M. Friedman, *A Friedman doctrine-- The Social Responsibility of Business Is to Increase Its Profits, The New York Tymes, 1970)*

[245] P. Polman and A. S. Winston. Net Positive. Profit Editorial, 2022

[246] M.Stampa, D.Callace, N.Ferro, La sostenibilità è un'impresa, Hoepli Milano, 2022, chapter 8, p.172

[247] *Ivi*, p.173

classifications of financial instruments that are somehow linked to sustainability. There are various types, but they are typically structured by tracing a continuum from traditional finance to philanthropy:[248]

Data shows that sustainable investing is growing and global investment is up to $35.3 trillion.[249] There are different ways of sustainable investing but, in this analysis, the focus will be on the three primary forms of sustainable investing: ESG, SRI and impact. There are also Conventional and Philanthropy investing that are more financially focused and the latter is more impact-focused.[250]

SRI stands for Socially Responsible Investing and balances financial return with social outcome; an example of SRI is the US vegan Climate ETF[251] because it balances market returns and attention to vegan values.

Secondly, Impact Investing focuses more on social outcomes with Financial Return as the primary goal is to address the social and/or environmental problem. An example of Impact Investing could be Iroquois Valley Farmland REIT[252], which provides secure access to land through long-term contracts for family farmers practising organic and regenerative farming.

Thirdly, ESG investing stands for Environmental, Social, and Governance, the newest form of investing but has become the most popular. ESG investments were also integrated and advanced with the Principles for Responsible Investment (PRI) launch. This was followed by the publication of the PRI blueprint for Responsible Investment, which set the direction for investments for the next ten years, keeping in mind nine priority areas. The three macro-categories of these areas are responsible investors, sustainable markets, and a prosperous world for all[253].

ESG is the largest category in sustainable investing. When talking about the environment, the focus of the investment is on the primary goal of conserving the natural world. Secondly, society considers people and relationships like customers or data protection, and finally, governance complies with the standards for running a company. An example of ESG investing is iShares[254], a collection of exchange-traded funds (ETFs) managed by Black Rock.

[248] *Ibidem*.
[249] L.E.Swedroe and S.C. Adams, Your essential guide to sustainable investing, Harriman House, 2022, p.7.
[250] *Ivi*, p. 8
[251] US vegan Climate ETF (https://veganetf.com/)
[252] Iroquois Valley Farmland REIT (https://iroquoisvalley.com/)
[253] L.E.Swedroe and S.C. Adams, Your essential guide to sustainable investing, Harriman House, 2022, p. 13
[254] iShares (https://www.ishares.com/it)

These different investment approaches have three main objectives: ESG investing aims to improve a portfolio's risk-return characteristics and SRI aims to align the portfolio with the investor's beliefs. Finally, impact investing uses capital to make changes happen in the environmental and social spheres.[255]

3.3. *Weighted Average Cost of Capital (WACC) and Sustainable Weighted Average Cost of Capital (SWACC)*

Corporations and investors must comprehend the costs and returns associated with sustainable projects. In evaluating investment opportunities, the Weighted Average Cost of Capital (WACC) is a conventional metric utilised in finance. However, applying WACC requires a deeper understanding of sustainable projects. The WACC has historically been used to determine the average rate a company anticipates paying to fund its assets. By proportionally weighting the cost of equity and the cost of debt, it serves as the threshold rate an investment must exceed to be considered. Sustainable projects, being unique in their financial, environmental and social risks, may offer long-term benefits but may also involve higher upfront expenses or regulatory uncertainties. Given these distinctive characteristics, the traditional use of WACC may not fully encompass the nuanced financial landscape of sustainable projects.[256]

3.3.1. Definition of WACC

The weighted average cost of capital of a security, an investment project, or an enterprise is a widely used tool for assessing strategies to buy or sell assets or determining the initiation or non-initiation of possible industrial projects.

Mostly known by the English WACC acronym, the Weighted Average Cost of Capital allows an undertaking or investor to determine the cost of capital by analysing all its components and thereby discriminate between an acceptable, expected return on investment. The WACC is, in fact, an integral and founding element of the DCF (Discounted Cash Flow) method, one of the most used for evaluating an enterprise's value.

[255] L.E.Swedroe and S.C. Adams, Your essential guide to sustainable investing, Harriman House, 2022, cap. 7 p. 113

[256] G.A. Kholjigitov, Specifics of WACC for sustainable projects, British Management University, Tashkent, Uzbekistan, 2023

3.3.2. SWACC

The Sustainable Weighted Average Cost of Capital (SWACC) is being proposed as an alternative to the traditional Weighted Average Cost of Capital (WACC) to account for the undervaluation of sustainable projects. This underestimation can occur because sustainable projects may promise more long-term profitability and reduced risk exposures, particularly in sectors that are susceptible to environmental regulations. The SWACC metric integrates the WACC to the required rate of return for sustainable investments while also adjusting the traditional WACC by incorporating environmental, social, and governance (ESG) risk premiums[257]. Investors increasingly perceive companies with strong ESG metrics as less risky and more attractive, which can be beneficial for these companies as sustainable investing becomes mainstream. Incorporating ESG factors into SWACC can give a more accurate representation of the risk and return dynamics.[258]

Dhaliwal et al.[259] note that companies with high ESG ratings typically have a reduced cost of capital. This can result in a more favourable SWACC for sustainable projects, reflecting their strategic and financial benefits.[260]

The WACC for sustainable projects differs from conventional ones. This is because several factors can impact the cost of equity and debt financing, including:[261]

1. Risk Profile: Sustainable projects, particularly those in emerging sectors like clean technology, could be perceived as riskier, driving up the cost of equity and debt financing. Additionally, since sustainable projects often have long-term goals, there may be higher risk premiums due to uncertain short-term financial outcomes.[262]

2. Capital Structure: Depending on investor appetite for sustainable investments, securing debt funding for sustainable projects could be more accessible or complex, affecting the proportion

[257] G.A. Kholjigitov, Specifics of WACC for sustainable projects, British Management University, Tashkent, Uzbekistan, 2023

[258] *Ibidem*.

[259] D.S. Dhaliwal., O.Z. Li., A. Tsang, & Y.G. Yang, Voluntary Nonfinancial Disclosure and the Cost of Equity Capital: The Initiation of Corporate Social Responsibility Reporting. *The Accounting Review*, 2011, *86*(1), 59–100. http://www.jstor.org/stable/29780225

[260] *Ibidem*.

[261] G.A. Kholjigitov, Specifics of WACC for sustainable projects, British Management University, Tashkent, Uzbekistan, 2023

[262] *Ibidem*.

of debt in the capital structure. Sustainable projects may have access to specialized financial instruments like green bonds, which could impact their cost structures.[263]

3. Regulatory and Tax Considerations: Government tax incentives for sustainable projects can influence the effective tax rate and, consequently, the SWACC (Sustainable Weighted Average Cost of Capital). Regulatory risks such as potential future regulations like carbon pricing may be perceived as a disadvantage for traditional projects but an advantage for sustainable ones.[264]

4. Market Conditions: Growing interest in ESG (Environmental, Social, and Governance) investing could lower the cost of equity for sustainable projects due to increased demand. The required market risk premium may differ based on market perceptions of sustainability as a value driver or risk mitigator.[265]

5. Operational Factors: Cash flows from sustainable projects may have unique characteristics, such as long-term contracts for renewable energy, impacting Free Cash Flow. Moreover, sustainable projects may have a higher terminal value due to their long-term orientation, influencing discounted cash flow calculations.[266]

In conclusion, evaluating sustainable projects introduces additional layers of complexity to calculating the Weighted Average Cost of Capital (WACC), stemming from heightened risk, innovation, and distinctive cost structures. These complexities necessitate adjustments in how we conceptualize and compute the Sustainable Weighted Average Cost of Capital (SWACC). Despite these adaptations, the fundamental principles underlying WACC and SWACC persist. SWACC is the benchmark for discounting Free Cash Flows, equating with the valuation derived from Equity Cash Flows. Thus, while the core tenets of WACC and SWACC endure, their application in sustainable projects demands a nuanced and informed approach. A comprehensive grasp of sustainability's distinct challenges and opportunities is imperative for accurate project valuation and sound financial planning in this evolving landscape.[267]

---

[263] *Ibidem*.
[264] *Ibidem*.
[265] G.A. Kholjigitov, Specifics of WACC for sustainable projects, British Management University, Tashkent, Uzbekistan, 2023
[266] *Ibidem*.
[267] *Ibidem*.

CHAPTER 3: THE CHIEF SUSTAINABILITY OFFICER

1. The role of the CSO

The corporate world is currently showing great interest in the concept of sustainability: as a consequence, companies have significantly increased the appointment of chief sustainability officers (CSOs), with more CSOs hired in 2021 than in the previous five years combined.[268]
The role of Chief Sustainability Officer (CSO) is undergoing a swift transformation. Especially in leading organizations, it has evolved from being solely a communication role to one that actively shapes business strategy. Through this shift, companies have come to recognize that their impact on society and the environment is not merely a matter of social responsibility but a crucial factor distinguishing them from their competitors. By focusing on product, labour, resources, and financial markets, a progressive CSO can create economic and non-economic value for all strategic stakeholders while investing in the company's financial, human, social, and natural capital.[269]

The role of a Chief Sustainability Officer centres around a bigger perspective: their primary objective is to assist businesses in evaluating their offerings through an ESG lens, identifying opportunities for sustainable growth, which involves skillfully navigating complex and often competing demands across various departments, including legal, environmental, social, geopolitical, and logistical considerations, to revolutionize business practices. To effectively carry out their mission, they require the authority to implement their agenda across all levels of the organization, which is why the C-level position is the ideal fit for this role.[270]

[268] E. Farri, P. Cervini, and G. Rosani, The 8 responsabilities of Chief Sustainability Officers, Harvard Buiness Review, march. 2023
[269] Leonardo Centre on Business for Society, Imperial College Business School, From Sustainability to Business strategy report, october 2023
[270] Deloitte, The future of the Chief Sustainability Officer Sense-maker in chief, November 2022

Here following a graph that perfectly explains how the role of the CSO need to interfere and it is interconnected with all the other sphere of the organization chart.

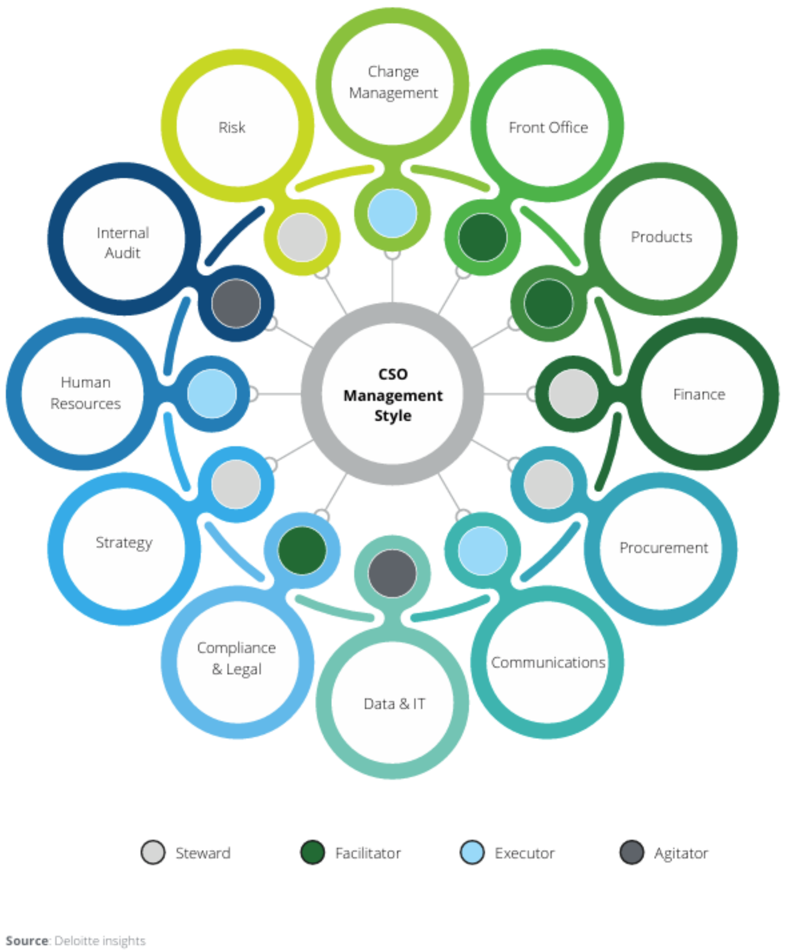

Figure 4: Interactions of a CSO in a typical organisation with respect to sustainability[271]

The image shows how the CSO interfaces with most of the functions and aspects of a company while operating in different ways. The CSO is a steward in fields like strategy, procurement or risk management. The role has to be a facilitator in fields like legal and complaint, products, and front office; on the other hand, it acts as an agitator for internal audits or data and IT. Finally, the CSO is an executor of what concerns change management, human resources and communication. Only in some companies will the CSO work and interact with all these disciplines, but this image helps understand how the role is interconnected with the whole organization chart.

[271] Deloitte, The future of the Chief Sustainability Officer Sense-maker in chief, November 2022

The role of CSO has been created as a response to the business need and the changes happening in the world like other senior corporate executive positions have been created in response to significant opportunities and risks emerging from technological or social disruptions. For example, the role of executives in the C-suite, such as Chief Technology Officers (CTOs), Chief Information Officers (CIOs), Chief Quality Officers (CQOs), Chief Financial Officers (CFO) and more recently CSOs, has been evolving. For instance, the CIO role was born as a support function and nowadays is an integrated part of the business, as technology is embedded in every part. Similarly, the CFO's scope has broadened from basic processing and control to risk management and decision-making support. These changes are transforming the career paths and capabilities of finance professionals[272]. The exact process is happening with the role of the CSO, which were just a few at the beginning of the last decade. Now, more and more companies are deciding to invest and institute this role in helping investing and reporting about sustainability matters.

Traditionally, CSOs have functioned as storytellers, weaving compelling narratives about the company's sustainability endeavours to its diverse stakeholders. Their primary aim was to mitigate reputational risks. However, their role was largely limited to this, with minimal involvement in shaping the company's strategy or communicating it to shareholders. These tasks were typically handled by the CEO, CFO, and head of investor relations.[273]

CSOs have shifted from simply sharing messages to actively incorporating ESG (environmental, social, and governance) issues into the company's strategy. This change necessitates close teamwork with other senior leaders and a solid dedication to investors. Two main drivers of this shift include the growing understanding among investors and executives that sustainability significantly impacts a company's financial performance. CSOs focus more on direct engagement with key stakeholders and investors rather than public communication.[274]

The role of the Chief Sustainability Officer finds its roots in corporate social responsibility or CSR, and many CSOs have started their careers in CSR-focused roles, initially aiming to present companies as "corporate citizens" responsible. Initiatives such as recycling, waste

[272] K. Miller G. Serafeim, Chief Sustainability Officers: Who Are They and What Do They Do?, Harvard Business School, 2014.
[273] R. G. Eccles, A. Taylor, Come sta evolvendo il ruolo dei Chief Sustainability Officer, Harvard Business Review, September 2023.
[274] *Ibidem*.

reduction, environmentally friendly energy consumption and employee volunteer programs are usually led by a CSO. The difference between CSR and philanthropy was often ambiguous and there was hardly any relationship between CSR and a company's strategy, capital allocation or business model.[275]

The role of the Chief Sustainability Officer (CSO) is increasingly becoming more strategic. These individuals now play a crucial part in recognizing and directing focus towards environmental, social, and sustainability governance matters that significantly influence a company's financial performance and risk assessment. This approach aligns with the broader business strategy and allows the company to focus more on what matters most for long-term value creation.[276]

Shifting attention from general corporate social responsibility to true sustainable value creation requires pragmatic leaders willing to admit that not all ESG measures benefit everyone, that is, both positive for the planet and profits.[277] These pragmatic leaders need to have specific characteristics to cover the role of the Chief Sustainability Officer. Firstly, it is essential that whoever is in charge of this role can collaborate within and outside the company and create partnerships with others. Secondly, the professional must be credible and show the company and the stakeholders the value of their recommendations.[278] Thirdly, CSOs, with their knowledge and work, could help the business drive new business lines; to do so, they must be figures with specific commercial awareness. In conclusion, a CSO must be driven by the commitment to a better and more sustainable world.[279]

Harvard Business Review[280] tried to summarize the role of the CSO, explaining the main eight tasks they need to cover in the company. The first is ensuring regulatory compliance by anticipating regulatory trends and their implications. A CSO needs to establish adherence to each industry, process or type of business sustainability law and regulation. Additionally, they should assess risk management and enact internal policies[281]. The second important task for a CSO is ESG monitoring and reporting. A CSO needs to collect and report data and metrics

[275] R. G. Eccles, A. Taylor, Come sta evolvendo il ruolo dei Chief Sustainability Officer, Harvard Business Review, September 2023
[276] *Ibidem*.
[277] *Ibidem*.
[278] World Economic Forum, the '4Cs' of beign a Chief Sustainability Officer, may 17, 2024
[279] *Ibidem*.
[280] E. Farri, P. Cervini, and G. Rosani, The 8 responsabilities of Chief Sustainability Officers, Harvard Buiness Review, march. 2023
[281] *Ibidem*.

following reporting standards, benchmark with industry peers, and prepare the company ESG report's completion and communication. The third task is overseeing the portfolio of sustainability projects. The CSO acts as a project management office by planning, coordinating, reviewing progress, and tracking results to coordinate various operational efforts.[282] The fourth task is managing stakeholders' relationships: a CSO should promote ongoing dialogue with internal and external stakeholders to develop constructive and transparent relationships. Furthermore, the Chief Sustainability Officer must identify gaps and adopt appropriate educational initiatives to upskill and/or source the missing capabilities. Additionally, they should identify innovative ways to scale the new capabilities and share and disseminate knowledge and best practices. The sixth task is about fostering cultural change and driving a transformation that inspires and excites. The CSO will help define and communicate the purpose of driving the transformation and champion cultural change across the organisation together with promoting mindset shifts based on concrete behaviours and also through education.[283] The Chief Sustainability Officer (CSO) fosters a culture of openness towards the external innovation ecosystem. Moreover, the CSO should also explore emerging sustainability technologies, solutions, and practices and test their applicability in the organisation. The eighth and final task involves embedding sustainability into processes and decision-making and ensuring that a commitment to sustainability is rooted in every aspect of the operations. The CSO will revise critical processes and related criteria/metrics/tools for decisions and coach decision-makers to manage complex trade-offs.[284]

Chief Sustainability Officers (CSOs) must lead their organizations towards sustainable practices; they need a diverse team of experts who specialize in areas such as climate, biodiversity, supply chain, and human rights. Integrating sustainability fully requires collaborating with individuals from various business units and functions. These individuals are often connected through sustainability committees and can help ensure that sustainability is critical to the company's success.[285]

The Harvard Business Review explains three main organizational changes that are typically required to achieve this goal. Firstly, the CSO should have the same level of importance as

[282] E. Farri, P. Cervini, and G. Rosani, The 8 responsabilities of Chief Sustainability Officers, Harvard Buiness Review, march. 2023
[283] *Ibidem*.
[284] *Ibidem*.
[285] R. G. Eccles, A. Taylor, Come sta evolvendo il ruolo dei Chief Sustainability Officer, Harvard Business Review, September 2023

other top management members, such as the managing director or general director. As new sustainability reporting standards are being implemented, control and measurement systems similar to those used in financial reporting are necessary.[286]

Secondly, the CSO should work closely with governance, risk, ethics and compliance functions. The outdated view that compliance only mitigates regulatory risk, while sustainability only improves reputational capital, no longer suffices. Upon closer inspection, this approach results in a stark contrast between a company's information on sustainability and its annual report.[287]

Finally, it is crucial to improve the integration between the boards of directors and the CSO function and the overall efforts of corporate sustainability. While boards of directors have made progress in their expertise on sustainability, there is still room for improvement. More than simple one-off ESG training or recruiting a single ESG expert to the board is required. For CSOs to effectively lead their organizations towards sustainability, is required a diverse team of experts specializing in climate, biodiversity, supply chain and human rights. To fully integrate sustainability into the organization, it is essential to collaborate with individuals from different business units and functions.[288]

In conclusion, it is essential to consider that the Chief Sustainability Officer must develop soft skills to be effective. This role is very complex, comprising various tasks and responsibilities that require specific personal characteristics for effective execution. For example, a CSO must have a remarkable ability to involve other parts of the company and be a good communicator both inside and outside the company. In addition, it must be able to maintain a certain level of authority because it is a coupling link between the various units working in different fields and having to submit different requests. The CSO must have an inventive mind and the ability to present innovative solutions within the company to improve the company's sustainability.

The role of the CSO demands a high level of adaptability and strategic thinking to address the diverse and complex issues encountered daily. CSOs must navigate intricate global challenges while coordinating and engaging with all levels of management. The importance of these soft skills will also emerge from the research conducted and reported in the next chapter; from the

[286] R. G. Eccles, A. Taylor, Come sta evolvendo il ruolo dei Chief Sustainability Officer, Harvard Business Review, September 2023
[287] *Ibidem*.
[288] *Ibidem*.

research, we understand how both soft and hard skills are essential to perform this position at best.

CHAPTER 4: RESEARCH ON THE ROLE AND POSITIONING OF THE CHIEF SUSTAINABILITY OFFICER

1. Methodology

This dissertation will conduct a comprehensive analysis using semi-structured qualitative interviews with three specific research questions. This meticulous approach aims to analyse and understand the role and positioning of the Chief Sustainability Officer within the company framework.
Given that this is a new and evolving role, the purpose of the research is to understand how this crucial role is effective in the company and its actual responsibilities.

The research questions were addressed through a series of fifteen open-ended questions posed to selected interviews with large companies that have implemented the role of sustainability manager or have a sustainability team.

The group of companies analysed in this dissertation has executed the role of sustainability manager and the aim of the research is based on three main analysis points. Firstly, it was essential to understand the background of the person designated for this role in the selected companies. Secondly, the focus was on the structural and framework orchestration of the sustainability team and how the company has changed with the application of the new role. Thirdly, the attention was also on the main challenges the single company has faced regarding sustainability. This focus on the specific company is crucial to understanding the level of sustainability in the company and how it impacts all sectors and roles within the organisation.

1.1. *Research question and objectives*

The analysis and the qualitative interviews conducted were guided by three main research questions.

RQ1: *What are the typical career paths and professional backgrounds of Chief Sustainability Officers, and why do some academic backgrounds fit better for this role?*

This research question aims to better understand the academic and professional backgrounds of the individuals currently occupying this crucial and evolving role. The objective is to determine whether these backgrounds have influenced the company's strategic decisions and directed the role in a specific trajectory. As this is a newly established role, specific professionals have still to be educated and therefore, individuals from diverse professional backgrounds have taken on this position. The research endeavours to identify these various backgrounds and elucidate why they are considered significant and preferable over others.

RQ2. *How is the role of the Chief Sustainability Officer integrated into the organisational schema?*

This research question seeks to gain insight into the Chief Sustainability Officer's placement within the company's organisational structure. The position's placement within the company conveys a significant message about the significance attributed to this role. It provides valuable insight into the sustainability manager's capacity and potential for the impact within the organisation.

RQ3: *What are this role's primary responsibilities and impacts on the organisational business strategy?*

This research question aims to assess the specific areas and initiatives the CSO focuses most on its operations. Sustainability covers a broad spectrum of issues and challenges that cannot be prioritised equally across various companies. An effort was made to analyse and comprehend which facets of sustainability were deemed more significant, the reasons behind this prioritisation and the decision-making influence of the CSO in this regard.

1.2. Sample of the research

To analyse and answer the three assumptions presented in the section above, semi-structured interviews were conducted with six big companies in different fields of operation. The six companies will not be explicitly cited due to limitations given by the company, but a description of the companies will be provided. The organisations are all multinational companies, most of them Italian, which was necessary for the research because small and medium enterprises still are not implementing the role of the sustainability manager or are not as well structured as in a multinational organisation. The companies interviewed operate in up to 50 countries, have 5.000 employees up to 340.000 employees and have a turnover ranging from 3 billion to 30 billion; four out of six companies interviewed are listed on the stock exchange and operate in the international market. The sectors in which they work are all different, and this was relevant for the research because it allowed the understanding of how different sectors organise sustainability and which fields were prioritised.

As mentioned earlier, the companies we analysed operate in a different range of sectors, reflecting the breadth of our research. We conducted an analysis on a company in the consulting field for technological and business transformation, a multinational agribusiness in the dairy industry, an international industrial group with capabilities in aerospace, defence, and security, the world's largest international health and beauty retailer, a leader in the distribution of consumer electronics and household appliances and a global leader in engineering services for designing, constructing and operating complex infrastructure and plants in the energy sector both offshore and onshore.

In the next paragraphs, we will discuss the findings and the answers provided by the respondents. Since most companies are publicly traded, the names of the companies can not be mentioned for privacy reasons. We will also refer to the various respondents, as represented in the table below, to make the findings and results clearer and easier to understand.

Table 1:

Type of sector and role	**Interview**	**Date of the interview**	**Sex**	**City**
Corporate Social Responsibility Head company in the consulting field for technological and business transformation.	Int. I	05/13/2024	Female	Milan
Sustainability manager for multinational agribusiness in the dairy industry.	Int. II	05/15/2024	Male	Milan
CSO of an international industrial group with capabilities in	Int. III	05/16/2024	Female	Rome

aerospace, defence, and security.				
CSO of the world's largest international health and beauty retailer.	Int. IV	05/14/2024	Male	Hong Kong
Sustainability Officer of a leader in the distribution of consumer electronics and household appliances	Int. V	04/22/24	Male	Milan
Sustainability Governance Manager of a global leader in engineering services for designing, constructing and operating complex infrastructure and plants in the energy sector, both offshore and onshore	Int. VI	05/13/2024	Male	Milan

1.3.Data collection procedure

In-depth qualitative interviews were used as a data collection method in this study to answer the previously proposed research questions. They were conducted using a semi-structured script with standardised open questions. To broaden the results base and deepen the topics discussed from different individual perspectives, the same questions were addressed to the specialists in the field from each company. A total of 6 interviews were conducted.

Regarding the data collection process, each interviewee was guaranteed anonymity, although the topics covered were not confidential. The interviews were conducted by asking each

respondent the same open-ended questions designed to explore and answer the Research Questions proposed in the previous paragraph.
As for RQ1, the questions addressed were aimed at understanding the extent to which academic and professional background influences the competencies for the role of sustainability officer, what backgrounds large companies prefer to assign to this role and which competent figures they choose.
For this purpose, the interviewed were asked the following questions:

1. What is your academic background?

2. What job roles did you previously hold? And what companies did you work in?

3. What led you to a career in sustainability, and how did your career lead you to your current position?

Furthermore, to address of RQ 2, the following questions were asked: RQ2 aimed to better understand where in the organisational chart the role was implemented and how it was implemented; in particular, for the scope of the research, it was important to understand to which position the sustainability manager responded in the organisational chart and which were its main responsibilities.

4. When has the role of the CSO in your company been implemented, and since when have you been in this role?

5. Are you only CSO, or do you have other responsibilities in the company? And if so, how much is the commitment compared to the other roles?

6. Could you explain the role and work of a CSO?

7. What does one of your typical days look like? What are your main tasks?

8. How many other company members are involved in these issues and support/respond to you?

9. Indicatively, in the organizational chart, where is the CSO function inserted (to whom does its role respond?)?

Finally, the interview was concluded with more specific questions about the role inside the company and the primary responsibilities and impacts in the organisational business. This third section was important to address better the third research question and also to understand the extent to which sustainability was developed inside the company and the facets that this topic takes within individual companies. Being the word sustainability one that encompasses such a wide branch of meanings and actions it was important to understand specifically in each sector what it meant by sustainability and what it was called upon to do. In this section, we also tried to understand the opinions of the interviewed on its role and the future evolution of this crucial and fast-evolving profession.

10. What are the main sustainability challenges for your company?

    a. How could you summarize your company's sustainability strategy?

    b. How does it collaborate with other business functions within the organization to integrate sustainability into various operations?

    c. And with stakeholders?

11. In your experience, what should be improved to achieve better performance?

12. Can you share a particularly significant sustainability action your organization has faced and how it has been addressed?

13. What are the KPIs and research to measure the progress and development of these sustainability actions?

14. Is sustainability a topic the company uses in its internal and external communication?

15. Do you believe implementing the CSO's role is crucial for companies? Why?

2. Results and Discussion

In this section, we will discuss and analyse the results of the interviews. The interviews were transcribed and analysed, enabling comparison and understanding of the primary research outcomes. Through answering the questions and conducting the analyses, seven main topics were identified, which were raised by all interviewees and represented the main outcomes and discussion of the research. Some of the insights that will be analyzed do not directly answer the research questions presented in the previous paragraphs but represent interesting evidence that arose during the interviews. These seven issues will be analysed in the following sections, and excerpts from the interviews will be included to enhance understanding of the discussion. The quotes will be reported within the text, citing the interviewees as presented in Table 1.

2.1 Academic and professional background

One of the main focuses of the research was to understand the academic and professional backgrounds of the professionals who now have the role of Chief Sustainability Officer. This analysis answers to the first research question presented in the section above. It was one of the main points because we believed it was important to understand the background and why the company decided to attribute this crucial and new role to a specific background. It is important to note that this being a recent function, all the interviewers were the first people in the company to have this role and, for most of them, the position was born and developed with them. It was expected that none of the sustainability managers had a background in mere sustainability and the research agreed with the hypothesis. All the interviewees had an economic, financial or engineering background and the works done in the past were more related to financial analysis, management of a specific field of the company or Human Resources.

It was surprising to notice that none of the interviewees had a communication role or background; this was an important aspect to notice that underlined how the role of the Chief Sustainability Officer is not just communication of the 'good behaviours' of the company but the role is becoming more and more strategic, even though all the interviewees answered that communication regarding sustainability actions inside and outside the company is crucial. The research underlines that *"this kind of profession is moving more and more toward something highly strategic*" (Int. V), and the professional needs a broader understanding of the company and all operating sections and groups.

In this section, it is important to underline how, even with different backgrounds or previous professional lives, all the respondents raised the concept that they needed to study and understand this fast-evolving world of sustainability and how to comply with all the norms and directives. *"Those who enter these kinds of roles with any level of seniority, so not necessarily those who lead the function, but also those who join should not improvise"* (Int I)

"It's a very, very beautiful profession if seasoned with solid skills. Because you have to; then everyone can have their own set of skills. Not necessarily, one can be a statistician. I've had people on my team who came from every background possible and imaginable. The important thing is to have those skills, that is, so study, study, study, read." (Int VI)

All the sustainability managers also raised the concept that their role is an orchestration role. *"My function is central in the sense that I don't really answer to a single organisation in our group. I answer to everybody by trying to be a collector of information because those who work in [...] probably don't know all the activities that those who work in [..] do.* (Int II)

They are collectors of information and coordinators of everything that happens in the area of sustainability within the company and this requires a great ability to communicate throughout all the sections of the company and integrate thinking and transversal thinking. "*An inherent feature of this type of topic (referring to sustainability) is that since it is a very cross-cutting topic, even the leadership must have the ability to hold other functions accountable for their work. It is a function that must have its own autonomy, its own leadership, its own visibility*." (Int I)

"Think of a CSO as the conductor of an orchestra; interpersonal and communication skills are very important, as a CSO needs to be in contact with the whole organisation and identify hurdles, facilitate project rollouts, support HR in developing talents in sustainability, etc.… (the list is very long)." (Int. IV)

During the research, it was emphasised that a certain level of seniority may be necessary to excel in this position. This is because individuals in this role oversee the operations of different business units and interact with all company levels. It is important for them to have a deep understanding of the company and possess skills related to the workplace that have been acquired over the years. *"So there is an issue of leadership, credibility, ability to build relationships and ability to motivate stakeholders to contribute. Which is not trivial at all. That, for example, also requires a certain level of seniority".* (Int I)

"Completing the tasks that this role requires is not something you can do immediately because, more than anything, you have to know the whole company. In order to be able to know who is in charge of the packaging within the business suite [...], You have to go and understand who it is that you have to understand the person, what he/she is in charge of, what his/hers perimeter

is and how different it is from what he does in another business unit. What was very helpful was the time, that is, the time to be able to learn." (Int II)

We have learned from our research that the Chief Sustainability Manager is not the only person in the company who values sustainability. The entire company takes sustainability and ESG into account when conducting business. The role of the sustainability manager is to understand the actions taken by various departments, encourage improved practices when necessary and report on positive initiatives carried out by all business units. *"It's not the sustainability team that does the sustainability of the company, the company does the sustainability in all the management of its issues, especially those that deal with health and safety, the environment, people, suppliers and relations with the financial community that are delegated. Partly to all the specialised structures, which are then in the functions both corporate and then within the projects or in the countries where the company is in the permanent establishment."* (Int VI)

2.2. Collocation in the organization chart of the role

The second crucial inisght that has been a priority to understand during the research was the collocation of this figure in the organisation chart: it was crucial to understand to which level the sustainability topic was posed, as the literature review presented in the chapters above underlined. This section of answers and analysis helped answer to the second research question. There must be direct or the most direct communication possible between the Chief Sustainability Officer and the C-suit of the company because they control the whole company's operation and all must be harmonised well. If there is no direct communication, this is not possible.

It was pleasant to learn that all the respondent companies had this direct communication with the C-suit of the company and responded directly to the CEO or to the chief of the Board that responded directly to the CEO.

"What I think is desirable for all companies, on the other hand, is certainly that sustainability has a direct relationship with the company's top management, so there are not so many other mediations". (Int I)

In addition to that, we tried to learn the size of the sustainability unit and this was an interesting area of the research because it showed how the role in the various companies was tailored to the needs of the individual company and not by taking standards or wanting to conform to regulations. Some companies have a more structured sustainability team with more or less fifteen people involved who work on different topics like reporting, social actions and sustainability governance; in other companies, the sustainability manager works independently for different reasons. Firstly, in these companies, it was made this decision because sustainability was already a founding pillar of the company and the sustainability manager has the role of organising and putting into communicating the different units. Still, all the single unit do their sustainability actions.

"Within each company, now a business unit, there used to be a core group of people who dealt with sustainability. A core group of people who dealt with sustainability, social energy, environment, etc. Today, these people have a functional head and a functional coordinator. The top structure of this today is one person. The idea is to have it expand in terms of a team as well because it's obvious that the more stuff there is to do, the less time there is. To devote ourselves to one person, however, you have to consider that we always work as a team organizationally. We always try to work as little as possible in silos." (Int II)

In addition, some of the companies are multinational and international, so there was already a big sustainability team in the home base company and they just needed to follow their base and guidelines. In addition, it was raised that in companies like this, the budget given to sustainability practices was more important than the personnel attributed to the cause.

"Focusing the construction of this function not so much on putting together a large team but instead on providing a budget for spending, so the big investment in terms of human resources was, let's say, my appointment and then the agreement is that I'm going to stay on my own. I'm going to need a budget to do initiatives and projects and so on. This approach was possible because of our context." (Int I)

Understanding this context makes it even clearer how the Chief Sustainability Officer's soft skills are increasingly a prerequisite. Knowing how to relate to all sides of the business is a basic requirement for filling this role because they are responsible for the company's sustainability. They never work on their own. Every day they interface with the entire company assembly line, from suppliers to the CEO, "*always in the concept of collaboration, in the sense that we without the help and work of others cannot work and vice versa."* (Int II)

2.3.The importance of the materiality analysis

The interviews underscored the significance of materiality and the critical need to incorporate sustainability into materiality analysis. It is noteworthy that while there was no specific question about integrating sustainability topics into the materiality matrix, all the respondents emphasised this aspect and stressed its importance so we believed it was important to analyse and underline this topic in the analysis of the answers.

This aligns with the findings in the literature review and emphasises the concept of double materiality in determining which issues are material for a company. This approach enables the company to take tangible steps and track the identified material topics. *"For us, materiality analysis is the number one principle and process to follow that which is not material. It has to be somehow, let's say, discarded, eliminated because otherwise, the company loses sight of the priority objectives*." (Int VI)

"Materiality analyses are the upstream of the whole annual process and stakeholder engagement activities. So, as far as the four galleys, let's say the organisation are all the Climate action part and then environmental policies by social impact, the ESG rating the benchmarking part and the Stakeholder engagement part". (Int III)

"Our worldwide group has defined what the priorities are for us from a sustainability perspective in its materiality analysis. These priorities then have, as it were, become further specialised in the sense that it is then some priorities that are even more important than others. They are mainly the three strands related to the world of emission reduction, packaging and animal welfare." (Int II)

2.4. Sustainability is not just an environmental issue

The analysis provided a better understanding of the various facets of the sustainability topic. As anticipated in the third research question, understanding how sustainability is intertwined with the company's needs was important. When the sustainability managers addressed the materiality issue, they also defined the material needs; the sustainability manager must be able to make these type of decisions. For companies focused on sustainability in the food industry, supply chain and packaging are among the key and critical issues to consider. Other companies prioritise digital inclusion as a central pillar of their sustainability policy.

"In our sustainability strategy, there are three pillars: one is diversity and inclusion; one is environmental sustainability, which is necessary; and a third is the one that is more related to our core business, which is digital inclusion." (Int I)

Some companies emphasise safety, gender inclusion and diversity, while others prioritise product and personnel safety. These diversifications make understand how the sustainability team is not solely responsible for environmental safety within the company but rather encompasses a wide range of considerations. This underlines how the ESG factors are considered equally important. Efforts are being made to implement policies for environment, social, and governance in an equitable manner.

2.5.Stakeholders

Another aspect that was analysed throughout the interviews was the relationship with the stakeholders. This section of answers helped respond to the third research question and the studies conducted in the literature review in the previous chapters was confirmed by the respondents. The Chief Sustainability Officer's relationship with the stakeholders is a crucial task. More and more stakeholders are expecting the company to be sustainable and want to be informed by the company about its engagement on this topic. It is important to note that employees are also a crucial factor and are the ones making requests to the company to be more compliant or to take actions to be more sustainable. *"It is essential that employees are the first witnesses to the company's commitment to sustainability; if this does not happen, that is a huge reputational risk, so a crucial point is the involvement of employees, not just precisely in volunteer activity."* (Int I)

2.6.Challenges of the role

Furthermore, the analysis while trying to address research question number three also brought up the most significant challenges for this nascent role. Indeed, being a new role, there is no figurehead to look up to before or ways of doing things to be inspired by, so sustainability managers are trying to operate within their own company in the best way possible and respond to the general and specific needs that the sustainability theme entails. In addition, Chief Sustainability Officers operate in a field with a long-run view; it can be challenging to understand the benefits that specific actions will provide to the company in the long run. "*So that's kind of the challenge, let's say, to deal with a little bit of taking hold of a vision of the* *future, knowing that this vision needs time that has several internal and external constraints*." (Int VI)

Another important aspect the respondent underlined as a challenge was the idea of the culture of sustainability. *"Another activity a little bit more across the board, which is to just to create a little bit of sustainability culture"* (Int V)

"*The culture of sustainability is perhaps the biggest challenge, which is to make everyone understand what sustainability means in a company like [...], which is a way of doing business, of managing all the impacts and risks that the company has inherent in its business, starting with the health and safety of people, the environmental impacts, the social impacts brought about by intervening in certain territories doing certain jobs and at the same time. To think that sustainability will be a way to seize opportunities in a changing world, in a changing external environment, and in the energy transition. That has to accompany countering climate change, hopefully*." (Int VI)

Communicating the culture of sustainability and the importance of the actions that are made is really difficult for the managers of sustainability but at the same time, really crucial. Internal communication regarding sustainability actions is imperative to help the company understand the sustainability actions made by the industry and get the employers involved, which is another challenge: *"the other important thing is that this sustainability plan was not a plan imposed from above, i.e., it's not that the CEO, the general manager, said, so these are the 30 actions, now do you do them. No, we identified the actions with the various heads of logistics, Office, and personnel."* (Int V)

2.7.The opinion of the Chief Sustainability Officers on their role

The study aimed to understand the perspectives of the Chief Sustainability Officers serving this role and their opinions on the future development of the job and the business world's needs. It is defined as "*an important role, but more importantly, here is an area where there is still much to be built. Certainly, it is a figure from a business organisation's point of view that is still very young, in the sense that this case is indeed going to evolve. The rates of evolution are very fast.* (Int III)

This role is rapidly evolving and companies with only one person handling sustainability strategy plan to expand their teams. The key finding of the research, as confirmed by the respondents, is that this is a strategic role that must oversee the entire company process and be influential at the executive level. The position is highly strategic. *"I increasingly expect sustainability to be integrated into the business model and corporate strategies. There is no longer a sustainability plan that stands to them, and you don't talk about the strategy plan."* (Int V)

3. The Chief Sustainability Officer as a crucial strategic role

Failing to position this role strategically and restricting the sustainability manager's activities to drafting sustainability reports undermines the strategic nature of the role and the expertise it can bring to the company, making it more competitive and aligned with the financial world and market needs. The demand for Chief Sustainability Officers is increasing due to growing stakeholder expectations around these issues. This underscores the necessity for the Chief Sustainability Officers to have autonomy in their strategic operations and direct communication with the executive team. *"The role of the sustainability manager is essential indeed with the regulatory evolution; it will be more and more, that is, even companies, let's say medium-sized companies, that will be required from next year to do reporting. [...] It's not enough to just get a consultant and say do your own, it takes someone who knows the business well, the company well, who is prepared obviously of the merit of the sustainability issues, and then knows how to translate them."* (Int I)

In conclusion, when considering the ESG (Environmental, Social, and Governance) and the governance aspect, it is important to reflect on how the company's investment in a sustainability manager is a concrete action toward developing better sustainable governance within the company. This highlights the evolution of the concept of governance, which is not just about inclusion and diversity or setting quotas for women in the company; while these factors are still crucial and fundamental and should be implemented in all companies, introducing the role of the Chief Sustainability Officer represents a concrete step toward more inclusive and sustainable business practices. *"Sustainability is not only a moral duty but also a business opportunity and a competitive advantage. By being more sustainable, we can enhance our brand reputation, customer loyalty, operational efficiency, innovation, and resilience."* (Int. IV)

4. Limitations and future research

The study aimed to better understand the CSO's new, growing role. Indeed, the responses obtained were fascinating and led to developments in our understanding of this role and its crucial need within the company as an orchestrator and facilitator. However, the research has some limitations.

Firstly, the research base is very small, and to obtain results that can be applied across different companies, we would need to analyse a larger sample. This is likely possible as the role becomes increasingly widespread and more types of companies have implemented it.

This relates to the second limitation, which is that the research analysed only large companies; as mentioned earlier, this was also necessary since small and medium-sized companies do not play this role, but this limitation gives us a less-than-complete view of the scenario.

Thirdly, it was also tried to find an actual CSO, but even in large companies with large structures and teams for sustainability, the CSO's role as a facilitator is still not so developed. Similar figures or sustainability managers still need to be at the company's C-level, even though they answer to the CEO.

Fourthly, the research was developed by having as respondents those in this role, and so it could be that the answers were limited by their view of the company and their role. This could be an interesting prompt for future research and understanding how within the company this role is perceived, both by the c-suite and employees.

In addition, for future research, the scope of analysis could be broadened to include more international and diverse companies without limiting to the Italian perimeter; moreover, broadening the base of people interviewed would lead to a greater understanding of the role and the strengths and weaknesses. Furthermore, the research should also be advanced towards small and medium-sized companies to understand better the scenario of the Chief Sustainability Officer's role, and it could also be interesting to understand how nascent or start-up companies are dealing with this issue and whether they consider the importance of this role.

Certainly, the research emphasises the ever-increasing role of the CSO and how the demand will increase and how well-trained figures who have studied will be requested in the world of work to respond to the needs of the changing world towards an more sustainable and inclusive planet.

CONCLUSIONS

In this dissertation, it has been analysed how the business world is evolving and answering the call and the need for a more sustainable world. The thesis has demonstrated how businesses are becoming more aware of the ESG themes and how they are doing so by considering strategy, finance, compliance and reporting throughout the evolving and growing role of the Chief Sustainability Officer.

The main outcomes of the thesis are summarized below.

Firstly, it was analysed that the need for a CSO is not just a suggestion, but a necessity. It is essential for the Chief Sustainability Officer to be part of the top management team and possess the necessary background, techniques, knowledge and skills to effectively guide and coordinate the entire company on sustainability issues. This is underscored by research conducted through interviews and the increasing demands of stakeholders. Making a strategic and informed choice for the CSO is not just important, but crucial for the company to establish credibility and avoid being accused of greenwashing. In the current environment, where there is growing awareness of ESG issues, the CSO needs to ensure that these issues are not just addressed but given the appropriate importance consistent with the company's strategy. The role of the CSO is not just fundamental, but critical in terms of organisational structure, training, empowerment and the characteristics they possess.

Secondly, the analysis reveals that the profile of the Chief Sustainability Officer is not only central but also increasingly necessary to meet the needs of stakeholders; these include regulated and regulatory bodies, public opinion, NGOs and others interested in the company. With the growing awareness of ESG issues, there is a critical focus on distinguishing genuine actions from greenwashing in company strategies. Therefore, it is crucial for the business to adequately value the role of the CSO, providing training and empowerment within the company and enabling them to align all parts of the firm towards common ESG goals. Equally important is the provision of training for the company's board of directors and top management, ensuring a comprehensive understanding of these issues at all company levels.

Thirdly, the role of the Chief Sustainability Officer shall be tailored to the company's specific needs rather than being a mere add-on tasked with environmental initiatives. The background of the CSO should align with the company's goals. For instance, a CSO responsible for decarbonising an energy company should have energy or environmental engineering expertise.

Similarly, for a company focused on raw materials, the CSO should possess strong knowledge of research and development or the supply chain. This strategic approach is crucial to avoid greenwashing.

In conclusion, selecting the Chief Sustainability Officer involves a strategic and governance decision that is becoming increasingly essential for the company and its future. The choice of CSO will be increasingly because it sends a clear message about the company's commitment to ESG issues and the focus on sustainability strategy will continue to grow. This role is expected to be in high demand, increasingly relevant and play a more strategic role within the company. As stakeholders' focus on ESG issues increases, there will be a greater need for consistent and specific action in this area. This is due to growing awareness and more specific regulations that require companies to invest in sustainability to remain competitive and meet new market demands. It will be interesting and important to observe how this role evolves in the coming years and the real impact it will have also on medium and small-sized companies.

BIBLIOGRAPHY

A.Jordan, & A. Lenschow (2010). Environmental policy integration: a state of the art review. Environmental Policy and Governance, 20 (3), 147–158.

Abdelkafi N, Täuscher K. 2015. Business models for sustainability from a system dynamics perspective. Organization and Environment https://doi.org/10.1177/1086026615592930.

Aureli S, Del Baldo M, Lombardi R, Nappo F. Nonfinancial reporting regulation and challenges in sustainability disclosure and corporate governance practices. Bus Strat Env. 2020; 29: 2392–2403. https://doi.org/10.1002/bse.2509

Barbier, E. B., & Burgess, J. C. (2021). *Economics of the SDGs*. Springer International Publishing.

BNP Paribas, Integreted report of 2022 https://integrated-report.bnpparibas/2022/article/21/

Brundtland, Gro Hariem. "World commission on environment and development." *Environmental policy and law* 14.1 (1985): 26-30.

C. Dupont, & A. Jordan (2021). Policy integration. In Environmental Policy in the EU: Actors, Institutions and Processes (Fourth Edition, pp. 203–219). London: Routledge
Cambridge Advanced Learner's Dictionary & Thesaurus *Cambridge University Press*.

Cambridge Institute for Sustainability Leadership (CISL) What is COP? https://www.cisl.cam.ac.uk/cop-climate-change-conference (last visited 28 March 2024).

Capital Market Union Action Plan, Communication from the commission to the European parliament, the council, the European economic and social committee and the committee of the regions a Capital Markets Union for people and businesses-new action plan, Brussels, 24.9.2020.

CBAM, Regulation (EU) 2023/956 of the European Parliament and of the Council of 10 May 2023 establishing a carbon border adjustment mechanism (Text with EEA relevance), 10 may 2023.

Communication from the Commission to the European parliament, the European council, the council, the European economic and social committee and the committee of the regions The European Green Deal, Brussels, 11, Dec, 2019.

Corporate Sustainability Reporting Directive (CSRD) Directive (EU) 2022/2464 of the European Parliament and of the Council of 14 December 2022 amending Regulation (EU) No 537/2014, Directive 2004/109/EC, Directive 2006/43/EC and Directive 2013/34/EU, as regards corporate sustainability reporting.

CS3D, Proposal for a Directive Of The European Parliament And Of The Council on Corporate Sustainability Due Diligence and amending Directive (EU) 2019/1937, Brussels, 23.2.2022.

D. Wallace-Wells, "The uninhabitable earth." *The Best American Magazine Writing 2018*. Columbia University Press, 2018.

D.S. Dhaliwal., O.Z. Li., A. Tsang, & Y.G. Yang, Voluntary Nonfinancial Disclosure and the Cost of Equity Capital: The Initiation of Corporate Social Responsibility Reporting. *The Accounting Review*, 2011, *86*(1), 59–100. http://www.jstor.org/stable/29780225

D.Schoenmaker and W. Schramade, principles of sustainable finance, oxford university press, 2019.

Deloitte Analysis, Da Non-Financial Reporting a Corporate Sustainability Reporting, 2021. https://www2.deloitte.com/it/it/pages/audit/articles/da-non-financial-reporting-a-corporate-sustainability-reporting-.html (last visited may 2024).

Deloitte, The future of the Chief Sustainability Officer Sense-maker in chief, November 2022.

Directive (EU) 2023/959 of the European Parliament and of the Council of 10 May 2023 amending Directive 2003/87/EC establishing a system for greenhouse gas emission allowance trading within the Union and Decision (EU) 2015/1814 concerning the establishment and operation of a market stability reserve for the Union greenhouse gas emission trading system.

Directive 2014/56/EU of the European Parliament and of the Council of 16 April 2014 amending Directive 2006/43/EC on statutory audits of annual accounts and consolidated accounts.

Directive 2014/95/EU of the European Parliament and of the Council of 22 October 2014 amending Directive 2013/34/EU as regards disclosure of non-financial and diversity information by certain large undertakings and groups.

Doshi, A. R., Dowell, G. W. S., & Toffel, M. W. (2013). How firms respond to mandatory information disclosure. Strategic Management Journal, 34, 1209–1231.

Dragomir, Voicu D.: Financial and competition implications of the European Union's Green Deal, Amfiteatru Economic Journal, ISSN 2247-9104, The Bucharest University of Economic Studies, Bucharest, 2022, Vol. 24, Iss. 61, pp. 593 https://doi.org/10.24818/EA/2022/61/593

Dupont, C., Moore, B., Boasson, E. L., Gravey, V., Jordan, A., Kivimaa, P., Kulovesi, K., Kuzemko, C., Oberthür, S., Panchuk, D., Rosamond, J., Torney, D., Tosun, J., & von Homeyer, I. (2024). Three decades of EU climate policy: Racing toward climate neutrality? *WIREs Climate Change*, 15(1), e863. https://doi.org/10.1002/wcc.863

E. Farri, P. Cervini, and G. Rosani, The 8 responsabilities of Chief Sustainability Officers, Harvard Buiness Review, march. 2023.

Effort Sharing Regulation, Regulation (EU) 2023/857 of the European Parliament and of the Council of 19 April 2023 amending Regulation (EU) 2018/842 on binding annual greenhouse gas emission reductions by Member States from 2021 to 2030 contributing to climate action to meet commitments under the Paris Agreement, and Regulation (EU) 2018/1999 (Text with EEA relevance), 19 April 2023.

Encyclopedia of the UN Sustainable Development Goals. Sustainable Cities and Communities (Section Editor) in W. Leal Filho, U. Azeiteiro, A.M. Azul, L. Brandli, P. Gökcin Özuyar and T.Wall (eds) Encyclopedia of the UN Sustainable Development Goals - Volume 3. Cham (Switzerland): Springer.

ETS directive, Directive (EU) 2023/959 of the European Parliament and of the Council of 10 May 2023 amending Directive 2003/87/EC establishing a system for greenhouse gas emission allowance trading within the Union and Decision (EU) 2015/1814 concerning the establishment and operation of a market stability reserve for the Union greenhouse gas emission trading system.

Eur lex, sustainable development definition https://eur-lex.europa.eu/EN/legal-content/glossary/sustainable-development.html#:~:text=Sustainable%20development%20was%20defined%20in,to%20meet%20their%20own%20needs'. (last visited 22/05/2024).

European Commission, "Guidelines on non-financial reporting: Supplement on reporting climate-related information, 2019.

European Commission, Energy, Climate change, Environment , Land use sector, EU rules on land use, land use change and forestry (LULUCF) https://climate.ec.europa.eu/eu-action/land-use-sector_en#eu-rules-on-land-use-land-use-change-and-forestry-lulucf (last visited may 2024).

European Commission, Energy, Climate change, Environment, Effort sharing 2021-2030: targets and flexibilities https://climate.ec.europa.eu/eu-action/effort-sharing-member-states-emission-targets/effort-sharing-2021-2030-targets-and-flexibilities_en (last visited may 2024).

European Commission, Energy, Climate change, Environment, Governance of the energy union and climate action https://climate.ec.europa.eu/eu-action/climate-strategies-targets/governance-energy-union-and-climate-action_en (last visited may 2024).

European Commission, Energy, Climate change, Environment, Renewable Energy Directive, https://energy.ec.europa.eu/topics/renewable-energy/renewable-energy-directive-targets-and-rules/renewable-energy-directive_en (last visited may 2024).

European Commission, Energy, Climate change, Environment, Sistema per lo scambio delle quote di emissione dell'UE (ETS UE) https://climate.ec.europa.eu/eu-action/eu-emissions-trading-system-eu-ets_it (last visited may 2024).

European Commission, EU Taxonomy for sustainable activities. https://finance.ec.europa.eu/sustainable-finance/tools-and-standards/eu-taxonomy-sustainable-activities_en (last visited may 2024)

European Commission, The European Green Deal, Brussels, 11.12.2019 https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=COM%3A2019%3A640%3AFIN

European Commission, Proposal for a REGULATION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL establishing the Just Transition Fund, 2019

European Council, Cop 28, 27 January 2024 https://www.consilium.europa.eu/it/policies/climate-change/paris-agreement/cop28/ (last visited 22/05/2024).

European Council, What is the Fit for 55 package? 12 april 2024.

European Council, Fit for 55 https://www.consilium.europa.eu/it/policies/green-deal/fit-for-55-the-eu-plan-for-a-green-transition/#what

European Green Deal, Communication From The Commission To The European Parliament, The European Council, The Council, The European Economic And Social Committee And The Committee Of The Regions The European Green Deal, Brussels, 11.12.2019.

F. Rossi, Libro la sfida inevitabile, la sostenibilità e il futuro dell'impresa, Il mulino, 2022.

Fit for 55: Communication from the commission to the European Parliament, the council, the European economic and social committee and the committee of the regions 'fit for 55': delivering the EU's 2030 climate target on the way to climate neutrality, Brussels, 17 July 2021.

G. Giese, et al. "Foundations of ESG investing: How ESG affects equity valuation, risk, and performance." *The Journal of Portfolio Management* 45.5 (2019): 69-83.

G.A. Kholjigitov, Specifics of WACC for sustainable projects, British Management University, Tashkent, Uzbekistan, 2023.

Global Reporting Initiative (GRI), https://www.globalreporting.org/ (last visited 22/05/2024)

Intergovernmental Panel on Climate Change, Climate Change 2022: Impacts, Adaptation and Vulnerability, 2022, https://report.ipcc.ch/ar6/wg2/IPCC_AR6_WGII_FullReport.pdf.

IPCC, 2022: *Climate Change 2022: Impacts, Adaptation and Vulnerability. Contribution of Working Group II to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change* [H.-O. Iroquois Valley Farmland REIT https://iroquoisvalley.com/ (last visited April 2024).

iShares https://www.ishares.com/it (last visited April 2024).

J. Hickel, Less is more: How degrowth will save the world, Random House, 2020.

Jones, Peter ORCID: 0000-0002-9566-9393, Hillier, David and Comfort, Daphne, The sustainable development goals and businesss. International Journal of Sales, Retailing and Marketing, 2016.

K. Miller G. Serafeim, Chief Sustainability Officers: Who Are They and What Do They Do?, Harvard Business School, 2014.

K. Rietig and C. Dupont, Climate policy integration and climate mainstreaming in the EU budget, ch. 17 of Handbook on European Union Climate Change Policy and Politics, 14 July 2023.

K. Sasaki, W. Stubbs, & M. Farrelly, The influence of the sustainable development goals on large companies' adoption and implementation of a broader corporate purpose. Corporate Governance: The International Journal of Business in Society. https://doi.org/10.1108/CG-04-2023-0167

K. Wade, The impact of climate change on the global economy, Schroders, 2016.

Kettlewell, Niejahr And Galdino European Union: the new Corporate Sustainability Due Diligence Directive has been provisionally agreed upon- what does this mean for companies?, Global Compliance News, February 2024.

L.E.Swedroe and S.C. Adams, Your essential guide to sustainable investing, Harriman House, 2022.

Legislative Decree 254/2016, Attuazione della direttiva 2014/95/UE del Parlamento europeo e del Consiglio del 22 ottobre 2014, recante modifica alla direttiva 2013/34/UE per quanto riguarda la comunicazione di informazioni di carattere non finanziario e di informazioni sulla diversita' da parte di talune imprese e di taluni gruppi di grandi dimensioni. (17G00002) (GU Serie Generale n.7 del 10-01-2017), note: Entrata in vigore del provvedimento: 25/01/2017.

Leonardo Centre on Business for Society, Imperial College Business School, From Sustainability to Business strategy report, October 2023.

LULUCF, REGOLAMENTO (UE) 2018/841 DEL PARLAMENTO EUROPEO E DEL CONSIGLIO del 30 maggio 2018 relativo all'inclusione delle emissioni e degli assorbimenti di gas a effetto serra risultanti dall'uso del suolo, dal cambiamento di uso del suolo e dalla silvicoltura nel quadro 2030 per il clima e l'energia, e recante modifica del regolamento (UE) n. 525/2013 e della decisione n. 529/2013/UE, 30 may 2018.

M. Friedman, A Friedman doctrine-- The Social Responsibility of Business Is to Increase Its Profits, The New York Tymes, 1970.

M. Rosenberg, A Strategic Approach to Sustainability IESE Insight Review.pdf https://www.iese.edu/insight/articles/sustainability-environmentalism-managers/
M. Rosenberg, Strategy and Sustainability: A Hardnosed and Clear-Eyed Approach to Environmental Sustainability For Business, IESE Business Collection, 2015.

M.Stampa, D.Callace, N.Ferro, La sostenibilità è un'impresa, Hoepli Milano, 2022.
National Energy and climate plan Poland, Executive Summary Of Poland's National Energy And Climate Plan For The Years 2021-2030 (NECP PL), 2019.

NFRD, Directive 2014/95/EU of the European Parliament and of the Council of 22 October 2014 amending Directive 2013/34/EU as regards disclosure of non-financial and diversity information by certain large undertakings and groups, 22 October 2014.

P. Polman and A. S. Winston. Net Positive. Profit Editorial, 2022.

P. Rota, S. Caristia, La Doppia Materialità e il processo di materiality assessment in pratica, Sostenibilità aziendale, il sole 24 ore in collaboration with KPMG, nov. 2023.

Paris Agreement "Paris agreement." Report of the conference of the parties to the United Nations Framework Convention on Climate Change (21st session, 2015: Paris). Retrieved December. Vol. 4. No. 2017. Getzville, NY, USA: HeinOnline, 2015.

Pizzi, S., Rosati, F., & Venturelli, A. *The determinants of business contribution to the 2030 Agenda: Introducing the SDG Reporting Score*. Business Strategy and the Environment, 30(1), 2021.

Pörtner, D.C. Roberts, M. Tignor, E.S. Poloczanska, K. Mintenbeck, A. Alegría, M. Craig, S. Langsdorf, S. Löschke, V. Möller, A. Okem, B. Rama (eds.)]. Cambridge University Press , Cambridge, UK and New York, NY, USA, 3056 pp., doi: 10.1017/9781009325844.

Poland's National Energy and Climate Plan for years 2021-2030 (NECP PL) along with attachments has been developed in fulfilment of the obligation set out in Regulation (EU)

2018/1999 of the European Parliament and of the Council of 11 December 2018 on the Governance of the Energy Union and Climate Action.

Protocol Kyoto. "Kyoto Protocol." *UNFCCC Website. Available online: http://unfccc.int/kyoto_protocol/items/2830. Php (accessed on 28 March 2024)* (1997): 230-240.

R. G. Eccles, A. Taylor, Come sta evolvendo il ruolo dei Chief Sustainability Officer, Harvard Business Review, September 2023.

R. Rodrich-Portugal, M. Marino-Jiménez, G. Mayurí-Aguilar., & S.A. Abad-Neyra. The purpose of the company beyond its position in the market: The new agent of social development. *Business Strategy & Development*, 6(4), 2023, 931–941. https://doi.org/10.1002/bsd2.288

Renewable energy directive, Directive (EU) 2018/2001 of the European Parliament and of the Council of 11 December 2018 on the promotion of the use of energy from renewable sources (recast) (Text with EEA relevance.), 11 December 2018.

Rosati, F., & Faria, L. G. D. Business contribution to the Sustainable Development Agenda: Organizational factors related to early adoption of SDG reporting. Corporate Social Responsibility and Environmental Management, 26(3), 2019.

S. Leape et al., More than a mission statement: How the 5Ps embed purpose to deliver value November 5, 2020, Article McKinsey Quarterly.

S. Nosratabadi; A. Mosavi; S. Shamshirband; E. Kazimieras Zavadskas.; A. Rakotonirainy; K.W. Chau, Sustainable Business Models: A Review. *Sustainability* **2019**, *11*, 1663. https://doi.org/10.3390/su11061663.

S. Schlacke, et al. "Implementing the EU Climate Law via the 'Fit for 55'package." *Oxford Open Energy* 1 (2022): oiab002.

S. Spinaci, Green and Sustainable Finance, Breefing EPRS | European Parliamentary Research Service, Members' Research Service PE 679.081 – February 2021.

S.Kammourieh and S. Vallèe, The political economy of green financial regulation, E3G, 03 Sept 2021.

Sachs, J.D., From Millennium Development Goals to Sustainable Development Goals. Lancet 379: 2206–2211, 2012.

Samborski, The energy company business model and the European green deal. Energies, 15(11), 2022.

Schaltegger, S., Hansen, E. G., & Lüdeke-Freund, F. (2016). Business Models for Sustainability: Origins, Present Research, and Future Avenues. Organization & Environment, 29(1), 3-10. https://doi.org/10.1177/1086026615599806

Social Climate Fund, Regulation (EU) 2023/955 of the European Parliament and of the Council of 10 May 2023 establishing a Social Climate Fund and amending Regulation (EU) 2021/1060

Stoczkiewicz. M. The climate policy of the European Union from the Framework Convention to the Paris Agreement, Journal of European Environmental & Planning Law, 2018, 15: 42–68.

Sustainable Corporate Governance, European Commission, 2022, https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/12548-Sustainable-corporate-governance_en

Sustainable Financial Reporting Regulation, Regulation (EU) 2019/2088 of the European Parliament and of the Council of 27 November 2019 on sustainability-related disclosures in the financial services sector.

T. Rayner et al. The global importance of EU climate policy: an introduction *Handbook on European Union climate change policy and politics*. Edward Elgar Publishing, 2023.

T.N. Gladwin, J.J. Kennelly, & T.S. Krause, Shifting paradigms for sustainable development: Implications for management theory and research. *Academy of Management Review*, *20*(4),1995 p. 877.

Tauron Capital Group https://raport.tauron.pl/en/conditions-of-activity/competitive-environment/#:~:text=TAURON%20Capital%20Group's%20distribution%20grids,revenue%20from%20the%20distribution%20operations. (last visited April 2024)

Taxonomy regulation, Regulation (EU) 2020/852 of the European Parliament and of the Council of 18 June 2020 on the establishment of a framework to facilitate sustainable investment and amending Regulation (EU) 2019/2088 (Text with EEA relevance).

Teece D. (2010). Business models, business strategy and innovation. *Long Range Planning*, 43, 172-194.

The Sustainable Finance Initiative, https://www.sustainablefinance.hk/ (last visited may 2024).

The United Nations Framework Convention on Climate Change (UNFCCC).

Transparency Directive, Directive 2004/109/EC of the European Parliament and of the Council of 15 December 2004 on the harmonisation of transparency requirements in relation to information about issuers whose securities are admitted to trading on a regulated market and amending Directive 2001/34/EC, 15 December 2004.

Trattato sul Funzionamento dell'Unione Europea, Versione consolidata, 26 October 2012.
UN Guiding Principles on Business and Human Rights (UNGPs).

United Nations (UN). 2015 a. The Millennium Development Goals Report 2015. New York: United Nations. https://www.un.org/millenniumgoals/2015_

United Nations (UN). 2015 b. Transforming Our World: The 2030 Agenda for Sustainable Development. New York: United Nations. https://sustainabledevelopment.

United Nations Climate Change, The Paris Agreement. What is the Paris Agreement https://unfccc.int/process-and-meetings/the-paris-agreement

United Nations Global Compact (UNGC), https://unglobalcompact.org/ (last visited mat 2024).

United Nations, Department of Economic and Social Affairs Sustainable Development, UN 2030 goals, https://sdgs.un.org/goals .

United Nations, Paris Agreement, 2015.

United Nations, The Millennium Development Goals Report 2015, https://www.un.org/millenniumgoals/2015_MDG_Report/pdf/MDG%202015%20rev%20(July%201).pdf

United Nationts Climate Change (UNFCCC) The Paris Agreement, What is the Paris Agreement? https://unfccc.int/process-and-meetings/the-paris-agreement (last visit 28 March 2024).

University of Cambridge Institute for Sustainable Leadership (CISL), net zero business transformation A framework for accelerating change in an era of turbulence and complexity. Cambridge, UK, 2022.

US vegan Climate ETF (https://veganetf.com/, last visited may 2024).

Villiers C. New Directions in the European Union's Regulatory Framework for Corporate Reporting, Due Diligence and Accountability: The Challenge of Complexity. *European Journal of Risk Regulation*. 2022;13(4):548-566. doi:10.1017/err.2022.25

World Business Council for Sustainable Development (WBCSD).

World Economic Forum (WEF) Innovating for the European Green Deal, White paper, January 2023.

World Economic Forum (WEF) Quantifying the Impact of Climate Change on Human Health, 16 January 2024.

World Economic Forum, the ‘4Cs’ of being a Chief Sustainability Officer, May 17, 2024.