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# Corporate Sustainability Reporting in Portugal: An Analysis of PSI-20 Companies

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Master in Finance

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Finance Department

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I dedicate this to my parents, Generosa Brito and Eduardo Lima, for their endless love and support, and for always being my role models of hard work and resilience, of work ethic and excellence, of kindness and modesty - they taught me all the most important things in life that we can’t learn in a classroom.

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# SUMÁRIO

À medida que os relatórios de sustentabilidade se tornam cada vez mais uma prática comum entre as empresas de todo o mundo, esta dissertação tem como objetivo avaliar o panorama atual desta prática entre as empresas portuguesas. Baseando-nos nos GRI Standards, foi construído um índice de avaliação para atribuir pontuações às empresas com base na extensão e detalhe do conteúdo incluído nos mesmos, e também nas características de qualidade do relatório, para produzir uma pontuação final que traduz a performance do relatório da empresa. Através de uma análise de conteúdo, os relatórios de sustentabilidade das 18 empresas que constituem o índice do PSI-20 foram analisados e comparados, para um período de três anos – de 2017 a 2019. Os resultados apontam para o facto de que, apesar da grande adesão a esta prática, as empresas portuguesas ainda não atingiram o verdadeiro potencial desta ferramenta e ainda têm muito espaço para evoluir no sentido de produzir relatórios realmente competitivos.

**Palavras-chave:** Responsabilidade Social; Relatório de Sustentabilidade; Índice PSI-20; GRI Standards

**Classificação JEL:** M10, M14

## ABSTRACT

As sustainability reports are becoming more and more a standard practice among companies all over the world, this research aims to evaluate the state of this reporting in Portuguese companies. Using the GRI Standards as a base, a scoring index was built to evaluate both the extent and detail of the content, as well as report quality characteristics, and produce an overall score that translates the overall reporting performance of a company. Through a content analysis, the reports of the 18 companies of the PSI-20 stock index were analyzed and compared, over a period of three years, between 2017 and 2019. The results point to the fact that, despite the general adherence to this practice, Portuguese companies have not yet reached the full potential of sustainability reporting and have a lot to evolve in order to produce competitive reports.



**Keywords:** CSR; Sustainability Report; PSI-20 Index; GRI Standards

**JEL Classification:** M10, M14

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**BCSD** – Business Council for Sustainable Development

**CDP** – Carbon Disclosure Project

**CDSB** – Climate Disclosure Standards Board

**CERES** – Coalition for Environmentally Responsible Economies

**CMVM** – Comissão do Mercado de Valores Mobiliários (Portuguese Securities Market Commission)

**CoP** – Communication on Progress

**CS** – Content Standard

**CSR** – Corporate Social Responsibility

**DJSI** – Dow Jones Sustainability Index

**ECS** – Economic Standard

**ENS** – Environmental Standard

**ESG** – Environmental, Social and Governance

**EU** – European Union

**FSB** – Financial Stability Board

**FTSE4Good -** Financial Times Stock Exchange-Russell Group (FTSE)

**GRI** – Global Reporting Initiative

**ICT** – Information and Communication Technologies

**IIRC** – International Integrated Reporting Committee

**ISO** – International Organization for Standardization

**KPI** – Key Performance Indicator

**MAS** – Management Approach Standards

**NFRD** – Non-Financial Reporting Directive

**NGO** – Non- Governmental Organizations

**OECD** – Organization for Economic Co-operation and Development

**PS** – Principles Standards

**PSI-20** – Portugal Stock Index

**SASB** – Sustainable Accounting Standards Board

**SDG** – Sustainable Development Goal

**SEC** – Security and Exchange Commission

**SR** – Sustainability Report

**SS** – Social Standards

**TBL** – Triple Bottom Line

**TFCD** – Task Force on Climate-related Disclosure

**U.S.** – United States

**U.K.** – United Kingdom

**UNEP** – United Nations Environment Programme

**UNGC** – Uniter Nations Global Compact

**US** – Universal Standards

**WBCSD** – World Business Council for Sustainable Development

# 1. Introduction

As sustainable development becomes a pressing issue for society, stakeholders all around the world are turning their attention to corporations to demand accountability and action towards a more responsible way to conduct business. In response, corporations are shifting their strategies to pursue not only shareholder value, but also *shared value* for the economy, society and the planet. Part of that shift lies in the effort of disclosing sustainability information – the positive and negative impacts of an organization, their strategies, risks and opportunities, and most importantly, their contributions to sustainable development –, besides the traditional reporting of financial information.

Nowadays, sustainability reports are part of the common practice of the corporate world, and they are also part of the informational needs and expectations of stakeholders, who use them to evaluate companies and make economic decisions. However, they do not bring benefits only to stakeholders, in fact research has shown that it is linked to many different positive impacts to the company such as increased employee welfare, attractive talent acquisition, reputational gains and credibility with stakeholders, creation of innovation and competitive advantages, long-term operational effectiveness and business sustainability, and also greater financial performance, stock valuation and access to capital.

Aside from certain key information, sustainability reporting is still voluntary for the most part in Portugal and most countries. Additionally, there is still no global consensus or a standardized way to approach it, like there is for financial information. Thus, some questions arise: Are Portuguese companies today, taking full advantage of this powerful tool that is sustainability reporting? Are they reporting this information and meeting these stakeholder needs? And if so, how are they approaching it?

These are some of the questions that initially have driven the choice of theme for this dissertation. Selecting the 18 companies that constitute the Portuguese stock index (PSI-20) has essentially to do with the fact that these organizations are listed, and therefore are required to issue yearly reports publicly, including issuing some non-financial information. But rather more importantly, the reason for choosing these companies is related to the nature of sustainability reporting, which is something more commonly found in the reports of companies of greater dimension, reputation and also resources. Logically, larger companies usually have greater impacts and responsibilities, and as a result, have all the more reason to report on sustainability matters and are in fact more pressured by stakeholders to do so. Additionally, these companies are typically those with the knowledge and human and financial resources to implement a reporting system.

The PSI-20 companies are also a suitable sample to analyze Portugal's sustainability practices because, being the top companies of the country, they should represent the best practices and most advanced reporting systems. They certainly do not give us the average level of the reporting practices of this entrepreneurial scene, but rather an insight to "where the bar is set" currently in our territory and where we can imagine the average company will be evolving towards in the next decades or so.

In this thesis we aim to measure and analyze the sustainability reporting practices of the companies included in the PSI-20 index through a scoring system based on the most relevant and adopted set of sustainability reporting standards worldwide – the Global Reporting Initiative Standards –, that analyzes both the extent and quality of their sustainability reports. Furthermore, we use that sample to draw conclusions on the current sustainability reporting practices of Portuguese companies as a whole, as well as their evolution between 2017 and 2019. Using this analysis, we focus on answering the following questions, both respective to the two objectives mentioned above: (1) To what level of extent and quality are PSI-20 companies, and Portuguese companies in general, reporting on sustainability? And which companies have the best practice? (2) What trends can be identified? Which topics are the most disclosed and what are the ones reported with the most detail?

This scoring system will deliver a final score for each of the reports reflecting its overall reporting performance, the Sustainability Score (SR score), and this score will in turn be the result of other two scores, one that evaluates the report regarding its contents and level of detail – *what is reported* – compared to what the GRI Standards would require the company to disclose, and that is our Content Score (CS). This score considers the reports' performance in disclosing in 4 different content categories: universal (US), economic (ECS), environmental (ENS) and social (SS). The other score concerns the report quality dimension, other than quality of content itself – *how it is reported.* As we explain in the literature review and methodology chapters, there is much more about a report that makes it competitive, other than the topics chosen to be disclosed. What constitutes a "great report" is hard to define, however, we reached the conclusion that in order to evaluate these reports fairly, it would not be enough to consider just content – other dimensions, the context of the content, could influence in a major way the final output's quality and its usefulness to the company and its stakeholders. Thus, we incorporated this as part of our scoring index, through the Principles Score (PS). This score considers the report's performance in 10 principles of report quality, according to the GRI Standards: Stakeholder Inclusiveness, Sustainability Context, Materiality, Completeness, Accuracy, Balance, Clarity, Comparability, Reliability and Timeliness.

We discovered that although somewhat of an established practice amongst these Portuguese companies, sustainability reporting is still far from its full potential, especially when it comes to the content included and its detail. However, it is a practice that has been rising in popularity, and the results show that it is also improving in performance, although slightly.

Despite the modest quantity of similar studies around the world and as well in Portugal, this thesis' unique contributions to the subject will hopefully be to present an updated and more detailed analysis of the sustainability report panorama of this country, and to fill the gap for a study that includes: (1) all three dimensions of sustainability (economic, environmental and social); (2) a statistical analysis of the results in order to really present a "Portugal sustainability reporting panorama"; (3) the consideration of quality characteristics in the analysis of the reports, in addition to the common analysis of the contents covered by these; (4) and some suggestions for the companies adopting this reporting practice. Additionally, this study has the added value of adopting the GRI Standards as the basis of the scoring system, which is the most recent and comprehensive framework of sustainability reporting, and which will allow us to make a more precise analysis of the reports.

## 2. Sustainability and Sustainable Development

Although traces of early notions of sustainability can be found as early as in 1916, in an article in the *Journal of Political Economy* (Christofi et al., 2012), it is only in 1972 that the word "sustainability" itself gains use in the social, economic and environmental contexts (Online Etymology Dictionary, n.d.; Shaharir, 2013).

Perhaps one of the most central definitions as well as the one regarded as the original one, is one provided in 1987 by the World Commission on Environmental Development's report entitled "Our Common Future". The otherwise known as "Brundtland report"[1] defined Sustainability, or rather synonymously, Sustainable Development, as the "development that meets the needs of the present without compromising the ability of future generations to meet their own needs" (Keeble, 1988, p. 41) . Although the definition was, as Isaksson put it, "a good starting point" (2009, p. 168), it instantly received some criticism for its overall ambiguity and since then, the definition has been subject of a lot of writing in the attempt to further define specific elements (M. A. White, 2013).

Sustainability can also be described as a complete approach considering 3 different dimensions – Environmental, Social and Economic – recognizing that all three must be considered together to achieve long-term prosperity (BCSD Portugal, n.d.):

Table 2.1: The Three Dimensions of Sustainability

| **Environmental Dimension** | **Social Dimension** | **Economic Dimension** |
|---|---|---|
| The responsible management of natural resources, particularly those unrenewable. This implies tackling pollution, the preservation of biodiversity and promotion of responsible consumption and production. | Focuses on the well-being of society regarding the defense of Human Rights and promotion of equal opportunity for all, as well as contributing to a civilization that is fair, inclusive, and moving towards income redistribution to eradicate poverty. | Prosperity in different social levels as well as economic prosperity of businesses that contribute to long-term value creation and promote employment. |

Although it is a broad term and it is currently used in diverse contexts, we will focus on its application to business.

[1] Named after Gro Harlem Brundtland who led the commission

## 3. The Concept of Sustainability applied to Business

When discussing sustainability in the context of business, we speak of "corporate sustainability", "corporate social responsibility" (or CSR), "sustainable development" and others. These terms are all related and are often used to refer to the same concept (Landrum & Ohsowski, 2018; Montiel, 2008). In the present thesis, we conducted the research assuming that authors who adopt these terms are essentially addressing the same, and we will adopt the term "corporate sustainability".

### 3.1. History

Although it may seem that CSR is a fairly recent practice in the business scene, it is possible to find evidence of businesses' concern about social matters since many centuries ago. Nonetheless, it is considered that the 1950s really marked the start of the CSR modern era: it was then that the topic began to be further discussed between investigators and the business community, as well as the time of the publication of the book *Social Responsibilities of the Businessman* by Bowen (1953), who is considered "The Father of CSR" (Carroll, 1999, p. 270; Christofi et al., 2012).

Since then, a lot of other academics have written about corporate sustainability and contributed to its progress, however, it was in the last decades that the most significant developments were made. Environmental disasters, ethical scandals from the 1980s and 1990s, as well as other corporate misconduct incidents during the 2008 financial crisis, severely damaged the corporate sector's reputation and raised skepticism and distrust amongst shareholders. What then followed was that governments and businesses started working together to build systems of shared accountability. Addressing social and environmental issues, something that before was mainly a role attributed to public institutions, was becoming a responsibility of the private sector as well. Finally, corporations shifted their strategies to pursue social and environmental benefits in addition to shareholder value, as organizational objectives. Beginning to report on social impacts of companies was at the center of those strategies, as we will later discuss. (Carroll, 1999; Christensen et al., 2013; Christofi et al., 2012; Dyllick & Hockerts, 2017; Hopkins, 2006).

### 3.2. Definitions

The very definition of Corporate sustainability has been changing and evolving over the years and has been subject of much debate still to this day (Carroll, 1999; Christensen et al., 2013; Dilling, 2010; Halkos & Nomikos, 2021; Hopkins, 2006; Moratis, 2016; Sethi, 1975).

Friedman (1962) claimed that the only social responsibility of a firm was merely to make profits, while McGuire's (1963) view was that it was about acting beyond what was necessary according to legal and economic obligations. Similarly, Manne (1972) proposed that it was essentially voluntary activities, and Steiner (1975) went beyond that and defined it as economic, legal and voluntary activity as well. Granted, there are many different views on the subject.

Sethi, who is accredited for having presented the first model of CSR, suggests that what we may recognize as "Corporate Social Performance" can be separated into three different dimensions: (1) social obligation, which refers to corporate action in regards to legal and market constraints, (2) social responsibility, which centers on behaviors according to social "norms, values and expectations" and (3) social responsiveness is what constitutes proactive efforts towards what should be the company's long-term role in society (Sethi, 1975, pp. 60–62).

Arguably one of the most relevant definitions to this day, as pointed out by various academics in this field (e.g. Moratis (2016)), is the four-part characterization proposed by Carroll (1983) and later popularized in the form of a four-level pyramid of responsibilities. The author developed the definition presented by Sethi and proposed that first a business must be profitable, in order to maintain its activity. Then it must obey the law in the countries which its activities are present in. Next, it should also comply with its responsibility towards society, and that is acting ethically. Finally, the author considers that businesses may want to support social causes, such as through philanthropy, but points out that this last one should be viewed as optional.

Elkington (1994) proposed a concept entitled "Triple Bottom Line" (TBL) that grew to become fairly popular among academia, because it not only drew on past CSR definitions but also shaped the following ones. It defined "People, Planet and Profit" as the social, environmental and economic bottom lines of the company. According to the author, the only way to achieve long-term sustainability in a business is to care for these 3 dimensions rather than just focusing on the economic side alone, despite that still meaning possible success in the short run.

Quite alternatively to other definitions brought forward in the past, Visser (2010) proposed a definition of CSR that was composed of 5 dimensions: (1) Creativity, implying businesses must keep innovating in the fields of economic, social and environmental change (2) Scalability, meaning the company's response must be adequate to the dimension of these issues (3) Responsiveness, which reinforces the need to act proactively and in a timely and transparent manner, (4) *Glocality* being the capacity to adapt global principles to local contexts and lastly, (5) Circularity, which translates to the continuous recycling of resources.

Transitioning from a stakeholder point of view to a more strategic perspective, Porter and Kramer (2011) pointed out to a distinction of the concepts of "discretionary CSR" and "strategic CSR", arguing that the strategic version created a benefit to the company – improving its ability to compete by associating sustainability with all aspects of its activity – as well as for the community and economy in which the company operated in, what they later called "shared value".

Another definition is one by Dyllick and Hockerts as "meeting the needs of a firm's direct or indirect stakeholders (such as shareholders, employees, clients, pressure groups, communities etc), without compromising its ability to meet the needs of future stakeholders as well" (Dyllick & Hockerts, 2017, p. 131). In association with this notion, they point to three key elements of corporate sustainability. The first being the integration of economic, environmental, and social dimensions in the managerial focus of corporations, which is what we already discussed as TBL. Secondly, responsible management considering both short and long-term, in contrast to the tendency to focus on the short-term gains and profitability only. And finally, the principle of maintaining the economic, natural and social capital basis of the business.

In much shorter and simpler designations, the Business Council for Sustainable Development (BCSD) Portugal has defined it as "the ability to manage their activity and creating long-term value while also creating social and environmental benefits for their stakeholders" (n.d.), and the European Commission as "a concept whereby companies integrate social and environmental concerns in their business operations and in their interaction with their stakeholders on a voluntary basis" (2006, p. 2).

# 4. Sustainability Reports

In this chapter we will discuss how sustainability reports have surged as a business practice, how we can define them and why corporations have been attracted to this practice.

## 4.1. History

It is considered that the history of sustainability reporting[2] dates back a period when corporations began to acknowledge their responsibility towards society instead of to shareholders only (i.e. wealth maximization), which started between the 1960s and 1970s in Europe, and later in the United States (U.S.). Countries such as Austria, Switzerland and Germany introduced environmental reporting during the 1970s and Finland was the very first country to adopt mandatory sustainability reporting, in 1997 (Brockett & Rezaee, 2015). There are some authors that point to the first corporate environmental report being produced in the 1980s by chemical companies facing intense scrutiny (Burritt & Schaltegger, 2010; Jamali, 2006).

Since then, other countries have adopted similar measures, including Portugal, which we will discuss further along (Brockett & Rezaee, 2015). But voluntary reporting practices also spread globally since companies saw publishing about their social and environmentally conscious activities as a way to benefit their reputation, which was being questioned by consumers, and their financial performance (Landrum & Ohsowski, 2018; G. B. White, 2005).

As the need for corporate transparency became more and more apparent, namely after the Exxon Valdez oil spill incident, and the reporting practice more accepted throughout the business community, the first guidelines and frameworks on sustainability reporting were developed. To name some relevant ones, in 1997, the Coalition for Environmentally Responsible Economies (CERES) together with the Tellus Institute, and later joined by the United Nations Environment Programme (UNEP) in 1999, developed and introduced the first universal framework for sustainability reporting: the Global Reporting Initiative (GRI). The goal was to "create the first accountability mechanism to ensure companies adhere to responsible environmental conduct principles", and it established guidelines for companies to implement TBL reporting (i.e to report on social, environmental and economic performance)

[2] Sustainability reports are also called a number of other things such as non-financial reporting, ESG reporting (Impact Management Project et al., 2020), Corporate Responsibility report (KPMG, 2013), triple bottom line report, sustainable development or sustainability report (WBCSD, 2002)(WBCSD and Deloitte in "Striking the balance", 2002), as well as CSR report, Social and Environmental report, among others (Perrini, 2006).

(Brockett & Rezaee, 2015; Christofi et al., 2012; Global Reporting Initiative, 2016c). The first version of the GRI guidelines was launched in the year 2000 and other versions followed: GRI G2 in 2002, GRI G3 in 2006, GRI G4 in 2013, in 2015 the Sustainable Development Goals (SDG) framework was incorporated and finally, in 2016, the first global standards for sustainability were launched – the GRI Sustainability Reporting Standards (Global Reporting Initiative, 2016c). In its first year of its existence, the GRI guidelines were adopted by approximately 50 companies, however, today they are considered to be the most adopted guidelines in corporate reporting all over the world (KPMG, 2017).

In 2010, the organization that regulates and controls the financial markets in the U.S., the Securities and Exchange Commission (SEC), issued a report entitled "Commission Guidance Regarding Disclosure Related to Climate Change" that made reporting on financial and reputational risks related to climate change mandatory for every company listed on the U.S. Stock Exchange. In the same year, the International Integrated Reporting Committee (IIRC) was established with the goal to create a global framework of integrated reporting and to standardize sustainability reporting. And later in that year, the International Organization for Standardization (ISO) released "ISO 26000", their widely used guidelines adoptable by any type of organization, about sustainability and how organizations may translate that into actions (Brockett & Rezaee, 2015; International Standardization Organization, 2010).

In 2011, the Sustainable Accounting Standards Board (SASB) was founded. Similarly to the previous ones mentioned, SASB is also a nonprofit organization that aims to set standards of reporting on financially material sustainability issues concerning the environment, society and governance (ESG), and it is one of the most globally used frameworks (Arevalo & Aravind, 2017; Sustainability Accounting Standards Board, n.d.)

These and other similar international organizations with common goals have collaborated over the years to advance the global reporting movement. Some examples of that are the collaboration of the IIRC with SASB in 2014 to grow the implementation of integrated reporting (IIRC, 2013), the partnership between GRI and IIRC in 2017, that aimed at exploring ways that the GRI guidelines could be implemented in an integrated reporting process (IIRC, 2017), and the one between SASB and GRI announced in July 2020, to launch a plan for companies that want to use both frameworks together (SASB, n.d.-a). In more recent events, in September 2020, five very relevant integrated reporting organizations that are considered the leading "standard-setters, GRI, IIRC, SASB, CDP (previously known as Carbon Disclosure Project) and the Climate Disclosure Standards Board (CDSB), announced their intent to work together to build one unique set of standards for corporate disclosure, through the publication of the report “Statement of Intent to Work Together Towards Comprehensive Corporate Reporting” that constituted a summary of the deliberations of the five establishments that was facilitated by the Impact Management Project, the World Economic Forum and Deloitte (Impact Management Project et al., 2020). In November 2020, the IIRC and SASB announced a merger, The Value Reporting Foundation, planned to be effective by mid-2021, which will carry out the plans stated in their joint statement. Additionally, there is a possibility that CDSB and other organizations may also integrate this foundation, thus contributing to convergence in this complex field (SASB, n.d.-a).

It is also worth to mention the organizations like the World Business Council for Sustainable Development (WBCSD) and the United Nations Global Compact (UNGC), that do not directly produce the usual corporate reporting standards, but nonetheless are significant world initiatives to engage the corporate sector for sustainable action according to the SDGs, and both provide resources to assist businesses in reporting and overall socially responsible business practices (United Nations, n.d.-a; WBCSD, n.d.). The European Union (EU) has also had an important role, particularly with the launch of the Directive 2014/95/EU in 2014, also called the “Non-Financial Reporting Directive” (NFRD), which turns sustainability reporting mandatory for some large public-interest entities in the EU and provides guidance on what and how to disclose. To complement the directive, in 2017 the EU published non-mandatory guidelines to support organizations in the disclosure of environmental and social information, the Guidelines on Non-Financial Reporting, as well as a supplement to the latter in 2019, the Supplement on reporting climate-related information (European Union, n.d.).

Although we can see a significant increase in the number of companies reporting on sustainability and several developments on guiding principles over the recent years, reporting is still voluntary for the most part [3] and the corporate sustainability reporting scene is far from standardized in a universal way. Different organizations still have different structures in their sustainability disclosures and the information they share still varies significantly according to their perspectives or focuses (Christofi et al., 2012; Nielsen & Thomsen, 2007).

### 4.2. Definitions of Sustainability Report

Sustainability reporting is a practice of disclosing, for both internal and external stakeholders, the organization’s positive and/or negative effects in environmental, social, economic and governance dimensions. This information should offer clarity on the company’s material

[3] KPMG (KPMG, 2017) states that there is a strong trend towards transitioning to mandatory reporting, already happening in some countries.

contributions to sustainable development (Deloitte, 2020; Global Reporting Initiative, 2016a; WBCSD, 2002) as well help understand not only its exposure to external risks but also its ability to benefit and profit from new opportunities (KPMG, 2013; Leszczynska, 2012). Additionally, sustainability report could be viewed as a demonstration of the adoption of responsible resources management measures as a part of the business process (Ameer & Othman, 2012). In that sense, we will discuss the benefits of reporting practices including literature about the benefits of CSR activities, which are the subject of the report itself, since they are very connected.

### 4.3. Advantages of Sustainability Reporting

The purpose of Sustainability Reporting has been a study subject of many investigations (Landrum & Ohsowski, 2018). Despite the recent rise of regulation and a trend towards transitioning to mandatory corporate disclosure (KPMG, 2017), voluntary reporting is still significant (Dilling & Caykoylu, 2019) and so, exploring the positive outcomes of this disclosure can help us understand the organizations' motivations to adopt it and why it is becoming so widespread among the organizational community.

Classic economic business models fail to capture the benefits that modern socially responsible activities and practices can bring to a company (Halkos & Nomikos, 2021). In the same way, traditional financial statements do not reflect certain drivers of value creation that sustainability disclosure standards help to identify (Impact Management Project et al., 2020), which helps to explain the reason there is so much pressure from external and internal stakeholders (such as consumers, investors and regulators) for companies to share relevant and precise information to assess its performance and potential as well as to make decisions. More importantly, it explains how sustainability reports are a crucial business tool (Deloitte, 2020; Impact Management Project et al., 2020).

Although provision of information (Arevalo & Aravind, 2017; Garriga & Mele, 2004; Hemingway & Maclagan, 2004) as well as the satisfaction of stakeholder's expectations and improvement of their relationship with the organization (Crane & Glozer, 2016; Dilling, 2010) are some of the most obvious benefits, companies are implementing sustainably strategies and reporting about it for many more reasons than that. For example, several studies point to it contributing to the increased welfare of customers and society in general as well as the wellbeing, productivity and engagement of employees (Ali et al., 2010; Arevalo & Aravind, 2017; Hussain et al., 2018). Additionally, it has been linked with more effective talent attraction and differentiation (Deloitte, 2020).

Results associated with market perception are also very important motivations. Reporting is said to offer businesses media exposure (Branco & Rodrigues, 2006), a greater reputation (Arevalo & Aravind, 2017; Halkos & Nomikos, 2021; Inyang, 2013) through associating the company with positive action (Crane & Glozer, 2016) besides help to maintain a certain market position too (Dilling, 2010). Moreover, the company can show accountability and credibility and gather trust in the market (Crane & Glozer, 2016; Deloitte, 2020).

However, perhaps some of the most relevant, and not so obvious, effects for the company are those that impact the operational and financial dimensions of the business. Literature on this subject suggests that the process of reporting on sustainability helps businesses define their mission and find their value proposition for stakeholders (Impact Management Project et al., 2020), to gain a greater understanding of the risks and opportunities they face and how to better manage and take advantage of them (Ballou et al., 2006; Deloitte, 2020; Dilling, 2010; Du et al., 2017; Impact Management Project et al., 2020; Ng & Rezaee, 2015). Ultimately, because this process requires organizations to perform certain analysis and produce a lot of specific information that they would not investigate if it were not for the purpose of the report, it might be an insightful process and provide new learnings for the company, as well as be the starting point for innovation (Deloitte, 2020; Du et al., 2017; Impact Management Project et al., 2020; Lankoski, 2008; Porter & Kramer, 2006) and ability to compete better in the market (Ng & Rezaee, 2015).

Besides the obvious value created for society and the environment, the implementation of responsible processes and actions also helps to ensure the sustainability of the business itself by ensuring viable supply chains and markets to expand into (Halkos & Nomikos, 2021). It creates enterprising value and returns on the investments carried out (Navickas et al., 2012), that in the long run surpass the expense incurred in order to report, whether it be in the form of tangible or intangible benefits (James, 2015). In fact, these activities can bring a growth in the long-term operational effectiveness and performance of the company (Deloitte, 2020; Dilling, 2010; James, 2015), decrease operational costs (EY & GreenBiz Group, 2011; Inyang, 2013; Lankoski, 2008) and may even broaden the customer base (Babiak & Trendafilova, 2011) facilitate the possibility to set a higher price for its products or services – a sort of premium – due to the association of the brand with sustainability (Arevalo & Aravind, 2017). Porter and Kramer (2006) defend as well that CSR can be an opportunity to build a competitive advantage. Inyang (2013) suggests that the lower costs and the improved image of the company are what gives it that positioning, while Stephenson (2009) claims that it could only be achieved if CSR principles are well incorporated within, and supported by, all aspects of the business [4].

Furthermore, many studies have proven that nonfinancial information disclosure is valuable for investors (Ng & Rezaee, 2015) and is an important signal for stakeholders[5] about responsible behavior and future financial results (Deloitte, 2020; James, 2015; Lo & Kwan, 2017; Peecher, 2014; Waddock & Graves, 1997), allowing for the integration of this information directly in stock valuation[6] (Du et al., 2017; Guiral et al., 2020; Zhang & Niu, 2015). Finally, voluntary disclosure has also been connected to an increased access to capital (Deloitte, 2020; D. Dhaliwal et al., 2011; Dilling, 2010; Ng & Rezaee, 2015), which is naturally should be a major motivation for companies.

[4] Read Porter and Kramer (2006) for more on the link between CSR and competitive advantage.
[5] Read Petra F. A. Dilling (2019) for more about signaling theory.
[6] More about sustainability report stock price influence in Du et. al. (2017)

## 5. Quality of a Sustainability Report

Although reporting is becoming a widespread practice among the business community, the academic community has been raising several concerns about value in sustainability disclosure (Bouten et al., 2011; Michelon et al., 2015). In fact, PwC (2014) has suggested that quality reporting is not necessarily about strictly following the guidelines of a reporting framework – as these are often not prepared to encompass all the information needed for a comprehensive and connected disclosure – but about having the right approach to the process, integrating a forward-looking, comprehensive operational perspective that will ultimately lead to, not only more strategic report, but also link it to the decision-making and performance of the company.

So, despite the fact that more and more regulation and frameworks have been emerging in the recent years (KPMG, 2013, 2017) – something that would be associated with some improvement and standardization in quality –, there is still much criticism around the topic. Recent studies question the very benefit it represents to stakeholders (Bird et al., 2007; D. Dhaliwal et al., 2011; D. S. Dhaliwal et al., 2012) and argue that sustainability reports have low credibility and trustworthiness, that they lack transparency and completeness (Cho et al., 2015; Eccles & Serafeim, 2017; Gray, 2011; Talbot & Boiral, 2015). Boiral (2013) and Moneva (2006) point to the failure of companies in addressing in their reports the most pressing sustainability issues affecting the viability of their businesses. Nagar (2003) even argues, based on agency theory, that there is an important conflict of interest relative to what shareholders wish to know about the company and what managers have incentives to disclose, which may explain criticism about completeness and stakeholder mistrust in reporting. Moreover, some authors claim that sustainability reports are unreliable and are not necessarily a demonstration of a company's commitment with sustainability and are instead a mere attempt to influence stakeholder's perceptions and enhance its reputation (Cho et al., 2012)[7]. Additionally, some academics point to the reduced stakeholder inclusiveness in the process of reporting (Owen et al., 2000; Smith et al., 2011), which GRI guidelines (2016) identify as an important principle for reporting, and also to the lack of insight about how the company uses the knowledge provided by its external analysis and includes it in organizational strategy (Archel et al., 2011; Michelon et al., 2015).

All of this criticism has led to many members of the business community and academics in the field have shifted their attention from the question of *what* and *how much to report*, to

[7] Also see Leung (2015) for more about influencing stakeholders perspectives through the company's reports.

*how to report* with high-quality (Pistoni et al., 2018). The use of reporting frameworks is usually regarded as a way to ensure the quality of the information, especially the use GRI guidelines (Gilbert & Rasche, 2013; KPMG, 2015; Rezaee & Tuo, 2019) the most widely used. However, Michelon's (2015) investigation[8] has found that the use of GRI did not in fact improve the quality of information in reports. It also found independent assurance of the report to not contribute to its quality, which is generally regarded as a means to increase the report's credibility (Ans Kolk, 2010; Boiral et al., 2019; De Beelde & Tuybens, 2015; Manetti & Becatti, 2009) and quality (Al-Shaer & Zaman, 2018). The impact of regulation, both from governments and stock exchanges, is also believed to have an impact on reporting quality, nevertheless, Abernathy (2017) believes that it is still uncertain whether it has such an effect [9].

So, what exactly *is* a high-quality report? And how do we measure such a characteristic? Unfortunately, there is not yet a real consensus on what exactly quality reporting is (Abernathy et al., 2017; Pistoni et al., 2018), however, many studies have proposed different approaches to this issue.

Chauvey identifies that two common ways to measure CSR reports are to evaluate space allocated [10] or themes addressed[11] (the latter known as "content analysis", a common methodology in this field, that typically relies on the creation of a scoring index), what he refers to as the "how much" and "what" of CSR disclosure (2015, p. 792) . Nevertheless, he recognizes that, despite being important measures, they don't directly reflect the quality of the information (Anna Pistoni (2018) and Kahn (2020) also agree that quantity of information reported is not related to quality), so the author describes how many studies have attempted to exceed this obstacle by adding weighs to the scores according to some characteristics of the information provided, such as its nature (qualitative, quantitative or monetary) or level of detail (whether it is descriptive, vague or immaterial). This too, he acknowledges, is a limited analysis mainly because of its focus on only one dimension of quality, but also because of its subjective nature. In his study that evaluates the reporting practices of listed companies in

[8] His analysis was conducted on firms listed on the London Stock Exchange for the years 2005–2007.

[9] To read more abou the criticism on sustainability report, see Hubbard (2011)

[10] For example, counting the number of words, sentences or even pages in relation to the total report

[11] This subjective approach is essentially the creation of a scoring index system. Based on the presence or absence of specific topics of interest in the text being analyzed, a score is attributed (typically binary: 1 if it is present, 0 otherwise), resorting to a coding method. The aggregation of the scores is the final measure of quality of the report.

France, he adopts a definition of reporting quality based on four different aspects: relevance, comparability, verifiability, clarity, and neutrality (p. 793)[12].

Many other studies have adopted a group of similar characteristics of information to try and capture the definition of reporting quality. For example, Garegnani (2015) suggests that reports should have informativeness and significance, understandability, comparability, comprehensiveness, materiality, reliability, and availability. Michelon (2015) considers dimensions regarding the quantity of information (quantity and density) as well as the degree of disclosure (accuracy) and the orientation of the information in time and usefulness (managerial orientation). Some studies have chosen a mixture of content-related aspects ("what is reported") as well as specific characteristics of the information reported ("how it is reported"), like Gao (2011) who, for his investigation of determinants of disclosure quality, adopted the definition of quality contemplated on a company scoring system created by the Ministry of Economic Affairs of the Netherlands (n.d.). It included both Content Standards and Quality Standards to evaluate the company's sustainability reporting: In the first category it considered company and business model, policy and results, and management approach; For the second, relevance, clearness, reliability, responsiveness and coherence. Similarly, but rather much more simplistically, Helfaya (2019, p. 163) considered content, credibility, and communication.

[12] These characteristics are chosen based on the definitions of reporting quality characteristics by FASB, SASB and GRI.

## 6. Frameworks

As pointed out before, frameworks and similar tools have been important contributors to advance the understanding of corporate sustainability and its measurement, and there are many different structures to them, each with its specific approach to sustainability. In fact, this is part of the difficulty in establishing a standardized global referential (Bose, 2020). In this section, we will explore the different types of frameworks there are, as well as discuss in greater detail the most relevant and widely used ones.

In terms their characteristics, one can find many differences between these tools. Siew (2015) identifies three main categories in sustainability reporting instruments: (1) Frameworks, which consist of a set of recommendations to guide the reporting process as well as some principles to follow, (2) Standards which typically serve the same purpose but are usually issued in formal documents and explain specific guidelines or requirements, and (3) Ratings and Indexes, which due to their valuation purpose, also can be considered a way to communicate about the sustainability performance of a company. On the another perspective, Gjølberg (2009) considers all of them CSR initiatives and identifies two dimensions to categorize them: in terms of their orientation to results or processes, and in terms of the nature of their requirements, hard or soft. Results-oriented initiatives usually involve very clear requirements and frequent monitoring (some examples are mainly index and rating systems such as DJSI, FTSE4Good and Global 100 Most Sustainable Companies, and are typically directed at businesses), while process-oriented initiatives often rely on more flexible guidelines, companies' commitment and voluntary actions (usually initiatives like WBCSD, GRI and UN Global Compact or standards like ISO 14001 and directed at any type of organization). The other dimension, soft or hard requirements, is relative to the barriers to entry of those initiatives: some initiatives are adoptable by any organization and require relative sustainability efforts (e.g. GRI), while others are only accessible to top sustainability performing businesses (e.g DJSI, which requires companies to be in the top 10% of their respective sectors). Bose (2020) on the other hand, recognizes different categories based on the framework's perspective or focus. For example, GRI guidelines can be viewed as "stakeholder-reporting" since their purpose is to provide material information for many different interested parties, while SASB or IIRC frameworks can be viewed as "investor-reporting" frameworks in the sense that their guidelines are more directed at information relevant for investors and providers of capital, specifically. Similarly, the Corporate Reporting Dialogue (composed of CDP, CDSB, GRI, IIRC, ISO and SASB) recognizes, that their frameworks "can essentially be divided into two types: those that support efficient financial markets and a financially stable economic system and those that drive sustainable development" (2019, p. 4). Finally, one may also consider two different categories between frameworks: some are horizontal in the sense that they are adequate for any sector or organization, and others are specific to some sector or reporting topic (European Commission, 2017).

Among the most globally recognized and adopted frameworks of corporate sustainability are GRI, IIRC and SASB frameworks, that focus on all aspects of sustainability. Specifically in this continent, the European Commission's guidelines are also very relevant and can be applied in accordance with most of the other frameworks. Since GRI guidelines are the most prevalent, we will discuss them in detail further along, and for now, focus on the other ones.

### 6.1. The International Integrated Reporting Council (IIRC)

As briefly pointed out earlier, the IIRC, founded in 2010, is a global partnership of regulators, investors, companies and NGOs, standard issuers and academia, intended to establish integrated thinking and integrated reporting (IR) as common business practice in public and private sectors to achieve efficient capital allocation and contribute to financial stability and sustainable development. Their framework, entitled "<IR> framework" originally launched in 2013, was recently revisited and upgraded in January 2021. It essentially provides general reporting support and guidelines on eight elements of content to address. Additionally, it contains seven reporting principles. Both the content elements and principles are listed below (IIRC, n.d.-a, n.d.-b, 2021):

Table 6.1.1: Elements of the IR Framework

| Content Elements | Reporting Principles |
|---|---|
| A. Organizational overview and external environment | A. Strategic focus and future orientation |
| B. Governance | B. Connectivity of information |
| C. Business Model | C. Stakeholder Relationships |
| D. Risks and Opportunities | D. Materiality |
| E. Strategy and resource allocation | E. Conciseness |
| F. Performance | F. Reliability and completeness |
| G. Outlook | G. Consistency and comparability |
| H. Basis of preparation and presentation | |

With this principles-based framework, the IIRC purposefully abstains from setting specific key performance indicators, measurement methodologies. Likewise, it refrains from suggesting individual topics to be disclosed and, instead, guides the reporting entity through each of the content elements of an IR with questions to be answered, plus explanations and examples to guide the reporting process (for example, in Governance, the question is “An integrated report should answer the question: How does the organization’s governance structure support its ability to create value in the short, medium and long term?” (IIRC, 2021, p. 40)). Hence, they transfer to the reporting entity the responsibility to identify what topics are material, given the characteristics and context of each business, and to choose how to select the most appropriate measures and disclosure methods. Moreover, the IR framework is mainly focused on providing information that is relevant for providers of financial capital and it was designed with for-profit companies of the private sector in mind, however, it recognizes all stakeholders can benefit from IR and it can be adapted to be used by other organizations (IIRC, 2021).

### 6.2. Sustainability Accounting Standards Board (SASB)

SASB was founded in 2011 an independent non-for-profit organization that specializes in producing standards for corporate disclosure. Their Standards serve the main purpose of facilitating the identification, management and reporting of financially-material information data by companies, an mainly in order to benefit investors, much like the IR Framework and in contrast with GRI standards. However, SASB points out that many companies use both SASB and GRI standards to complement each other and fulfill stakeholder informational needs (Bose, 2020; Sustainability Accounting Standards Board, n.d.).

Published in 2018, SASB Standards’[13] structure stands out from other reporting instruments since they are industry-specific for 77 industries across 11 sectors (Consumer Goods, Extractives & Minerals Processing, Financials, Food & Beverage, Health Care, Infrastructure, Renewable Resources & Alternative Energy, Resource Transformation, Services, Technology & Communications and Transportation), each standard providing a list of the most relevant topics of financial materiality for each of the industries and their respective particular metrics. SASB’s choice to specify these materiality topics is attributed to the need to simplify the reporting fatigue for report writers and investors, as well as to the

[13] While we refer to SASB as a reporting framework, the organization emphasizes very clearly that they identify their work as producing standards, not a framework. They state that while frameworks are a principle-based and comprise a set of principles and general guidance on how a report should be structured, prepared and what large contents to include, standards offer much more specific and thorough requirements on what to report and how for each topic, including metrics (Sustainability Accounting Standards Board, n.d.).

rationale that different sustainability issues affect different companies’ financial performance, as well as in different ways according to the respective industry. The “SASB Materiality Map” visually summarizes these topics for every sector and issue (Bose, 2020; SASB, n.d.-b).

The standards are based around five major sustainability dimensions – environmental, social capital, human capital, business model & innovation, and leadership & governance – and each include general disclosure topics, for which there are specific quantitative and/or qualitative accounting metrics, which in turn are accompanied by technical protocols that provide additional guidance such as measuring units, definitions, scope and others, to ensure the standards are applied in a consistent manner and enable comparisons between different reports and companies. Besides these, it also offers activity metrics to report on, which give operational context to the disclosure, and general transversal guidance on the application of the standards and reporting process (SASB, n.d.-b).

### 6.3. European Commission’s Non-Financial Reporting Directive and Guidelines

The European Commission’s Directive 2014/95/EU also known as NFRD, launched in 2014, is a directive regarding the non-financial and diversity disclosure, directed at large listed companies, financial institutions and other public-interest companies and requires that they disclose on five key sustainability areas: policies related to environmental action, social responsibilities and employees management, consideration for human rights, diversity of boards, and measures against corruption and bribery, from the year 2018 onwards. To complement the directive, the Commission has published additional non-mandatory Guidelines on Non-financial Reporting, in 2017, and to complement these in turn, also produced a supplement, the Guidelines on Climate-related Information, published in 2019. While the first is a directive, and comes in a formal document with some indications, the latter two have more resemblance to an actual framework and describe more detailed methodologies for the reporting process. All of them provide some level of guidance and encourage the use of international, European or national frameworks or guidelines, giving the reporting entity the flexibility to choose the preferred format (European Parliament, 2014; European Union, n.d.).

The Guidelines on Non-Financial Reporting comprise a set of six reporting principles – that point out that information reported should be: (1) material; (2) fair, balanced and understandable; (3) comprehensive but concise; (4) strategic and forward looking; (5) stakeholder-oriented; and (6) consistent and coherent – to guide the reporting process. Using many examples and KPIs, they also provide support on what topics to address and how, in six categories: (1) business model, (2) policies and due diligence, (3) outcomes, (4) principal risks and their management, (5) key performance indicators and (6) thematic aspects. They are based on many different already established frameworks including the ones from CDP, CDSB, GRI, ISO, OECD, SASB, UN Global Compact, the UN SDGs, among others. (European Commission, n.d.-a, 2017).

The "Guidelines on Non-Financial Reporting: Supplement on Reporting Climate-related Information" are, in practice, guidelines to compliment the ones on Non-Financial Reporting. Thus, they refer to the guidelines published in 2017 and provide clarifications on (1) materiality, (2) climate-related risks, dependencies and opportunities, (3) structure of the proposed disclosures, and (4) consistency with recognized frameworks and standards; and further instructions on the recommended disclosure categories, in the first five out of the six in the original guidelines[14]; all regarding the climate-related dimension of environmental disclosure. This supplement actually integrate the Task Force on Climate-related Disclosure's (TFCD) recommendations and are consistent with their framework and the NFRD. However, the European Commission's guidelines contemplate materiality in the financial, environmental and social perspective, while the TCFD has a financial materiality perspective exclusively (European Commission, 2019) which results from its focus on financial sector stakeholders, as we will discuss in more detail further below.

It is also worth to mention the Task Force on Climate-related Disclosure (TFCD), the CDP, and the CDSB as some of the most important organizations that set guidelines for sustainability reporting, although they are focused specifically on environmental disclosure.

#### 6.3.1. Task Force on Climate-related Disclosure (TFCD)

The TFCD was launched in 2015 by the Financial Stability Board (FSB) with the purpose of creating recommendations to improve corporate disclosure and help financial market participants, such as investors, lenders and insurers, understand and make decisions regarding companies' exposure to climate related risks and opportunities. In 2017, after some draft reports were published, the task force released its final climate-related financial disclosure recommendations. The reporting framework provides flexible and easily adoptable guidance for companies and other organizations, and it is organized in four different areas: Governance, Strategy, Risk Management and Metrics and Targets, each with some suggested specific disclosures the companies can adopt, the "recommended disclosure" (for example, in

[14] The six categories are mentioned in 5.4.

Governance, a recommended disclosure is to "Describe the board's oversight of climate-related risks and opportunities" (p.22)). Additionally, to the general recommendations, which are adequate for any organization in any sector, there are supplementary recommendations for some of the Financial and also Non-Financial sectors potentially exposed to climate risk (including Banks and Insurance, as well as Energy and Transportation). The framework also includes seven principles for the reporting process itself, such as presenting relevant information, disclose in a specific and complete way, among others (Task Force on Climate-related Financial Disclosure, n.d., 2017). As of 2020, 1,500 organizations all over the globe were showing support of the TFCD, as well as many governments including the U.K., Belgium, Canada, France, Sweden, and New Zealand. (Task Force on Climate-related Financial Disclosures, 2020).

### 6.4. CDP (previously known as Carbon Disclosure Project)

Founded in 2000, CDP is an independent non-for-profit charity focused on environmental impact reporting. Only in Europe, more than 2,4000 companies have disclosed information regarding climate change, water security and forests through CDP, part of a total of 9,600 globally. The initiative holds one of the largest and most recognized datasets on environmental action and through the information supplied to CDP by various companies and cities it is able to publish an annual score of the companies involved (in a scale from D-, the Disclosure Level, to A, the Leadership Level) based on the quality and completeness of information as well as on the company's responsiveness, management, and progress with environmental issues. The scores are meant to incentivize good business practice in these areas and are given in different topics included in three main categories: Climate Change, Forests and Water Security, involving many factors into consideration, including in the fields of Governance, Risk and Opportunities, Business Strategy, Targets and Performance, and many more (CDP, n.d.).

### 6.5. Climate Disclosure Standards Board (CDSB)

The CDSB was instituted in 2007 in the World Economic Forum as an international alliance of businesses and NGOs, with the purpose to establish an international framework for reporting on climate risk and environmental impact to supplement financial reporting to benefit investor analysis and decision-making. Its framework, entitled "CDSB Framework for reporting on environmental and climate change information", is designed to capture the relationship between the business' policies and performance with environmental risks, opportunities and impacts, in annual or integrated reports (CDSB, n.d.). It contains seven guiding principles and twelve reporting requirements providing guidance on disclosure on topics such as governance, sources of environmental impact, risks and opportunities, company outlook, and others (CDSB, 2020).

Additionally, the UN Global Compact, a principles-based framework, and the SDGs framework, are also considered relevant despite not having the usual guidelines or standards format as the other main ones. Nonetheless, they guide sustainability development measuring efforts and its disclosure for various stakeholders.

### 6.6. UN Global Compact

Officially launched in 2000 in the UN Headquarters, the UNGC is the largest corporate sustainability initiative in the world and a platform for development, implementation and reporting of sustainable strategies and practices for companies with currently more than 14,000 participants in over 160 countries. Their efforts are aimed at engaging organizations with greater societal goals such as the UN SDGs, as well as building a more responsible business community through the promotion of ten principles in their strategies and operations. These principles are divided in the four areas of human rights, labor, environment and anti-corruption.

The Communication on Progress (CoP) is the reporting dimension of this initiative, since it is through this document that companies report on their efforts and results towards these principles and goals. It requires only a statement by the CEO declaring support of the initiative, a description of the actions or plans of the company towards the ten principles and finally their results expressed in a measurable way. The CoP is prepared by the participating companies and annually submitted to be published on the UNGC’s website, in order to be publicly accessed (United Nations Global Compact, n.d.).

### 6.7. UN SDGs

The Sustainable Development Goals are a framework launched in 2015 by the UN to achieve sustainable development by 2030, identifying 17 areas such as reducing poverty and inequality, improving health, living and working conditions, tackling climate change and environmental challenges, as well as peace and justice, each with specific targets and indicators. It is a comprehensive outline of sustainable development in social, economic and environmental aspects and it can be used by various types of organizations as a guiding tool to disclose relevant information to key stakeholders, using SDG indicators. There are some specific initiatives incorporating SDG reporting, including the "SDG Compass", a partnership between the UN Global Compact, GRI and WBCSD, which provides guidance for companies on how to align strategies with the SDGs and measure their contributions towards each goal; and the "Reporting on the SDGs" initiative launched in 2017 from the UN Global Compact and GRI, that leverages on GRI guidelines and the UN Global Compact's principles to report on the goals. (SDG Compass, n.d.; SDG National Reporting Initiative, n.d.; UN Global Compact, n.d.; United Nations, n.d.-b). KPMG (2018) assessed that 40% of the 250 world's largest companies report on the SDGs.

Despite having many differences, which can increase the difficulty in navigating sustainability reporting for companies, some similarities can be found between the various standards and frameworks. For instance, they may differ in stakeholder focus or materiality, conversely, most of them follow the TBL style of reporting, but most importantly, they are mostly coherent with each other and can be used in simultaneous (Bose, 2020).

Having covered some of the relevant frameworks there are, we now move on for perhaps the most important and prevalent one, the one from Global Reporting Initiative.

### 6.8. Global Reporting Initiative (GRI)

As mentioned before, the Global Reporting Initiative was born in 1997 and launched the first guidelines in 2000. The latest instruments produced by the international non-for-profit are the GRI Sustainability Reporting Standards – which we will explore in detail in this section – introduced in 2016, marking the organization's transition from supplying guidelines to establishing standards. Adopted in more than 100 countries by organizations of any kind, their standards are largely recognized as the current most dominant sustainability reporting framework in the world (GRI, n.d.; KPMG, 2017), and they are considered the "sole global standard-setter" in this matter (Brockett & Rezaee, 2015, p. 26). In 2017, KPMG (2017) was reporting that 63% a large sample of the world's biggest companies[15] and 75% of the world's largest companies [16]were using the GRI framework.[17]

The *Standards* (GRI Sustainability Reporting Standards) were developed for every type of organization – large, small, public or private and of any sector or geographic location – and

[15] The sample was composed of 4,900 companies, the 100 largest in revenue in each of the 49 countries assessed.

[16] By revenue.

[17] However, in 2017, from the companies applying the GRI framework one year after the launch of the Standards, only 10% were adopting the GRI Standards, while 88% were still using the G4 guidelines launched in 2013, and 2% were using the G3, launched in 2006.

to be used to communicate information to multiple stakeholders[18] about the organization's material matters, their related positive and negative impacts on economic, environmental and social topics and how those impacts are managed. They enable the presentation of anything material about the company's overall contribution to sustainable development – *materiality* being the keyword in this topic. For GRI, a material topic is any topic that significantly impacts the assessment and decisions of a stakeholder, or that reflects important economic, environmental, or social impacts of the organization. As we were able to notice before, not *every* reporting framework considers all aspects of materiality – for example, SASB focuses on financial-materiality only – a crucial aspect for making this a multi-sided and comprehensive approach to sustainability (Global Reporting Initiative, 2020).

It is important to note that the GRI Standards can be used in different ways. An organization can choose between two approaches: (1) build a report in accordance with the Standards or (2) use only selected Standards or parts of their content to make specific disclosures. In the first one the organization may choose between two modalities to do this: (a) *Core*, for reporting with the minimum information necessary in order to reflect the nature of the organization, its material topics and respective impacts and how those are managed or (b) *Comprehensive*, which is broader than the Core option and additionally requires reporting on the organization's strategy, ethics, integrity and governance, as well as a more extensive disclosure, through demanding the report of all the topic-specific disclosures on each of the material topics. The organizations then have to meet a group of criteria[19] for the respective modality to be able to claim that the report is in fact in accordance with the Standards. Besides, the reports can be issued individually as sustainability reports or instead reference information in various different locations and formats, and have to include a GRI content index. (Global Reporting Initiative, 2020).

Moreover, it should be referenced that the Standards are thorough and descriptive to facilitate their application but most importantly, to bring consistency and enable comparability across different years and companies, along with improving the quality of

[18] For the GRI, a Stakeholder can be any "entity or individual that can reasonably be expected to be significantly affected by the reporting organization's activities, products and services, or whose actions can reasonably be expected to affect the ability of the organization to successfully implement its strategies and achieve its objectives", such as employees and investors, policymakers, capital markets, as well as suppliers, vulnerable groups, local communities, NGOs and civil society, with a connection to the company.

information that is communicated about organizational impact. Thus, although they provide flexibility, they were designed to be used together, as they are interconnected. All companies should apply the Universal Standards – containing the GRI 101: Foundation, GRI 102: General Disclosures and GRI 103: Management Approach – and then each should identify the Topic Standards they must report on, based on the issues identified as material to the specific company, selecting them from the GRI 200, 300 and 400 series that include several topic-specific economic, environmental and social standards, respectively. The scheme below summarizes this overview of the GRI Standards.

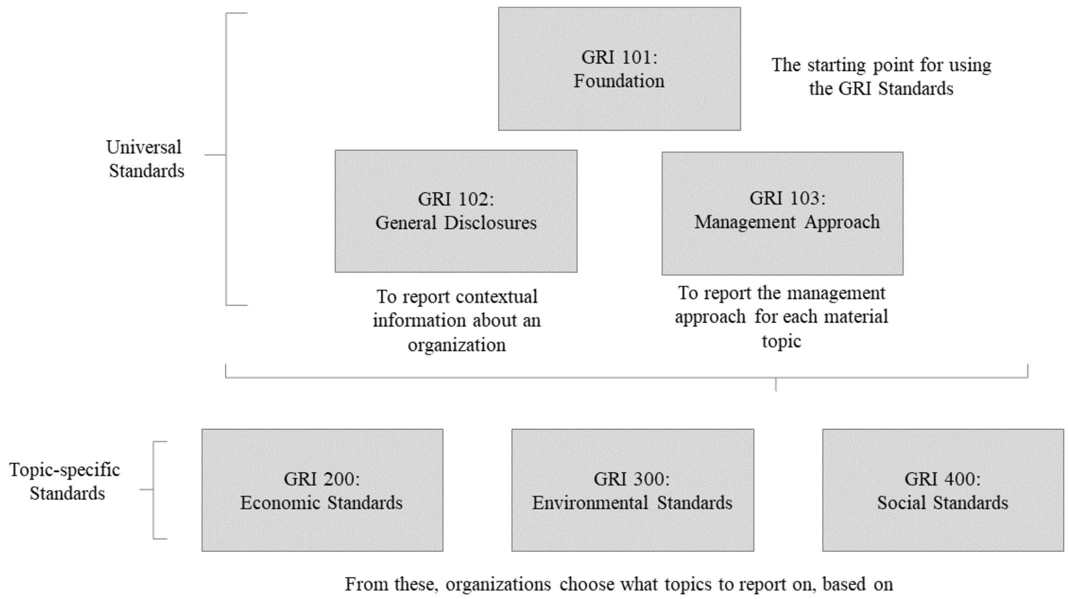


Figure 6.8.1: GRI Standards Overview

(Adapted from Global Reporting Initiative (2016a))

The GRI Reporting Principles are qualities that organizations must convey when building a report in accordance with the Standards. The Principles are divided into two groups: Principles for defining report content and Principles for defining report quality, which together guide the company into ensuring a high-quality report that contemplates all the relevant contents and considers the organization's actions, impacts and their stakeholders' needs and expectations. The principles are summarized in the table below (and the explanation each can be found in Annex A):

Table 6.8.1: Reporting Principles of the GRI Standards

| **Reporting Principles for defining report quality** | **Reporting Principles for defining report content** |
|---|---|
| *Accuracy* | *Stakeholder Inclusiveness* |

| | |
|---|---|
| *Balance* | *Sustainability Context* |
| *Clarity* | *Materiality* |
| *Comparability* | *Completeness* |
| *Reliability* | |
| *Timeliness* | |

## 7. Current state of Sustainability Reporting in Portugal

To the best of our knowledge, recent academic research on the current state of sustainability reporting in Portugal is fairly scarce, especially in a general approach: some studies explore either the environmental or the social responsibility dimension of corporate reports, or focus on the report's assurance and respective influencing factors for that decision, while others focus even on the topic from an accountant or auditor's perspectives. Some of the main conclusions of that research suggest that Portuguese companies' sustainability reporting is on an increasing trend although mostly being adopted by larger and renowned companies (Duarte, 2009). Also a trend was the disclosure of mostly qualitative rather than quantitative information, which suggests that sustainability disclosure is still regarded as more of a marketing tool by companies, rather than powerful value-creating instruments integrated in their long-term strategies (Duarte, 2009; Tiago, 2014). Analyzing the aftermath of the economic crisis, some studies found that, while there was an increase in the number of sustainability reports in the period before (Dias et al., 2016), there was a temporary decrease after the economic recession on 2008, mostly by unlisted companies, and simultaneously, an increase in the quality of that disclosure which may be associated with the fact that, under the pressure of the crisis, only sustainability-devoted organizations continue with the commitment of publishing reports (Branco et al., 2014; Gomes et al., 2015). BCSD Portugal (2019) also found that after the crisis, specifically from 2011 on, the number of companies that were part of the council consistently decreased until around 2016, which may also reflect the negative impact of the crisis on corporate commitment with sustainability.

In general, Portugal has been regarded as a country with competitive sustainability reporting in the global scenario. Gomes (2015) has found that GRI framework is the most prominent in sustainability reporting in Portuguese companies – with 87% of their sample using their standards in 2011 – and that the country proved to follow international corporate sustainability trends. In 2011, KPMG (2011) distinguished the country as one of the leaders in the communication quality and process maturity of sustainability reporting. In 2013, they were stating that 71% of Portugal's 100 biggest companies reported on corporate responsibility, which represented a slight growth from 69% in 2011. At the time, the country had one of the highest rates of GRI use, earning a 3$^{rd}$ place out of the 41 countries analyzed, with a use rate of over 90% in its companies (KPMG, 2013). Finally, in 2017, they reported that the percentage reached 80%, which was higher than the global average of 72% of companies reporting on corporate responsibility. Additionally, 58% of those companies reported on their activities in referencing the UN SDGs securing Portugal the 2$^{nd}$ place in the ranking of SDG reporting out of the 49 countries considered in that study, only behind Sweden. The same report adds that Portugal is the 9th country more likely to discuss Human Rights with 72 out of the 100 biggest companies acknowledging Human Rights in the report (KPMG, 2017).

Studying its nearly 100 associated companies in 2019, BCSD Portugal (2019) found that more than half were elaborating sustainability reports, and that there was a tendency of an increase in the reporting on UN SDGs, in particular SDG 8: Decent Work and Economic Growth (74%), SDG 12: Responsible Production and Consumption (72%) and SDG 13: Climate Action (65%). This can possibly suggest that there is no particular focus on some area – economic, social or environmental – of sustainability. They also note that, in a general way, companies that report are of primarily of larger dimension and business volume and belong to the Industry or Energy activity sectors. These Portuguese companies' reports are, in most part, separate from other financial reporting (nonintegrated reporting) and are on average 91 pages, so not too long. In partnership with PwC and Vieira De Almeida Lawyer Society, BCSD Portugal found that, despite being more and more common, ESG corporate reporting is still, for the most part, inconsistent and disperse in national companies, which can be associated to the fact that there are not too many global sustainability reporting standards for medium and small companies, that make the bulk of the Portuguese entrepreneurial scene. Although they do not have the same incentives to report as larger companies do, they are also becoming increasingly driven to disclose about their corporate responsibility (BCSD Portugal et al., n.d.).

Portugal is, much like the rest of the world, witnessing an increase of the laws and regulations around sustainability reporting. There is currently two defining objects of the Portuguese Law, both deriving from EU's directives (1) Law nº 89/2017 of August 21st, that requires civil and commercial societies and other institutions, to report information to a database about the individuals that hold property or control over the entity in question, in an effort to prevent the use of the financial system for money laundering or the financing of terrorism; and (2) the Decree-Law nº 89/2017 of July 28th, that makes the Portuguese correspondence of the EU Directive 2014/95/UE, and regulates the non-financial information disclosure of large corporations of public interest, including topics such as due diligence processes and social and environmental risks associated with operations. Additionally, there are some others by the EU that are relevant to the country, for example, the EU Regulation 2019/2088 that establishes consistent orientations of sustainability disclosure, risk, and impact management of the financial sector, or the EU Regulation 2020/852, that succeeds the

2019/2088, and is essentially a tool that determines the criteria necessary for an investment to be deemed environmentally sustainable, also known as EU Taxonomy, to name a few (BCSD Portugal et al., n.d.).

Corporate sustainability has also become an important issue for Portuguese financial markets and its supervising entities. The Euronext Lisbon Stock Exchange has joined the Sustainable Stock Exchange Initiative – which aims to increase the corporate disclosure on ESG topics and endorse informed investment –, and although it does not have sustainability-related indexes of its own, it is covered by the ones of Euronext Stock Exchange, and it has released its own guidelines on ESG reporting for listed companies. Similarly, CMVM, which regulates and oversees the market, has also published a template of non-financial reporting to encourage and aid listed companies to disclosing this type of information (CMVM, n.d.; Sustainable Stock Exchanges Initiative, n.d.).

# 8. Methodology

In this chapter, we cover the details of the methodology adopted in this thesis, including the sampling process.

## 8.1. Content Analysis and Scoring System

A great deal of research has used the content analysis methodology to study CSR (Guthrie & Abeysekera, 2006). Some common approaches have been attempts to measure CSR through space and dimension metrics (such as the count of words, phrases or pages used by CSR information relative to the dimension of the report), but although the dimension of the disclosure is important, it does not, by itself, reflect much about the disclosure's content or its quality. Although more space allocated can be related to more information being provided, it does not necessarily implicate greater detail in the information. It may also, in some cases, decrease the information's usefulness, as pointed out by the IIRC's framework (n.d.-a) that encourages the report to be clear and as most succinct as possible, instead of long and complex.

Other approaches, although much more exposed to subjectivity, rely on the measure of the themes present in the reports, often using a scoring index, in an effort to measure CSR based on its content. These involve curating a list of disclosures that should be present in the reports and scoring the companies using binary points (the company is scores "1" if it mentions a particular theme in the report, and "0" otherwise). However, this method has been altered and evolved by some authors using weights to the scores to also reflect the nature or level of detail of the information (some authors distinguish the information between qualitative, quantitative or monetary, like Michelon (2015), and others by vagueness or descriptiveness). Others attribute different importance according to the commitment shown in the content itself, such as Ameer (2012), or by the level of compliance with a certain framework's requirements for each topic's disclosure (such as Carvalho (2013), Dias (2009) or Trindade (2016)). All of these approaches improve the rigor and quality of the scoring indexes but often capture only one or two dimensions of a report's quality. To make our score more complete in the assessment of the sustainability reports, we combine this content analysis modality of the weighted content scoring index, with a "disclosure quality" dimension that captures other important characteristics of report, drawing upon the literature review on this topic. The choice to use the GRI Principles, which we will later describe, is to keep our score consistent with the GRI framework in both the content and the principles scores.

## 8.2. Sample, Data Collection and Period of Analysis

As we mentioned before in the Introduction, the choice of using the companies from PSI-20 index was naturally based on the availability of information due to the fact that they are listed, and thus, are required to share information publicly. Additionally, the choice was also influenced by the nature of sustainability reporting – the topic of this study – and the fact that this practice is more commonly adopted by businesses of greater dimension and reputation. Moreover, these companies will also help us understand the *state of the art* of sustainability reporting practices in Portugal, as these companies are some of the biggest and most advanced in this territory. Refer to Annex B for a list of the companies included in this sample as well as a brief summary of their profiles.

We analyze the sustainability reports of the companies[20] of the sample, from the years 2017 through 2019, inclusively. It is important to note that only publicly available reports possible to find in the companies' websites are considered, and that in the absence of a "stand-alone" sustainability report, the company's yearly consolidated report is considered, provided it contains a specific section to discuss sustainability, in which case we will consider it to be "integrated". Basing ourselves in GRI's definition, we consider that a report qualifies as a sustainability report, or rather contains a section to report on sustainability, if it publicly discloses the economic, environmental and/or social impacts of the company, i.e., it should report on at least one of these dimensions.

This period of analysis was chosen having in consideration that this analysis would be all the more relevant if it were as recent as possible and considering the introduction of the GRI Standards from 2016 onwards, making this period particularly interesting from the point of view of the development of corporate sustainability reporting practices.

## 8.3. Methodological Approach

To measure the companies' sustainability reporting practices, we have built a scoring system through an index of disclosure standards. This system will produce a final score for each company on each of the years in the period of analysis when there is in fact a report, evaluating its overall reporting performance – the Sustainability Report score (SR score). This SR will be the average of two scores, one concerning the extent of the report's content – the

[20] It is implicit that the reports are yearly, however, in some cases of the sample, there were bi-annual reports. Despite these reports being released in the year after the period they refer to, the reports to consider will be the ones relevant for the 2010 through 2019 period (example: the report from 2010 is the one referring to the sustainability performance of the company in the year 2010).

Content Standards Score (CS score) – and the other concerning the report's quality, the Principles Standards score (PS score)[21]. The CS score reflects the percentage of the company's coverage of the topics relative to the total of topics it should report on[22], and with the detail required, based on the GRI Standards, and it comprises of 4 other scores representing the average scores in each of the different categories of content standards – universal (US), economic (ECS), environmental (ENS) and social (SS)[23].

The PS score will reflect in percentage the report's performance concerning its characteristics, that represent various dimensions (other than the 'content' dimension) of report quality. As explained before, we believe that in order to be of the upmost standard and rigor, it is not enough to cover all the topics necessary: the report should portray certain characteristics that are vital to the report's quality and usefulness to the stakeholder. These 10 characteristics, or rather *Principles* as they are called in many frameworks, include: Stakeholder Inclusiveness, Sustainability Context, Materiality, Completeness, Accuracy, Balance, Clarity, Comparability, Reliability and Timeliness.

The formulas used to build the final Sustainability Report Score are as follows:

$$SR_{x,y} = \frac{CS_{x,y} + PS_{x,y}}{2} \qquad 8.3.1$$

$$CS_{x,y} = \frac{US_{x,y} + ECS_{x,y} + ENS_{x,y} + SS_{x,y}}{16} \qquad 8.3.2$$

$$PS_{x,y} = \frac{PS_{1,x,y} + PS_{2,x,y} + \cdots + PS_{10,x,y}}{40} \qquad 8.3.3$$

Where:

$x$ – Company

$y$ – Year

[21] It should be noted that, when a company does not have a report for one or more years, those will not be scored. Nonetheless, the very information that the reports are not available or do not exist, will be collected and used for the analysis of the number of reports over time.

[22] The Economic, Environmental and Social Standards that each company should report on depends on which of them are material to the companies. More information about the consideration of materiality aspects can be found in the ANNEX C.

[23] For the formulas of these scores, please refer to the ANNEX E.

$PS_{i,x,y}$ – Score given in respect to the number *i* principle, for the company

The scale of possible scores used for the Content Standards, and respective meanings, are as shown in the following table:

Table 8.3.1: Content Standards Scale of Scores

| ***Score*** | ***Description*** |
|---|---|
| **-** | When the topic is not material to the company, it is not considered |
| **0** | The report does not comply with the Standard in any way |
| **1** | The report covers some or all the information required by the Standard although vaguely/without detail |
| **2** | The report covers only part of the information required by the Standard, with some level of detail |
| **3** | The report covers most or almost all the information required by the Standard, with some level of detail |
| **4** | The report complies fully with the information required by the Standard with comprehensive detail (including the Management Approach) |

The scale of scores used for the Principles Standards, and respective meanings, is as follows:

Table 8.3.2: Principles Standards Scale of Scores

| ***Score*** | ***Description*** |
|---|---|
| **0** | The report does not show this characteristic in any way |
| **1** | The report lightly demonstrates this characteristic |
| **2** | The report moderately demonstrates this characteristic |
| **3** | The report strongly demonstrates this characteristic |
| **4** | The report very strongly demonstrates this characteristic |

Methodological notes on the formulas mentioned above, as well as other formulas, and the scales used for both the Content and Principles Standards can be found on Annex D and E, and the description of each of the Content and Principles Standards, and explanations about the scoring system decision criteria used for each, can be found in Annex D as well. For more information about the consideration of Materiality in this research, please refer to the Annex C.

## 9. Results and discussion

For the period of three years, 2017 to 2019, and considering the 18 companies in the PSI-20 index, we found that there were 50 sustainability reports we could consider, out of 54 possible, that is, 93% of our total sample for the three years, which is a good indicator for the sustainability reporting scene in Portugal. Of course, these are some of the biggest companies of the country and they are all public, therefore they are the ones that, out of all the companies, have the greatest incentives to report on non-financial information. In 2017, 89% of the companies reported, and in 2018 and 2019, that percentage increased to 94%, which shows that still in the recent years, the trend is that more and more companies issue non-financial information for stakeholders.

In the beginning of the analyzed period, the majority of the considered reports were what we called "stand-alone" reports – reports that are separated from other disclosures, for example, from the annual report – however, this tendency gradually became inverted, as the majority of them were now integrated, that is, included in the annual reports. However, this is still a divided choice, as in 2019, 59% of reports were integrated and the remaining 41% were stand-alone reports.

We also found that there was a better reporting performance in stand-alone reports than integrated ones, both in content and quality: the average CS score of stand-alone reports were 49% whereas for integrated ones, it was 36% - 13 percentage points lower. As for PS scores, the stand-alone report has an average of 71% while integrated ones stood with an average 62% - 9 percentage points below. Stand-alone reports also addressed a larger number of content standards in comparison to integrated ones, revealing that companies with a dedicated document have overall greater sustainability reporting.

In terms of chosen frameworks, most of the reports adopted some sort of GRI framework – the GRI Standards, that were already launched by 2017, the GRI G4 guidelines, or a combination between any of those two and others like the IIRC. The adoption of GRI Standards gradually increased from 63% in 2017 to 76% in 2019, while the overall use of some sort of GRI framework grew from 81% to 88% in that period, which reflects the general acceptance of GRI as the most relevant sustainability reporting standard-setter. Reports that explicitly adopted GRI Standards or guidelines incorporated significantly more standards into the reports, and disclosed with much better content and quality: 62% SR score for reports using GRI Standards, 55% score for reports using a combination of frameworks including a GRI one and a score of 51% for those using G4 guidelines, against 15% SR score for those using no framework at all.

Of the available reports that were adopting GRI Standards or guidelines, majority of the companies adopted the Core Option, 64% in 2019, rather than the Comprehensive option which is the more thorough on content standards. Still, the average score for the overall reporting performance was almost the same between the options, particularly in the CS score: 48% average score for both, which shows that there was no difference in the reporting performance influenced by the option chosen. We'll elaborate more on that in the following paragraphs.

Although almost all of the companies had at least some kind of sustainability reporting, and of those, the vast majority report using some kind of GRI Framework, the average SR score of the PSI-20 companies for that year stood at 52,76%. This result is likely to be related to the fact that our scoring system considers all Universal Standards and all Specific Standards to calculate the CS score (unless there is an explicit reason stated by the company or an obvious reason for a certain standard not to apply for that business' reality), which is the same as considering the Comprehensive Option of the Framework and also the assumption that all topics are material to all companies (again, unless it is clearly not applicable or material due to the business nature). We understand that these conditions clearly form a high standard for the score that is not necessarily required by the framework, as the latter offers the flexibility to choose between Core and Comprehensive options and to report only on what they see as material specific topics, however, we found that this is the "fairest" way to compare such different industries and their subjective understandings of each of their own materiality.

Additionally, 64% of the companies in 2019 chose to report on the GRI Standards according to the "Core option" – with only the essential Universal Standards, 31 instead of 54 – and, perhaps more importantly, despite claiming to report according to some version of the Standards, in a generalized way, companies still failed to comply fully with what is required by the respective chosen option of the framework. Either by disclosing some but not all of the information required by the Standard – as most of them demand a high level of detail – or by vaguely mentioning the topic of the Standard but failing to disclose the actual information and indicators required altogether.

It is also important to notice that, although some companies used the GRI Index to match the Standards required to different external sources (such as other reports or web pages) where the information would allegedly be – something that is considered by the GRI Standards as equivalent to reporting on it –, we did not consider the information disclosed outside of the exact report considered for the analysis. This is because of two reasons. First, because it would be impossible to find all the information linked. As the reports analyzed are from previous years, it is unlikely that we would find the information of those years in the webpages, when the websites are constantly updated with the most recent information. It is also unlikely that the website has the same paths as in previous years, as company websites' structure also suffers changes from time to time – this becomes an obstacle to find external information, for example, in EDP's report that lists external sources by describing the paths on the website, which no longer exist.

Secondly, it is because we believe that stakeholders who are looking for the information on a report would hardly go through the trouble of clicking on so many different links (some of them are as general as the link to the homepage of the company's website) or even manually look for the information on other sources (as some Indexes listed only the names and sections of other reports or webpages where the information would be, and it would be up to the stakeholder to find those sources and the specific place for that information). Some companies left out some, if not most of the basic and important information about their business by linking it in the GRI Index at the end of their reports, which we find defeats the purpose of having a sustainability report in the first place – concentrating the relevant information about the sustainability of the business in one place for the stakeholder to access.

What results of this decision to not consider that externally linked information, additionally to the facts mentioned before, is precisely that some companies, even with extensive reports and even with the Comprehensive Option of the framework, were given low SR scores[24].

In general, companies tended to have more or less the same report structure over the period analyzed, which makes sense in the perspective of maintaining consistency for stakeholders and also to facilitate the process of yearly reporting. However, we see this approach as limiting for the evolution of reports: as new challenges and opportunities emerge, organizations and their material issues change, and so reports must accompany that change in terms of disclosed information – not to mention the fact that both reporting guidelines and stakeholders' expectations also become more and more demanding. And so, this approach may discourage entities to continuously look for ways to improve their disclosures, to make them more efficient and streamlined, to add information that becomes relevant and take away

[24] For example: Galp in 2018 and 2019, and The Navigator Company in 2019.

other that becomes less important. Some reports even contained the exact same paragraphs as in the years before, only updating the quantitative information for the current year[25].

Regarding external assurance, most of the reports adopted that practice. Despite it not being necessarily required of them by any law or framework, the practice increased in popularity through the years, from a 63% implementation in 2017, to 71% in 2019. We also identified that externally assured reports had better scores in both content standards, as well as principles standards, giving them higher SR scores compared to non-assured reports. As pointed out in the literature review, external assurance has been adopted by many companies as an effort to increase the credibility of non-financial reporting, but as these results show, it also may be a sign of a true investment in delivering great reporting, from the company. It must be noted that having external assurance does not necessarily mean that the report will disclose all the important topics in the best way possible – as it can be observed by the variance of SR scores of assured reports – but rather that the reporting has been done with generally higher standards than those that are not.

Aside from the rising dominance of the GRI Standards in detriment of other frameworks, and the increase in adoption of both integrated reporting and external assurance, we also identified the trend in the raise of the average number of pages of the reports: from 76 pages to 87 in the three-year period. In particular, stand-alone reports went from a 112 to 142 average of pages, while integrated reports – which, because they include much more information such as financial, governance and management reports, tend to keep sections brief – grew from an average of 40 pages to 58 pages, including possible GRI Indexes. As discussed in the literature review, the length in reports does not have a direct relationship to the detail or quality of their content, as the results could demonstrate (see scatter plot in ANNEX F): in 2019, the second longest report, with 180 pages, achieved an SR score of 59%, similarly to another reports with half - 92 pages. The third longest report, with 160 pages achieved an SR score of 54%, similar to another of 74 pages, which is less than half of its length. In the same way, some of the highest SR scores were achieved with smaller reports, of 66 and 49 pages. These are some examples of the non-linear relationship between the variables. However, the rising average of number of pages dedicated to sustainability reporting could reflect a bigger focus on non-financial data, from companies.

[25] For example, Altri and Ibersol.

## 9.1. Performance between sectors

Between the 18 companies there were 10 different sectors represented: Wood processing, paper and printing; Finance, insurance and real estate; Transportation and storage; Energy and water supply, sewerage and waste management; Hospitality and Tourism; Wholesale and retail trade, renting and leasing; Construction; ICT service activities; Business administration; Manufacturing of fabricated metal products, except machinery and equipment (European Commission, n.d.-b). Although between the group of companies there is a very small sample of each sector, it is still interesting to make some comparisons between them, and so, we found that the best performing sectors in overall reporting performance in 2019 were the Wholesale and retail trade sector, followed by the Transportation and storge sector, and the Finance sector. In contrast, the worst performing sectors were in Manufacturing of fabricated metal products, followed by the ICT service activities and the Hospitality and services sector.

When looking at the overall performance in content standards, the Transportation sector, the Wholesale and retail trade and the Construction sectors reported best, with greater detail and conformity with the standards. This was also true for almost every category, except for the ENS, where instead of the Construction sector, the Finance sector was among the best three. On the other hand, the Manufacturing of fabricated metal products and the ICT service activities sectors obtained the worst results of the group. The Energy sector, which we expected to be among the best performing - due to the high stakeholder scrutiny especially for environmental issues, as well as their constant efforts to associate their brands to sustainability – was surprisingly also among the bottom three in terms of overall content score and in every content standard category, which reveals that this sector along with the other two mentioned above, will need to address more standards and meet their information requirements with greater rigor.

## 9.2. Content Analysis

Overall, the category of standards with highest average scores were, in 2018 and 2019, the Universal Standards, which reflects a commitment from companies in explaining the context of the reporting entity and its disclosure practices. From the specific standards categories, the category of Environmental Standards is the one with the best performance: with the highest average score[26], as well as with the highest percentage of standards addressed in least in some level, in each of the three years. There seems to be a greater focus on environmental impacts

[26] i.e., the ENS Score is higher, in relation to US, ECS and SS scores.

compared to economic and social ones, when it comes to what stakeholders are demanding and what corporations' CSR strategies are focused on, and this is reflected in these results.

Social Standards are also greatly emphasized by reports, only slightly behind Environmental ones, in terms of average score and percentage of standards addressed in least in some level. By far, Economic Standards are the ones less addressed on average, and also with lower score. In a general way, we found most reports neglected the economic topics, which shows that there is still much progress to achieve in this area of sustainability reporting.

In terms of the different sub-categories of standards, we identified that the ones that were most reported on, this is, addressed in at least some level, by the companies in 2019, were Organizational Profile and Reporting Practice in the Universal Standards Category, the Procurement Practices and Anti-Corruption in the Economic Standards, Supplier Environmental Compliance and Waste in the Environmental Standards, and finally, Training and Education, as well as Diversity and Equal Opportunity in the Social Standards category. All of those were also the two sub-categories with highest score averages in their respective categories, which means they were also the ones reported with most detail and extent – all with the exception of Supplier Environmental Compliance, which was the third highest, to the sub-categories of Emissions and Waste. Although the companies were far from perfect reporting on these eight themes, there was in fact a decent convergence with the requirements of the framework in these specific themes, this is, there were high rates of inclusion on the report of said topics, as well as a fair delivery on their specific information disclosure requirements.

In contrast, the sub-categories that were least addressed were Governance and Ethics and Integrity, in US category, Tax and Anti-Competitive Behavior in the ECS category, Materials and Environmental Compliance in the ENS category, and finally, Customer health and safety and Rights of Indigenous People in the SS category. As for those with lower average scores, we identified: Governance and Strategy in the US category, Tax, and equally, Indirect Economic Impacts and Anti-Competitive Behavior in the ECS category, Materials and Environmental Compliance in the ENS category, and also, Labor Relationships and Customer Health and Safety in the SS category. All of these are examples of topics that need more attention by reporting entities, as well as more effort in the detail and information included.

Considering the Principles Standards, in 2019, the results indicated that the reports very strongly demonstrated Timeliness, and also strongly demonstrated Clarity, Comparability, Stakeholder Inclusiveness and Sustainability Context[27]. This means that on average the reports performed perfectly in timely reporting, with regular schedules so that the information is relevant to stakeholders at the time they receive it, as well as showed a satisfying practice in terms of: accessibility and understandability of the report for its users; consistency of the information, enabling comparisons over time and with other entities; capability of identifying stakeholders and their response in meeting their expectations and information needs; and ability to present the reporting entity's performance in the wider context of sustainability.

Meanwhile Balance, Accuracy, Materiality, Completeness and Reliability were characteristics that the reports only demonstrated moderately, which means that there is still some progress to make when it comes to: making reports more even in terms of reflecting both positive and negative information to enable stakeholders to produce a reasonable assessment on the company's overall impacts; including enough detail so that the users of the report can clearly understand the entity's performance; covering all topics that are truly relevant in assessing the performance of the company, and disclosing which topics are considered material as well as the rationale behind it; including enough information about the material topics and their boundaries so that it provides complete image of the company's activities and impacts; and finally, providing reasonable assurance of the quality and materiality of the information reported, as well as evidence that supports it.

### 9.3. Scores Overview

Regarding the categories of content standards, the average score for the Universal Standards stood at 1,89 – a rounded 2 out of 4, for the year of 2019. There was a slight improvement in the extent and detail to which the companies are reporting on the general disclosures (1,55 in 2017 to 1,89 in 2019), however, it is still far from complying fully with the reporting framework. The same happens with both the Environmental Standards and the Social Standards, which also stood with an average score of 2 out of 4, in 2019. For the Environmental Standards, the score fluctuated slightly over the three years, as between 2018 and 2019 the score actually fell from 1,81 to 1,77, however, it was still growth compared to 2017's result of 1,61. As for the Social Standards category, the average score in 2019 stood at 1,67, which was an improvement from the 1,47 score of 2017. These results reflected that in all these three categories, the reports covered only part of the information required by the Standards with some level of detail, meaning that there is still room for improvement, by

[27] From highest to lowest.

increasing the scope of reports on these categories, as well as with including more of the required details in each disclosure, in accordance with the GRI Standards.

As for Economic Standards, the average score of 1,26 in 2019 was the lowest of the content standards, and it reflects that the reports covered only some of the information required by the Standards vaguely and without detail. This score also came to grow, although only slightly, from the 2017's, 1,11. At the end of the day, companies showed a poor performance in disclosing on their economic impacts, as they left out the majority of the topics encompassed in this category and reported with few details on the ones included.

In 2019, companies tended to perform better in the Universal Standards category, in terms of extent and detail of the report's content, while Environmental Standards was the second best category, followed by Social Standards and Economic Standards, however, all of them improved during the three years.

Another important factor affecting the CS score is the scores of the Management Approach Standards for each of the specific standards categories, which received overall low results: 1,75 out of 4. When following the GRI Standards, companies tended to neglect the Management Approach Standards which were supposed to give some context and structure to the overall reporting of specific standards: explanations of each material topic and its boundaries, the management approach to each topic and each the components of that approach, and finally, the evaluation of the management approach. In general, the reports elaborated more on the Standard 103-2: The Management Approach and its components, which had an average score of 2,22 in 2019, and reported less on "Standard 103-1: Explanation of the material topic and its Boundary"

All of these factors resulted in the Content Standards score, which improved as well from 36% in 2017 to 41% in 2019, which of course, shows that Portuguese sustainability reports have a low coverage of the topics that are material to them, and they do not report with the upmost, and required, level of detail that is needed in order to deliver a relevant and complete report.

In terms of Principles Standards, the results were more positive, with the overall score rising from 57% in 2017 to 64% in 2019, showing a satisfactory level of report quality characteristics. However, we still consider that there is need for improvement in representing these characteristics in reporting, to make the reports more valuable and relevant to stakeholders, particularly, as we said before, in the areas of Balance, Accuracy, Materiality, Completeness and Reliability.

The outcomes above have resulted in the overall performance of sustainability reporting, measured by the SR score, being only average, with a score of 53% in 2019 – a slight improvement from 2017's score of 46%.

### 9.4. Review of each company

#### 9.4.1. Altri

Altri chose to publish stand-alone reports for all three years, not explicitly following any framework of reporting in 2017 (although it was designed having GRI guidelines in mind) and adopting the GRI Standards' Core Option for the 2018 and 2019 reports. It is worth to mention that the company did not have external assurance on the sustainability reports, despite having assured a section of 2019's report on green bonds.

From 2017 to 2019, the number of pages almost tripled, from 57 in 2017 to 160 in 2019, and the number of content standards they addressed increased as well – considering the Standards they scored at least 1 or above, they went from addressing, in at least some level, 32% to 56% of standards in the same period – an increase of 24 percentage points. However, the SR score increased only 14 percentage points in the same period, from 40% in 2017 to 54% in 2019. In terms of CS score, it increased from 32% to 46%, showing an improvement in the extent of the disclosure, and in terms of PS score, it increased from 48% to 63% over the same period, also showing an improvement in the quality of the report.

The content standards which Altri most addressed in 2019 were the ENS ones, addressing 84% of the standards with at least some level of disclosure (score equal to 1 or above). In accordance with those results, ENS had also a higher score, with an average of 2,67 out of 4, which shows ENS was the category of standards which they disclosed more of, and also with more detail and complying more fully with the standards, which was expected given the industry they are inserted in.

#### 9.4.2. Banco Comercial Português (BCP)

BCP has published stand-alone sustainability reports in all three years using the GRI Standards Core Option. All three reports were externally assured and were relatively long – gradually increasing from 87 to 112 pages over the analyzed period. BCP's reports maintained essentially the same structure over the three years, with some improvements in 2019, where they went from addressing 45% of content standards, in at least some level, in both 2017 and 2018, to addressing 54% of the standards. This came to reflect in their SR score evolution: 66% in both 2017 and 2018, and then 69% in 2019. It is worth to mention that the relatively positive scores were mostly due to the high PS scores, which for example, was 93% in 2019, contrasting with the CS score of 46%. This reflects that what was most valuable in the report was not so much the extent of coverage or detail in the content of the report, but the overall presence of quality reporting characteristics: Stakeholder inclusiveness, sustainability context, materiality, completeness, accuracy, balance, clarity, comparability, reliability and timeliness.

Finally, the category with the highest percentage of content standards addressed being the US, with 61%, followed by the SS category with 55%. However, the categories of content standards with highest scores were the ENS with 2,48 out of 4, while the US had a score of 1,89 and SS had a score of 1,77. This reflects that although more topics were addressed in universal and social topics, they were not the standards disclosed with more detail according to what was demanded by the framework.

### 9.4.3. Corticeira Amorim

Corticeira Amorim reported on sustainability in an integrated report in all three years, however, it also had on its website a stand-alone report, which was essentially a document with just the sustainability section of the company's yearly report. In all three years, the reports were externally assured and were made according to the Core version of the GRI Standards. Between 2017 and 2019, the number of pages dedicated to sustainability reporting more than doubled, from 53 to 119 pages, however, interestingly the SR score increased only slightly between the same period, from 62% in both 2017 and 2018, to 67% in 2019, which resulted from a slight increase in CS score from 46% to 51%, and an increase in PS score from 78% to 83%. In fact, Corticeira Amorim's reports maintained essentially the same structure over the three years, and besides increasing in volume, it improved only marginally in both content and quality.

In terms of how much Standards they addressed, the percentage increased from 61% to 66% Standards addressed in at least some level, with the categories with the highest percentage being the US with 74%, followed by the ENS with 69%, which would be expectable for the industry of Corticeira Amorim. Conversely, those are the categories of content standards with higher scores as well, US scoring an average of 2,65 and ENS scoring an average of 2,52.

#### 9.4.4. CTT

CTT also reported in all three years and all three were externally assured, although their structure underwent some changes: In 2017 they released a stand-alone report that followed GRI's 4th generation guidelines, G4, in the core option; In 2018, they adopted the structure of integrated reporting, according to both the IIRC and the GRI G4 guidelines for the Core option; Finally, in 2019, they upgraded from Core to Comprehensive GRI G4 guidelines, and maintained IIRC guidelines. Through the years, CTT's reports also went through a fluctuation in the number of pages: in 2017 the stand-alone report totaled 77 pages, and in the next year it decreased to 45 in the integrated report, increasing just 4 more pages in 2019, to 49 pages. In these three years, the company did relatively well in terms of reporting performance, going from a SR sore of 64% to 69% and then 70% in 2019, which is mostly due to the rise in the CS score from 50% in 2017 to 63% in 2019, while the PS score remained the same all three years in a solid 78%. In terms of content standards addressed, in at least some level, CTT has very high percentages in all categories: 89% overall, 93% in US, 91% in ENS, 76% in ECS and 88% in SS. This means that the report disclosed with a score equal to 1 or above, on almost all of the Standards in every category but we can see from the respective average score of the CS score, 63%, that the disclosure lacked some detail relating to the requirements of the framework, especially in the ECS, which scored an average of 1,78 out of 4.

Because the report was integrated and had a good GRI Index that pointed to different sections of the report with diverse information, we were able to find most disclosure requirements, as different sections complemented each other. The SR scores achieved during these three years were consecutively the highest out of the 18 companies: 73% in 2017, 85% in 2018 and finally, with a slight decrease from the year before, 84% in 2019.

#### 9.4.5. EDP

EDP reported in all three years with quite extensive Stand-alone reports, all of them assured and following the GRI Standards' Comprehensive option. The number of pages of the report started as 171 pages in 2017 and then increased to 264 in 2019. As for the SR score, the company consecutively managed the highest score in all three years, with a score of 73% in 2017, 85% in 2018, and finally with a slight drop from the year before, 84% in 2019, with high CS score (76% in 2019, which is well above average) as well as particularly high PS scores (93% in 2019). The CS categories with highest average scores were the US, with 3,50 in 2019, and ENS with 2,98, which is expected given the company is inserted in the energy industry, which suffers high scrutiny over environmental issues. In terms of the percentage of content standards addressed, in at least some way, the percentage is also very high and had an increase in 2018, where it went from 73% to 83%, the category of US being the one with highest percentage, 93%, and ENS and SS equally addressed, with a percentage of 78%. These statistics point to the fact that EDP not only addressed most of the required standards but also in a detailed way, with great quality of reporting.

It is worth to mention that, although more information and detail is usually a positive thing, in the case of EDP the extensiveness and thoroughness of the report made it harder to navigate. Indeed, the reports achieved high scores and were able to address most of the standards in every category, however, there was also a lot of information that could have been left out in the name of keeping the document simple and straightforward to the readers. Then again, it is understandable that such a large corporate group would have a much longer report.

As the change of the number of pages in relation to the change in SR score suggests, there was not a positive outcome in increasing the length of the document, when looking at 2018 and 2019, when the report extended 50 more pages and the SR actually decreased 1%.

#### 9.4.6. EDP Renováveis

EDP Renováveis reports were available for all three years and integrated into the annual report of the company, occupying a relatively small portion of the document, with 26 pages, then 41 and finally 43 in 2019. All three were assured and followed the GRI Standards' Core option. Although a subsidiary of EDP group, it adopts a different approach to reporting, with much lower SR scores: 42% in 2017, and then 55% in both 2018 and 2019. When singling out the CS and PS scores, one can see that the company has particularly poor performance in content standards, despite the acceptable levels of the PS scores, which results from the much less detailed disclosures and smaller scope when addressing GRI Standards (only 56% of content standards addressed in at least some level, in 2019), comparing to its parent company, EDP. Surprisingly for an energy company in the renewables market, EDP Renováveis had the poorest performance in the ENS Standards, with this being the category with the lowest percentage of standards addressed – 44% in 2019 – and the lowest average of scores – 1,24 in the same year. Using an integrated report, the company took the opportunity to leverage off of information already disclosed in other sections of the document, however, still failed to report on a lot of standards.

### 9.4.7. Galp

In the case of Galp, we did not consider that the company had reported on sustainability for the purpose of the study, as we did not find any stand-alone report, nor did we find a dedicated section of the annual report for the subject for the year of 2017. In the other two years, however, the company did include a section of the annual report that was a sustainability report, making them integrated reports, both assured and according to the GRI Standards Comprehensive Option. Although with this information we expected to see a thorough sustainability disclosure, this was not the case since Galp only included 27 pages of the report dedicated to Sustainability and did not include a GRI Index inside the document that pointed to other sections for relevant sustainability information. In fact, sustainability information was scattered among various documents, which we did not consider. All of this resulted in a poor reporting performance: only 36% of content standards addressed in at least some level, and a SR score of 41% in 2019, that resulted from a 25% CS score and a 58% PS score.

The category of content standards most addressed were the ENS ones, with Galp mentioning 53% of the standards in at least some level, and with an average score of 1,39, the highest average out of all the categories for the company, which is somewhat expected for the industry that the company operates in. In contrast, the company did especially poorly in ECS, addressing only 6% of the standards in the category with an average score of 0,28. As the results reflect, the report did not cover much of the information required by GRI Standards, nor did it disclose with the upmost detail or quality either. This score was exactly the same as the year before, when the SR was also 41%, although there was a marginal improvement in the CS score between the years.

### 9.4.8. Ibersol

Ibersol was one company that reported in all three years in a stand-alone report, claiming to follow GRI Standards, although not explicitly saying which option, and also not mentioning any type of external assurance. It maintained essentially the exact same report structure over the three years, wth around 110 pages and only changing some sentences and updating the numerical information. This caused its scores to be the exact same on every category along the three years, which is highly unusual: a SR score of 46%, composed by 44% CS score and a 48% PS score, so a very unexceptional report in every way. The reports covered 62% of content standards in at least some level, with the social standards being the ones most covered

– 80% of standards addressed – and also with the highest average score, 2,10, which indicates that the report did not have a high level of detail and conformity with the standards.

### 9.4.9. Jerónimo Martins

Jerónimo Martins issued externally assured integrated reports in all three years using the GRI Standards for the Core Option. While the page number somewhat increased over that period – from 78 to 124 pages – the SR score increased only marginally, from 69% to 71% in 2019. This growth is entirely due to the improvement in the CS score from 56% to 59%, as the PS remained the same at 83%. Through this period, the report kept the same structure, adding some information or detail here and there, but also, withdrawing some too, as one can see by looking closely at the evolution of average scores of content standards categories through the years: a slight decrease of the US Score from 2018 to 2019, and also of the ENS score from 2017 to 2018, which is quite interesting.

Furthermore, Jerónimo Martins had a relatively positive performance in addressing most of the content standards in at least some level, with a 73% coverage overall. In the category of US, it achieved the highest percentage of that coverage, with 81%, followed by the ENS category, with 72% of the standards covered. However, it is in the US and the SS categories that Jerónimo Martins achieved the highest score averages, with 2,96 and 2,54 respectively.

### 9.4.10. Monta-Engil

Monta-Engil issued stand-alone reports for all three years. All three were relatively extensive, with 178, then 202 and finally 180 pages in 2019. The company did not identify any external assurance (so by default, we considered them not assured) and they all followed GRI directives: GRI G4 in both 2017 and 2018, and in 2019, the report adopted the GRI Standards. Overall, the company had a positive growth in the SR score, from 41% to 59% in the three years, improving in both CS score and PS score, from 39% to 55%, and from 43% to 63% respectively. Oddly enough, when we look at the content categories, different things have happened: In the US and SS categories, both the average scores and the coverage of addressed standards in at least some level increased. However, in the ENS category, both the average score and percentage of standards addressed decreased – average score dropped from 2,14 to 1,63, and coverage dramatically fell from 66% to only 22% of the standards, which is definitely an unusual change given the prominence environmental issues have gained in the last years and the industry of Monta-Engil. Finally, an equally unusual change was in the ECS category, where the percentage of standards addressed decreased but in contrast, the average score increased.

It is worth to mention that Monta-Engil, like other PSI-20 companies, has a lengthy report which includes important qualitative and quantitative data, but is mostly filled with descriptions of particular initiatives and events, some of them only relative to specific business units or locations, won awards and stakeholder testimonials, which have their relevance, just not in the context of what the GRI Standards require. In this way, most of their report resembles a newsletter or a "highlights of the year" report, rather than a sum up of essential sustainability information about the entire company's yearly performance.

### 9.4.11. NOS

NOS reported on sustainability in all three years, through integrated externally assured reports that followed GRI Standards' Core Option. From the initial 62 pages, the company increased to 106 pages in 2018 and then went back to 66 pages in 2019, to a more limited sustainability disclosure inside the annual report. Nonetheless, their SR scores were above average, with 66% in 2017 and going up to 71% in the two years after. This 71% SR score derived from a CS score of 55% and one PS score of 88% in 2019, reflecting a better performance in report quality than content, as per usual with all reports. In terms of the number of content standards addressed in at least some level, NOS was able to cover 67% of standards overall, with this percentage increasing slightly over the three-year period. The content standards categories with highest percentage being US and SS, with 81% and 68% respectively. However, it was in the US and ENS categories that the company had its highest scores average, with average 2,85 and 2,35 respectively, so while it may have focused more on social standards, it did better on fulfilling the requirement's details with the environmental standards.

### 9.4.12. Novabase

Novabase included 4 pages of sustainability reporting in each year's annual report, between 2017 and 2019, which is barely any reporting at all compared to the complex framework it was compared to. In the few information that those reports did disclose, there was not much detail and only some things could actually be considered disclosure of GRI Standards, and for this reason, it was scored 0% in PS score and 5% in CS score, resulting in a 3% SR score. The information was not assured, nor did it follow any GRI guidelines explicitly.

### 9.4.13. Pharol

Pharol did not have any type of sustainability report, stand-alone or integrated into the annual report.

### 9.4.14. Ramada Investments

Ramada Investments did include a specific section in their annual report, for all three years analyzed, dedicating 11, then 13 and then 20 pages to sustainability reporting. This brief reporting, that was not assured nor followed any specific reporting framework, lacked a lot of relevant information and detail, as well as important quality characteristics, and in line with that, it achieved a 20% SR score in 2017 and 2018, improving to 24% in 2019. In terms of content, the reports were very weak, only addressing in at least some level 26% of the content standards, with an average of 13% in the CS score, while the PS score stood at 35%, in 2019 – a slight improvement from the years before.

### 9.4.15. REN

REN published externally assured integrated reports in all three years, with sections of around 40 pages dedicated to sustainability disclosure, using the GRI G4 guidelines in 2017, and the GRI Standards' Comprehensive option in 2018 and 2019. Over the years, its scores were virtually the same, reaching a 29% CS score and a 75% PS score, resulting in a 52% SR score – an average reporting performance, strong on quality, but weak on content. In fact, only 31% of the content standards were addressed in at least some level, and the low average scores in US and ECS categories, 0,98 and 0,59 out of 4, help explain this CS result. The content with highest average score was SS, with an average of 1,60 which is still low.

### 9.4.16. SEMAPA

SEMAPA, had issued stand-alone reports in all three years, all using the GRI Standards Core option, but only in 2019 was the report externally assured. With reports around 80 pages, their SR score only increased 1% between 2017 and 2019, from 58% to 59%, with a modest decline to 55% in 2018, so overall, almost stagnant. This decline from 2017 to 2018 results from a decrease both in CS and PS scores, as the report covered less standards and with poorer quality. In 2019, the company achieved a 47% CS score and a 70% PS score, and they were only addressing 45% of content standards in at least some level, which reveals that there wasn't a great effort in the choice of content of the document. The highest average scores categories were US and SS, with 2,13 and 2,05 scores, those two being some of the categories most addressed in terms of percentage of standards covered in at least some level.

#### 9.4.17. SONAE

SONAE has published sustainability reports in all three years using the GRI Standards Core option and also external assurance. In 2017, it issued a Stand-alone report with 107 pages, in 2018, a stand-alone report with 77 pages, and then in 2019, it adopted an integrated reporting structure, dedicating 87 pages to sustainability reporting. During these three years, the company improved in terms of reporting performance, having grown from 61% to 73% in 2018, however, in 2019 that score decreased to 72%, which is still well above average. In terms of content, the 2019 report scores 53% - only 1% ahead from 2017 and 4% below 2018's score – while the PS score went from 70% to 90% in 2018 and maintained in 2019. Despite 2017's report being the longest, it was the one with the lowest percentage of standards addressed in at least some way, with only 55% coverage. Interestingly enough, in 2019 and 2018, the coverage was the same, 62%, but as the CS declined between that period, we can assume that it was mainly due to less coherence with the framework and the details that it required. The highest average score in content categories was in the ENS, reaching an average score of 2,80, followed by the 2,10 score in SS, which was also the categories with most standards addressed, in at least some level.

#### 9.4.18. The Navigator Company

The Navigator Company published externally assured stand-alone reports using the comprehensive option of the GRI Standards, in all three years. In the first two years, the reports of around 130 pages reached SR scores of 73% in 2017 and 76% in 2018. In 2019, the report size decreased to almost half, and its SR score decayed to 54%. Although the quality characteristics decreased by only 5% between 2018 and 2019, it is clear to see that it was due to the content that its SR score deteriorated: its CS score dropped from 66% to 33%, while the percentage of content standards addressed dropped from 72% to 40%. The report did especially poorly with economic standards, scoring 0,84 average in the ECS category, while the highest average was in the US category, with 1,57.

### 9.5. General comparisons between companies

In terms of overall reporting performance in 2019, the average SR score was 56%. According to their scores, EDP was the better performing company with a SR score of 84%, followed by

SONAE with 72%, NOS and Jerónimo Martins with 71%, and CTT with 70%. Meanwhile, the companies that did were Novabase with a SR of 3%, Ramada Investments with 24%, Galp with 41%, Ibersol with 46% and REN with 52%.

When looking at their performance in terms of the extent and detail of their reporting, the average score was 44%, with EDP as the best performing once again, earning a CS score of 76%. EDP was also the best in every individual content category, US, ECS, ENS and SS. Second was CTT with 63% CS score, then Jerónimo Martins with 59%, and Mota-Engil and NOS with 55%. The least performing in the CS were Novabase with a 5% score, followed by Ramada Investments with 13%, Galp with 25%, REN with 29%, and The Navigator Company with 33%.

Regarding quality characteristics of the reports, the PS average score was 68%, and EDP shared the lead with Banco Comercial Português, both with a PS score of 93%, while SONAE scored 90%, NOS scored 88% and Jerónimo Martins scored 83%. The reports which showed less quality characteristics were Novabase with 0% score, Ramada Investments' with 35%, Ibersol with 48%, Galp with 58%, and Altri and Mota-Engil, both with 63%.

## 10. Conclusion and Recommendations

From our analysis, we were able to reach the conclusion that Portuguese companies are in fact adhering to this trend of sustainability reporting, and that it has become common practice among some of the biggest companies, at least. Almost all companies of the PSI-20 index issue some kind of sustainability information, and the trend is that the number of companies reporting is increasing, based on what we have seen between 2017 and 2019.

During this research, it was possible to notice that most of the companies that are part of this stock index, are adopting this sustainability disclosure as a standard practice, issuing, for the most part, lengthy reports on a yearly basis, and usually, alongside financial and managerial information – combining everything in one report only, an integrated report. This alone shows that Portuguese companies are acknowledging the importance of non-financial information for their stakeholders and for their own organizations, which, regardless of the content and quality of the disclosure, is already a sign of commitment and an important first step in the right direction.

Some conclusions that we were able to draw from this analysis were that the generally adopted framework is by far the GRI Standards, with some companies using previous versions of GRI guidelines like GRI G4, and some using the IIRC together with one of the two; while the most popular option of reporting was the "Core" one, the simplest of the two, instead of the "Comprehensive" one, and we were able to observe that reports which adopted GRI guidelines of any sort, outperformed those who did not. Moreover, while it is still a divided scene, the greater part of the companies reported on sustainability in an integrated way, i.e. as part of their yearly financial and management reports. However, on average, stand-alone reports performed better. External assurance was also a generalized choice amongst the companies, despite it not being required by any law or framework. Interestingly, assured reports also performed better on average, against the score. Finally, another conclusion about the reports' profile of these Portuguese corporations, has been that the length of these reports has also been increasing, to an average 87 pages, which signals that more and more attention is being given to non-financial information in the context of corporate reporting. It is worth to mention that, just as stated in the literature review, there is evidence in other research that points to the fact that using the GRI Standards, externally assuring reports or increasing report length is not necessarily linked to higher quality sustainability reporting, nonetheless, these are interesting conclusions.

Furthermore, we were able to assess that the sectors that performed best in overall reporting were the Wholesale and retail trade sector, followed by the Transportation and storge sector, and the Finance sector. While the worst performing sectors were the Manufacturing of fabricated metal products, followed by the ICT service activities and the Hospitality and services sector. Regarding report content alone, the Transportation sector, the Wholesale and retail trade and the Construction sectors reported best, with greater detail and conformity with the standards, for the majority of content standards categories.

EDP's reports were the ones with highest overall score in all three years analyzed, therefore the best sustainability reports in the perspective of this research. The company issued stand-alone reports according to the GRI Standards Comprehensive option, releasing three documents with perhaps exaggeratedly extensive sustainability information – more than 250 pages of report in the latest one. EDP covered most of the required standards in a thorough manner, while managing to follow almost all the principles of quality of reporting. Despite still having some room for improvement – mainly in making the information more streamlined and straightforward for stakeholders – it is the most competitive company out of the 18 that were subject of this research, and a true example for others to follow.

In general, companies reported most and with the most detail on Universal Standards, as those are the basis of any report. Regarding the topic-specific standards, the Environmental Standards category was the one in which companies' reports achieved the best results. This result was somewhat expected, as companies tend to focus more on this dimension when approaching sustainability, especially nowadays with the topic gaining so much traction with stakeholders – and that is reflected on these results. Social Standards are also greatly emphasized on these reports, as there is also a lot of scrutiny around the way companies interact with their employees and communities around them. However, by far Economic Standards are the most neglected, being the topics that were less approached and also with less detail, making this area one that Portuguese companies need to work on in the future.

In terms of reporting principles, these documents portrayed very strongly Timeliness, and also strongly demonstrated Clarity, Comparability, Stakeholder Inclusiveness and Sustainability Context qualities. This is, they performed perfectly in issuing timely reporting and managing to consistently deliver information to stakeholders at the time it was most relevant to them, and showed a satisfactory performance when it comes to: keeping that information straightforward and accessible to all users; keeping the consistency in reporting structure and methodology, and enabling comparisons over time and with other entities; being capable of identifying and meeting stakeholder expectations and needs; and also when it comes to adapting the report to the wider context of sustainability;

The qualities that were least present were Balance, Accuracy, Materiality, Completeness and Reliability, which means that these reports have a lot of room to improve regarding: presenting both positive and negative impacts of the organization, in a true and objective way; disclosing with enough detail to allow stakeholders to understand the entity's performance; including in the reports every topic that is relevant for stakeholders to make assessments and decisions about the company, as well disclosing which topics are considered material by the company and the rationale behind that choice; providing enough information on those material topics and their boundaries in order to present a full picture of the company's activities and impacts; and also, providing reasonable assurance and credibility of the quality and materiality of the information presented in the report, as well as evidence that supports it;

During the three-year period of our analysis, the average scores of the companies' reports all improved, whether it being in the Sustainability Report score, Content Scores or Principles Scores, and in any of the 4 categories of content scores as well. Although it has for sure proven to be quite established and has been improving lately, the corporate sustainability reporting scene in Portugal is still, at the end of the day, not at its full capacity, which is reflected by the overall unexceptional results achieved by the companies against our scoring system. The reporting itself is still fairly limited in terms of content coverage and detail and is lacking some important quality characteristics that help these tools realize their full potential for companies and society.

While developing this research, it has become clear that Portuguese companies have now the incentives – whether they are reputational, operational, or financial – and the tools and guidelines needed, available to them to develop competitive sustainability reports. And yet, with almost all of them following the same set of standards for this reporting, we still see significant discrepancies between their different executions of these reporting tools – like Christofi (2012) and Nielsen (2007) pointed out, this will vary according to each company's objective and focus. We were able to see that, while some companies produce outstanding reports with thorough explanations and indicators of their sustainability efforts, and discuss their impacts, risks and opportunities in a strategic way – others stick to superficial narration of their initiatives and event throughout the year, only mentioning part of the topics that are truly material, and rarely quantifying the company's overall performance or providing enough detail to allow the important assessments that fulfill the very objective of a report. This lack of balance, materiality, accuracy as well as other important characteristics, is something that we were able to see reflected on the companies' Principles and also Content scores.

As mentioned before, the definition of a sustainability report is a disclosure that enables internal and/or external stakeholders to gather information about an organization's positive and negative impacts on the environment, the economy and on society, and enable them to assess not only its material contributions to sustainable development but also its exposure to risks and opportunities (Deloitte, 2020; Global Reporting Initiative, 2016b; KPMG, 2013; Leszczynska, 2012; WBCSD, 2002), and as Portuguese sustainability reports are currently like now, we cannot be sure if the majority of them are accomplishing those goals. Therefore, we cannot also be sure if they are currently granting these companies all of the benefits of reporting that literature suggests that exist.

While there are globally accepted tools for reporting, like the GRI Standards, there is still a lot of room and flexibility for companies to report how they see most appropriate which naturally gives them also a lot of freedom to pick and choose what they want to report or not (which is the case of defining their own materiality and the subjectivity attached to that), how much to report and also how to report it. The GRI Standards is a well-constructed tool and provides a lot of guidance, specifying exactly what organizations should disclose when approaching particular subjects, however, most reports manage to work around those strict instructions to report *what* and *how* they want, while still being able to claim that they report according to the Standards – and maybe that is the problem.

Granted, most of these Portuguese companies have a lot to work on, in order to improve their sustainability reporting performance, which may require them to change their approach to sustainability reporting altogether, and to take it more seriously, similarly to how they approach financial reporting. Some recommendations that these companies could adopt are to invest more time and resources in sustainability reporting expertise, to evolve towards higher compliance with the GRI Standards or any other globally accepted reporting frameworks such as the ones mentioned in this thesis. The GRI Standards in particular are easy to understand and follow, as they provide simple but still very specific examples, flexible for any organizational reality. They already give the tools to produce great reports. Furthermore, companies should provide better explanations of the consideration of materiality in their reports, and how each topic they include is material to them, and include more information inside the report, instead on external sources. Finally, some important suggestions are to include more detail – qualitative and quantitative detail – to aid report users in better understanding the organization's performance; to disclose information in a balanced way, both negative and positive relevant impacts; and to leverage on economic disclosures as well.

One thing is for sure: by improving the way they are reporting on sustainability matters, they will deliver more value for stakeholders as well as for their own entity.

It is our hope that this dissertation has contributed to our goal of analyzing the sustainability reporting of Portuguese organizations, through the example of PSI-20 companies, and provided a clearer understanding of how these companies are reporting, how that practice has been evolving over recent years, and also suggested some areas on where to improve next in this practice. This dissertation, among many that have approached this subject, stands out from others that we encountered, in the sense that it studies the case of Portuguese companies in particular, it considers all three aspects of sustainability – environmental, economic and social – and not just one, and it considers different dimensions of sustainability report performance, not just content, in the traditional content analysis method used, but also report quality characteristics, and this is why we believe that it provides a more complete method of evaluating sustainability reports. As we have explored in the literature review and methodology chapters, this methodology is able to overcome some obstacles of other content analysis strategies used for this type of research. Additionally, the introduction of some characteristics of the report profile to our analysis, enabled us to produce some statistics to build a better understanding of the current panorama of sustainability reporting in Portugal. Finally, our methodology is based on the GRI Standards, which is the most recent and most relevant set of standards used today in this practice, which is why this research adds some value, relatively to other previous ones.

Of course, there are some limitations to this research that must be mentioned, in particular the limited number of companies subject of our research, and also the limited period of analysis. This stands a valid limitation, however, with the substantial time and effort invested in carefully analyzing manually dozens of lengthy reports and giving more than 150 different individual scores in each one, it would have been difficult to deliver a more robust and complete analysis without more time and resources. Additionally, there is of course the subjectivity of the scoring system and the scoring process itself.

Future research could embrace a wider period of analysis and evaluate the relationship between reporting quality and the introduction of the GRI Standards, in contrast with other previous guidelines or lack thereof. Additionally, it would be interesting to research about the reporting performance influence on the presence benefits of reporting described in the literature review, because as we said before, we cannot be sure if the current state of sustainability reporting in Portuguese companies still allows for companies to produce the desired effects of such a practice.

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**ANNEXES**

ANNEX A:

In this section, we provide further details about the structure of the GRI Standards.

One important aspect of the structure of the Standards is that throughout them, there are three categories of information: (1) *Requirements* which are mandatory to follow in order to claim the report has been produced in accordance to the Standards; and two others that give context to the Requirements, which are (2) *Recommendations*, that are suggestions about how to apply the standard and are not mandatory and (3) *Guidance*, which include contextual information and further instructions and examples to assist the reporting process in applying the requirements.

Regarding the GRI Reporting Principles, the explanation of each one can be found in the table below:

Annex Table A: GRI Reporting Principles

| **Reporting Principles for defining report quality** | **Reporting Principles for defining report content** |
|---|---|
| ***Accuracy:*** The reported information shall be sufficiently accurate and detailed for stakeholders to assess the reporting organization's performance. | *Stakeholder Inclusiveness:* The reporting organization shall identify its stakeholders and explain how it has responded to their reasonable expectations and interests |
| ***Balance:*** The reported information shall reflect positive and negative aspects of the reporting organization's performance to enable a reasoned assessment of overall performance. | *Sustainability Context:* The report shall present the reporting organization's performance in the wider context of sustainability |
| ***Clarity:*** The reporting organization shall make information available in a manner that is understandable and accessible to stakeholders using that information | *Materiality:* The report shall cover topics that reflect the reporting organization's significant economic, environmental, and social impacts; or substantively influence the assessments and decisions of stakeholders |
| ***Comparability:*** The reporting organization shall select, compile, and report information consistently. The reported information shall be presented in a manner that enables stakeholders to analyze changes in the organization's | *Completeness:* The report shall include coverage of material topics and their boundaries [28], sufficient to reflect significant economic, environmental, and social impacts, and to enable stakeholders to assess the reporting organization's |

[28] A topic's boundary, as defined by GRI, is a "description of where the impacts occur for a material topic, and the organization's involvement with those impacts" (Global Reporting Initiative, 2017)

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| performance over time, and that could support analysis relative to other organizations. | performance in the reporting period. |
| ***Reliability:*** The reporting organization shall gather, record, compile, analyze, and report information and processes used in the preparation of the report in a way that they can be subject to examination, and that establishes the quality and materiality of the information. | |
| ***Timeliness:*** The reporting organization shall report on a regular schedule so that information is available in time for stakeholders to make informed decisions. | |

(Adapted from Global Reporting Initiative (2016a))

Finally, some notes about the structure of Specific Standards. Each category of content standards (Universal, Economic, Environmental and Social) has its own sub-categories. For example, the Universal Standards includes groups of Standards such as Organization Profile, another called Strategy, other called Ethics and Integrity, among others. We'll call these groups of standards "sub-categories of standards"). For each subcategory, refer to Annex Table C on Annex D.

ANNEX B: PSI-20 and company profiles

In this section, we explain what the PSI-20 index is, and describe the profiles of each of the 18 companies in it. PSI-20 is the most important stock index of Portuguese public companies, and it is essentially a market capitalization weighted index that reflects the market performance of the highest traded shares in the Portuguese stock market, the Euronext Lisbon. It consists of a minimum of 18 companies and a maximum of 20, has a free float market capitalization subject to 12% market capitalization (Euronext, n.d.). The profiles of each of the companies that are currently part of it, are as follows:

Annex Table B: PSI-20 Company Profiles

| Company | Sector | Company profile |
|---|---|---|
| **Altri** | Wood processing, paper and printing | Altri, SGPS, S.A. is a holding company founded in 2005, and composed of several companies which the main activities are paper pulp production, logging, and electricity production from renewable energies, in different areas of Portugal. It integrates 765 employees, its weight on the PSI-20 index is 3,85%, and their net profit as of 2020 was €35M. A member of BCSD Portugal, Altri's business model is very reliant on environmental resources, so naturally has many certifications of their resource's management, and it is also part of CDP's ratings. |
| **Banco Comercial Português** | Finance, insurance and real estate | Banco Comercial Português, S.A., established in 1985, is one of the leading banking groups of Portuguese financial market, and a financial institution of international reference. Some of the main activities of the banking group are retail banking in some European and African countries, corporate investment, and private banking, as well as insurance. Globally, it has 18 496 employees, its weight on the PSI-20 index is 8,41%, and their net profit as of 2020 was €35,3M. A member of BCSD Portugal, it has earned many distinctions, including 'Ethibel Excellence Europe' ESG index, and is also included in CDP's ratings. |
| **Corticeira Amorim** | Wood processing, paper and printing | Corticeira Amorim SGPS, S.A. is currently the world's largest company in the cork transformation industry. It was founded in 1870 and today sells to more than 100 countries around the globe. With more than 4 400 employees, its net profit was €110.7€ in 2020 and its weight on the index is 3,87%. A member of BCSD Portugal, Amorim's business model is deeply connected with environmental management and circular economy |

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| | | and has many sustainability certifications. |
| **CTT** | Transportation and storage | CTT-Correios de Portugal, S.A. is Portugal's main postal services provider. Founded in 1520, the company today has many some activities besides mail collection and delivery or package transportation, such as financial products and services. As of 2020, it has 12 097 employees, earned €16.7M in net profit, and its weight currently in the index is 3,39%. A member of BCSD Portugal, the company also has earned a few awards and recognitions for the quality of its services and reputation among stakeholders, and answers to some sustainability indexes reporting requirements, including CDP. |
| **EDP** | Energy and water supply, sewerage and waste management | EDP – Energias de Portugal, S.A. is a multinational company, and a leader in the energy producing and distributing sector. Established in 1976, EDP's activities are distributed between the production, sale and distribution of many alternative energies, the providing of engineering and consulting services, the sale and distribution of gas, and others. As of 2020, it had 12 180 employees, earned €801M in net profit, and its weight currently in the index is 11,83%. A member of BCSD Portugal, the company has earned many top positions in sustainability rankings and indexes over the years, including in the Dow Jones Sustainability Index, FTSE4Good, CDP, and others. |
| **EDP Renováveis** | Energy and water supply, sewerage and waste management | EDP Renováveis is also a multinational company, specializing in renewable energies. Established only in 2007, its activities are mainly the construction of electricity production infrastructures, wind and hydraulic energy production, and operation and maintenance of electrical plants. As of 2020, it had 1 735 employees, it earned €555,7M in net profit, and its weight currently in the index is 12,24 %. Additionally, EDPR is also a part of BCSD Portugal and Dow Jones Sustainability Index for many years now. |
| **Galp** | Energy and water supply, sewerage and waste management | Galp Energia, SGPS, S.A. is a top oil and gas group, founded in 1999 and specializing in oil refining and distribution for Portugal, Spain and Africa, the production and distribution of natural gas, electrical power production, and exploration of crude oil. As of 2020, it had 6 114 employees, it had a -€42M in net loss, and its weight currently in the index is 11,14%. A member of BCSD Portugal, Galp is part of many sustainability and ESG indexes such as the Dow Jones Sustainability Index and others. |

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| **Ibersol** | Hospitality and Tourism | Ibersol, SGPS, S.A is a multinational company operating in portugal, Spain, Angola and Italy, founded in 1989. It is responsible for running restaurant and bar chains, especially in the fast-food category. As of 2019, it had 12 272 employees, it had a -€70,5M in net loss, and its weight currently in the index is 0,66%. [29] |
| **Jerónimo Martins** | Wholesale and retail trade, renting and leasing | Jerónimo Martins SGPS, S.A. is a leading business group in the food retailing and distribution sector. Founded in 1792, today it has more than 4500 stores in Portugal, Poland and Colombia, with more than 118 000 employees. In 2020, it earned €323M and it represented 12,70% in the PSI-20 index, the highest of the group. A member of the BCSD Portugal, its sustainability practices have been recognized by CDP, Sustainalytics, FTSE4Good and many others in the ESG rating industry. |
| **Mota-Engil** | Construction | Mota-Engil SGPS, S.A. is a multinational business group founded in 1946 and is today among the biggest construction groups of Europe and present in 24 countries. Its main activities are engineering and construction, however, it operates in 6 other sectors, such as waste management, energy, multiservices, transport concessions, mining and logistics. It has approximately 35 000 employees and a net profit of €8M in 2020, with a 1,12% weight of the PSI-20 Index. Additionally, the company is a member of BCSD Portugal and has been recognized by some awards on its corporate sustainability and resources management practices. |
| **NOS** | ICT service activities | NOS SGPS, S.A. is a top business group operating in the telecommunications and entertainment services in Portugal, and is the result of the 2014 fusion between two telecom companies, Optimus telecommunications and ZON Multimedia. NOS's products and services include phone, television, internet, voice and data solutions, as well as cinema distribution, in all market segments. It has 1899 employees and a net profit of €92M in 2020, with a 6,13% weight of the PSI-20 Index. Additionally, the company, who is a member of BCSD Portugal, has been distinguished by some ESG rating and indexes, CDP being one of them. |
| **Novabase** | ICT service activities | Novabase SGPS, S.A. is the top computing services company in Portugal, and has offices in many countries all over the world. Founded in 1989, |

[29] To the best of our knowledge, there was no information in the company's website or latest annual report about the company receiving any kind of sustainability recognition from sustainability awards or ESG rating agencies or indexes.

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| | | Novabase operates in the energy, financial services, governance, telecommunications, and transport industries, combining engineering, management and human sciences knowledge to create business solutions. It has 1740 employees and a net profit of €7,5M in 2020, with a 0,45% weight of the PSI-20 Index. [30] |
| **Pharol** | Business administration | Pharol SGPS, S.A., previously Portugal Telecom, was established in 1994, and is a holding company that focuses on owning stock of telecommunications field. It is estimated that it has around 12 000 employees, and it made -€14,3M of net loss in 2020. It weighs 0,7% in the PSI-20 Index. [30] |
| **Ramada Investimentos e Indústria** | Manufacturing of fabricated metal products, except machinery and equipment | Ramada Investimentos e Indústria, S.A. is the latest addition to the PSI-20 index, added in the end of 2020, weighing 0,34%. It was founded in 1935 and it specializes in the production of special steels. Additionally, the company also manufactures storage systems, offers financial services, and develops and manages real estate assets, mainly in Portugal but also in other countries. In 2020, the company had 475 employees, and made a net profit of nearly €7M. [30] |
| **REN** | Energy and water supply, sewerage and waste management | REN – Redes Energéticas Nacionais, SGPS, S.A., is a portuguese company that primarily does transportation of electricity and natural gas. Additionally, the company also acts in the telecommunications industry, with infrastructure, service management and consulting. Established in 1994, REN works in national territory but is working towards internationalization. In 2020, REN made a €109M, it had 697 employees and it weighted 8,38% in the Index. REN also reports to CDP and has come to be recognized for its sustainability practices. |
| **SEMAPA** | Wood processing, paper and printing | Semapa is an industrial sector holding company, that has a portfolio of companies in the industries of paper and pulp, cement and construction materials, and environmental services. Founded in 1991, the company operates in 4 continents, but primarily in Europe. It has 5876 employees and made a net profit of €142M in 2020. In the PSI-20 index, it consists of 2,3%. The company is the holding to The Navigator Company, who is also traded in Euronext and belongs in the PSI-20 index. It has |

[30] To the best of our knowledge, there was no information in the company's website or latest annual report about the company receiving any kind of sustainability recognition from sustainability awards or ESG rating agencies or indexes

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| | | earned positive recognitions by CDP e Sustainalytics, and part of their companies belong to the BCSD Portugal. |
| **SONAE** | Wholesale and retail trade, renting and leasing | SONAE – SGPS, S.A. is a multinational holding company to many different companies in the retail, financial services, shopping center management and telecommunication industries. It was founded in 1959, and today is one of the biggest companies in the country, with 49 000 collaborators, €71M in net profit and 6,72% weight in PSI-20 Index. A member of BCSD Portugal as well, SONAE is very active with sustainability and reports to CDP. |
| **The Navigator Company** | Wood processing, paper and printing | The Navigator Company, which is part of the Semapa group, produces printing paper – and is on of the top European companies to do so – and also produces eucalyptus pulp, sells tissue paper and also other products. It started in 2001, and today has more than 3000 direct collaborators, made €109,2M in net profit in the year 2020, and has a 5,76% weight in PSI-20. Navigator has been a member of BCSD Portugal and also reports to, as is rated by CDP. |

(Altri, n.d.; Corticeira Amorim, n.d.; CTT, n.d.; EDP, n.d.; EDP Renováveis, n.d.; Euronext, n.d.; Galp, n.d.; Ibersol, n.d.; Jerónimo Martins, n.d.; Millennium BCP, n.d.; Mota-Engil, n.d.; NOS, n.d.; Novabase, n.d.; Pharol, n.d.; Ramada Investimentos e Indústria, n.d.; REN, n.d.; Semapa, n.d.; Sonae, n.d.; The Navigator Company, n.d.)

When it comes to sustainability, the majority of the PSI-20 companies has an easily identifiable dedicated section in their websites, with information about their policies and progresses. Most of them, especially retailers or industrial companies working with natural resources, engage in various social solidarity activities and campaigns in support of economic and environmental causes, showcasing with great emphasis their achievements and recognitions in various areas of sustainable development.

## ANNEX C: Materiality

We understand that the GRI framework allows for each of the companies to define their own material topics based on their business' nature, and to report only on those topics, additionally to the Universal Topics, which every company has to report on. However, not every company defines their own materiality, or often, this definition is vague and difficult to connect to each of the GRI Topic-Specific Standards, or subjective to the discretion of the decision-makers of the company, that can choose to omit important topics from their materiality matrixes and, thus, not be accountable to report on them despite them being objectively important and influential to stakeholders' decisions and perceptions of the company. While initially we tried to define an objective and reliable referential of what material topics each company should report on (based on their materiality matrixes and also SASB Materiality Matrix, which considers only financial materiality), it was clear that this was not enough to make fair criteria for all of the companies. Thus, we decided to consider all topics for every company by default, and when properly justified, not consider certain topics that may be immaterial to the company, thus not including it in the score and not negatively affecting the company for not reporting on it.

## ANNEX D: Content and Principles Standards, and respective decision criteria

### Content Standards

In this section, we summarize the Standards used for the Content Standards score, divided by the four content categories. These Standards are part of the GRI Standards framework, released in 2016. To guide de decision on the 0 to 4 score to attribute in each Standard, the *requirements* section of each of the GRI Standards was used, serving as our "decision criteria" in this case, thus, for more on the specific criteria for these Standards, refer to the GRI Standards (2016). It should be noted that, although only the information disclosures mentioned in the *requirements* section of the GRI Standards was used to grade the reports, the *guidance* section was also helpful to guide the scoring process, as it provides a further explanation on each information requirement.

It is worth to mention that we will refer to the "GRI Standards 102: General Disclosures" as "Universal Standards" as a simplification, because in fact, in the original GRI Standards, the Universal Standards includes 2 more series besides that one: the "101: Foundation" and

“103: Management Approach Standards”. The “101: Foundation Standard” was not included as part of the Content Standards, as they are essentially an explanation of how to use and apply the GRI framework throughout the report. However, part of them were used for the Principles Standard score (It was essential to define the characteristics and point system for each). As for the “103: Management Approach Standard” (MAS), they were used throughout the Content Score, as part of the Specific Standards scores (or categories, this is, the ECS, ENS and SS), as it essential for the organization do disclose the management approach of each material topic for the disclosure to be really complete according to the framework. In this way, in each of those categories we included 3 Standards that are respective of the Management Approach in that particular theme. The “Management Approach” standards are “103-1: Explanation of the material topic and its Boundary”, “103-2: The management approach and its components” and “103-3: Evaluation of the management approach”, and the requirements considered for each, regardless of being respective to economic, environmental or social standards, are the same and based on the explanation provided in GRI Standards 103: Management Approach. Indeed, it would not be a complete sustainability report if the organizations included exclusively the information required in the individual Standards of series 102, 200, 300 and 400, as the Management Approach complements and gives context to that information.

Below is the Table summarizing the Content Standards regarded in our score system, including Management Approach for each of the Content Standards categories. The first column has the Category (for example, “100: Universal Standards”) and also the Sub-categories (for example, 102: Organizational Profile”). The second column named “#” refers to the number of the Standard relative to the Category, which will be helpful to identify the individual standards (102-1, 102-2, and so on) for the formulas. The third column has the code of the Standard and the fourth column, the names of the Standards, both according to the GRI Standards.

Annex Table C: GRI Standards

| **Category and Sub-category** | **#** | **Code** | **Standard** |
|---|---|---|---|
| **100: Universal Standards (US)** | | | |
| 102: Organizational Profile | 1 | 102-1 | Name of the organization |
| | 2 | 102-2 | Activities, brands, products, and services |
| | 3 | 102-3 | Location of headquarters |
| | 4 | 102-4 | Location of operations |
| | 5 | 102-5 | Ownership and legal form |
| | 6 | 102-6 | Markets Served |

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| | 7 | 102-7 | Scale of the organization |
| | 8 | 102-8 | Information on employees and other workers |
| | 9 | 102-9 | Supply Chain |
| | 10 | 102-10 | Significant changes to the organization and its supply chain |
| | 11 | 102-11 | Precautionary Principle or approach |
| | 12 | 102-12 | External initiatives |
| | 13 | 102-13 | Membership of associations |
| 102: Strategy | 14 | 102-14 | Statement from senior decision-maker |
| | 15 | 102-15 | Key impacts, risks, and opportunities |
| 102: Ethics and Integrity | 16 | 102-16 | Values, principles, standards, and norms of behavior |
| | 17 | 102-17 | Mechanisms for advice and concerns about ethics |
| 102: Governance | 18 | 102-18 | Governance Structure |
| | 19 | 102-19 | Delegating Authority |
| | 20 | 102-20 | Executive-level responsibility for economic, environmental, and social topics |
| | 21 | 102-21 | Consulting stakeholders on economic, environmental, and social topics |
| | 22 | 102-22 | Composition of the highest governance body and its committees |
| | 23 | 102-23 | Chair of the highest governance body |
| | 24 | 102-24 | Nominating and selecting the highest governance body |
| | 25 | 102-25 | Conflicts of interest |
| | 26 | 102-26 | Role of highest governance body in setting purpose, values, and strategy |
| | 27 | 102-27 | Collective knowledge of highest governance body |
| | 28 | 102-28 | Evaluating the highest governance body’s performance |
| | 29 | 102-29 | Identifying and managing economic, environmental, and social impacts |
| | 30 | 102-30 | Effectiveness of risk management processes |
| | 31 | 102-31 | Review of economic, environmental, and social topics |
| | 32 | 102-32 | Highest governance body’s role in sustainability reporting |
| | 33 | 102-33 | Communicating critical concerns |
| | 34 | 102-34 | Nature and total number of critical concerns |
| | 35 | 102-35 | Remuneration policies |
| | 36 | 102-36 | Process for determining remuneration |
| | 37 | 102-37 | Stakeholders’ involvement in remuneration |
| | 38 | 102-38 | Annual total compensation ratio |
| | 39 | 102-39 | Percentage increase in annual total compensation ratio |
| 102: Stakeholder Engagement | 40 | 102-40 | List of stakeholder groups |
| | 41 | 102-41 | Collective bargaining agreements |
| | 42 | 102-42 | Identifying and selecting stakeholders |
| | 43 | 102-43 | Approach to stakeholder engagement |

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| | 44 | 102-44 | Key topics and concerns raised |
| 102: Reporting Practice | 45 | 102-45 | Entities included in the consolidated financial statements |
| | 46 | 102-46 | Defining report content and topic Boundaries |
| | 47 | 102-47 | List of material topics |
| | 48 | 102-48 | Restatements of information |
| | 49 | 102-49 | Changes in reporting |
| | 50 | 102-50 | Reporting period |
| | 51 | 102-51 | Date of most recent report |
| | 52 | 102-52 | Reporting cycle |
| | 53 | 102-53 | Contact point for questions regarding the report |
| | 54 | 102-54 | Claims of reporting in accordance with the GRI Standards |
| | 55 | 102-55 | GRI content index |
| | 56 | 102-56 | External Assurance |
| **200: Economic Standards (ECS)** | | | |
| 201: Economic Performance | 1 | 201-1 | Direct economic value generated and distributed |
| | 2 | 201-2 | Financial implications and other risks and opportunities due to climate change |
| | 3 | 201-3 | Defined benefit plan obligations and other retirement plans |
| | 4 | 201-4 | Financial assistance received from government |
| 202: Market Presence | 5 | 202-1 | Ratios of standard entry level wage by gender compared to local minimum wage |
| | 6 | 202-2 | Proportion of senior management hired from the local community |
| 203: Indirect Economic Impacts | 7 | 203-1 | Infrastructure investments and services supported |
| | 8 | 203-2 | Significant indirect economic impacts |
| 204: Procurement Practices | 9 | 204-1 | Proportion of spending on local suppliers |
| 205: Anti-corruption | 10 | 205-1 | Operations assessed for risks related to corruption |
| | 11 | 205-2 | Communication and training about anti-corruption policies and procedures |
| | 12 | 205-3 | Confirmed incidents of corruption and actions taken |
| 206: Anti-competitive behavior | 13 | 206-1 | Legal actions for anti-competitive behavior, anti-trust, and monopoly practices |
| 207: Tax | 14 | 207-1 | Management Approach: Approach to Tax |
| | 15 | 207-2 | Management Approach: Tax governance, control, and risk management |
| | 16 | 207-3 | Management Approach: Stakeholder engagement and management of concerns related to tax |
| | 17 | 207-4 | Country-by-country reporting |
| 103: Management Approach | 21 | 103-21 | Explanation of the material topic and its Boundary |
| | 22 | 103-22 | The management approach and its components |
| | 23 | 103-23 | Evaluation of the management approach |
| **300: Environmental Standards (ENS)** | | | |
| 301: Materials | 1 | 301-1 | Materials used by weight or volume |

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| | 2 | 301-2 | Recycled input materials used |
| | 3 | 301-3 | Reclaimed products and their packaging materials |
| 302: Energy | 4 | 302-1 | Energy consumption within the organization |
| | 5 | 302-2 | Energy consumption outside of the organization |
| | 6 | 302-3 | Energy intensity |
| | 7 | 302-4 | Reduction of energy consumption |
| | 8 | 302-5 | Reductions in energy requirements of products and services |
| 303: Water and effluents | 9 | 303-1 | Management Approach: Interactions with water as a shared resource |
| | 10 | 303-2 | Management Approach: Management of water discharge-related impacts |
| | 11 | 303-3 | Water withdrawl |
| | 12 | 303-4 | Water discharge |
| | 13 | 303-5 | Water consumption |
| 304: Biodiversity | 14 | 304-1 | Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas |
| | 15 | 304-2 | Significant impacts of activities, products, and services on biodiversity |
| | 16 | 304-3 | Habitats protected or restored |
| | 17 | 304-4 | IUCN Red List species and national conservation list species with habitats in areas affected by operations |
| 305: Emissions | 18 | 305-1 | Direct (Scope 1) GHG emissions |
| | 19 | 305-2 | Energy indirect (Scope 2) GHG emissions |
| | 20 | 305-3 | Other indirect (Scope 3) GHG emissions |
| | 21 | 305-4 | GHG emissions intensity |
| | 22 | 305-5 | Reduction of GHG emissions |
| | 23 | 305-6 | Emissions of ozone-depleting substances (ODS) |
| | 24 | 305-7 | Nitrogen oxides (NOX), sulfur oxides (SOX), and other significant air emissions |
| 306: Waste | 25 | 306-1 | Management Approach: Waste generation and significant waste-related impacts |
| | 26 | 306-2 | Management Approach: Management of significant waste-related impacts |
| | 27 | 306-3 | Waste Generated |
| | 28 | 306-4 | Waste diverted from disposal |
| | 29 | 306-5 | Waste directed to disposal |
| 307: Environmental compliance | 30 | 307-1 | Non-compliance with environmental laws and regulations |
| 308: Supplier environmental compliance | 31 | 308-1 | New suppliers that were screened using environmental criteria |
| | 32 | 308-2 | Negative environmental impacts in the supply chain and actions taken |
| 103: Management Approach | 31 | 103-31 | Explanation of the material topic and its Boundary |
| | 32 | 103-32 | The management approach and its components |
| | 33 | 103-33 | Evaluation of the management approach |
| **400: Social Standards (SS)** | | | |

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| 401: Employment | 1 | 401-1 | New employee hires and employee turnover |
| | 2 | 401-2 | Benefits provided to full-time employees that are not provided to temporary or part-time employees |
| | 3 | 401-3 | Parental leave |
| 402: Labor management relations | 4 | 402-1 | Minimum notice periods regarding operational changes |
| 403: Occupational health and safety | 5 | 403-1 | Management Approach: Occupational health and safety management system |
| | 6 | 403-2 | Management Approach: Hazard identification, risk assessment, and incident investigation |
| | 7 | 403-3 | Management Approach: Occupational health services |
| | 8 | 403-4 | Management Approach: Worker participation, consultation, and communication on occupational health and safety |
| | 9 | 403-5 | Management Approach: Worker training on occupational health and safety |
| | 10 | 403-6 | Management Approach: Promotion of worker health |
| | 11 | 403-7 | Management Approach: Prevention and mitigation of occupational health and safety impacts directly linked by business relationships |
| | 12 | 403-8 | Workers covered by an occupational health and safety management system |
| | 13 | 403-9 | Work-related injuries |
| | 14 | 403-10 | Work-related ill health |
| 404: Training and education | 15 | 404-1 | Average hours of training per year per employee |
| | 16 | 404-2 | Programs for upgrading employee skills and transition assistance programs |
| | 17 | 404-3 | Percentage of employees receiving regular performance and career development reviews |
| 405: Diversity and equal opportunity | 18 | 405-1 | Diversity of governance bodies and employees |
| | 19 | 405-2 | Ratio of basic salary and remuneration of women to men |
| 406: Non-discrimination | 20 | 406-1 | Incidents of discrimination and corrective actions taken |
| 407: Freedom of association and collective bargaining | 21 | 407-1 | Operations and suppliers in which the right to freedom of association and collective bargaining may be at risk |
| 408: Child labor | 22 | 408-1 | Operations and suppliers at significant risk for incidents of child labor |
| 409: Forced or compulsory labor | 23 | 409-1 | Operations and suppliers at significant risk for incidents of forced or compulsory labor |
| 410: Security practices | 24 | 410-1 | Security personnel trained in human rights policies or procedures |
| 411: Rights of indigenous peoples | 25 | 411-1 | Incidents of violations involving rights of indigenous peoples |

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| 412: Human rights assessment | 26 | 412-1 | Operations that have been subject to human rights reviews or impact assessments |
| | 27 | 412-2 | Employee training on human rights policies or procedures |
| | 28 | 412-3 | Significant investment agreements and contracts that include human rights clauses or that underwent human rights screening |
| 413: Local communities | 29 | 413-1 | Operations with local community engagement, impact assessments, and development programs |
| | 30 | 413-2 | Operations with significant actual and potential negative impacts on local communities |
| 414: Supplier social assessment | 31 | 414-1 | New suppliers that were screened using social criteria |
| | 32 | 414-2 | Negative social impacts in the supply chain and actions taken |
| 415: Public policy | 33 | 415-1 | Political contributions |
| 416: Customer health and safety | 34 | 416-1 | Assessment of the health and safety impacts of product and service categories |
| | 35 | 416-2 | Incidents of non-compliance concerning the health and safety impacts of products and services |
| 417: Marketing and labeling | 36 | 417-1 | Requirements for product and service information and labeling |
| | 37 | 417-2 | Incidents of non-compliance concerning product and service information and labeling |
| | 38 | 417-3 | Incidents of non-compliance concerning marketing communications |
| 418: Customer privacy | 39 | 418-1 | Substantiated complaints concerning breaches of customer privacy and losses of customer data |
| 419: Socioeconomic compliance | 40 | 419-1 | Non-compliance with laws and regulations in the social and economic area |
| 103: Management Approach | 41 | 103-41 | Explanation of the material topic and its Boundary |
| | 42 | 103-42 | The management approach and its components |
| | 43 | 103-43 | Evaluation of the management approach |

(Adapted from the GRI Standards from 2020)

Both Standards “102-54: Claims of reporting in accordance with the GRI Standards” and “102-55: GRI content index” were not included in the scoring system as they are specific requirements of disclosure that would only apply if the organization was using the framework, and the purpose of using the GRI Standard as a base was only to have a standardized and objective referential of what to disclose in any sustainability report – regardless of the framework that was really adopted. Thus, in order to not penalize them direct them directly for not adopting GRI Standards explicitly, we unconsidered them from the score. However, to avoid disturbing the sequence of numbering of Standards, to keep it as close to the framework as possible, we treated them as "Not material" for any of the organizations, instead of removing them.

Below is a summary of the Principles Standards and their definition, as well as their respective decision criteria. In this particular case, four specific aspects of each Principle were defined to support the objectivity of the scoring process. We understand that it is likely that other aspects may be considered in a more in-depth assessment of each Principle, nevertheless, we based our decision the aspects to consider for each, off of their description and examples in the GRI Principles (2016), as well as other relevant literature (such as Michelon (2015), Gao (2016), The Ministry of Economic Affairs and Climate Policy of the Netherlands (n.d.) and others) on report quality characteristics with similar scoring systems. In this way, while scoring a report on its performance regarding each Principle, 1 point is given for the presence of each aspect (example: 1 = the report identifies its stakeholders), so the report can score from 0 to 4 on that particular quality or characteristic (example: stakeholder inclusiveness). The list of the ten Principles, as well as their meaning and decision criteria is as follows:

Annex Table D: Principles Standards Decision Criteria

| |
|---|
| ***501-1: Stakeholder Inclusiveness:*** **The reporting organization shall identify its stakeholders and explain how it has responded to their reasonable expectations and interests.** |
| 1 = The report identifies the stakeholders whom the organization considers itself to be accountable to |
| 1 = The report identifies the existence of organization processes of stakeholder engagement in which stakeholders can express their interests and expectations about the organization |
| 1 = The organization expresses in the report that it has taken the outcomes of stakeholder engagement processes into consideration when deciding which topics are material and defining report content |
| 1 = The organization clearly explains in the report how they involve stakeholders in their policy and activities |
| ***501-2: Sustainability Context:*** **The report shall present the reporting organization's performance in the wider context of sustainability.** |
| 1 = The organization presents, in its report, its understanding of sustainable development, drawing on objective and available information, and authoritative measures of sustainable development, for the topics covered |
| 1 = The organization presents, in its report, its performance with reference to broader sustainable development conditions and goals, as reflected in recognized sectoral, local, regional, or global instruments |
| 1 = The organization presents, in its report, its performance in a manner that communicates its impacts and contributions in appropriate geographic contexts |
| 1 = The organization describes, in its report, how economic, environmental, and/or social topics relate to its long-term strategy, risks, opportunities, and goals, including in its value chain. |
| ***501-3: Materiality:*** **The report shall cover topics that reflect the reporting** |

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| **organization’s significant economic, environmental, and social impacts; or substantively influence the assessments and decisions of stakeholders.** |
| 1 = The report presents what topics are material to the organization and the report's content is coherent with that selection |
| 1 = For each of the material topics, the organization explains why the topic is material and its boundaries |
| 1 = The organization presents, in its report, the process used to define material topics |
| 1 = The organization provides an explanation of the scope and boundaries of the overall reporting: It is clearly explained which entities of the organization the societal information is about |
| ***501-4: Completeness:*** **The report shall include coverage of material topics and their Boundaries, sufficient to reflect significant economic, environmental, and social impacts, and to enable stakeholders to assess the reporting organization’s performance in the reporting period.** |
| 1 = The report covers sufficient economic, environmental and/or social topics to reflect the organization’s significant impacts, and to enable stakeholders to assess the organization |
| 1 = The report not only includes information on the impacts it directly causes, but also on impacts it contributes to, and impacts that are directly linked to its activities, products or services through a business relationship |
| 1 = The report presents activities, events, and impacts that occurred in the reporting period, enabling stakeholders to assess the organizations performance in the reporting period |
| 1 = The information in the report includes estimates of significant future impacts (when those impacts are reasonably foreseeable and can become unavoidable or irreversible) |
| ***501:5 Accuracy:*** **The reported information shall be sufficiently accurate and detailed for stakeholders to assess the reporting organization’s performance.** |
| 1 = When qualitative information is provided, it is sufficiently clear and detailed to enable stakeholder assessment of the organization's performance |
| 1 = There is quantitative information when adequate to describe the impacts of the company; |
| 1= When quantitative information is provided, the measurements for data and bases for calculations are adequately described |
| 1 = The report clearly indicates which data has been measured and what data has been estimated, plus the underlying assumptions and techniques used for the estimation, or where that information can be found |
| ***501-6: Balance:*** **The reported information shall reflect positive and negative aspects of the reporting organization’s performance to enable a reasoned assessment of overall performance** |
| 1 = The report covers both favorable and unfavorable results and topics |
| 1 = The information in the report is presented in a format that allows users to see positive and negative trends in performance on a year-to-year basis |
| 1 = The emphasis on the various topics in the report reflects their relative priority in terms of materiality |
| 1 = The report distinguishes clearly between facts and the organization’s interpretation of them |
| ***501-7: Clarity:*** **The reporting organization shall make information available in a manner that is understandable and accessible to stakeholders using that information.** |
| 1 = The report is easy to find in the reporting organization's website and it is available for any stakeholder |
| 1 = The report is easy to navigate and allows stakeholders to find information without |

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| unreasonable effort, by providing tables of contents, maps, links or other aids |
| 1 = The report is easy to read, containing the level of information required by stakeholders, but avoiding excessive and unnecessary detail |
| 1 = The report avoids technical terms, acronyms, jargon, or other content likely to be unfamiliar to stakeholders, and includes explanations (where necessary) in the relevant section or in a glossary |
| ***501-8: Comparability:*** **The reporting organization shall select, compile, and report information consistently. The reported information shall be presented in a manner that enables stakeholders to analyze changes in the organization's performance over time, and that could support analysis relative to other organizations.** |
| 1 = The organization has included results from previous years in the reporting, enabling the stakeholder to compare the information on a year-to-year basis |
| 1 = The report is arranged in such a way that users are able to compare the position, development and results of the company with other companies and appropriate benchmarks (And when necessary, providing context that helps report users understand the factors that can contribute to differences in performance or impacts between organizations) |
| 1 = The organization includes total numbers (that is, absolute data, such as tons of waste) as well as ratios (that is, normalized data, such as waste per unit of production) to enable analytical comparisons |
| 1 = When they are available, the report utilizes generally accepted protocols for compiling, measuring, and presenting information |
| ***501-9: Reliability:*** **The reporting organization shall gather, record, compile, analyze, and report information and processes used in the preparation of the report in a way that they can be subject to examination, and that establishes the quality and materiality of the information.** |
| 1 = The scope and extent of external assurance is identified |
| 1 = The report includes a reasonable level of external assurance on all material elements |
| 1 = The organization can provide reliable evidence to support assumptions or complex calculations |
| 1 = Any uncertainties associated with the information included are clearly identified and explained by the organization in the report |
| ***501-10: Timeliness:*** **The reporting organization shall report on a regular schedule so that information is available in time for stakeholders to make informed decisions.** |
| 1 = Information in the report has been disclosed while it is recent, relative to the reporting period; |
| 1 = The reporting organization is consistent with its reporting frequency |
| 1 = The sustainability report schedule and the financial report schedule are aligned, to allow stakeholders to make informed decisions |
| 1 = The information in the report clearly indicates the time period to which it relates, when it will be updated, and when the latest updates were made, and separately identifies any restatements of previous disclosures along with the reasons for restatement |

ANNEX E: Additional formulas and explanations

Annex Table E: Additional formulas of the Scoring System

| Formula | Explanation |
|---|---|
| $SR_{x,y} = \frac{CS_{x,y} + PS_{x,y}}{2} * 100$ | The SR score is a general appraisal of |

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|---|---|
| | the report of the company, which is expressed as a percentage, reflecting the overall reporting performance in relation to the GRI Standards. It results from the average between the 2 main scores – Content Standards (CS) score and Principles Standards (PS) score – for the company x in year y. |
| $CS_{x,y} = \frac{US_{x,y} + ECS_{x,y} + ENS_{x,y} + SS_{x,y}}{16} * 100$ | The CS score reflects the report performance in terms of the extent of content included and its level of detail, according to what is required by the GRI Standards, and it is expressed as a percentage. The sum of each content category average score is divided by 16 because each of the 4 categories will have a score from 0 to a maximum of 4 $(4 * 4 = 16)$, turning the CS into a percentage. |
| $US_{x,y} = \frac{\sum_{i=1}^{56} US_{i,x,y}}{56}$ <br> $where\ i = 1,2, \dots 56$ | The US score is the report's performance in terms of the extent of content included and its level of detail, according to what is required by the Universal Standards: General Disclosures and the Management Approach Standards of the GRI Standards. It is expressed on a scale from 0 to 4, corresponding to the levels in Table 8.3.1. |
| $ECS_{x,y} = \frac{\sum_{i=1}^{17} ECS_{i,x,y}}{17} * 0{,}5 + \frac{\sum_{a=21}^{23} MAS_{a,x,y}}{3} * 0{,}5$ <br> $where\ i = 1,2, \dots 17\ and\ a = 21, 22, 23$ | The ECS score is the report's performance in terms of the extent of content included and its level of detail, according to what is required by the Economic Standards and the Management Approach Standards of the GRI Standards. It is expressed on a scale from 0 to 4, corresponding to the levels in Table 7.3.1. |
| $ENS_{x,y} = \frac{\sum_{i=1}^{32} ENS_{i,x,y}}{32} * 0{,}5 + \frac{\sum_{a=31}^{33} MAS_{a,x,y}}{3} * 0{,}5$ <br> $where\ i = 1,2, \dots 17\ and\ a = 31, 32, 33$ | The ENS score is the report's performance in terms of the extent of content included and its level of detail, according to what is required by the Environmental Standards and the Management Approach Standards of the GRI Standards. It is expressed on a scale from 0 to 4, corresponding to the levels in Table 8.3.1. |

| | |
|---|---|
| $SS_{x,y} = \frac{\sum_{i=1}^{40} SS_{i,x,y}}{40} * 0{,}5 + \frac{\sum_{a=41}^{43} MAS_{a,x,y}}{3} * 0{,}5$ <br> $where\ i = 1,2, \dots 40\ and\ a = 41, 42, 43$ | The SS score is the report's performance in terms of the extent of content included and its level of detail, according to what is required by the Social Standards and the Management Approach Standards of the GRI Standards. It is expressed on a scale from 0 to 4, corresponding to the levels in Table 8.3.1. |
| $PS_{x,y} = \frac{\sum_{i=1}^{10} PS_{i,x,y}}{40}$ <br> $where\ i = 1,2, \dots 10$ | The PS score reflects the report's performance concerning its characteristics, that represent various dimensions (other than the 'content' dimension) of report quality, and it is expressed as a percentage. The sum of the scores given to each Principles Standard is divided by 40 because each of the 10 principles will have a score from 0 to a maximum of 4 ($10 * 4 = 40$), turning the PS score into a percentage. The score on each of the Principles Standards are given According to Table 8.3.2 and Annex Table D. |

Where $US_{i,x,y}$ is the given score in the Universal Standard number *i*, in the company *x*'s report in year *y*, and the Standard number *i* corresponds to a number in the sequence of Standard codes. For example, $US_{4,x,y}$ is the given score for the Standard "102-4: Location of Operations" (Note that the reason for the series number being 102 instead of 100 is because we are referring to the Universal Standards' General Disclosures only, which is the second series of the Universal Standards group. More on that topic in Annex D).

In the case of the Specific Standards (series 200, 300 and 400), that have subcategories (for example 201, 202, and so on), we continue the sequence in the same way. For example: Standard number 1 is 201-1, 2 is 201-2, 3 is 201-3, 4 is 201-4, however, number 5 is 202-1, as there are only 4 standards in the first subcategory of the Economic Standards.

In the case of Management Approach Standards, or MAS, because they are the same three Standards but are considered separately for each Content Standards category, they have been given the following codes: 103-21, 103-22 and 103-23, for the Economic Standard's Management Approach; then for the ones in the Environmental Standards: 103-31, 103-32 and 103-33; and for the Social Standards: 103-41, 103-42 and 103-43; In which the "103" refers to Management Approach series of Standards, and the first number after the dash, identifies the respective category of Content Standards, referencing the first number of its series (2, 3 or 4 for the series of 200, which is ECS, 300, which is ENS,s and 400 which is SS), and the second number after the dash identifies the number of the Management Approach Standard, which is 1, 2 or 3. Thus, $MAS_{a,x,y}$ represents the given score in the Management Approach Standard $a$, which will be 103-1, 103-2 or 103-3 for the specific content category.

In the case of the PS, each $PS_{i,x,y}$ represents the score given to the Principle Standard $i$, in the company $x$ and year $y$, and in which $i$ = 1, 2, …10, respective to 501-1, 501-2 and so on, which are the ten quality characteristics evaluated as part of the Principles scores.

The choice to not give weights to each Standard derives from the nature of the GRI framework. Although previous GRI guidelines had implicit differences in the importance of standards, by dividing them between “Essential” and “Additional”, the current version of GRI Standards does not have this division. There is, however, two reporting options – “Core” and “Comprehensive” – that make a differentiation about the broadness of the topics covered in the report, but this, however, is a distinction that varies for each company, and is tied mainly to their own definition of materiality – thus, not necessarily establishing a hierarchy between the disclosures.

ANNEX F: Data and Scatter Plot

Annex Table F: Report Scores

| Company | Year | SR | CS | PS | US | ECS | ENS | SS |
|---|---|---|---|---|---|---|---|---|
| **Altri** | 2017 | 40% | 32% | 48% | 1,02 | 1,29 | 1,49 | 1,28 |
| | 2018 | 49% | 37% | 60% | 1,85 | 0,58 | 2,14 | 1,43 |
| | 2019 | 54% | 46% | 63% | 1,81 | 1,20 | 2,67 | 1,74 |
| **Banco Comercial Português** | 2017 | 66% | 43% | 90% | 1,48 | 1,14 | 2,48 | 1,71 |
| | 2018 | 66% | 42% | 90% | 1,48 | 1,14 | 2,43 | 1,71 |
| | 2019 | 69% | 46% | 93% | 1,89 | 1,17 | 2,48 | 1,77 |
| **Corticeira Amorim** | 2017 | 62% | 46% | 78% | 2,61 | 1,24 | 2,22 | 1,34 |
| | 2018 | 62% | 46% | 78% | 2,59 | 1,18 | 2,21 | 1,43 |
| | 2019 | 67% | 51% | 83% | 2,65 | 1,09 | 2,52 | 1,85 |
| **CTT** | 2017 | 64% | 50% | 78% | 2,69 | 1,04 | 2,59 | 1,70 |
| | 2018 | 69% | 61% | 78% | 3,15 | 1,78 | 2,59 | 2,24 |
| | 2019 | 70% | 63% | 78% | 3,41 | 1,78 | 2,59 | 2,24 |
| **EDP** | 2017 | 73% | 59% | 88% | 2,87 | 1,88 | 2,32 | 2,35 |
| | 2018 | 85% | 78% | 93% | 3,43 | 2,99 | 3,07 | 2,93 |
| | 2019 | 84% | 76% | 93% | 3,50 | 2,90 | 2,98 | 2,74 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **EDP Renováveis** | 2017 | 42% | 26% | 58% | 0,46 | 1,36 | 0,96 | 1,33 |
| | 2018 | 55% | 42% | 68% | 2,13 | 1,75 | 1,24 | 1,67 |
| | 2019 | 55% | 43% | 68% | 2,15 | 1,78 | 1,24 | 1,65 |
| **Galp** | 2017 | 0% | 0% | 0% | 0,00 | 0,00 | 0,00 | 0,00 |
| | 2018 | 41% | 24% | 58% | 1,15 | 0,28 | 1,39 | 0,98 |
| | 2019 | 41% | 25% | 58% | 1,31 | 0,28 | 1,39 | 1,08 |
| **Ibersol** | 2017 | 46% | 44% | 48% | 1,83 | 1,29 | 1,78 | 2,10 |
| | 2018 | 46% | 44% | 48% | 1,83 | 1,29 | 1,78 | 2,10 |
| | 2019 | 46% | 44% | 48% | 1,83 | 1,29 | 1,78 | 2,10 |
| **Jerónimo Martins** | 2017 | 69% | 56% | 83% | 2,89 | 1,93 | 2,01 | 2,21 |
| | 2018 | 70% | 58% | 83% | 2,98 | 1,93 | 1,99 | 2,32 |
| | 2019 | 71% | 59% | 83% | 2,96 | 1,93 | 1,99 | 2,54 |
| **Mota-Engil** | 2017 | 41% | 39% | 43% | 2,06 | 0,72 | 2,14 | 1,28 |
| | 2018 | 47% | 39% | 55% | 2,07 | 0,72 | 2,14 | 1,37 |
| | 2019 | 59% | 55% | 63% | 2,65 | 2,02 | 1,63 | 2,45 |
| **NOS** | 2017 | 66% | 46% | 85% | 2,52 | 1,37 | 1,63 | 1,90 |
| | 2018 | 71% | 54% | 88% | 2,76 | 1,54 | 2,29 | 2,04 |
| | 2019 | 71% | 55% | 88% | 2,85 | 1,45 | 2,35 | 2,08 |
| **Novabase** | 2017 | 3% | 5% | 0% | 0,13 | 0,28 | 0,17 | 0,24 |
| | 2018 | 3% | 5% | 0% | 0,13 | 0,28 | 0,17 | 0,24 |
| | 2019 | 3% | 5% | 0% | 0,11 | 0,28 | 0,18 | 0,28 |
| **Pharol** | 2017 | 0% | 0% | 0% | 0,00 | 0,00 | 0,00 | 0,00 |
| | 2018 | 0% | 0% | 0% | 0,00 | 0,00 | 0,00 | 0,00 |
| | 2019 | 0% | 0% | 0% | 0,00 | 0,00 | 0,00 | 0,00 |
| **Ramada Investments** | 2017 | 20% | 12% | 28% | 0,54 | 0,12 | 0,64 | 0,60 |
| | 2018 | 20% | 12% | 28% | 0,54 | 0,12 | 0,62 | 0,57 |
| | 2019 | 24% | 13% | 35% | 0,50 | 0,40 | 0,70 | 0,55 |
| **REN** | 2017 | 52% | 28% | 75% | 0,96 | 0,59 | 1,41 | 1,60 |
| | 2018 | 52% | 29% | 75% | 0,98 | 0,59 | 1,41 | 1,60 |
| | 2019 | 52% | 29% | 75% | 0,98 | 0,59 | 1,44 | 1,60 |
| **SEMAPA** | 2017 | 58% | 44% | 73% | 2,02 | 1,26 | 1,97 | 1,74 |
| | 2018 | 55% | 41% | 70% | 1,98 | 1,26 | 1,65 | 1,65 |
| | 2019 | 59% | 47% | 70% | 2,13 | 1,72 | 1,66 | 2,05 |
| **SONAE** | 2017 | 61% | 52% | 70% | 1,46 | 2,03 | 2,53 | 2,30 |
| | 2018 | 73% | 57% | 90% | 2,00 | 2,11 | 2,68 | 2,30 |
| | 2019 | 72% | 53% | 90% | 1,74 | 1,88 | 2,80 | 2,10 |
| **The Navigator Company** | 2017 | 73% | 65% | 80% | 2,43 | 2,47 | 2,71 | 2,85 |
| | 2018 | 76% | 66% | 85% | 2,46 | 2,47 | 2,81 | 2,88 |
| | 2019 | 54% | 33% | 75% | 1,57 | 0,84 | 1,52 | 1,29 |

Annex Table G: Report Characteristics

| Company | Year | Type | Framework | Option | Assurance | #Pages |
|---|---|---|---|---|---|---|
| **Altri** | 2017 | Stand-alone | None | None | Not assured | 57 |
| **Altri** | 2018 | Stand-alone | GRI Standards | Core | Not assured | 43 |

| | | | | | | |
|---|---|---|---|---|---|---|
| **Altri** | 2019 | Stand-alone | GRI Standards | Core | Not assured | 160 |
| **Banco Comercial Português** | 2017 | Stand-alone | GRI Standards | Core | Assured | 87 |
| **Banco Comercial Português** | 2018 | Stand-alone | GRI Standards | Core | Assured | 106 |
| **Banco Comercial Português** | 2019 | Stand-alone | GRI Standards | Core | Assured | 112 |
| **Corticeira Amorim** | 2017 | Integrated | GRI Standards | Core | Assured | 53 |
| **Corticeira Amorim** | 2018 | Integrated | GRI Standards | Core | Assured | 69 |
| **Corticeira Amorim** | 2019 | Integrated | GRI Standards | Core | Assured | 119 |
| **CTT** | 2017 | Stand-alone | GRI G4 | Core | Assured | 77 |
| **CTT** | 2018 | Integrated | Combination | Core | Assured | 45 |
| **CTT** | 2019 | Integrated | Combination | Compre-hensive | Assured | 49 |
| **EDP** | 2017 | Stand-alone | GRI Standards | Compre-hensive | Assured | 171 |
| **EDP** | 2018 | Stand-alone | GRI Standards | Compre-hensive | Assured | 212 |
| **EDP** | 2019 | Stand-alone | GRI Standards | Compre-hensive | Assured | 264 |
| **EDP Renováveis** | 2017 | Integrated | GRI Standards | Core | Assured | 26 |
| **EDP Renov.** | 2018 | Integrated | GRI Standards | Core | Assured | 41 |
| **EDP Renov.** | 2019 | Integrated | GRI Standards | Core | Assured | 43 |
| **Galp** | 2017 | Not Available | N.A. | N.A. | N.A. | N.A. |
| **Galp** | 2018 | Integrated | Combination | Compre-hensive | Assured | 27 |
| **Galp** | 2019 | Integrated | Combination | Compre-hensive | Assured | 27 |
| **Ibersol** | 2017 | Stand-alone | GRI Standards | Not Assured | Not assured | 116 |
| **Ibersol** | 2018 | Stand-alone | GRI Standards | Not Assured | Not assured | 114 |
| **Ibersol** | 2019 | Stand-alone | GRI Standards | Not Assured | Not assured | 110 |

| | | | | | | |
|---|---|---|---|---|---|---|
| **Jerónimo Martins** | 2017 | Integrated | GRI Standards | Core | Assured | 78 |
| **Jerónimo Martins** | 2018 | Integrated | GRI Standards | Core | Assured | 88 |
| **Jerónimo Martins** | 2019 | Integrated | GRI Standards | Core | Assured | 124 |
| **Mota-Engil** | 2017 | Stand-alone | GRI G4 | Selection | Not assured | 178 |
| **Mota-Engil** | 2018 | Stand-alone | GRI G4 | Selection | Not assured | 202 |
| **Mota-Engil** | 2019 | Stand-alone | GRI Standards | Core | Not assured | 180 |
| **NOS** | 2017 | Integrated | GRI Standards | Core | Assured | 62 |
| **NOS** | 2018 | Integrated | GRI Standards | Core | Assured | 106 |
| **NOS** | 2019 | Integrated | GRI Standards | Core | Assured | 66 |
| **Novabase** | 2017 | Integrated | None | None | Not assured | 4 |
| **Novabase** | 2018 | Integrated | None | None | Not assured | 4 |
| **Novabase** | 2019 | Integrated | None | None | Not assured | 4 |
| **Pharol** | 2017 | Not Available | N.A. | N.A. | N.A. | N.A. |
| **Pharol** | 2018 | Not Available | N.A. | N.A. | N.A. | N.A. |
| **Pharol** | 2019 | Not Available | N.A. | N.A. | N.A. | N.A. |
| **Ramada Investments** | 2017 | Integrated | None | None | Not assured | 11 |
| **Ramada Investments** | 2018 | Integrated | None | None | Not assured | 13 |
| **Ramada Investments** | 2019 | Integrated | None | None | Not assured | 20 |
| **REN** | 2017 | Integrated | GRI G4 | Compreh-ensive | Assured | 44 |
| **REN** | 2018 | Integrated | GRI Standards | Compreh-ensive | Assured | 37 |
| **REN** | 2019 | Integrated | GRI Standards | Compreh-ensive | Assured | 41 |
| **SEMAPA** | 2017 | Stand-alone | GRI Standards | Core | Not assured | 83 |
| **SEMAPA** | 2018 | Stand-alone | GRI Standards | Core | Not assured | 87 |

| | | | | | | |
|---|---|---|---|---|---|---|
| **SEMAPA** | 2019 | Stand-alone | GRI Standards | Core | Assured | 92 |
| **SONAE** | 2017 | Stand-alone | GRI Standards | Core | Assured | 107 |
| **SONAE** | 2018 | Stand-alone | GRI Standards | Core | Assured | 77 |
| **SONAE** | 2019 | Integrated | GRI Standards | Core | Assured | 87 |
| **The Navigator Company** | 2017 | Stand-alone | GRI Standards | Compreh-ensive | Assured | 130 |
| **The Navigator Company** | 2018 | Stand-alone | GRI Standards | Compreh-ensive | Assured | 134 |
| **The Navigator Company** | 2019 | Stand-alone | GRI Standards | Compreh-ensive | Assured | 74 |

Annex Table H: Average Scores

| **Average** | **Average of SR** | **Average of CS** | **Average of US** | **Average of ECS** | **Average of ENS** | **Average of SS** | **Average of PS** |
|---|---|---|---|---|---|---|---|
| **2017** | 52% | 40% | 1,75 | 1,25 | 1,82 | 1,66 | 64% |
| **2018** | 55% | 43% | 1,97 | 1,30 | 1,92 | 1,73 | 67% |
| **2019** | 56% | 44% | 2,00 | 1,33 | 1,88 | 1,77 | 68% |
| **Total** | 54% | 42% | 1,91 | 1,29 | 1,87 | 1,72 | 66% |

Annex Table I: Maximum Scores

| **Maximum** | **Max of SR** | **Max of CS** | **Max of US** | **Max of ECS** | **Max of ENS** | **Max of SS** | **Max of PS** |
|---|---|---|---|---|---|---|---|
| **2017** | 73% | 65% | 2,89 | 2,47 | 2,71 | 2,85 | 90% |
| **2018** | 85% | 78% | 3,43 | 2,99 | 3,07 | 2,93 | 93% |
| **2019** | 84% | 76% | 3,50 | 2,90 | 2,98 | 2,74 | 93% |
| **Total** | 85% | 78% | 3,50 | 2,99 | 3,07 | 2,93 | 93% |

Annex Table J: Minimum Scores

| **Minimum** | **Min of SR** | **Min of CS** | **Min of US** | **Min of ECS** | **Min of ENS** | **Min of SS** | **Min of PS** |
|---|---|---|---|---|---|---|---|
| **2017** | 3% | 0,05 | 0,13 | 0,12 | 0,17 | 0,24 | 0% |
| **2018** | 3% | 0,05 | 0,13 | 0,12 | 0,17 | 0,24 | 0% |
| **2019** | 3% | 0,05 | 0,11 | 0,28 | 0,18 | 0,28 | 0% |
| **Total** | 3% | 0,05 | 0,11 | 0,12 | 0,17 | 0,24 | 0% |

Annex Table K: Standard Deviation of Scores

| St. Deviation | StdDev of SR | StdDev of CS | StdDev of US | StdDev of ECS | StdDev of ENS | StdDev of SS | StdDev of PS |
|---|---|---|---|---|---|---|---|
| **2017** | 20% | 16% | 0,91 | 0,63 | 0,73 | 0,66 | 25% |
| **2018** | 21% | 19% | 0,91 | 0,82 | 0,77 | 0,72 | 25% |
| **2019** | 20% | 18% | 0,95 | 0,71 | 0,77 | 0,66 | 24% |
| **Total** | 20% | 17% | 0,91 | 0,71 | 0,75 | 0,67 | 24% |

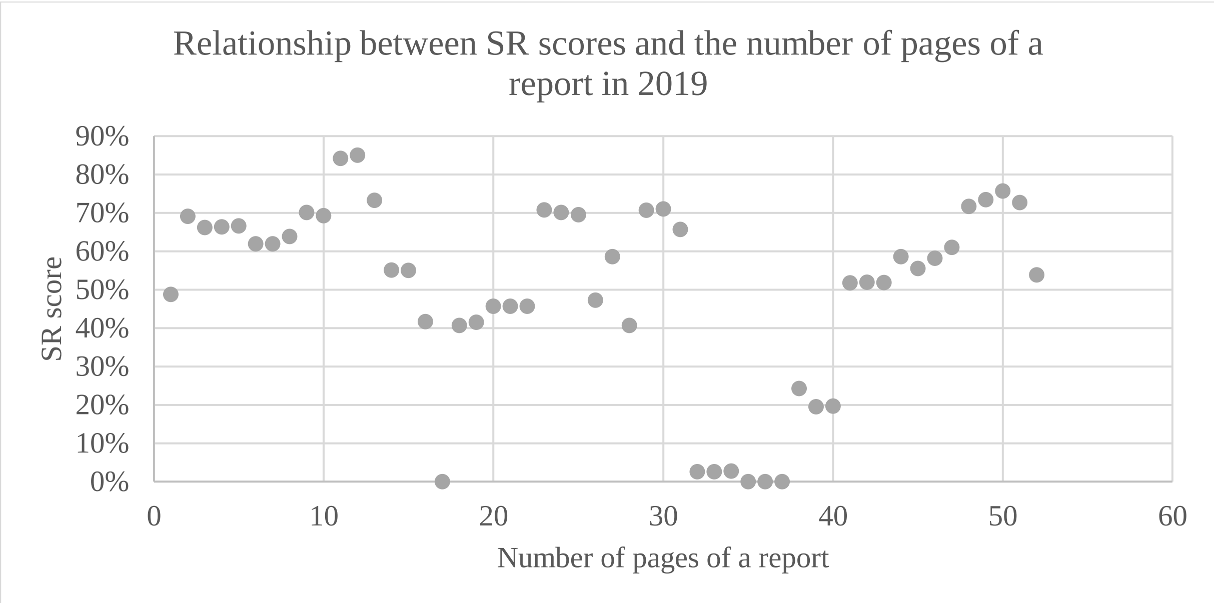


Figure 10.1: Relationship between SR scores and the number of pages of a report in 2019