The role of non-financial performance indicators and integrated reporting in achieving sustainable value creation
The role of non-financial performance indicators and integrated reporting in achieving sustainable value creation

Abstract

This study provides a structured analysis of the current scientific evidence on the effects of sustainability reporting including non-financial performance indicators, stand-alone sustainability reporting as well as integrated reporting. It discusses the benefits and challenges particularly related to internal decision-making, external transparency as well as financial and non-financial/environmental, social and governance effects. Further, it offers policy recommendations in view of the European Commission’s proposal on the Corporate Sustainability Reporting Directive.

This document was commissioned by the Policy Department for Economic, Scientific and Quality of Life Policies at the request of the ECON Committee.
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<td>CDP</td>
<td>Carbon Disclosure Project</td>
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<tr>
<td>CDSB</td>
<td>Climate Disclosure Standards Board</td>
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<tr>
<td>CSR</td>
<td>Corporate Social Responsibility</td>
</tr>
<tr>
<td>CSRCB</td>
<td>Corporate Sustainability and Reporting for Competitive Business</td>
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<tr>
<td>CSRD</td>
<td>Corporate Sustainability Reporting Directive</td>
</tr>
<tr>
<td>CTSCA</td>
<td>California Transparency in Supply Chains Act</td>
</tr>
<tr>
<td>EBA</td>
<td>European Banking Authority</td>
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<tr>
<td>EC</td>
<td>European Commission</td>
</tr>
<tr>
<td>EER</td>
<td>Extended External Reporting</td>
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<tr>
<td>EFRAG</td>
<td>European Financial Reporting Advisory Group</td>
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<tr>
<td>ESG</td>
<td>Environmental, Social and Governance</td>
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<tr>
<td>EU</td>
<td>European Union</td>
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<tr>
<td>FASB</td>
<td>Financial Accounting Standards Board</td>
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<tr>
<td>FSB</td>
<td>Financial Stability Board</td>
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<tr>
<td>GHG</td>
<td>Greenhouse Gas</td>
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<td>GRI</td>
<td>Global Reporting Initiative</td>
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<td>G7</td>
<td>Group of Seven</td>
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<tr>
<td>IAASB</td>
<td>International Auditing and Assurance Standards Board</td>
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<tr>
<td>IASB</td>
<td>International Accounting Standards Board</td>
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<tr>
<td>IBC</td>
<td>International Business Council</td>
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<tr>
<td>IETA</td>
<td>The International Emissions Trading Association</td>
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<td>IFAC</td>
<td>International Federation of Accountants</td>
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<td>IFRS</td>
<td>International Financial Reporting Standards</td>
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<tr>
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<td>IIRC</td>
<td>International Integrated Reporting Council</td>
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<tr>
<td>IOSCO</td>
<td>International Organization of Securities Commissions</td>
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<tr>
<td>&lt;IR&gt;</td>
<td>&lt;Integrated Reporting&gt;</td>
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<tr>
<td>ISSB</td>
<td>International Sustainability Standards Board</td>
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<tr>
<td>KPI</td>
<td>Key Performance Indicator</td>
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<tr>
<td>PCAF</td>
<td>Partnership for Carbon Accounting Financials</td>
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<td>SASB</td>
<td>Sustainability Accounting Standards Board</td>
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<td>SDGs</td>
<td>Sustainable Development Goals</td>
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<td>SFDR</td>
<td>Sustainable Finance Disclosure Regulation</td>
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<td>SMEs</td>
<td>Small and Medium-sized Enterprises</td>
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<td>Shareholder Rights Directive II</td>
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<td>TCR</td>
<td>The Climate Registry</td>
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<td>UN</td>
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EXECUTIVE SUMMARY

Background

With the significant consequences on our health, economy, politics and the way we live our daily lives, the COVID-19 pandemic has exposed the problems inherent in our systems such as social and economic injustice, weak healthcare systems and ineffective environmental policies. It has shown how urgent the topic on sustainability is, calling for immediate action. As United Nations (UN) Secretary-General António Guterres stated in his speech at the Human Rights Council in April 2020:

“Looking ahead, we need to build back better. The Sustainable Development Goals – which are underpinned by human rights – provide the framework for more inclusive and sustainable economies and societies. Strengthening economic and social rights bolsters resilience for the long haul. The recovery must also respect the rights of future generations, enhancing climate action aiming at carbon neutrality by 2050 and protecting biodiversity”. (António Guterres 2020)

Among its 17 Sustainability Development Goals (SDGs), the UN calls via SDG 12 for “Responsible consumption and production” and directly addresses firms and their behaviour through Target 126 “Sustainable practices in companies”. The latter comprise not only firms’ actions towards more sustainability but also the reporting about it. Non-financial or sustainability reporting allows companies to provide information on their environmental, social and governance (ESG) activities and their impact on environment and society. Such information is necessary for different stakeholders in order to assess whether companies’ practices are indeed sustainable. In 1987, sustainability was defined as “meeting the needs of the present without compromising the ability of future generations to meet their own needs” by the United Nations Brundtland Commission (United Nations 2021).

Most of the non-financial information provided to date is voluntary as there are only few settings with a corporate social responsibility (CSR) mandate. Directive 2014/95/EU, which is the Non-Financial Reporting Directive (NFRD), is an exception as since 2018 it requires large public-interest companies with more than 500 employees in the European Union (EU) to disclose environmental and social information. This Directive has been the focus for discussion resulting in a proposal by the European Commission (EC) on 21 April 2021 for a Corporate Sustainability Reporting Directive (CSRD) amending the existing NFRD by extending the scope of companies subject to the mandate, requiring the assurance of reported information and envisaging the adoption of EU sustainability reporting standards.

The development of the latter is accompanied by concurrent international initiatives, trying to consolidate and harmonise the scattered landscape of already existing sustainability reporting frameworks. These include the merge between the U.S. Sustainability Accounting Standards Board (SASB) with the Integrated Reporting Council (IIRC) in June 2021, the public announcement in September 2020 of the intent to work together by CDP (formerly Carbon Disclosure Project), Climate Disclosure Standards Board (CDSB), Global Reporting Initiative (GRI), IIRC and SASB, and the announcement in February 2021 by the IFRS Foundation to establish an International Sustainability Standards Board (ISSB) next to the International Accounting Standards Board (IASB).

Against this background, this study was written to provide academic insights on the effects of sustainability reporting including non-financial performance indicators, stand-alone as well as integrated reporting in order to understand their role on sustainable value creation. Based on these insights, suggestions for the future of sustainability reporting are proposed.
Aim

The academic discourse on sustainability reporting is very broad and diverse and goes back to the 1970ies. For the purpose of this study, the systematic literature had to be limited to studies published in top ranked accounting, finance and management academic journals from 2015-2021. It is acknowledged that there are numerous additional studies before our selected time period and also published in other journals with important findings using different research paradigms of which only few could be considered. **For the purpose of this study, the analysis starts in 2015, one year after the EU NFRD was published.**

Prior scientific evidence is structured along the following dimensions:

- general effects of non-financial reporting from an external, internal and ESG perspective;
- the role on sustainable value creation of:
  - disclosure content (non-financial key performance indicators (KPIs) vs narratives);
  - disclosure format (stand-alone vs integrated report);
  - disclosure credibility (presence vs absence of assurance);
  - disclosure framework (principles- vs rules-based); and
  - disclosure requirement (voluntary vs mandatory).

Key Findings

The review of the extant prior literature on sustainability reporting shows that there are different effects related to providing such information. Some of these effects result from higher transparency, which is particularly relevant for external stakeholders such as investors as there are observable benefits for market valuation, liquidity, risk and cost of equity and debt capital. Other effects are internal as they change how managers make decisions affecting investment efficiency and risk management. These real effects can turn into actual ESG effects, i.e. sustainability reporting may result in improved environmental or social conditions such as higher working safety and lower greenhouse gas (GHG) emissions. The scientific evidence is not unambiguous though as some studies also suggest no or negative effects related to sustainability reporting. Particularly if provided on a voluntary base with no or low assurance, there is a risk of greenwashing and impression management.

The contradictory findings can be related to the very heterogeneous subject of study as sustainability information and related effects highly vary depending on measures, regulatory frameworks and institutional settings. There are many managerial choices available also for entities subject to the CSR mandate under the EU NFRD, such as, e.g. whether to use KPIs or narratives, to have the information assured or not and how to report it (in a separate or integrated report). Results from previous literature have to be interpreted in the specific context in which they have been obtained.

Hence, specific regulatory mechanisms are needed to ensure that sustainability reporting is beneficial for different stakeholders. Based on the literature review, the study proposes suggestions for the future of sustainability reporting including:

- a mandate for sustainability reporting for public firms and non-listed firms above specific thresholds;
- sustainability reporting standards that ensure comparability but with reasonable flexibility and that allow for managerial discretion, particularly to consider:
The role of non-financial performance indicators and integrated reporting in achieving sustainable value creation

- specifics of the financial sector and
- proportionality for small- and medium-sized entities;

- a mandate for assurance, preferably reasonable assurance;
- proper institutions, enforcement and public oversight; and
- a focus on a multi-stakeholder perspective.

The double-materiality criterion inherent in both the EU NFRD and the EC CSRD proposal is a powerful tool to address all stakeholders allowing for a more holistic view when addressing the UN SDGs. In António Guterres’ words (2020): “We are all in this together”. 
1. INTRODUCTION

To achieve its Sustainability Development Goal (SDG) 12 “Responsible consumption and production” the United Nations (UN) call for more transparency via sustainability reporting, specifically through Target 12.6 “Sustainable practices in companies” (United Nations Conference on Trade and Development 2016). Through proper corporate reporting different stakeholders such as governments, investors and society can better assess how companies affect and are affected by the SDGs. Against this background the objective of this study is to provide a structured analysis of the scientific evidence to date on the effects of sustainability reporting including non-financial performance indicators, stand-alone as well as integrated reporting.

The academic literature in accounting, management and finance offers a broad range of analyses on sustainability reporting using empirical, experimental and qualitative research designs. The results are not unanimous on the actual effects of the use of non-financial information. While there are ample observed benefits related to non-financial information in corporate reporting – be it via a separate sustainability report or an integrated report that comprises both financial and non-financial information – they may vary depending on research design, economic environment, institutional setting, managerial incentives and come with a series of challenges. This study aims to structure, summarise and discuss these diverging findings in view of the European Commission’s (EC) proposal on the Corporate Sustainability Reporting Directive (CSRD). It provides suggestions for the EC’s long-term aim to make sustainability reporting tantamount to financial reporting.

Chapter 2 presents the scope of the analysis. There are different terms that are being used in the discourse such as “corporate social responsibility (CSR)”, “sustainability” as well as “environmental, social and governance (ESG)” activities. In addition, Directive 2014/95/EU is known as the “Non-Financial” Reporting Directive (NFRD) amending Accounting Directive 2013/34/EU as regards disclosure of non-financial and diversity information by certain large undertakings and groups. Since 2018 it requires large public-interest companies with more than 500 employees in the European Union (EU) to disclose environmental and social information. This has been extended to climate-related information in 2019 along with the EU Sustainable Finance Action Plan and recommendations of the Task Force on Climate-related Financial Disclosures (TCFD). About 11,700 firms and groups across the EU are currently affected by this including listed firms, banks and insurance companies (European Commission 2021a).

On 21 April 2021, the EC adopted a proposal for a “Corporate Sustainability” Reporting Directive (CSRD) amending the existing NFRD and envisaging the adoption of EU sustainability reporting standards. The review of the NFRD was a commitment made in the EC’s communication of the European Green Deal in 2019 to increase sustainable finance by improved transparency. As a major change instead of only addressing selected large companies, the scope is intended to increase to about 49,000 firms covering more than 75% of total EU companies’ turnover (Deloitte 2021a). The objective is to ensure that the increasing information need of users beyond traditional financial figures are met.

The EC has mandated the European Financial Advisory Group (EFRAG) with its standard-setting expertise to develop the draft European standards for sustainability reporting. In February 2021 EFRAG published its final report with “Proposals for a relevant and dynamic EU sustainability reporting standard-setting”. Currently firms are free to choose from or also combine different sustainability reporting frameworks such as the standards of the Global Reporting Initiative (GRI), the framework of the International Integrated Reporting Council (IIRC), or the standards issued by the U.S. Sustainability Accounting Standards Board (SASB).
Despite this rich availability of guidelines, sustainability information provided in corporate reports to date suffers from low comparability, low reliability and credibility as well as partly also low relevance.

Hence, the discussions on European sustainability reporting standards are accompanied by concurrent international developments such as the completed merge of IIRC and SASB into the Value Reporting Foundation in June 2021 as well as the IFRS Foundation’s public consultation end of 2020 on the creation of an International Sustainability Standards Board (ISSB) next to the International Accounting Standards Board (IASB). In addition, the Corporate Reporting Dialogue convened by the Value Reporting Foundation brings several international sustainability reporting initiatives and the major accounting standard setters together. The objective of all these initiatives is to make the landscape of sustainability reporting more coherent, comparable and consistent by both building on existing frameworks and collaborating with the established bodies (Corporate Reporting Dialogue 2021).

Chapter 3 and 4 provide the structured literature review. Chapter 3 summarises scientific findings on the role of sustainability reporting in sustainable value creation. The consequences of non-financial sustainability reporting can take the form of real effects, i.e. an actual change in firms’ behaviour. These real effects complement economic and non-financial consequences through higher transparency and disclosure quality such as impact on cost of capital, liquidity, market value and ESG performance.

Chapter 4 discusses previous findings along different dimensions such as disclosure content (non-financial key performance indicators (KPIs) vs narrative disclosures) and disclosure format. While an increasing number of firms to date publishes an integrated report, there may still be benefits related to showing non-financial information in a stand-alone report separate from financial information. An ongoing discussion is how comparability of sustainability reporting can be achieved. Hence, there are several studies on the role of assurance of sustainability reporting and the auditing of non-financial information to prevent greenwashing i.e. the practice to engage in symbolic CSR reporting but not in substantive actions (Velte 2021; Aguilera et al. 2021). Numerous studies have investigated the use of frameworks such as those offered by the GRI or the IIRC with pros and cons for a tick-the-box or a principles-based approach. To date South Africa is the only country where integrated reporting is mandatory (apply-or-explain approach). In the accounting literature there is a long-standing debate on the benefits of voluntary vs mandatory disclosure which findings can be transferred to the setting of non-financial information.

The majority of the scientific evidence to date is centred on large listed and mostly non-financial firms. However, both the financial sector and private firms including small and medium-sized enterprises (SMEs) also face increasing pressure to provide non-financial information. Chapter 5 discusses the specific challenges for these types of firms.

Chapter 6 provides suggestions for the future of sustainability reporting in view of the EC’s proposal on the CSRD. The recommendations are based on the scientific evidence presented in the previous chapters. Chapter 7 concludes the study.
2. SCOPE OF ANALYSIS

KEY FINDINGS

Even if regulations like the EU’s (EU) 2014/95/EU Non-Financial Reporting Directive (NFRD) require specific companies to provide disclosures on sustainability, there is a choice to publish the information in a stand-alone or integrated report with the latter comprising both financial and non-financial information. Similarly, the range of non-financial performance indicators is very diverse but is typically classified into environmental, social and governance (ESG) indicators. Assurance of the information by a third party to increase its credibility is also voluntary and can be reasonable or limited. Oftentimes referred to an “alphabet soup”, there are currently numerous international initiatives trying to provide frameworks for sustainability reporting like e.g. the Global Reporting Initiative (GRI), Carbon Disclosure Project (CDP), International Integrated Reporting Council (IIRC) and Sustainability Accounting Standard Board (SASB) etc. Also, the International Financial Reporting Foundation aims to establish an International Sustainability Standards Board (ISSB) developing global sustainability standards next to the International Accounting Standards Board (IASB). While both small and medium-sized enterprises (SMEs) and the financial sector play a key role in the economy, sustainability reporting comes with specific responsibilities and challenges for such companies that need to be addressed.

2.1. Definitions

The focus of this study is on sustainability reporting, which is a core element within sustainable corporate governance. While the objective of financial reporting is to indicate the financial health of a firm, companies can use sustainability reporting to disclose and communicate material information on a company’s sustainability goals and actions. Firms are free to provide a stand-alone sustainability report or an integrated report that comprises both the financial report and sustainability report in one. In both types of reports, sustainability or non-financial performance indicators are disclosed to give users measurable information on a firm’s ESG activities and the impact it has on the environment and society as a whole.

2.1.1. Sustainability Reporting and Non-Financial Performance Indicators

Contrary to financial reporting, sustainability reporting is mostly voluntary to date and given the complex landscape of different reporting frameworks the preparation, auditing and comparison of sustainability information is more challenging. However, for large public companies the sustainability report has become an integral element to their corporate reporting with 80% of the N100 companies (the top 100 firms from 52 countries) disclosing sustainability information in 2020 (KPMG 2020b). Some of these sustainability reports contain 100 pages and above and are almost as extensive as the annual report including financial information itself. The issues addressed comprise management’s statement on the overall sustainability strategy of the firm, environmental and social issues as well as governance practices including sustainability indicators for each of these areas such as, e.g. greenhouse gas (GHG) emissions, women in top management and code of conduct trainings.

Sustainability/ESG/CSR information has also regularly been labelled as non-financial information to contrast them from financial information. The discussion on the role of non-financial performance measures goes back to the ‘90s when beyond the financial perspective other areas were detected to have an impact on firm performance such as quality initiatives, customers and internal innovation...
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processes (Kaplan and Norton 1992; Ittner and Larcher 1996). However, despite acknowledging the boundaries of a purely financial view on a company, the discussion back then still primarily revolved around a firm’s financial performance. This view on non-financial information has changed fundamentally with sustainability information now representing a key element to publicly disclose the impact a firm has on the environment and society as well as vice versa. This paradigm-shift to a more holistic view with a clear focus on sustainability per se is also observable in the revision of the EU “Non-Financial” Reporting Directive 2014/95/EU (NFRD) that has now been relabelled in the EC April 2021 proposal to the “Corporate Sustainability” Reporting Directive (CSRD).

Historically, corporate governance has been discussed separately from environmental and social issues. This was particularly the case around the millennium when due to the large corporate scandals such as Enron and others the call for stronger governance mechanism increased. There is a large body of research to date investigating how financial accounting information may impact economic performance through its role in a firm’s corporate governance (Bushman and Smith 2001; Brown et al. 2011). In this study, the focus is on sustainability and integrated reporting comprising any governance aspects including but not limited to topics such as managerial compensation packages, director monitoring and board independence.

A widely used alternative term for sustainability (ESG) is corporate social responsibility (CSR) with the objective to advance social welfare or making a firm’s activities more sustainable (Christensen et al. 2021). In recent times, investors increasingly demand more information on firms’ ESG activities beyond their financial performance (Cohen et al. 2015). CSR or sustainability reports aim to meet these demands. In Europe, the regulatory framework for these reports has been set through the NFRD that requires large public-interest entities with more than 500 employees to disclose material information on the environment, social and employee issues, human rights, bribery and corruption, and diversity on company boards. In 2019 the EC published additional guidelines on reporting climate-related information supplementing the existing guidelines from 2017. Given the landscape of companies in the EU with 99% of the firms being SMEs, the majority of entities can voluntarily publish a sustainability report, but they are not required to. The proposed CSRD aims to extensively broaden the scope of firms mandated to provide sustainability information along with more concrete standards on what information to disclose and how. It further suggests audit requirements and a link to the EU Taxonomy by demanding the data to be in electronic format.

In this regard, Europe is currently ahead of the U.S. where rather only recently the debate for mandatory sustainability reporting has gained real momentum. The SEC’s stance is now clear that the current voluntary framework does not meet the increasing information demand of investors on ESG and that a mandatory framework is needed (Lee 2021).

This may shift the discussion of sustainability reporting more strongly (back) towards shareholder orientation. As mentioned above, the idea of providing ESG information is rooted in complementing economic and financial information with the latter being clearly targeted to investors alone. However, a key aspect of sustainability reporting is orientation towards the broad set of stakeholders that a firm is engaged with such as customers, suppliers, employees and the wider public and society in general. As such, the “double materiality” criterion that has been introduced with the NFRD plays a key role by mandating firms to report how sustainability issues have an impact on their own business (outside-in) but also how their activities in turn have an impact on society and the environment (inside-out). For the former, the disclosure of climate-related information is necessary from a “financial materiality” standpoint as a company may face financial risks, legal liabilities and a loss in reputation, which particularly investors would be interested in. For the latter, “environmental and social materiality” also speaks to investors but equally to other stakeholders as they increasingly demand information on the
externalities of firms (European Commission 2019). By having companies take a perspective on how their actions affect sustainable development and stakeholders other than investors, they will more strongly engage with the UN SDGs (Adams et al. 2021).

2.1.2. Integrated Reporting

While sustainability reporting focuses on a firm’s ESG activities and addresses all stakeholders relevant for a firm, the objective of integrated reporting is to connect this non-financial (or “not-yet financial”) information with a firm’s financial performance. As such, the latter focuses on providers of financial capital and to improve their capital allocation through better integrated information (International Integrated Reporting Council 2013). According to the 2021 Integrated Reporting Framework, the IR Framework, an integrated report is concise communication about a firm’s sustainable value creation including its strategy, governance, performance and prospects. Since stand-alone sustainability reports may suffer from comparability, credibility and relevance problems, the objective of the principles-based approach of integrated reporting is to disclose information that is expected to be material and useful for sustainable value creation in the short, medium and long-term (International Integrated Reporting Council 2013). While the initial concept of integrated reporting is investor-driven it also seeks to address all stakeholders and aims to encourage integrated thinking internally by breaking-up silo thinking (Haller and Van Staden 2014). There are actual real effects observable through integrated thinking and a multi-capital and multi-stakeholder management approach that facilitates integrated decision-making and actions (International Integrated Reporting Council 2019).

Integrated reporting has particularly increased in popularity when the first IR Framework was published in 2013. To date it still remains a voluntary option though with South Africa being the only country mandating integrated reports for firms listed on the Johannesburg Stock Exchange through an apply-or-explain approach. The reason for South Africa being at the forefront of this development goes back to its apartheid history and the years thereafter that were marked by wide firm mismanagement (West 2006). There was a strong call for high standards of corporate governance, finally established in the King Code. Since its third version, King Code III has been requiring firms to publish an integrated report to meet the information needs of firms’ stakeholders that financial reports alone were not seen to achieve (Barth et al. 2017). About 2,000 companies across 70 countries are currently moving towards integrated reporting (International Integrated Reporting Council 2020). The IR Framework will be explained more in-depth in the following chapter along with other established international initiatives on sustainability reporting.

2.2. International Initiatives on Sustainability Reporting

In 1994 the term triple bottom line was introduced by the business writer John Elkington to denote an accounting framework encompassing the three areas of social, environmental and financial activities of a firm (Elkington 2018). The focus should shift from the one bottom line of the profit and loss statement that shows a firm’s net income to a broader performance concept. To date there are about 400 disclosure regimes for climate-related and sustainability information led by different regulators, non-governmental organisations, stock exchanges, international initiatives and industry (Task Force on Climate-Related Financial Disclosures 2016; Carrots & Sticks 2021). They are highly heterogeneous and despite existing overlaps, the different frameworks do not follow one coherent approach on how to best present corporate performance beyond the traditional financial figures. In the following, the main established frameworks and standards will be presented followed by a discussion of current developments.
The role of non-financial performance indicators and integrated reporting in achieving sustainable value creation

2.2.1. Established Frameworks and Standards

The most established initiative for sustainability reporting is the Global Reporting Initiative (GRI) initially founded in Boston in 1997 after the Exxon Valdez oil spill that resulted in public calls for corporate transparency. As such the first GRI Guidelines (G1) published in 2000 represented the first actual global framework for sustainability reporting. Over the years GRI regularly published updated guidelines up to G4 in 2013. In 2016, the guidelines were replaced by the GRI Standards that again formed the first set of global standards for sustainability reporting. The GRI also provides guidance for firms to link the UN SDGs in their corporate reports (Global Reporting Initiative 2021a). When preparing a sustainability report, be it voluntary or mandatory, the GRI Standards represent the main framework companies would reach out to. The standards follow a modular approach with three universal standards (GRI 101 “Foundation”, 102 “General Disclosures” and 103 “Management Approach”) that each organisation preparing a sustainability report would use and a range of elective topic-specific standards to provide material information on economic, environmental or social issues (Global Reporting Initiative 2019). Today, the GRI operates from Amsterdam with regional hubs around the world that regularly meet at GRI global conferences (Global Reporting Initiative 2021b).

In 2000 the CDP (formerly Carbon Disclosure Project) was founded with CDP Europe’s headquarters located today in Berlin and CDP Worldwide’s headquarters in London. The focus of this initiative is to provide standards primarily for environmental reporting that not only companies but also cities and states can apply to measure, manage and disclose their impact on the environment. In 2016, about 5,800 companies (close to 60% of the global market capitalization) published environmental information through CDP (Global Reporting Initiative and CDP Worldwide 2017). It holds a rich data set on self-reported corporate environmental information that is highly appreciated by investors.

At the World Economic Forum (WEF) in 2007, the Climate Disclosure Standards Board (CDSB) was founded as a consortium of different business and environmental non-governmental organisations comprising CDP, CERES, The Climate Group, The Climate Registry (TCR), The International Emissions Trading Association (IETA), World Council for Business and Sustainable Development (WCBSD), World Resources Institute (WRI) and WEF (Deloitte 2021b). They have stated their mission to commit to “advancing and aligning the global mainstream corporate reporting model to equate natural capital with financial capital” (Climate Disclosure Standards Board 2021a). The focus of the CDSB Framework is on supporting organisations to report environmental and climate change information in their mainstream corporate reports such as 10-K filing or annual report to improve investors’ decision-making. In 2018, the Framework was updated to be in line with the proposal of the Task Force on Climate-related Financial Disclosures (TCFD) of the Financial Stability Board (FSB) (Climate Disclosure Standards Board 2021b).

Companies may also use the recommendations by CDP and CDSB to provide climate-related information when preparing an integrated report that combines a firm’s financial report and sustainability report into one.

The International Integrated Reporting Council (IIRC) was founded in 2010 to establish a globally accepted framework that follows a more holistic approach considering both the external and internal perspective and putting value creation at the centre.

December 2013 marked an important date with the release of the first International Integrated Reporting Framework (International Integrated Reporting Council 2013). The concept of “Integrated Thinking” inherent in the framework aims at pushing companies to think about their overall value creation, which requires breaking up the silo-thinking of different departments.
This is expected to be achieved through the “connectivity of information” as a base for integrated thinking to then show how the factors needed for value creation are interrelated. As such, the objective of integrated reports is to create a value creation story of the firm (Melloni et al. 2017). In January 2021 the <IR> Framework was revised for the first time but the broad global consultation with experts confirmed that the guidelines are still fit for purpose (International Integrated Reporting Council 2013). Also like a stand-alone sustainability report, an integrated report aims at addressing all stakeholders interested in the value creation of an organisation and not solely shareholders. At the same time, its primary purpose is to show to providers of financial capital how value is being created, preserved or eroded over time using both financial and other information (International Integrated Reporting Council 2013). A key element is that it does not follow a tick-box approach but it is principles-based, i.e. despite aiming to achieve comparability it allows a high degree of flexibility to factor in the individual differences across organisations. The six capitals (financial, manufactured, intellectual, human, social and relationship, and natural) form the base for the concept of value creation. Organisations should consider all the forms of capital they use and that they may have an impact on, but they are not required to structure their integrated report along these categories. While some companies like BASF have been publishing integrated reports already for many years, other big listed companies like BMW recently merged their financial and stand-alone sustainability report into one 2020 corporate report.

About the same time as the IIRC’s foundation, in 2011 the Sustainability Accounting Standards Board (SASB) was created in the U.S. Its objective is “to help businesses and investors develop a common language about the financial impacts of sustainability” (Sustainability Accounting Standards Board 2021a). It took several years until the final SASB standards were published in November 2018. The unique features of this set of sustainability standards is its focus on financial materiality given its main addressee being investors and the explicit consideration of differences across industries. In fact, for 77 industries SASB developed an own set of industry-specific standards on the ESG issues that matter most for the financial performance of the specific industry (Sustainability Accounting Standards Board 2021b). Currently several hundred firms are using SASB standards including large corporations like Adidas and Apple with 50% of those domiciled outside of the U.S (Sustainability Accounting Standards Board 2021c). The SASB standards can be seen as complementary to GRI as the latter aims to inform all stakeholders while SASB targets primarily investors. The standards may also help implementing frameworks like those by the TCFD and IIRC that are principles-based.

2.2.2. New Developments

The previous chapter showed how complex the landscape for sustainability reporting standards and frameworks has grown over time, with all the acronyms regularly being called an “alphabet soup” (Murray 2021). Hence, as a first step to simplification, in November 2020 IIRC and SASB announced their merge into the new Value Reporting Foundation, which was completed in June 2021. Through the merger, the <IR> Framework and the standards issued by the SASB are expected to still complement each other with both frameworks addressing mainly providers of financial capital. The objective is to move towards a reporting system that is more comprehensive and coherent by combining the principles-based framework of IIRC with the industry-specific metrics of SASB. The Value Reporting Foundation has initiated the Corporate Reporting Dialogue as a platform to unify the different organisations and initiatives involved in the discussion including CDP, CDSB, Financial Accounting Standards Board (FASB) as observer) GRI, IASB, Value Reporting Foundation and the International Organization for Standardization.

Similar to the Value Reporting Foundation, SASB and GRI have announced a joint workplan in July 2020 to make it easier for preparers to use both sets of standards and to help users understand the different type of information better.
A key difference is that at the time of reporting, information under GRI may not be financially material yet, but given its identified importance for stakeholders it may turn financially material in the future with the latter being the focus for SASB (Sustainability Accounting Standards Board 2020).

Also CDP and CDSB joint with GRI, IIRC and SASB have published an intent to work together towards comprehensive corporate reporting in September 2020. The pandemic has shown how closely linked sustainability and financial performance are. Hence, the five organisations are committed to engage with all stakeholders to change the traditional corporate reporting landscape (CDP et al. 2020).

In September 2020 the International Business Council (IBC) of the World Economic Forum (WEF) published a White Paper joint with the Big 4 Accounting Firms Deloitte, EY, KPMG, and PwC on “Measuring Stakeholder Capitalism: Towards Common Metrics and Consistent Reporting of Sustainable Value Creation” (World Economic Forum 2020). In the White Paper, 21 ESG core and 34 expanded metrics are defined based on existing frameworks and standards with the objective for an accelerated converged and simplified landscape of sustainability standards. By encouraging its IBC members to use the suggested metrics and lead by example, other firms are expected to follow resulting in greater comparability of sustainability information.

In February 2021 the International Organization of Securities Commissions (IOSCO) affirmed the urgent need to establish sustainability standards that are globally consistent, comparable and reliable. The focus should first be on climate change-related risk and opportunities and later be extended to broader sustainability issues. IOSCO supports the intent of the IFRS Foundation announced in February 2021 to establish an International Sustainability Standards Board (ISSB) next to the IASB that issues International Financial Reporting Standards (IFRS). The IFRS Foundation has broad experience in global standard-setting but will have to closely work with the established initiatives with expertise in sustainability reporting.

Finally, in July 2021 GRI and the EFRAG Project Task Force responsible for the development of EU sustainability reporting standards announced a Statement of Cooperation. Both bodies have a rich experience of technical expertise that will be useful in the co-construction of the new standards (Global Reporting Initiative 2021f).

2.3. The Role of Assurance in Sustainability Reporting

In view of the diverse landscape of frameworks and standards for sustainability reporting the assurance of the information by an independent third party is similarly complex. The primary role of auditors is to provide a reasonable assurance whether the financial statements do not include a material misstatement, which is communicated via the auditor’s report. While the auditing process for financial reports is highly professionalised and looks back at many decades of expertise on both preparers’ and auditors’ sides, the assurance of sustainability reports is rather recent and as young as the information itself (Adams and Evans 2004; Simnett et al. 2009; Peters and Romi 2015; Boiral and Heras-Saizarbitoria 2020). However, while in 2005 only 33% of N100 companies engaged an independent assurer, the number exceeded 50% for the first time in 2020 (KPMG 2020b). This development is expected to persist as third-party assurance is viewed as a sign for increased credibility despite also observed misuse of sustainability assurance for symbolic accountability only in the presence of low independence and high management control in the process (O’Dwyer and Owen 2005; Perego and Kolk 2012).

To date there are two main international assurance standards: the International Standard on Assurance Engagements 3000 that was last revised in 2013 (ISAE 3000) by the International Federation of Accountants (IFAC) and the AccountAbility 1000 Assurance Standard (AA 1000)
(Fuhrmann et al. 2017). Besides there are several national assurance frameworks for sustainability reports that assurers can use separately or in combination with the international ones.

Contrary to the auditing of financial reports, these standards are applied by both accountants including the Big 4 accounting firms but also non-accountants such as specialist consultants. Both sets of standards offer two levels of assurance: reasonable vs limited assurance under ISAE 3000 and high vs moderate assurance under AA 1000 (Clarkson et al. 2019). While reasonable assurance does not imply that there is no risk of potential material misstatement the assurer can state that “Based on the procedures performed, in our opinion, the management assertion on XYZ is reasonably stated.” For a limited assurance less or more simple tests are performed, usually based on smaller sample sizes, resulting in an assurance that is less rigid and that can only be negatively framed such as “Nothing came to our attention to indicate that the management assertion on XYZ is materially misstated.” (Institute of Chartered Accountants in England and Wales 2021).

The assurance of sustainability reports is mostly voluntary and given the significantly larger costs of a reasonable assurance the vast majority of firms typically only obtains limited assurance (Gürtürk and Hahn 2016). This may change in view of the efforts for a globally accepted solution for sustainability reporting. In April 2021 the International Auditing and Assurance Standards Board (IAASB) has published “Non-Authoritative Guidance on Applying ISAE 3000 (Revised) to Extended External Reporting (EER) Assurance Engagements”. The objective is to support stakeholders facing challenges when applying ISAE 3000 (Revised), improving the reliability of assurance reports and increasing stakeholders’ confidence in those (International Auditing and Assurance Standards Board 2021). The development for a wider scope of as well as improved sustainability assurance can be expected to run in parallel with the development of sustainability reporting.

2.4. Sustainability Reporting in the Financial Sector

A key player in achieving the UN SDGs is the financial sector. Financial institutions carry a particular responsibility by providing capital to foster green investments and transitioning the economy to being more sustainable in general. At the same time, the financial sector itself faces increasing financial risks in view of changes in the economy due to climate change and the depletion of resources (European Banking Authority 2021). Hence, Regulation (EU) 2019/2088 on sustainability-related disclosures in the financial services sector requires financial market participants and financial advisers to integrate and disclose information on sustainability risks that may negatively impact the return of the financial investment or advice.

Banks not only have to adhere to existing accounting standards but their activities and disclosures are also heavily shaped by regulatory bodies such as banking authorities and central banks. As such the European Banking Authority (EBA) published a report in June 2021 on the management and supervision of ESG risks for credit institutions and investment firms. It provides definitions of ESG risks and how they should be integrated in the regulatory and supervisory framework of the sector. The proposal comprises the integration of ESG risks into the institutions’ business strategies, their governance and risk management. This includes, e.g. extending strategic planning to a longer time horizon of at least 10 years, testing the institutions’ resilience to ESG risks by using different scenarios, and aligning remuneration packages with their long-term objectives, among others.

In 2020, 78% of N100 companies that provided a sustainability report were in financial services compared to 71% in 2017 (KPMG 2020b). Despite the key role of the financial sector through its lending and investment activities to achieve a sustainable economy and the importance of sustainability reporting in sustainable corporate governance, little is known on the actual quality of sustainability reports in this significant sector let alone its subsectors such as banks, insurance companies, pension
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schemes and asset managers (United Nations Environment & Group of Friends of Paragraph 47 2016). These subsectors are very different with particular differences also across countries, particularly emerging countries. This makes a coherent provision of sustainability information that is comparable within the financial sector and across countries especially challenging.

In June 2021 the Group of Seven (G7) declared their support for the mandatory disclosure of climate-related information. The financial sector will be among the first to be required to provide such disclosures in line with the TCFD recommendations for which they can also be held accountable (CDP 2020a). The environmental data collected and provided by CDP over the last 20 years plays a key role as it is aligned with TCFD. From 2020 CDP also collects information on how financial institutions impact the economy in general through their lending and investment behaviour, which allows financing portfolios to better assess risks and opportunities related to climate change (CDP 2020a).

In France a mandatory setting already requires financial institutions with the exception of banks to disclose climate-related information through the law on “La transition énergétique pour la croissance verte” since 2016. A working paper by the Banque de France shows that investors of those institutions mandated to provide such information also reduce their funding of fossil fuels by 40% compared to those not affected by the regulation (Mésonnier and Nguyen 2021). This shows the power that a mandate to report sustainability information may have particularly in the financial sector.

2.5. Sustainability Reporting for SMEs

Even though SMEs including micro-entities and small family businesses face less pressure from a regulatory but also public side to prepare sustainability reports, they are likewise affected by the increasing general demand for this type of information. Through their banks and financial institutions, SMEs are increasingly more called upon to provide information on sustainability. Since the global financial crisis in 2008, the financial sector discussed above had to go through a wide range of regulatory and governance changes. This included broadening financial institutions’ scope to not only focus on economic performance but also to address environmental and social issues. As intermediary banks carry a particular responsibility with their activities by not only directly having an impact on sustainability but also indirectly through lending money to other organisations that in turn affect the environment and society. Hence, when lending money to SMEs banks have to publish what effect this has from a sustainability perspective, making it necessary for SMEs to provide such information to their lenders (ElAlfy and Weber 2019).

Another external pressure for SMEs comes from larger companies for which they act as their suppliers. Since large companies in the EU are required to provide sustainability reports with a holistic view, similar to banks they need ESG information of their oftentimes small and foreign supplying firms to be able to communicate the ecological and social impact of their whole value chain.

Having the daunting process of preparation and potential assurance of sustainability reports in mind, European SMEs mostly perceive it as an additional burden and even a threat due to extra costs and need for additional resources paired with the potential risk of losing their role in the supply chain (Maloni and Brown 2006). Hence, from 2016-2021 GRI provided the Corporate Sustainability and Reporting for Competitive Business (CSRCB) programme joint with the Swiss Confederation’s State Secretariat for Economic Affairs.

The mission is to help SMEs in selected developing countries to be better integrated into global value chains through sustainability reporting. GRI considers the latter as a tool for SMEs to access markets and differentiate themselves more against competitors (Global Reporting Initiative 2021c).
The aim of the programme is to show to SMEs that the application of GRI is not bound to firm size and that also smaller companies can use the framework to benefit from more concise information on sustainability.

Nevertheless, significant direct and indirect costs of preparation can arise: The effective compliance with sustainability reporting standards, e.g. the GRI’s one could require an increase in the specificity and level of detail of sustainability disclosure relative to what firms currently report. Further, a (costly) information system for CSR reporting similar to firms’ internal controls over financial reporting might be needed (Christensen et al. 2021).

Besides, contrary to large entities many SMEs are family-run with owner and management oftentimes being the same individual(s). Family control may have positive effects such as increased responsible behaviour or the publishing of a larger variety of sustainability reports but also result in less compliance with sustainability standards (Campopiano and De Massis 2015; Terlaak et al. 2018). The owner-manager typically does not have to address the heterogeneous demands by different stakeholders that large firms have to, putting particular importance on the owner-manager to push a sustainability agenda in the firm.

In the EU 99% of all businesses are SMEs with a significant part across all sectors. They are key players in terms of employment, innovation as well as moving towards a digital and sustainable economy (European Commission 2021b). SMEs increasingly see strategic advantages to engaging with sustainability, which is central to embracing the reporting about it not as a mere compliance exercise (Morsing and Perrini 2009). Hence, if sustainability reporting is a means for a sustainable economy the specifics of SMEs need to be well understood to ensure that they are appropriately integrated in the process and development of sustainability frameworks and standards.

There is no doubt that SMEs and financial institutions are very different from large non-financial firms. Nevertheless, the majority of the scientific evidence typically focuses on the latter mainly due to data availability. As such, the discussion of prior literature on sustainability reporting presented in the following two Chapters 3 and 4 may not be fully transferable to other firms. Chapter 5 will therefore highlight the specific needs for the financial sector and SMEs, which will be included in the proposed suggestions for the future of sustainability reporting (Chapter 6).
3. THE ROLE OF NON-FINANCIAL REPORTING IN SUSTAINABLE VALUE CREATION

KEY FINDINGS

In this chapter, prior studies on sustainability reporting and its effects on financial and non-financial value are presented, analysed and interpreted. The ultimate goal is to provide critical insights on the costs and benefits of the adoption of different forms of non-financial disclosure, including stand-alone sustainability reports and integrated reports. The systematic review of prior scientific literature in accounting, finance and management sheds light on the fact that there are positive effects associated with increased non-financial information via higher transparency (mostly “capital market” and “financial” effects) and improved internal decision-making and risk management (“real” effects). Besides, sustainability disclosure can also have a positive impact on ESG performance and other non-financial effects. However, such effects seem to be conditioned by a number of factors and in particular by the quality and credibility of sustainability disclosure. Finally, important drivers of both financial and non-financial effects are also linked to the institutional environment (e.g. mandatory vs voluntary reporting regime).

3.1. Introduction to the Effects of Non-Financial Reporting

3.1.1. The Objective of the Analysis

Sustainability reporting in its diverse forms could play a major role in ensuring the achievement of sustainable value creation. The UN explicitly call for greater transparency via corporate ESG disclosure to ease external observers in assessing business contributions to the SDGs and in more accurately evaluating the degree to which sustainability is implemented (cf. SDG 12.6). Nevertheless, recent corporate scandals such as the 2015 Volkswagen Diesel scandal question the role of non-financial reporting in ensuring corporate transparency and raise high criticism on it, due to its limited credibility.

In this section, the study reviews prior literature on non-financial reporting to offer an in-depth analysis of its effects captured both in economic and non-financial/ESG terms. Within the economic effects, it distinguishes between internal (e.g. real effects in terms of improved decision-making, risk management or other internal processes of preparers) and external outcomes of non-financial reporting (e.g. capital market effects as a consequence of increased transparency for external users). Indeed, non-financial reporting affects the external recipients of the information but could also alter the internal behaviour of preparers. Existing research in accounting, finance and management has focused primarily on the external perspective, and, specifically, on the economic consequences of non-financial reporting. In this first sense, non-financial reporting is expected to primarily play an informative role and to be associated with capital market and financial performance effects. Nevertheless, the internal perspective has gained more and more attention: indeed, non-financial reporting could also play a transformative role for firms in that it may affect the internal decision-making processes of its preparers and could therefore be associated with real effects. In contrast to capital market effects, real effects are defined as “situations in which the disclosing manager or reporting entity changes its behaviour in the real economy (e.g. investment, use of resources, etc.).

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1 Eccles and Serafeim (2015) call these two objectives inherent in non-financial reporting the “transformation function” and “information function”.
consumption)” (Leuz and Wysocki 2016, p. 545). This study looks at both effects: the internal (in section 3.2) and the external ones (in section 3.3).

Whether non-financial reporting influences sustainability/ESG/non-financial performance in addition to economic performance is unclear. The awareness of (future) environmental and social challenges as well as the public attention to sustainable development has been increasing over time. Therefore, it is crucial to assess if ESG reporting initiatives in the field, especially the ones that maintain an investor-focus such as integrated reporting, affect corporate ESG performance. We address this specific issue in the final section 3.4 of this chapter to capture what we define as ESG effects.

The analysis also looks at the form of reporting and if the firm publishes a stand-alone sustainability report or an integrated report. As discussed above, integrated reporting differs from traditional sustainability reporting in a variety of key fundamental elements including the primary users of the report, the scope of information to be included as well as the definition of main principles underpinning its preparation (e.g. materiality). In light of this, it is expected that depending on the form of report adopted, different effects may be associated with the disclosure of non-financial information.

Besides, the analysis focuses on the quality of sustainability disclosure and its credibility (via the presence of assurance for instance) as important drivers of both financial and non-financial effects.

Finally, the mandatory vs voluntary nature is expected to be a critical factor that could help in understanding plausible effects of sustainability reporting adoption. Findings from prior studies conducted in different regulatory settings are therefore interpreted in view of this important key factor.

3.1.2. The Research Design

The research design is based on a systematic literature review of prior studies published in top ranked accounting, finance and management academic journals from 2015-2021. From a methodological point of view, the relevant articles are identified via a list of targeted key words in line with prior studies (Christensen et al. 2021) and analysed focussing on the following dimensions:

- the type of research (empirical, experimental, qualitative or literature review);
- the sector (non-financial vs financial industry), firm listing status (publicly listed vs non-listed/private firm) and jurisdiction (Europe, U.S., South Africa, other jurisdictions) of the sample under review;
- the disclosure format (sustainability report, integrated report or other reports), and type (e.g. content or style of information);
- the disclosure requirements (mandatory or voluntary adoption); framework (principles- vs rules-based) and standards (GRI, SASB, IIRC, others); and
- the perspective (internal/managerial decision-making vs external/transparency) and dimension (financial vs environmental, social, governance) of the effect under review.

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2 It is worth noting that both capital market and real effects are closely connected: The (potential or actual) reaction of the reader is often the information the publisher of the information is responding to (Kanodia and Sapra 2016).

3 Of the numerous additional studies published before our selected time period or in other journals with important findings using different research paradigms, only few could be considered.
3.2. The Internal Perspective: Real Effects of Non-Financial Reporting

3.2.1. Internal Effects of Stand-alone Reports and other Forms of ESG Disclosure

Research on the real effects of sustainability disclosure (i.e. the effect of reporting on the behaviour of companies) faces several empirical challenges and is still emerging. Christensen et al. (2021) offer the most complete and updated review of the literature to date including a separate section on the real effects of mandatory non-financial disclosure. They specifically look at potential investment, operating and financing effects of non-financial reporting including the possibility that companies might exit markets or at least abandon certain activities to provide support of the existence of real effects on firms’ policies (see also Michelon et al. (2020) for a recent and detailed review of the corporate reporting literature).

There are few studies finding that mandatory sustainability reporting requirements affect companies’ decisions on whether to invest and operate in specific markets. Given the lack of abundant mandates for sustainability reporting, empirical evidence for such firm behaviour of exit strategies in view of CSR regulation is still scarce but becoming increasingly relevant. According to Christensen et al. (2021) mandatory sustainability reporting may impact the decision whether to trade in public markets with more extensive disclosure requirements or to remain in a defined product market. They argue that industries may see a shift in composition as for high polluting firms an exit may seem more attractive than complying with sustainability disclosure standards and/or reaching or maintaining costly high sustainability performance. In addition, if such firms do not achieve high CSR performance and transparency, they may suffer from negative repercussions on their reputation. This is in line with prior research on financial reporting providing evidence of market exit as a regulatory avoidance strategy (e.g Leuz et al. 2008; Kamar et al. 2009; DeFond and Lennox 2011).

In line, Christensen et al. (2017) show that – compared to unregulated companies – effects for SEC-registered companies which are subject to mine-safety disclosure rules are intended (i.e. dangerous mine facilities are rather shut down) and unintended (i.e. labour productivity is reduced). Similarly, Rauter (2020) shows that on the introduction of a mandatory extraction payment disclosure regulation, oil, gas and mining firms in Europe and Canada lower their investments, which is desirable. However, at the same time investments are reallocated from disclosing firms to firms not bound to such regulation. For the host countries where extractions take place, this means that drilling productivity and resource production is reduced. Hence, there is a risk of distorted capital allocation in case of varying disclosure regulation within one industry.

Besides such consequences on a firm’s investments and operations, additional plausible real effects of binding non-financial disclosure requirements are related to managerial internal decisions (e.g. on taxation, earnings management and investments). For instance, Lin et al. (2017) show that in China mandatory CSR disclosures are related to higher tax compliance but only if proper institutions are in place. Indeed, in those regions where institutional quality is low, firms tend to avoid taxes making CSR disclosures seem more like window-dressing. Wang et al. (2018) find that firms with mandatory CSR disclosures perform less earnings management after the policy, particularly if analyst coverage is low. Overall, such research suggests that a firm’s financial reporting quality serves as the mechanism for CSR disclosures reducing information asymmetry. Lu et al. (2017) also argue that CSR disclosures mitigate information asymmetry having a favourable effect on the monitoring of managerial investment.

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4 Rezaee and Tuo (2019) further analyse and show that both the quality and quantity of sustainability disclosures are related to earnings quality as both the latter and ESG information can be expected to be relevant for investors and other users to ensure corporate reporting is trustworthy.
decisions. They find that issuing stand-alone CSR reports is associated with a higher value of cash holdings, i.e. managers are less likely to misuse cash for projects that are in fact value-destroying.

Only few studies to date have analysed the impact of sustainability reports on firms’ debt financing decisions. Tan et al. (2020) show that in the presence of higher levels of CSR disclosure firms are more likely to do their financing through public debt rather than private debt. In addition, bonds of such firms are issued at more favourable terms including lower bond yield spread and longer maturity. Also taking a debt perspective, Wang et al. (2020) show that voluntary CSR reporting in China reduces the positive effect that loan guarantees have on audit fees. They particularly focus on the disclosure of creditor protection, which forms part of a firm’s sustainability. Their findings suggest that the mitigating effect on increasing audit fees can be explained by the incremental information that such CSR disclosures provide.

3.2.2. Internal Effects of Integrated Reporting

Few studies to date have analysed the internal consequences of the adoption and quality of integrated as opposed to stand-alone sustainability reports, but they tend to support positive real effects in both mandatory and voluntary settings. Besides external effects, Barth et al. (2017) also analyse internal effects related to the integrated reporting mandate for firms listed on the Johannesburg Stock Exchange in South Africa. They find positive relationships between integrated reporting disclosure quality and future realized operating cash flows as well as less over- and under-investment. In addition, Obeng et al. (2021) show that integrated reporting can help restrain managerial opportunism by providing a more complete information set that can reduce potential agency problems between managers and investors. They analyse an international sample with firms from 35 countries and find a negative association of integrated reporting with agency costs (e.g. free cash flows and dividend payout ratio). The result suggests that integrated reporting has a disciplining role for managers.

3.2.3. Conclusion

To summarise the scientific evidence on the internal effects of non-financial reporting, one can conclude that overall, only selected studies have analysed how non-financial reporting may alter managerial behaviour (have “real effects”) and the majority of them focuses on stand-alone sustainability reports rather than integrated reports. A key theme of these studies is the expected higher transparency and provision of incremental information through CSR disclosures, which has been shown to mitigate information asymmetry. Through the latter the monitoring of managers increases resulting in improved use of cash, less earnings management, higher tax compliance and “bad” CSR companies exiting the market. However, for these effects to eventuate, proper institutions must be in place. In addition, particularly a mandate for large public firms to provide information on a firm’s sustainability may have unintended consequences such as the shift of risky CSR activities from regulated to unregulated firms as well as from larger to smaller firms (Christensen et al. 2021).
3.3. The External Perspective: Economic Effects of Non-Financial Reporting

3.3.1. External Effects of Stand-alone Reports and other Forms of ESG Disclosure

Drawing upon prior literature on CSR reporting, this section discusses the external capital market effects of sustainability reporting via stand-alone CSR reports or other forms of ESG disclosure (e.g. mandatory disclosure requirements as imposed by the EU NFRD). The external effects of integrated reporting will be discussed separately in Chapter 3.3.2.

As highlighted by prior review of the non-financial reporting literature, CSR disclosures deliver economic benefits for external users in terms of, e.g. improved stock returns and liquidity, lower risk and cost of equity (Michelon et al. 2015; Christensen et al. 2021). In the following, the broad academic evidence on the external effects of stand-alone sustainability reporting is structured along the following dimensions: a) capital (equity and debt) market and financial performance effects related to (the quality of) CSR disclosures, b) the effects depending on the type of non-financial information, c) the role of CSR disclosures as insurance-like protection and impact on firm reputation, d) the specific perception by non-professional investors contrary to overall capital market effects, and e) the external effects when moving from a voluntary to a mandatory CSR disclosure regime.

a. (Quality of) CSR Disclosures and Capital Market/Financial Performance Effects

Reviews of the CSR-specific literature with respect to capital market effects demonstrate a positive link between ESG disclosure and firms’ value and/or performance (cf. Christensen et al. 2021). Hope et al. (2016) find that analysts can make improved assessments of the fundamental firm risk when firm’s CSR disclosures are more specific. Such significant link makes clear that investors and stakeholders care about CSR information contained in non-financial reports.

A common feature of such body of literature is the reliance on measures of sustainability reporting that not only capture if the firms have issued a CSR report (or not). Instead of narrowing the analysis down to such a binary construct, researchers attempt to assess and evaluate the quality of CSR disclosures through the creation of own CSR disclosure indices or publicly available ratings. By that several studies have found a positive association of voluntary CSR disclosures and firm value/share price, which can vary depending on the quality of CSR disclosures and across countries depending on institutional features such as the level of democracy, regulation, and freedom of press (Plumlee et al. 2015; De Villiers and Marques 2016).

For the Chinese setting, Wang and Li (2016) differentiate between firms controlled by the government vs privately controlled entities. While for the overall sample the evidence suggests that first-time CSR reporting firms have higher market valuations, it is lower for government-controlled firms, i.e. their CSR activities come less as a surprise. In addition, the authors encourage firms to initiate specific CSR strategies as both CSR reporting quality and the perceived credibility of the information have a positive impact on market valuation. For high-quality disclosures, Gao et al. (2016) further show an increase in analyst coverage, institutional ownership, liquidity and lower yields to maturity when issuing bonds, particularly when firms also have a strong CSR performance. Further positive effects of high-quality CSR disclosures for the debt market are confirmed by Gong et al. (2018) for lower costs of corporate bonds in China.

Besides using disclosure indices that capture the content of ESG disclosure, studies are increasingly evaluating the CSR disclosure quality looking at textual characteristics linked to the style of disclosure including the readability, tone and length of CSR reports (Melloni et al. 2017). Prior research shows significant market reactions around the release of the reports as well as more accurate analysts’...
forecasts in the presence of high-quality CSR textual disclosures (Muslu et al. 2019; Du and Yu 2020). By identifying the unexpected portion separate from the expected portion, Cahan et al. (2016) also find a positive association of this incremental information via CSR reports with firm value. Further, based on textual analyses, researchers can specifically focus on pre-defined CSR-related words such as, e.g. “philanthropy” or “green technology”. Using such an approach, Cannon et al. (2020) find that firms with a higher amount of CSR keywords benefit from gross and profit margins being above industry-median over a longer time.

Given the large variety in sustainability reporting frameworks, empirical studies use data based on different standards as well. Several studies in different international settings like Europe or Asia find that firms using GRI reporting experience benefits related to higher firm profitability (Yang et al. 2019; Gonçalves et al. 2020). This suggests that firms may make selective CSR investments (and disclosure) to primarily increase their profits. However, this stance is challenged by Griffin and Youm (2018) who show that in such an environment, the view of firms seeking public legitimacy (i.e. acting only symbolically to maintain legitimacy in society) rather than being profit-driven seems to dominate. Specifically, they do not confirm the previous findings of a positive association of voluntary CSR disclosures with firm profitability but find publicly listed firms and those with more employees to provide such information. Those companies are particularly dependent on shareholders’ and analysts’ acceptance, which is consistent with the legitimacy argument.

U.S. studies exploit the data available from firms using industry-specific SASB standards that particularly focus on the financial materiality of sustainability information. They show well-rated firms concerning sustainability issues to beat those with poorer ratings on the same topics but only if the materiality criterion is met (Khan et al. 2016). Firms that disclose more sustainability information following SASB on a voluntary base further show higher price informativeness (Grewal et al. 2021). Positive effects of CSR disclosures through higher (future) financial performance are further confirmed for Islamic banks by Platonova et al. (2018). Finally, for French family firms Nekhili et al. (2017) observe less CSR information than for the non-family counterparts but a positive association with financial performance suggesting that family firms may particularly benefit from such disclosures.

Taken together, these results shed light on the fact that CSR disclosure quality matters and it is associated with different capital (both equity and debt) market and financial performance effects.

b. Type of Non-Financial Information

Non-financial information can comprise a range of different topics that is commonly summarised as ESG information. Several studies analyse how relevant environmental information is per se but also relative to or jointly with, e.g. social information. Most of the climate-related data includes GHG emissions and carbon performance and has been shown to be value relevant and negatively priced by investors (Griffin et al. 2017; Liesen et al. 2017). While firms with social disclosures benefit from higher market values due to higher expected future cash flows, this does not apply for environmental disclosures (Qiu et al. 2016).

However, when analysing environmental and social disclosures jointly, research findings suggest a negative association with total and idiosyncratic risk through higher transparency and trust-building (Benlemlih et al. 2018). In addition, both types of non-financial disclosures are positively associated with analyst following, i.e. there is an increasing interest in such information from professional market participants (Bernardi and Stark 2018).

There are specific mandatory non-financial disclosures as required by, e.g. the California Transparency in Supply Chains Act (CTSCA) of 2010. It demands large retail and manufacturing firms to disclose how they eliminate slavery and human trafficking in their supply chains.
The role of non-financial performance indicators and integrated reporting in achieving sustainable value creation

The problem of such mandatory ad-hoc disclosure is that firms may (mostly symbolically) comply but the quality of the information itself is rather poor. In addition, the market reacts particularly negatively for larger firms that are most affected (Birkey et al. 2018).

This is consistent with evidence based on the passage of Section 1502 of the Dodd-Frank Wall Street Reform and Consumer Protection Act. Prior research shows that the mandatory human rights disclosures of conflict mineral usage are negatively valued by investors.

This is specifically the case if firms have a record of previous human rights violations and if their disclosures are ambiguous (Elayan et al. 2021).

To summarise, a lot of research focuses on climate-related and environmental disclosures. Compared to social disclosures, capital market effects on the former are rather negative, similar to disclosures on human rights violations. This suggests that disclosure type is an important channel affecting the external effects of ESG reporting.

c. CSR Disclosures as Insurance-like Protection and Reputation Effects

Another channel through which CSR disclosures have been shown to affect financial performance is corporate reputation (Pham and Tran 2020). This can be achieved, e.g. through social disclosures like community involvement in developing countries, which increases a company’s brand and by that its financial performance (Malik and Kanwal 2018). Prior research further finds that additional factors like chief executive officer integrity strengthen the impact that CSR disclosures have on firm reputation, which explains why studies on the main effect between non-financial information and financial performance show different results (Pham and Tran 2020).

The link between CSR disclosures and firm reputation can be particularly important for companies in times of crises. Several studies have identified insurance-like protection effects via sustainability reports with firms in the presence of consistent CSR disclosures experiencing lower declines in firm value after an exogenous shock, own or intra-sector high-profile misconduct scandals and financial restatements (Zahller et al. 2015; Christensen 2016; Heflin and Wallace 2017; Zhang et al. 2020). Such negative events may also encourage firms to improve their CSR disclosure quality in terms of style by reporting in a more conservative tone and providing more concise and readable information.

Another important aspect to consider is the type of stakeholders that is processing the information. Pérez et al. (2017) show that the reporting-reputation link is dependent on the intensity of reporting to particular stakeholders including investors, regulators and the media. Similarly, when differentiating between non-professional and professional investors, only for the latter group stand-alone sustainability reports seem to have an impact on corporate reputation though (Axjonow et al. 2018).

In a nutshell, it seems that under certain conditions, CSR disclosure could play an insurance-like protection and have positive reputation effects for given users. The specific perception of individual investors is discussed in the next section.

d. Perception by Individual Non-Professional Investors

Experimental CSR evidence allows drawing conclusions on how (non-professional) investors perceive non-financial information and hence, make their decisions. Such stream of literature is different to the studies mentioned above that look at overall market effects and ignore the level of the individual.\(^5\)

\(^5\) Furthermore, the use of experimental research designs allows investigating actual cause-effect relationships that studies based on archival data cannot establish. This is due to the manipulation of pre-determined factors (e.g. providing non-financial information or not) where one group of participants will be the “treatment” group and the other one the “control” group. All participants are then directly
The results of the experimental studies suggest that non-professional investors may use different approaches when processing CSR information. Recent research by Guiral et al. (2020) finds that immaterial and positive CSR issues are processed via heuristics, but material or negative CSR issues are processed more systematically. One can also differentiate between types of investors: those with a focus on the “numeracy” of the reports (i.e. investors that more naturally process numerical information) are more willing to make investments in the firm when the strategy frame matches the presentation style of a company’s CSR report (Elliott et al. 2017).

Investors are also said to react more strongly to ESG practice disclosure that is bad rather than good (Crifo et al. 2015) but to respond positively to CSR investment and disclosure when the benefits to society are emphasised rather than the cost (Martin and Moser 2016). The presence (or absence) of a negative event may further alter how investors process management’s intent for CSR (as well as CSR assurance) in their valuation: while investors generally focus on the promise of future cash flows (related to financial performance and societal benefits), ethical judgment and assurance become more important once a negative event occurs (Stuart et al. 2021).

Overall, CSR studies using experimental research designs show that investors process CSR information for their judgment and valuation, ultimately leading to effects such as on the willingness to invest.

e. Changing from Voluntary to Mandatory CSR Disclosures

Findings on the effects of changing a CSR regime from voluntary to mandatory non-financial disclosure are mixed. On the one hand, several studies observe negative effects on share price once the mandatory regulation has been announced as investors seem to associate higher costs with such a mandate (Grewal et al. 2019; Mittelbach-Hörmanseder et al. 2021). Further, for the Chinese mandatory CSR reporting setting, Chen et al. (2018) find a negative impact on future profitability resulting from improved environmental outputs. On the other hand, Ioannou and Serafaim (2017) find an increase in firm valuations following more CSR disclosures after they become mandatory, which they explain by improved transparency.

To summarise, results from prior research shed light on the importance to consider many complementary factors including mandatory vs voluntary nature of reporting to open the black box of CSR reporting effects. This provides insights to both users and preparers of CSR disclosures who want to understand the economic consequences of CSR disclosures.

3.3.2. External Effects of Integrated Reporting

In an extensive review of prior research on integrated reporting, Velte (2021) summarises the studies that cover consequences of jointly reporting financial and non-financial information on firm value. The review indicates that both the adoption of integrated reporting and (disclosure) quality are positively linked with total performance measures (e.g. Tobin’s Q, Return on Assets, Return on Equity).

Among the first studies to assess capital market consequences of mandatory adoption of integrated reporting in the South African context, Baboukardos and Rimmel (2016) analyse the value relevance of book value of equity and earnings post-King III Report. While the value relevance of earnings increases, they find the opposite for net assets, which may be related to unrecognized liabilities and risks that become visible under integrated reporting. A positive impact of the adoption of integrated reporting on firm value has also been documented in later contributions in the mandatory South African regime (Barth et al. 2017; Zhou et al. 2017; Bernardi and Stark 2018; Caglio et al. 2020).

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asked to perform a specific task or make an assessment so that differences between the treatment and control group can be compared and referred back to the manipulation.
However, such effects are typically shown when considering “integrated reporting (disclosure) quality” as the key driver of such a positive effect rather than “integrated reporting adoption”.

A seminal contribution in this research area is the study of Barth et al. (2017) also exploiting the mandatory setting of the Johannesburg Stock Exchange in South Africa. As discussed in Chapter 3.2.2., they analyse both external and internal effects of integrated reporting. For the former they demonstrate a positive and significant relationship between integrated reporting quality and firm value, and particularly on liquidity and expected future cash flows (but not cost of capital).

Further external effects related to integrated reporting have been shown for analysts as higher integrated reporting quality (stronger alignment with the <IR> Framework) increases analyst forecast accuracy and analysts following; as such, integrated reporting can be said to provide information that is incrementally useful (e.g. additionally to financial but also stand-alone sustainability reports) (Zhou et al. 2017; Bernardi and Stark 2018).

Similarly, Caglio et al. (2020) provide empirical evidence of the capital market benefits associated with the disclosure quality of integrated reporting (and its external assurance) in the South African setting. They show that specific integrated reporting stylistic textual attributes (i.e. “readability” and “conciseness”) are associated with a significantly higher market valuation and stock liquidity which suggests that integrated reporting users seem to appreciate reports that are readable, concise and focused. However, they also show that “tone bias” (i.e. a disclosure strategy based on the use of an overly optimistic tone) is associated with less dispersed analysts estimates suggesting that integrated reporting preparers may opportunistically hint at tone management strategies targeting analysts.

Such results are in line with prior research showing that integrated reporting could be used as the locus of impression management strategies targeting to manipulate audience perceptions of the actual corporate behaviours, especially in voluntary disclosure settings (e.g. Melloni et al. 2017). Not surprisingly, several studies find that both users and preparers only see limited benefits related to integrated reporting. This is possibly due to such type of report not being part of the traditional investment thinking and preparers mainly facing unclear guidance and high costs of preparation (Chaidali and Jones 2017; Slack and Tsalavoutas 2018).

On the one hand, the above-mentioned results suggest that besides existing reporting mechanisms integrated reporting provides additional useful information to the capital market. On the other hand, they raise awareness (and concerns) on the importance of ensuring the credibility of integrated reporting disclosure (Wang et al. 2020). An important mechanism to ensure integrated reporting credibility is its external assurance. Similar to the voluntary third-party assurance of a CSR report, external assurance of integrated reports could indeed play a key role to enhance their quality and credibility and bring about economic effects in both mandatory and voluntary settings. As such Maroun (2019) finds that an increase in the number of elements of an integrated report, being subject to external assurance is associated with higher quality reporting.

Caglio et al. (2020) provide evidence that assurance on integrated reporting moderates the negative effects of low disclosure quality: for integrated reports of low readability, the negative effects on market value are mitigated through external assurance. This is also the case if reports are too long and by that have a negative effect on liquidity. Finally, the dispersion of analyst forecasts decreases with integrated reporting assurance, which is consistent with such assurance serving as a tool to improve the credibility of non-financial information. Reimsbach et al. (2018) provide evidence that obtaining assurance of non-financial disclosures positively affects professional investors’ evaluation of a firm’s sustainability performance, results in a higher weighting of the information, and leads to higher investment-related judgments. From an investor’s perspective, the assurance therefore results in users putting more
weight on the information; however, such result is stronger in the presence of a stand-alone report as opposed to an integrated report (Reimsbach et al. 2018).

3.3.3. Conclusion

Academic insights on the external effects of non-financial reporting can be summarised as follows: Many studies establish positive capital (equity and debt) market effects such as higher stock returns, liquidity, analyst forecast accuracy, lower cost of equity and debt as well as higher financial performance related to CSR disclosures and particularly the quality of the information.

However, findings can highly vary depending on the setting (e.g. institutional environment, level of democracy, voluntary vs mandatory regime, sustainability reporting standards). Further, the type of disclosure (social vs environmental) appears to have an impact: for instance, some environmental disclosures have negative capital market effects, contrary to most social disclosures. CSR disclosures can have an insurance-like protection, particularly in times of crises as there is a direct link with corporate reputation. Particularly non-professional investors may process sustainability information differently depending on its presentation and whether it is assured or not. The evidence for integrated reports is similar in that positive external effects seem to dominate but with the potential risk of firms engaging in impression management, which may be mitigated through assurance.

3.4. The ESG Perspective: Non-Financial Effects of Non-Financial Reporting

3.4.1. ESG Effects of Stand-alone Reports and other Forms of ESG Disclosure

Academic insights suggest that sustainability disclosures are linked to higher CSR performance in both mandatory and voluntary disclosure settings. The focus is similar to the analysis on real effects in Chapter 3.2 (e.g. impact on managerial investment decisions) but in the following, studies will be highlighted that explicitly find an impact on a firm’s CSR performance or activities.

For the European NFRD, Fiechter et al. (2020) find that firms already start increasing their CSR activities in anticipation of the mandatory disclosure requirement, particularly if they disclosed less information on CSR in the past. The evidence is consistent with benchmarking having a positive influence on firms’ engagement in sustainability. Such peer pressure is confirmed by Johnson (2020) who finds that companies improve compliance and have less work injuries when they are in close proximity to firms whose violations of occupational work-safety have been made public. Particularly once they can observe and benchmark their own GHG performance with that of competitors, firms reduce their GHG emissions, also due to increasing stakeholder pressure when such information is disclosed (Downar et al. 2020; Tomar 2021).

For different other regulatory environments that mandate CSR disclosures like in the EU and Canada for oil, gas, and mining firms or in China, studies have found that the release of non-financial information results in less extraction activities, industrial wastewater, sulfur dioxide emission and higher work-safety particularly when compared to firms not subject to the mandate (Christensen et al. 2017; Chen et al. 2018; Rauter 2020).

Concerning voluntary disclosure regimes, voluntary carbon disclosure following the CDP, has been shown to be positively related to environmental performance (Luo and Tang 2014). Similarly,

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6 Depoers et al. (2016) find significantly different GHG amounts disclosed in corporate reports vs CDP disclosures with the latter showing higher amounts.
Christensen et al. (2016) provide evidence that firms with voluntary CSR disclosures are less likely to be involved in future corporate misbehaviour resulting in lawsuits. Internally, voluntary environmental disclosure can result in sustainability issues being incorporated into organisational values in a more structured way, i.e. external disclosure and internal changes going hand in hand (Passetti et al. 2018). In more complex supply chains, such positive social and environmental effects can only be achieved if the buying and supplying firm cooperate accordingly (Kalkanci and Plambeck 2020).

Furthermore, while several prior studies find positive non-financial effects on CSR activities and performance, others highlight that firms may deliberately provide information to obfuscate and for impression management. Clarkson et al. (2020) show that certain stylistic disclosure attributes in CSR reports can be used as a base to accurately predict a firm’s CSR performance. Further, Du and Yu (2020) find that if CSR disclosures are more readable and have a more optimistic tone, future CSR performance increases. However, this does not necessarily imply that the information provided is complete and credible as firms may make the disclosed information unnecessarily hard to read, understand and particularly to blur unfavourable news to influence environmental ratings and the perception by users (Fabrizio and Kim 2019). Even if environmental information such as waste gas, wastewater and solid waste is shown and slightly reducing waste itself, the disclosure may be insufficient and of low quality (Huang and Chen 2015). An additional risk is that time-consuming standards as those by the GRI may result in firms focusing more on CSR representation rather than CSR performance itself (Vigneau et al. 2015).

Overall, it is shown that both mandatory and voluntary sustainability disclosures bring about positive ESG effects on specific CSR activities. However, this does not mean that firms are in general more committed to overall CSR and/or less irresponsible (Jackson et al. 2020).

3.4.2. ESG Effects of Integrated Reporting

Finally, emerging research has started looking at the ESG consequences of integrated reporting offering evidence that integrated reporting may also lead to better non-financial performance and/or broader effects on society and non-financial stakeholders.

Although integrated reporting has been shown to be linked with several positive effects and claims to provide the most holistic type of report, Maniora (2017) finds that there are several factors influencing the benefits of integrated reporting, e.g. companies’ level of ESG management tools already being implemented and national legal requirements for CSR disclosures. When considering the latter, the link between integrated reporting and CSR performance can be actually negative compared to a stand-alone sustainability report.

For an analysis on the impact of integrated reporting on different stakeholders, Caglio et al. (2020) focus on ESG controversies score (i.e. capturing how much a company is exposed to negative ESG events in the global media). They find that the quality of integrated reporting is not directly linked to such a measure of ESG performance, but the presence of assurance moderates the relationship. Hence, particularly for a more diverse set of stakeholders, the assurance of integrated reporting is relevant.

Interviewing integrated reporting preparers, Lai et al. (2018) find that integrated reporting particularly allows reaching out to a broader audience through plainer messages. Despite shareholders being a prime user of the reports, integrated reporting allows firms being accountable also towards other stakeholders, which further improves the dialogue between the two parties.

Hence, evidence on the effects of integrated reporting demonstrates the existence of benefits along ESG dimensions.
3.4.3. Conclusion

Overall, sustainability disclosure can positively impact ESG performance and factors (i.e. “non-financial” effects) but such effects seem to be conditioned by a number of factors including the quality of disclosure, the presence of assurance and additional institutional characteristics and, in particular, the presence of mandatory vs voluntary disclosure regime.

Some evidence is offered in support of the positive relationship between integrated reporting and ESG outcomes but depending on several factors (Maniara 2017; Lai et al. 2018; Caglio et al. 2020). However, more research is needed to understand the ESG effects of integrated reporting as well as its comparative advantage against traditional stand-alone CSR reporting (Bucaro et al. 2020).

Both sustainability reporting and integrated reporting may become a useful tool for financial and non-financial stakeholders to understand what companies consider as material ESG issues from a financial perspective and how they manage them (Eccles and Krzus 2014). By embracing such broader stakeholder perspective, it can be assumed that a proper reporting tool such as integrated reporting can provide valuable information to both the capital market and other non-financial stakeholders.

Nevertheless, improved market valuation, decision-making as well as ESG benefits are realistic only if ESG information is of high (disclosure) quality and credible. Indeed, greenwashing is a crucial challenge in both CSR reporting and integrated reporting, especially in voluntary disclosure settings (Melloni et al. 2017). Hence, it is crucial for regulators to consider mechanisms that ensure not only non-financial reporting/integrated reporting adoption per se, but also its disclosure quality and credibility (Wang et al. 2020).
4. DIFFERENCES IN NON-FINANCIAL PERFORMANCE DISCLOSURE CONTENT, FORMAT, AND REGULATORY ENVIRONMENT

KEY FINDINGS
Companies can report non-financial information with different content and using different formats. They can disclose the information using key performance indicators or narratives, in an integrated or a stand-alone format, assured or unassured. Such disclosure choices have important implications as they influence the information processing of the disclosure users, the valuation by the capital market, the operations of the company as well as its environmental, social and governance (ESG) performance.

Besides, the regulatory environment in which companies operate determines the degree of freedom for companies’ choices. The disclosure of non-financial information may be mandatory or voluntary and it can be principles- or rules-based. Thereby, the regulatory regime also has significant effects as it impacts the degree of comparability, transparency, and accuracy of the non-financial information provided.

4.1. Research Aim and Design
While Chapter 3 focusses on the effects of non-financial reporting more in general, this Chapter 4 identifies different specific dimensions of sustainability reporting that may have varying external, internal, and ESG effects. The focus is to highlight how CSR reports can differ in terms of disclosure content (KPIs vs narratives), format (integrated report vs stand-alone report), credibility (presence or absence of assurance), framework (principles-based vs rules-based) and requirement (mandatory vs voluntary) and how this may result in different effects.

Capturing such variation and its impact on sustainable value creation is particularly important considering the NFRD and its supplementing Guidelines. Via the NFRD, the EU aims at ensuring greater transparency and making companies financially and non-financially more resilient. Further it targets at achieving increased trust among stakeholders in the long-term as well as a more robust growth and employment. It sets out mandatory requirements for the disclosure of non-financial information for companies within its scope with a (largely) principles-based approach.

Companies falling within the scope of the EU NFRD should include non-financial KPIs relevant/material to their particular business. The information disclosed shall as a minimum include information on environmental matters, social and employee matters, respect of human rights as well as anti-corruption and bribery matters. The Directive is specified by two non-binding Guidelines that should support firms in its implementation but without imposing a legal obligation to adopt them.

According to the first non-binding Guideline 2017/C 215/01, the non-financial information should include both material indicator-based disclosures and appropriate narratives making those more understandable. They should be useful, considering the characteristics of a company, and be consistent with actual metrics used in the internal management and risk assessment of a company.

7 As such there may be some overlap in the studies being presented in the following with those in the previous chapter but they are discussed with a different focus here.
Further, they should be material, both at a general and sectoral level, as well as useful for stakeholders. However, the Guideline does not prescribe the optimal number of KPIs to disclose.

The second non-binding Guideline 2019/C 209/01 provides additional guidance to facilitate comparability. It suggests as good practice to disclose all KPIs in one place. Further it recommends the disclosure of 14 KPIs related to GHG emissions, energy, physical risks, products and services as well as to green finance. For each of the KPIs, the guideline suggests the units of measure and provides examples as well as rationales. In addition, companies are asked to consider sector-specific, environmental, and social indicators as well as indicators related to opportunities.

To summarise, companies should disclose their business model, policies and their outcomes, main risks as well as key performance indicators. Importantly, the EU NFRD does not mandate whether to disclose the non-financial information using KPIs or narratives, in an integrated or a stand-alone format, and assured or unassured. This high degree of freedom in companies’ choices can influence the degree of comparability, transparency, and accuracy of the non-financial information provided.

Under these premises, in the discussion of the appropriate or most efficient degree of freedom, the review of prior research suggests that several characteristics of non-financial reporting should be considered:

- **Non-financial reporting has a broader potential audience** than financial reporting. On the one hand, investors and other shareholders who use financial reports for their financial analyses are increasingly also demanding and affected by non-financial information (Dong 2017; Kramer 2020). On the other hand, there are other stakeholder groups that are interested in the non-financial information but with few experience in reading corporate reports, e.g. consumers interested in a company’s environmental policy (Christensen et al. 2021);

- **Non-financial information includes a wide range of potential topics** (Christensen et al. 2021). The topics significantly differ across countries, industries, and firms. For example, Christensen et al. (2018) find that in 56% of U.S. industries under review in 2015, there is no common topic disclosed by at least half of the listed companies in a non-boilerplate fashion;

- **Non-financial information is not necessarily measurable or monetizable**. Some non-financial information like carbon dioxide emissions is disclosed by several companies. However, even for those KPIs, there is no uniformity in the scope included, in the measurement, or in the formula applied (Christensen et al. 2021). The lack of adequate measurement tools is one important factor leading to inconsistent and incomplete information (Chiba et al. 2018). In line with that, Berg et al. (2020) find that more than 50% of the overall divergence in ESG ratings of the most prominent rating agencies is explained by differences in the measurement rather than the scope of weight;

- **Underlying CSR activities are mostly voluntary**. Thereby even in a mandatory regulatory environment, companies report based on own underlying voluntary choices. Therefore, a voluntary regulatory environment can be considered to be endogenous in two ways. Companies voluntary choose their (i) (level of) CSR activities and (ii) their reporting on those (Christensen et al. 2021);

- **Non-financial reporting attempts to quantify externalities** generated by a company (Christensen et al. 2021). Those externalities, the impact of a company on the environment and society, can be either positive, e.g. tax payments and increased employment or negative, e.g. air pollution and related shorter life-expectancy; and
Non-financial reporting responds to a broad range of interests and has many objectives, which can quickly change over time and vary across companies (Christensen et al. 2021). There are several theories why companies disclose non-financial information voluntarily.

Among others, those include legitimacy theory (symbolic act to maintain legitimacy in society) and stakeholder theory (respond to external stakeholder pressure). Further, companies might disclose non-financial information for greenwashing and impression management purposes (Boiral 2013; Liesen et al. 2015; Diouf and Boiral 2017; Borgstedt et al. 2019).

The following discussion about different managerial choices in non-financial reporting takes these characteristics into consideration.

4.2. Disclosure Content: Non-financial Performance Indicators vs Narrative Disclosures

Companies’ choice of disclosure content (KPIs vs narratives) can affect the disclosure quality and by that have effects on the capital market, the operations of companies and their ESG performances.

4.2.1. Disclosure Quality and Measures

According to prior studies, immaterial or unspecified disclosures can reduce the usefulness of information to users of the report (Khan et al. 2016). However, most CSR topics disclosed can be considered boilerplate (cf. Sustainability Accounting Standards Board 2017 study on U.S. Securities and Exchange Commission filings): Companies are reporting information neither tailored for the individual situation nor the circumstances of a company. Those boilerplate disclosures are specifically a problem inherent in verbal disclosures (Christensen et al. 2018; O’Dochartaigh 2019). Companies appear to use narratives for storytelling targeted at specific stakeholders and according to their own performance (Nwagbara and Belal 2019; O’Dochartaigh 2019; Morrison and Lowe 2021). Studies find that worse financial, environmental and social performers disclose information of worse quality, i.e. of less certainty and more optimism (Cho et al. 2010; Hummel and Schlick 2016; Melloni et al. 2017). Further, companies disclose narratives according to the verifiability of information provided. Information that is easily verifiable shows higher quality than information that can only be verified in the future as well as information that users might never be able to verify (Comyns and Figge 2015).

The use of KPIs does not necessarily improve transparency. Companies appear to have weaknesses in quantifying non-financial KPIs and targets (Velte 2021). Further, they provide various non-financial KPIs in a manner that makes comparisons difficult. For example, many companies present KPIs in various sections of the report but do not provide appropriate explanations of why and how those are used by the management. A prior study finds that in 2019 only 41% of the large public interest entities in Poland disclose the non-financial KPIs in a coherent and clear summarised form; only 12% explain their KPI choice; only 33% disclose their measurement methods; and only 19% supplement the KPIs with narratives explaining the importance for decision-making (Zarzycka and Krasodomska 2021). Similarly, in a Canadian setting, another study observes numerous inaccuracies in measurement tools in the majority of reports (Chiba et al. 2018). In those situations, narrative disclosures might be more informative and more suited to meet information needs despite the huge amount of managerial discretion regarding content.

Overall, KPIs’ disclosure quality primarily appears to suffer from opacity and limited measurability while narratives’ disclosure quality appears to be reduced by high discretion, storytelling, and boilerplate information. Companies are found to be reluctant to report high-quality environmental information in the absence of guidance and strong definitions.
Some researchers argue that this lack of quality is primarily caused by the many different initiatives and frameworks of which none has been universally adopted (Gibassier et al. 2020; Pitrakkos and Maroun 2020; Senn and Giordano-Spring 2020).

From the point of view of users and preparers, prior studies show that non-financial disclosure quality is primarily determined by the range of information provided and measures used. Other criteria such as the range of themes or subjects addressed, or the volume disclosed are considered less important (Helfaya et al. 2019; Table 1). Such a study also shows that within the disclosure measures, the most important KPIs are related to forward looking information.

Table 1: Insights on the importance of the different disclosure measures and quality dimensions for users and preparers

<table>
<thead>
<tr>
<th>Quality Dimensions</th>
<th>Disclosure Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Range of information provided</td>
<td>1. Future plans and targets using forward-looking measures</td>
</tr>
<tr>
<td>2. Range of measures used</td>
<td>2. Quantitative non-financial disclosure</td>
</tr>
<tr>
<td>3. Use of external reporting standards</td>
<td>3. Quantitative financial disclosure</td>
</tr>
<tr>
<td>4. The inclusion of an environmental audit</td>
<td>4. Specific narrative disclosure</td>
</tr>
<tr>
<td>5. Range of themes or subjects addressed</td>
<td>5. General narrative disclosure</td>
</tr>
<tr>
<td>6. Range of visual presentation tools used</td>
<td></td>
</tr>
<tr>
<td>7. Volume of disclosure</td>
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</table>

Source: Based on Helfaya et al. 2019.

Although narrative disclosures are increasingly used, preparers and users appear to prefer quantitative disclosures (Helfaya et al. 2019; Michelon et al. 2021). Future plans and targets are considered to be even more important (Table 1). However, Moussa et al. (2021) provide evidence that companies tend to disclose symbolic environmental targets. They find high variability and inconsistencies in their reporting.

Finally, the content disclosed (using KPIs or narrative) is relevant but also its presentation style (e.g. disclosure tone, readability) as discussed in Chapter 3. They can not only influence companies’ market valuations but also have an impact on their operations and ESG performance (Caglio et al. 2020). Despite the content disclosed, the linguistic features of narratives are valued by the capital market. In general, better linguistic features, i.e. longer, less complex and better readable reports written at a more advanced level, in a neutral but friendly, cooperative and ambitious tone are associated with higher market values (Clarkson et al. 2020). This link is found to be independent of underlying CSR performance. Rather, Du and Yu (2020) find that a better readability and a more optimistic tone are indicators for improved future performance. Improved readability is found to be achieved by visual and presentation tools and less structural presentation techniques (Helfaya et al. 2019; Stone and Lodhia 2019).

4.2.2. The Effects of Non-financial Performance Indicators and Narratives

Disclosures related to environmental performance such as carbon emissions are among those metrics most often disclosed by companies. For example, in 2020, more than 76% of the 250 world’s largest companies by revenues disclosed carbon reduction targets in their reporting (KPMG 2020a). This is also in line with what is suggested by Guideline 2019/C 209/01: Companies primarily disclose information focussed on environmental matters. The capital market values the disclosure of GHG emissions, carbon abatement investments, environmental provisions, and emission mitigation strategies.
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- Companies disclosing higher GHG emissions have a lower market value. Specifically, the allocation shortfall is found to be relevant: the emissions exceeding allowances under a cap-and-trade system and the extent to which the related compliance costs cannot be passed on to the customers (Clarkson et al. 2015);

- Carbon abatement investment disclosures are priced in investor decisions contingent on national climate policies. In countries with stringent climate change policies, they enhance firm value. In contrast, in countries without such policies, they are considered as value-destroying (He et al. 2021);

- Investors rather rely on environmental performance information based on ratings of companies disclosing environmental provisions. They are perceived as a tool to disentangle the benefits and costs of the ESG performance commitment (Baboukardos 2018). Further, the disclosure of environmental liabilities is associated with lower bid-ask spreads and reduced analyst forecasts errors (Paananen et al. 2021); and

- For companies with CSR performance above average, the capital market’s assessment does not differ based on the disclosed emission strategies. However, for those with CSR performance below average, operational change strategies are more valued by non-professional investors than purchasing offset strategies. They are perceived to be more environmentally and socially responsible (Johnson et al. 2020).

Concerning the social dimension, interestingly, environmental and social responsibility disclosures are disassociated. Companies that increase environmental disclosures do not necessarily increase social disclosures (Broadstock et al. 2018). Despite this disassociation in disclosure practice, the capital market generally appears to value higher social disclosures. For example, companies with higher social disclosures are found to have a higher market value. This link is driven by expected higher cash flow growth rates (Qiu et al. 2016). However, whether the disclosure of a social metric is favourable depends on the CSR performance revealed. For gender pay gap metrics, Austin et al. (2021) find that investors are only more willing to invest in a firm with gender pay gap equality. In contrast, when there is a gender pay gap, it is rather favourable for a company not to disclose any information.

The provision of governance disclosures appears to be perceived favourably by the market as well. Hope and Lu (2020) provide evidence suggesting that companies with related-party governance disclosures tend to have lower cost of capital. The disclosure is perceived to likely enhance a firm’s governance.

Studies find that the increased disclosures and use of non-financial KPIs are not driven by shareholder pressure. Rather the quality of environmental KPI disclosures is found to be higher with pressure from ecologists (Zarzycka and Krasodomska 2021). In addition, the use of social performance indicators of a company appears to be increased for economic reasons and with top management’s commitment (Lisi 2018).

Guideline 2019/C 209/01 mentions several benefits for companies reporting climate-relevant information. In line with this, studies find that the disclosure of specific KPIs and narratives affect the reporting company. It increases companies’ awareness of the underlying issue and thereby their performance (“Outside-in” effect): Qian and Schaltegger (2017) find that companies disclosing GHG emissions, improve their performance subsequently. This link is observed irrespectively of the motives underlying the disclosure decision, e.g. legitimizing poor performance. However, it is relevant how the respective issue is reported. When companies need to present figures more prominently, they increasingly act on behalf of those (Christensen et al. 2017).
4.2.3. Conclusion
Companies can disclose non-financial information using KPIs, narratives or both. When analysing them separately, both have advantages and disadvantages inherent to them. The disclosure quality of KPIs appears to suffer from opacity and limited measurability while that of narratives appears to be reduced by high discretion, storytelling, and boilerplate information. Disclosures are primarily focussed on environmental matters. The content and presentation style of KPIs and narratives influence companies’ market valuations and operations. Such results have important policy implications. As the EU NFRD and its supplementing Guidelines 2017/C 215/01 and 2019/C 209/01 are non-binding, companies have high flexibility in disclosing KPIs and narratives.

4.3. Disclosure Format: Integrated vs Stand-alone

4.3.1. The Choice of the Disclosure Format
The choice of the reporting format (i.e. integrated vs stand-alone report) is an important strategic decision with significant economic and ESG effects. Neither the EU NFRD nor its supplementing Guidelines suggest companies to disclose non-financial information via a specific format, i.e. in an integrated or stand-alone manner. Rather flexible approaches are perceived being necessary considering the fast-evolving reporting landscape. However, Guideline 2019/C 209/01 encourages companies to integrate climate-related, non-financial and financial information when appropriate, supporting a de facto adoption of the integrated reporting format.

However, integrated and stand-alone reporting are different concepts. Integrated reporting is an innovative approach to business reporting. It aims at integrating financial with non-financial information and perspectives along the value chain. Specifically, it attempts to provide concise information on the links among all available forms of capital. In contrast, stand-alone reporting is rather a complement to the traditional financial reporting. Non-financial and financial reporting are presented separately. While stand-alone reports include non-financial information relevant for all stakeholders, integrated reporting is rather an information tool primarily for financial stakeholders (Velte 2021). That is still the case, although the preparers of integrated reports attempt to establish meaningful dialogues with various stakeholders (Lai et al. 2018).

Overall, as discussed previously, the evidence on the advantages and disadvantages of both disclosure forms is contradictory. Some researchers expect that integrated reporting is the next step in corporate reporting, complementing or even substituting stand-alone reporting. It is argued that an increasing number of companies adopts the integrated reporting practice. Therefore, when left to the market, it will become the new reporting norm (Stubbs and Higgins 2018; Velte 2021). In addition, the market valuation implications of the interaction of non-financial and financial information are used as arguments to support the call for more integrated reporting (Baboukardos 2018). However, other researchers argue that companies do not benefit from changing from stand-alone to integrated reporting, specifically as time and financial resources are needed to adopt it (cf. Maniora 2017 in Chapter 3.4.3; Velte 2021).

4.3.2. The Effects of Integrated vs Stand-alone Reporting
The disclosure format affects the relevance of non-financial information perceived by users. Since integrated reporting rather emphasises the financial information, stakeholders may consider the non-financial information to be less important and tend to reduce the weight given to the non-financial information.
In contrast, when non-financial and financial information is presented separately, investors appear to rather take a “multidimensional perspective” (Maniora 2017; p. 665; Bucaro et al. 2020).

Non-professional and short-term investors are generally not influenced by non-financial information (Dong 2017; Moss et al. 2020). Whether presented in an integrated or separate report does not affect their reliance on that information (Dong 2017). Professional and longer-term investors increasingly centre their investment approaches on non-financial information though, and are thereby more strongly affected by them (Dong 2017; Kramer 2020). However, professional investors, i.e. fund managers and analysts consider the usefulness of integrated reports as low. Slack and Tsalavoutas (2018) find that integrated reporting provides better information on linkages related to value creation, strategy, and risk. But they identify several weaknesses like lack of familiarity with integrated reporting offsetting the benefits (Table 2).

**Table 2: Summary of professional equity market views on the decision usefulness of integrated reporting (<IR>)**

<table>
<thead>
<tr>
<th><strong>Strengths</strong></th>
<th><strong>Weaknesses</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Linkage of value creation underpinned by firm strategy in reporting.</td>
<td>Lack of critical mass in use and familiarity with &lt;IR&gt;.</td>
</tr>
<tr>
<td>Reporting of key performance indicators reflecting strategy and core business areas.</td>
<td>Traditional deference to annual report format and statutory accounting information.</td>
</tr>
<tr>
<td>Linkage of risks to value creation and relevant capitals in the business.</td>
<td>Lack of measurability across the &lt;IR&gt; Framework and use of more qualitative reporting.</td>
</tr>
</tbody>
</table>

**Source:** Based on Slack and Tsalavoutas 2018.

Further, the integrated reporting of non-financial information changes the relative value relevance of financial accounting information. A broader range of capitals, i.e. human, social and natural capital becomes more relevant. Potential risks and unrecognised liabilities are revealed and can be measured more reliably. Consistently, Baboukardos and Rimmel (2016) find that when presented in an integrated format, investors consider earnings information as more and net assets as less value relevant (Baboukardos and Rimmel 2016).

Finally, both the adoption of integrated reporting as well as the adoption of stand-alone non-financial reporting are generally associated with higher CSR activity. However, when directly compared, CSR performance is slightly lower among integrated reporting companies. Further, Maniora (2017) finds that companies that report information separately, integrate ESG issues more in their core business model.

**4.3.3. Conclusion**

Companies can disclose non-financial information via various formats, i.e. integrated or stand-alone sustainability reports. Conceptually, integrated and sustainability reporting are different. In stand-alone reports non-financial information is separately disclosed for the use of all stakeholders. In integrated reports, non-financial information is integrated with financial information primarily for the use of investors. Based on whether information is disclosed in an integrated manner or separately, the relevance of the non-financial information for stakeholders as well as for the integration in the business...
model is affected. Despite its increasing popularity, integrated reporting appears to have some disadvantages. However, those might be caused by a lack of familiarity with the type of the report.

4.4. Disclosure Credibility: Assurance vs Non-Assurance

4.4.1. The Choice to Assure Non-financial Reporting

To ensure credibility of ESG information, the decision to assure non-financial information is crucial. Although not required by regulation such as the EU NFRD (and the supplementing Guidelines), several companies voluntarily obtain third-party assurance of the non-financial information disclosed. In 2020, 71% of the 250 world’s largest companies by revenue invested in independent assurance of their non-financial information (KPMG 2020a). Such results are not surprising given that managers perceive that the assurance results in a higher credibility of the information disclosed and a higher quality of the data. Further, they expect the providers of non-financial information assurance to support and initiate internal processes (Briem and Wald 2018). However, because of the voluntary nature, companies can use assurance services based on their discretion. For example, Sethi et al. (2017) find that companies with CSR reports of higher quality more likely have those reports assured. Companies may decide against obtaining an assurance fearing unpleasant assurance results and higher costs. The latter can especially be a burden for small companies (Al-Shaer and Zaman 2018; Briem and Wald 2018).

Besides the managerial discretion on whether to obtain third-party assurance, there are several ethical issues underlying the assurance process (Boiral et al. 2019):

- The familiarity with the audited company;
- The interdependency between consulting and assurance activities;
- The symbolic character of the verification process; and
- The commercialised relationship between auditors and companies.

Another issue inherent to the voluntary nature of obtaining third-party assurance is its inconsistent application. There is no uniform procedure for the assurance of non-financial reports, specifically for integrated reports. This is due to inconsistent definitions of the type of report and the vague legal situation (Briem and Wald 2018). Further, the inconsistency arises from the differences in providers' understanding of the assurance practice (Channuntapipat et al. 2019). By that it becomes more difficult for stakeholders to understand the scope and nature of assurance engagement (Ackers and Eccles 2015).

Such considerations are of particular importance for policy makers. In particular, for companies falling within the scope of the EU NFRD. Even if it is not compulsory, Guideline 2017/C 215/01 suggests independent external assurance as a tool to make information fairer and more accurate. Auditors should examine the existence of a non-financial statement or separate report. Furthermore, the assurance of the information included can be required by the Member States.

4.4.2. Assurance, Disclosure Quality and Credibility

Assurance is considered as an important governance mechanism which mitigates concerns about the credibility of non-financial information. Users of the disclosed information consider assurers as one of the most influential credibility factors. In contrast, preparers and assurers rather emphasise the importance of management competence (Wong and Millington 2014; Xiao and Shailer 2021; Table 3; Al-Shaer and Zaman 2018; Helfaya et al. 2019).
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Table 3: Comparison of the Top 10 variables for the importance in assessing the credibility of sustainability reporting by users, preparers, and assurers

<table>
<thead>
<tr>
<th></th>
<th>Users</th>
<th>Preparers</th>
<th>Assurers</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Oversight and accountability</td>
<td>Competence of management</td>
<td>Competence of management</td>
</tr>
<tr>
<td>2</td>
<td>Presence of assurance</td>
<td>Expertise of management</td>
<td>Track record of management in providing credible sustainability information</td>
</tr>
<tr>
<td>3</td>
<td>Competence of management</td>
<td>Trustworthiness of management</td>
<td>Trustworthiness of management</td>
</tr>
<tr>
<td>4</td>
<td>Trustworthiness of management</td>
<td>Honesty of management</td>
<td>Expertise of management</td>
</tr>
<tr>
<td>5</td>
<td>Expertise of assurance provider</td>
<td>Track record of management in providing credible sustainability information</td>
<td>Expertise of assurance provider</td>
</tr>
<tr>
<td>6</td>
<td>Balanced Tone</td>
<td>Consistency with information from other sources</td>
<td>Honesty of management</td>
</tr>
<tr>
<td>7</td>
<td>Expertise of management</td>
<td>Expertise of assurance provider</td>
<td>Presence of assurance</td>
</tr>
<tr>
<td>8</td>
<td>Assurancescope</td>
<td>Reputation of assurance provider</td>
<td>Balanced Tone</td>
</tr>
<tr>
<td>9</td>
<td>Materiality</td>
<td>Stakeholder responsiveness</td>
<td>Use of sustainability reporting guidelines</td>
</tr>
<tr>
<td>10</td>
<td>Assurance level</td>
<td>Materiality</td>
<td>Use of assurance standards</td>
</tr>
</tbody>
</table>

Source: Based on Xiao and Shailer 2021.

Note: Preparers, users and assurers assign the same rank to several credibility variables. For a better illustration, respective cells are merged and credibility variables are ordered alphabetically. Further, credibility variables related to assurance are bold faced.

Prior studies demonstrate that when combined with incentives, preparers disclose more accurate information if it is assured. In addition, users tend to value the disclosed information more (De Meyst et al. 2018). However, when incentives like managerial pay are linked to non-financial performance but no assurance is obtained, investors tend to be sceptical of the reported information and expect overinvestment (Brown-Libur and Zamora 2014).

Nevertheless, results on whether assurance can affect the quality of non-financial information is contradicting. Some researchers find that the use of assurance on average does neither improve the quality nor quantity of information disclosed. It is argued that assurance can rather be considered a symbolic approach to CSR (Michelon et al. 2015). Further, assurance services appear to be ineffective. Talbot and Boiral (2018) show that 92% of reports analysed are non-compliant with the GRI standard the sample companies claimed to use. In contrast, other researchers find that the disclosure quality is higher for companies having their non-financial information assured (Rivera-Arrubla et al. 2017; Gerwanski et al. 2019). The internal and external effects of assurance are discussed in the next section more specifically.
4.4.3. The Effects of Assurance

Most studies find that the presence of third-party assurance is valued by stakeholders in general and by financial stakeholders in particular. Investors are more willing to invest in those companies who have their reports assured. Further, they tend to assess CSR performance more favourably, weigh the provided non-financial information more, and make higher investment-related judgements (Cheng et al. 2014; De Meyst et al. 2018; cf. Reimsbach et al. 2018 in Chapter 3.3.2). In addition, third-party assurance appears to decrease information asymmetry, indicating that assurance is considered to enable more effective monitoring (Fuhrmann et al. 2017; Steinmeier and Stich 2019; Fan et al. 2021). Consistently, Du and Wu (2019) find that for companies with first time CSR-related misconduct, their market value is protected by assurance. However, such an insurance role of assurance does not exist for repeat offenders (Du and Wu 2019; Stuart et al. 2021). Similarly, insights provided by Quick and Inwinkl (2020) suggest that debt capital providers’ confidence in the non-financial information disclosed increases when those are assured. They make more favourable decisions towards those companies with assured non-financial information, i.e. approve credits, invest, or recommend for investment. Further, although assurance does not affect investors’ fairness heuristic, it is related to environmental reputation (Birkey et al. 2016; Brown-Liburd et al. 2018).

Furthermore, third-party assurance of non-financial information also appears to affect companies’ operations. It is said to reduce the frequency of future CSR-related misconducts and to increase the CSR investments when combined with incentives. In addition, the CSR investment efficiency of managers is higher, indicating that assurance supports managers in identifying favourable CSR investments but prevents unfavourable overinvestment (De Meyst et al. 2018; Du and Wu 2019; Steinmeier and Stich 2019).

Consistent results have been found for integrated reporting assurance. Caglio et al. (2020) provide evidence that assurance moderates the negative link between integrated reporting low-quality textual attributes and economic consequences of a company. In addition, it appears to be a credibility-enhancing mechanism for financial analysts. Specifically, for those firms obtaining assurance of their integrated reports, the analysts’ forecast dispersion is lower. The authors find consistent results when considering the quality of the assurance provided, when the assurance provider belongs to the accounting profession or is a Big 4 company. This indicates that assurance providers (and additional assurance quality attributes) may exert a reputation and credibility signal towards the capital markets (cf. Caglio et al. 2020 in Chapter 3.3.2 and 3.4.2). This aspect is further discussed in the next section.

4.4.4. The Role of the Provider, Level, and Scope of Assurance

Disclosure quality, credibility, internal and external effects of assurance appear to be affected by the assurance provider, the assurance level, and the scope of assurance. Non-financial assurance can be obtained by auditing as well as non-auditing assurance providers, i.e. consulting companies and technical experts. Between and within those provider groups, differences in the approaches to non-financial information are observed, i.e. in the scope of assurance engagement (Channuntapipat et al. 2019; Farooq and De Villiers 2019). Boiral et al. (2019) conclude that the greater expertise claimed by consulting companies is debatable and that the qualification of most assurance providers appears to be inconsistent with the competencies required for non-financial assurance.

Additional studies find that companies obtaining third-party non-financial assurance by experienced auditing companies disclose information of higher quality. Specifically, Martinez-Ferrero and García-Sánchez (2018) show that material errors and omissions are more likely detected when the assurance provider is an experienced auditing company, i.e. a Big 4 accounting firm and when the assurance practitioner is an industry expert (Martinez-Ferrero and García-Sánchez 2018; Maroun 2019; Quick and
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Inwinkl (2020). Further, most studies find that for those companies obtaining third-party non-financial assurance by experienced auditing companies, effects on stakeholders like perceived credibility are stronger. For example, Clarkson et al. (2019) show that the capital market appears only to value the provision of non-financial information when assured by an experienced auditing company, i.e. a Big 4 accounting firm. In addition, internal effects like investment efficiency seem to be stronger as well when non-financial information is assured by a member of the audit profession (Steinmeier and Stich 2019). In contrast, environmental reputation is not found to be affected by the assurer type (Birkey et al. 2016).

Non-financial assurance can be obtained at different levels, i.e. reasonable or limited assurance and with different scopes, i.e. assurance of all disclosed non-financial information or only a part of it. Companies with a higher assurance level are perceived to be more credible (Fuhrmann et al. 2017). However, this link is found only to exist for positive but not for negative performance reports (Sheldon and Jenkins 2020). Additionally, credibility is improved when assurers test numerical details (Fuhrmann et al. 2017). Companies with a broader assurance scope are said to have non-financial reports of higher quality (Maroun 2019). Further, both a higher assurance level and a broader assurance scope appear to strengthen the real effect that assurance has on the reporting company. Steinmeier and Stich (2019) find that for higher assurance levels and broader assurance scopes the investment efficiency is higher.

4.4.5. Conclusion

Third-party assurance delivers limited improvements in disclosure quality. However, assurance is considered an important governance mechanism increasing the credibility of disclosed information. External effects are primarily related to perceived risk reduction and internal effects to a higher awareness of CSR-related issues. The data quality, credibility, internal and external effects related to assurance depend on the characteristics of the assurance, i.e. the provider, the level, and the scope. The effects tend to be stronger when a more experienced auditing company provides the services with reasonable assurance and a broad scope of assurance.


4.5.1. The Choice of the Disclosure Framework

In a rules-based regulation, all companies are required to apply the same benchmarks independent from their characteristics. In contrast, in a principles-based regulation that considers contextual factors and judgement, companies can disclose different benchmarks (Schantl and Wagenhofer 2021). The EU NFRD and its supplementing Guidelines are rather principles-based. However, the frameworks that they are built on differ in their classification: while the GRI framework is rather rules-based, others like the <IR> Framework are rather principles-based (Tschopp and Huefner 2015).

When the international financial accounting standards were introduced, there were also discussions on the appropriate characteristics of a disclosure framework. Traditionally, the United States use a rather rules-based regulation, the U.S. Generally Accepted Accounting Principles (U.S. GAAP). In contrast, most countries worldwide including the EU opted to use a rather principles-based regulation, the IFRS (Financial Accounting Standards Board 2021; IFRS Foundation 2021). Therefore, the subsequent section is based on insights gained and conclusions drawn not only from the non-financial but also the financial literature.
4.5.2. The Effects of Principles- vs Rules-based Frameworks

Differences in information quality appear to depend on how the managerial flexibility in a principles-based system is used. On the one hand, the flexibility in the interpretation of a standard allows to include professional judgement, i.e. to choose disclosures relevant for the particular business. In contrast, under a rules-based regulation, companies might need to disclose metrics when those are in fact not appropriate or useful to stakeholders. Consistently, firms’ earnings are found to be more persistent and informative in a principles-based system (Folsom et al. 2015). In addition, the reporting typically tends to be less aggressive, specifically when a strong audit committee exists (Agoglia et al. 2011). On the other hand, the flexibility in a principles-based system might be too open for interpretation (Tschopp and Hufner 2015). Specifically, Folsom et al. (2015) find evidence that when under pressure, e.g. near bankruptcy or when metrics are close to prominent benchmarks, managers rather use the discretion provided.

In favour of a rules-based system, some argue that as all companies have to disclose the same benchmarks those are rather comparable and verifiable (Folsom et al. 2015). However, principles-based accounting is in general associated with higher reporting quality and more relevant information, increasing capital markets’ investment efficiency (Sundvik 2019; Schantl and Wagenhofer 2021).

The compliance with the regulation can be easier and less expansive under a rules-based system. Less time and effort are needed for appropriate interpretation. In addition, less potential litigation costs reduce the costs for preparers and thereby generate economic benefits. However, under a rules-based system even metrics need to be provided for which the costs of gathering the information outweigh the perceived benefits (Folsom et al. 2015; Tschopp and Hufner 2015; Schantl and Wagenhofer 2021).

Whether a company is subject to a principles- or rules-based disclosure framework can affect its operations and by that its ESG performance. In fact, the adoption of specific standards can influence the choice of CSR activities as well as the interpretation of CSR performance (Vigneau et al. 2015). Further, Böhling et al. (2019) find that standards primarily based on filling templates can result in below-compliance effects.

Related enforcement penalty mechanisms play a key role for the preference for one regulatory approach over the other. Specifically, Schantl and Wagenhofer (2021) find that when enforcement penalty mechanisms are missing, a principles-based regulation cannot be implemented. In those cases, the rules-based approach, which is generally considered to be enforced more easily, is favourable. However, when there are appropriate enforcement penalty mechanisms, the principles-based approach is considered favourable.

4.5.3. The Role of Uniform vs Multiple standards

For the disclosure of non-financial information there are currently numerous frameworks that can be applied. The EU NFRD explicitly mentions six union-based, national, and international frameworks on which undertakings subject to this Directive may rely on.

There are several disadvantages associated with the current frameworks. Those include that:

- stakeholder value dimensions are different from those emphasised by some frameworks (Bradford et al. 2017);
- some frameworks primarily focus on the process for creating reports, rather than on measurement criteria (Sethi et al. 2017); and
- even when following the same guidelines, it is difficult to compare companies’ non-financial performances. Reasons include data heterogeneity, ambiguous and incomplete information,
indicator contingency, qualitative aspects of sustainability and report opacity (Boiral and Henri 2017).

Ray (2018) finds that whether the use of multiple or uniform frameworks is advantageous depends on a trade-off between the associated costs and benefits. In a system with a uniform framework, compliance costs may vary across companies. In contrast, in a system with multiple frameworks, the cost for investors to learn the different standards may vary (Ray 2018).

4.5.4. Conclusion

Research provides insights on the role of company characteristics and the situations companies are in, when analysing managerial flexibility in a principles-based regulation. However, from a standard setter’s perspective those are not observable. Therefore, whether principles- or rules-based frameworks are favourable is rather determined by related enforcement penalty mechanisms. In the decision whether a uniform framework should be adopted, costs of companies and investors should be considered for maximising welfare.

4.6. Disclosure Requirement: Voluntary vs Mandatory

4.6.1. Voluntary vs Mandatory Disclosure Regimes

The likelihood of companies to disclose more non-financial information appears to be influenced primarily by country- and firm-level factors. For instance, some companies voluntarily disclose non-financial information beyond what is required by the EU NFRD. Companies’ voluntary non-financial disclosures are typically higher:

- in countries that are more democratic, have stronger investor protection measures, more government effectiveness, more freedom of press, higher quality regulations and lesser commitment to environmental policies (cf. De Villiers and Marques 2016 in Chapter 3.3.1);

- when the companies are more profitable, larger, more leveraged, operate in a more environmentally sensitive industry, have higher book-to-market ratios and older assets as well as spend more on capital (De Villiers and Marques 2016); and

- when there is higher stakeholder pressure (Liesen et al. 2015).

Countries are adopting mandatory non-financial disclosure requirements for different reasons (Jackson et al. 2017). Conceptually, there is no need for a mandatory regulation when there are net benefits in the voluntary system. But companies have heterogeneous net benefits of non-financial reporting (Christensen et al. 2021). Further, they rather determine those at the company level, not including the externalities for society. The existence of externalities is an economic rationale for non-financial mandatory disclosure requirements (Christensen et al. 2021). Non-financial mandatory disclosure regulation is perceived as a tool so that companies rather include the created externalities in their net benefit analysis. However, for determining whether the adoption of a mandatory system rather creates net benefits or costs, several dimensions need to be considered. For standard setters it requires a multi-level trade-off as economic consequences for stakeholders, costs as well as externalities should be included (Leuz and Wysocki 2008).

Regulations interact with other existing institutional environment features. It is difficult to disentangle the effects and there is a lack in quantifiable information for economic justifications (Leuz and Wysocki 2016; Christensen et al. 2021). Further, several of the presented research findings in this section are tied to specific settings and disclosure items. Those aspects are important limitations of the presented literature review.
4.6.2. Disclosure Requirements, Information Quality and Comparability

Mandatory requirements for non-financial disclosure appear to be linked to the quality of non-financial as well as financial information. Under a voluntary regulation, the frequency of disclosure is low and companies are rather slow to adapt (Broadstock et al. 2018; Healy and Serafeim 2020). But some firms already disclose information before they are actually required to (Eccles and Krzus 2018). In contrast, companies with mandatory non-financial information are found to increase disclosure quality and quantity following the regulation (Ioannou and Serafeim 2017). Further, in a Chinese setting, Wang et al. (2018) find that upward earnings management is more likely to be caught when disclosures are mandatory, indicating that financial reporting quality is additionally improved.

With respect to comparability, evidence on whether a mandatory or voluntary approach is favourable, is contradictory. Sethi et al. (2017) argue that the voluntary nature of non-financial information has led to a lack of robust measures, inclusion of a broad range of topics, and inconsistencies in reporting format and treatment. In contrast, Schneider et al. (2018) suggest that even under a mandatory disclosure requirement, there is still a lot of managerial discretion.

4.6.3. The Effects of Mandatory vs Voluntary Disclosure Requirements

Several studies on the external and internal effects of adopting a mandatory instead of a voluntary non-financial disclosure regulation show conflicting results. Particularly research findings on the market value reaction of companies are contradicting. Ioannou and Serafeim (2017) provide evidence that following the release of non-financial information, market value increases. They argue that the transparency is improved given the better disclosure quantity and quality. Further, Baboukardos (2017) finds that the negative link between GHG emissions and listed companies’ market value decreases when a mandatory system is introduced. In contrast, several other studies show that the market value in general decreases or that the reaction is determined by company characteristics (Birkey et al. 2016; Healy and Serafeim 2020; Elayan et al. 2021). Grewal et al. (2019) find that the negative stock price reaction on the introduction of mandatory regulations depends on the pre-directive non-financial performance and disclosure. For those companies performing and disclosing weakly in terms of sustainability, their stock price reacts negatively. However, for those performing and disclosing strongly, the stock market reacts positively. This suggests that the equity capital market expects the mandatory regulation to lead to net costs for companies performing and disclosing weakly and to net benefits for companies performing and disclosing strongly. Consistently, Hombach and Sellhorn (2017) find that specifically for those companies with public scrutiny investors expect the costs to be high. Further research suggests that information asymmetry rather decreases after the introduction of mandatory disclosures (Wang et al. 2018).

Finally, changing the non-financial reporting regulation from a voluntary to a mandatory approach appears to affect companies’ behaviour. Some researchers find that this does not necessarily reduce a company’s propensity to act in an irresponsible way. Rather they argue that CSR activities become more homogenous and minimum standards are promoted (Jackson et al. 2017). In a Chinese setting, Makosa et al. (2020) observe decreasing CSR investments but increasing investment efficiency, indicating that overinvestment is alleviated. However, most studies find that companies subject to this regulatory switch or (in anticipation of it) have higher CSR investments and a better CSR performance (Aragón-Correa et al. 2020; cf. Fiechter et al. 2020 in Chapter 3.4.1). In addition, the environmental impact is found to decrease directly (own impact) as well as indirectly (supply-chain impact) (Gramlich and Huang 2017). Some studies find that in a mandatory system awareness is increased and CSR issues, i.e. environmental externalities are reduced (cf. Chen et al. 2018 in Chapter 3.3.1; Christensen et al. 2021).
Further, Tomar (2021) provides evidence that benchmarking with peers, which is rather possible in a mandatory disclosure regulatory system, facilitates emission reduction. Companies can adopt peers’ “best practice” as those need to reveal proprietary CSR information. However, Breuer et al. (2019) provide insights from the introduction of the financial mandatory disclosure regulation that this might decrease incentives to innovate. In addition, evidence from the automobile industry suggests that environmental regulations do not reduce foreign investments. The type of companies investing is different, i.e. companies have stronger environmental capabilities. However, the aggregated investment amount tends to remain stable (Madsen 2009).

To conclude, mandatory non-financial regulations can have side-effects on companies. Specifically, some researchers argue that it decreases flexibility, with potential negative implications for competitiveness. In Chapter 3, the evidence was discussed that drilling companies that mandatorily need to disclose extraction payments to foreign host countries reduce their extraction activities compared to non-disclosing competitors (cf. Rauter 2020 in Chapter 3.2.1 and 3.4.1). Consistently, Cohen and Tubb (2018) find that regional competitiveness is mostly positively impacted under a mandatory regulation. However, for company competitiveness there are less consistent results. Further, a study by Chen et al. (2018) shows that the introduction of non-financial mandatory regulation in China is found to be linked to decreasing profitability. Operating and impairment costs are observed to increase while return on assets, return on equity, and sales revenues are observed to decrease as well as capital expenditures.

4.6.4. The Role of Enforceability and of the Comply-or-Explain Approach

The aforementioned disclosure quality, comparability, internal and external effects do not necessarily have to origin from the introduction of a mandatory disclosure regulation. Rather they might be linked to concurrent enforcement changes. It is difficult to disentangle the effects of both events and in research it has rarely been done so far. Christensen et al. (2013) find that after the mandatory IFRS introduction, only in those European countries information asymmetry decreased that concurrently made substantive reporting enforcement changes. The quality of national legal and regulatory systems rather does not matter. Additionally, it is argued that in the absence of proper institutions, non-financial disclosures might be used for window-dressing (cf. Lin et al. 2017 in Chapter 3.2.1). Other researchers conclude that only the adoption of guidelines is not enough. Rather powerful tools such as loss of legitimacy and sanctions for not complying are needed to generate improved CSR performance (Comyns and Figge 2015; Aragón-Correa et al. 2020).

Finally, an intermediate approach between a mandatory and a voluntary disclosure regime is the comply-or-explain one. Opinions contradict on whether such an approach should be considered rather mandatory (since all companies either have to comply-or-explain) or voluntary (since companies do not have to conform) (Ho 2017). Supporters claim it a better approach than a mandatory reform as it acknowledges the principle that one size does not fit all. In contrast, critics argue that the approach “might not have teeth” (cf. Fauver et al. 2017 p. 134). Overall, in the academic literature little attention is given to this approach (Roberts et al. 2020). However, few insights are provided. In an international study comprising 41 countries, Fauver et al. (2017) analyse the impact corporate board reforms have on company values. They find that under comply-or-explain reforms company values increase more strongly compared to those under a rules-based reform. Whether the respective country is a common law or civil law country has no effect.
4.6.5. Conclusion

The adoption of a mandatory non-financial disclosure regulation appears to offer several improvements but at cost. Improvements include a higher non-financial and financial disclosure quality as well as higher and more efficient CSR activities.

Although research results are not consistent, the introduction of a mandatory approach appears to be additionally linked to higher comparability and an improved capital market valuation. Costs, however, contain decreased flexibility and profitability.
5. SUSTAINABILITY REPORTING IN THE FINANCIAL SECTOR AND FOR SMES

KEY FINDINGS
The majority of previous studies to date focuses on public non-financial firms. However, both the financial sector and small- and medium-sized entities (SMEs) are key players in the economy. While non-financial institutions are primarily preparers of non-financial reports, financial intermediaries like banks and also insurance companies are both preparers and users of those reports. Financial institutions do not only create externalities by their own operations but rather especially through their investment, lending, and underwriting activities. However, some underestimate their own climate-related risk, specifically by not adequately considering the externalities of their portfolios. Furthermore, financial institutions face the problem that counterparties like SMEs, do not provide them with non-financial information needed to determine the portfolios’ exposure. Nevertheless, financial institutions can have an important governance role. For SMEs, sustainability issues can be integrated into internal processes but the external reporting on such topics imposes large direct and indirect costs for these firms. To meet these tensions, i.e. the need for non-financial data by financial institutions vs the lack of available data by certain companies like SMEs, specific and simplified rules are needed for these types of firms.

5.1. Financial Institutions’ Role in Sustainable Value Creation
Financial institutions are considered “central for the steering of the global economy towards sustainability” (Hummel et al. 2021 p. 21). However, the literature on non-financial performance and disclosures of financial institutions is limited, specifically that on insurance providers (Manokaran et al. 2018; Ullah et al. 2019; Hummel et al. 2021). Therefore, the focus in the following section will be on the relevance of non-financial information when making lending decisions as well on the related disclosures of banks.

The practical implications of the financial sector’s special features are increasingly considered in regulatory approaches. Even though in the EU there was no separate consideration for financial firms, Guideline 2017/C 215/01 notes that banks should focus on disclosing ESG-related impacts of their investments and on their role in supporting the real economy. In addition, Guideline 2019/C 209/01 provides extensive additional guidance for banks and insurance companies within the scope of the EU NFRD (other financial institutions such as asset management companies and pension funds are outside of the scope). However, this additional guidance does not impose additional requirements on financial institutions compared to other companies. Importantly, in Guideline 2019/C 209/01 it is acknowledged that private capital is needed to fund transition and that financial institutions play a critical role in this context. However, while 45% of banks are aligning their lending portfolios with the net zero carbon world strategy, only 27% of insurers are taking actions (CDP 2020b).

Further, there are other voluntary guidelines and mandatory directives for which data requirements are overlapping, e.g. between Pillar 3 and the EU Taxonomy. The TCFD is a voluntary commitment defining metrics and targets built on industry standards such as the Partnership for Carbon Accounting Financials (PCAF) standards. The Pillar 3 requirements are based on both the EU Directive as well as the EU Taxonomy (e.g., the Green Asset Ratio, “GAR”). Further, important regulations for financial institutions are the Sustainable Finance Disclosure Regulation (SFDR) and the Shareholder Rights
Directive II (SRD II). The number of relevant frameworks and their overlapping requirements make the non-financial reporting for financial institutions particularly difficult.

Non-financial firms are in general preparers of disclosure and their use of other companies’ CSR reports is rather limited to disclosures of competitors (e.g. benchmarking), suppliers and potential acquisition targets (e.g. potential negative spill-over effects). Investing financial institutions like asset managers and asset owners are typically mainly users of CSR reports (cf. Chapter 4.3.2.) but financial intermediaries like banks and also insurance companies are both preparers and users of CSR reports. As suggested in Figure 1, the business model of market participants determines whether they are preparers or users of non-financial disclosures.

Figure 1: Interaction of preparers and users of non-financial information disclosures

In addition, different from other companies, financial institutions in the form of intermediaries do not only create externalities, i.e. impact the environment and society by their own operations but rather especially by their investment choices (European Banking Authority 2021; Figure 2). Therefore, not only the non-financial disclosures about themselves are relevant but rather those of their investments undertaken. A CDP survey shows that for the financial institutions participating in the study, financed emissions are on average over 700x larger than operational emission (CDP 2020b).

Figure 2: Relationship between institutions and ESG factors through the outside-in and inside-out perspective (“double materiality”)

In line with the research findings in Subchapter 4.2.2. and 4.2.3., besides regulatory pressure, banks appear to consider non-financial information in their lending decisions. While Hoepner et al. (2016) find that country-level sustainability, specifically in the environmental dimension, is relevant for lending conditions, several other studies rather consider firm-level sustainability as an important factor.
For example, investors expect banks to incorporate carbon risk in their lending decisions (Herbohn et al. 2019). Further, companies with stronger female board representation and superior CSR performance are found to have favourable loan terms, specifically in stakeholder-oriented countries (Cheung et al. 2018; Tan et al. 2020; Karavitis et al. 2021).

Bank lending is considered a governance factor for the borrowing company decreasing the information asymmetry. 82% of banks and 67% of insurers demand their clients to engage on climate-related issues (CDP 2020b). Further, the bank monitoring impacts the equity capital market. For example, Herbohn et al. (2019) find high excess loan announcement stock market returns on loan renewables.

Despite this governance function, most banks (73%) and insurance companies (69%) assess their own portfolios’ exposure as well. However, some financial institutions underestimate their own climate-related risk (CDP 2020b). Further, Hummel and Festl-Pell (2015) provide exploratory insights that banks appear to set the wrong emphasis in disclosing. Specifically, on material issues there are few disclosures, whereas on rather immaterial issues a lot of information is provided. In addition, to assess the portfolios’ exposure the provision of non-financial information by counterparties is critical.

Besides the lack of relevant data, the main issues appear to be that banks face numerous overlapping regulations and focus on operational rather than on financial portfolio concerns (CDP 2020b).

5.2. The Effects of Sustainability Reporting on SMEs

The effectiveness of ESG disclosures for SMEs remains poorly explored by prior literature with only few exceptions even though these businesses represent the majority of companies around the world. The lack of evidence on the effects of sustainability reporting on private firms’ value is possibly explained by methodological barriers: since SMEs are typically non-listed private companies, there are limited secondary data that are publicly available and can be effectively collected and analysed.

Existing studies have been primarily concentrated in understanding the determinants of voluntary CSR reporting and have demonstrated the existence of a significant size effect: firms have greater incentives to adopt CSR reporting and signal its quality when they are larger, their shares are publicly traded and/or ownership is dispersed among many investors. In the U.S. setting, Hickman (2020), for example, finds that compared to similar public firms, private firms are much less likely to publish a CSR report. Further, for listed firms the quality of disclosure is higher as they follow GRI guidelines at a higher rate (Hickman 2020). Similarly, Chi et al. (2020) document that private firms are less likely to issue CSR reports compared with their public peers in Taiwan and stress the differences in terms of CSR disclosure effects between private and public firms. In particular, private firms do not reap the same benefits as larger firms, in terms of favourable credit ratings and a lower cost of debt. Similarly, Gjergji et al. (2021) study the effects of non-financial disclosure on the cost of capital of Italian SMEs and reveal that – different from evidence on larger companies – SMEs which are subject to environmental disclosures face higher cost of capital. In contrast, Gallemore and Jacob (2020) find that enforcements aimed at SMEs improve the borrower information environment, i.e. regional U.S. corporate tax enforcements in the 1990s encourage greater commercial lending. However, overall, the differences in the CSR reporting behaviours between SMEs/un-listed companies and large/listed ones have been primarily attributed to the different costs and benefits that smaller firms face compared to larger ones.

More specifically, evidence from prior research suggests that companies provide more non-financial disclosures in the presence of higher information asymmetry, which is particularly the case with more shareholders. In such contexts, sustainability reporting may reduce investors’ costs for information collection and analysis and foster comparability across firms, particularly if investors’ preferences focus on certain CSR topics.
Furthermore, the reputational costs from a mismatch with stakeholders’ preferences are typically higher for larger firms that are subject to higher public scrutiny on CSR compared to smaller ones. SMEs, on the other hand, not only face less external pressure to engage in CSR practices, but they are also challenged with additional implementation costs when embracing sustainability reporting: they may lack critical resources for CSR reporting such as human or financial capital, or the internal information systems that are needed to support non-financial reporting preparation (Christensen et al. 2021).

Nevertheless, prior studies challenge the assumption that SMEs ‘do less’ in terms of actual CSR activities because of less CSR reporting. There exists evidence that SMEs are already internally committed to CSR, but they do not communicate their efforts externally. Wickert et al. (2016) points at the existence of an actual “small firm communication gap” with SMEs being less active in external CSR communication but giving more emphasis on internal CSR implementation. On the contrary, they also show that larger companies rather engage in communicating than in implementing CSR into their core business structures and procedures (i.e. “large firm implementation gap”). Similarly, Halme et al. (2020) identify a configuration for private (public) firms, i.e. an endogenous (exogenous) pathway, whereby CSR is managed more (less) in terms of internal best practices and less (more) adherence to external CSR initiatives.

A significant risk ascribed to such a SMEs communication gap is that the lack of external disclosure of their CSR engagement may compromise their ability to get those extra returns that would be ensured if the information would be publicly shared with external stakeholders. Ortiz-Avram et al. (2018) show that even if SMEs know that environmentally and socially responsible business practices improve reputation and are required by stakeholders, in most cases they do not formally communicate and report on it. With a focus on family firms, Nekhili et al. (2017) investigate the relationship between CSR reporting and firm market value in a French context and show a positive association for family firms (but a negative one for non-family firms) (cf. Chapter 3.3.1). Such result suggests that family firms would greatly benefit from communicating their commitment to CSR; possibly because in this way they can obtain shareholders’ endorsement more easily than nonfamily firms.

The importance of CSR activities and the reporting thereof for SMEs and non-listed companies is increasing also considering the recent discussions about the possibility to extend mandatory CSR reporting for such types of firms. A CSR reporting mandate would possibly reduce the gap in the information environment between large/public firms and private/SMEs and facilitate their comparability. It may also decrease the risk of exit strategies from regulated to non-regulated markets. Larger firms subject to mandatory CSR disclosure may redirect their operations (and harmful CSR activities) from public to SMEs/private firms to avoid the CSR related costs and pass the burden on to the smaller private entity (Christensen et al. 2021). In addition, listed firms with high CSR risks or operating in CSR sensitive industries, could choose to go private to decrease transparency/shade their behaviours. Overall, the reallocation between large and small companies can cause an increase in positive ESG effects of larger firms, but the aggregate effect in the entire economy may not be positive (Christensen et al. 2021).

However, Morsing and Spence (2019) claim that the focus on CSR communications introduces dilemmas for SMEs which might not be constitutive of improved CSR actions.
5.3. Conclusion

Notwithstanding their importance as key economic actors, financial institutions and SMEs have received limited attention in the non-financial reporting literature.

With reference to financial institutions, they represent intermediaries that are both preparers and users of non-financial information different from other non-financial institutions. Because of their strength in financial resource allocation, they have an important role in fostering the economic transition towards sustainability. The externalities of their investments undertaken rather than those from their own operations are especially important. Although banks are a governance factor in raising the awareness of borrowing companies to ESG issues and assess their own portfolio’s exposure, they appear to set wrong emphasis in disclosures. They rather focus on operational than on financial portfolio concerns. Further, they face overlapping regulations and a lack of data provided by counterparties to determine the portfolios’ exposure.

Besides, SMEs possess several organisational characteristics that can promote the implementation of CSR-related practices in corporate core functions but face significant constrains to external CSR reporting due to direct and indirect implementation costs. It remains crucial to tailor the SME reporting requirements to their organisational characteristics by considering, e.g. exemptions like requiring only companies above certain assets, revenues or employees thresholds to report or a reduced/adjusted set of reporting criteria, based on the size of the company. According to Adams et al. (2021), simplified guidance would be helpful for SMEs, especially when dealing with specific sustainability reporting standards like those provided by the GRI.
6. SUGGESTIONS FOR THE FUTURE OF SUSTAINABILITY REPORTING

KEY FINDINGS

Despite its challenges and limitations, sustainability reporting plays a key role in achieving the United Nations (UN) Sustainability Development Goals (SDGs). The literature review has shown that specific regulatory mechanisms are necessary though to ensure the provision of high-quality and credible sustainability information that is useful for the decision-making of different stakeholders. Sustainability reporting should be mandatory at least for public firms but also for non-listed firms above specific thresholds as voluntary reporting lowers the disclosure quality and may result in greenwashing and impression management.

Despite the benefits of harmonised sustainability standards and by that increasing comparability, there is still a need for flexible solutions, particularly to address industry-specific differences. Given their particular nature and economic importance, specific regulations are necessary for the financial sector and small- and medium-sized entities (SMEs) including proportionality criteria for the latter.

This will ensure disclosures that are informative but do not overburden firms. Further, mandatory assurance is required to ensure credible disclosures, particularly if the assurance is reasonable. For a desired degree of commitment, private assurance should also be combined with public oversight. Finally, the double-materiality criterion inherent in the Non-Financial Reporting Directive (NFRD) and still present in the Corporate Sustainability Reporting Directive (CSRD) proposal is a powerful tool to ensure a multi-stakeholder perspective that is needed for addressing the UN SDGs through sustainability reporting.

6.1. Clarifying the Purpose of Sustainability Reporting

Given the already widespread global issuance and use of sustainability reports at least among mid- and large-cap firms (KPMG 2020b), the question is less on “if” to report but rather on “how” to report on CSR. Critical observers may argue that despite the increase of CSR reports over the past 20 years that have also been using GRI standards, the outcome on sustainable value creation is rather low given the continuous rise of carbon emissions, accelerated environmental damage and increasing social inequity over the same two decades (Pucker 2021).

However, transparent information is necessary both for good decision-making (external and internal) and making companies accountable for their actions. In addition, the research discussed suggests that higher transparency leads to peer pressure and benchmarking resulting in overall better firm behaviour. Hence, despite its challenges, sustainability reporting is a key driver for addressing climate change and sustainable value creation. The double materiality criterion inherent in the EU NFRD and also EC CSRD proposal is a powerful tool to address all stakeholders. By taking both an outside-in and inside-out perspective, companies can take a more holistic approach to address how they impact the SDGs and are impacted by those. Their sustainability reporting has to be considered as an enabler of “Sustainable practices in companies” (cf. SDGs 12.6).

The review of the scientific literature on sustainability reporting in Chapter 3 and 4 has shown that the evidence on the benefits of providing such information is indeed not unequivocal. This is particularly due to the mostly voluntary nature of these types of disclosures including their assurance, the diverse set of regulatory frameworks and by that low comparability and the problem of potential
greenwashing and impression management. Hence, in order to make sustainability reporting an effective instrument for sustainable value creation, several regulatory mechanisms are necessary which will be discussed in the following.

6.2. Making Sustainability Information Mandatory

In the presence of a sustainability reporting mandate, firms may have less incentives to use mostly generic and boilerplate language as is currently the case for about 50% of the firms registered with the U.S. Securities and Exchange Commission (Sustainability Accounting Standards Board 2017; Christensen et al. 2018). In line with this, the EC CSRD proposal aims at extending the requirement for providing sustainability information to more than four times the number of firms currently subject to the mandate including non-listed firms above certain thresholds (European Commission 2021c). A requirement for sustainability reporting may have certain unintended consequences both for the firm itself but also its stakeholders. As the review of the literature suggests, environmentally damaging and other harmful CSR activities may shift towards private firms or abroad if it is too costly for public national firms to comply with a sustainability reporting standard. From a global perspective, CSR performance would not be improved. The higher transparency implies increasing proprietary costs, which may further result in firms being less innovative from a sustainability view (Christensen et al. 2021).

Once CSR reporting becomes mandatory though, boards will be involved and the firm’s strategy and risk management will become more aligned with more global sustainability issues (Adams 2017). Without a mandate, the risk of companies leaving out material negative information and showing themselves in a better light is too high (Adams 2004). The literature review has shown that letting firms voluntarily provide sustainability reports comes at the cost of having information with lower disclosure quality and lower and less efficient CSR activities.

Although comparability is certainly a key characteristic for high-quality information, the domain of sustainability requires flexible solutions given the diverse set of information as well as users. Hence, despite the promising effort of consolidating the scattered landscape of different regulatory frameworks for sustainability reporting as discussed in Chapter 2, harmonisation alone will not suffice. Similar to the literature on IFRS adoption, it is less the harmonised standards themselves that matter but rather the reporting enforcement as well as managerial discretion in applying the rules (Christensen et al. 2013). The summary findings of the CSR literature review also highlight that effective transparency may only be reached through mandatory reporting combined with proper enforcement.

In the following, several areas will be discussed that are necessary to be considered for a sustainability reporting mandate: the need for flexible solutions, mandatory assurance and proper enforcement and standards that take a multi-stakeholder perspective.

6.3. Designing Flexible Solutions

For financial reporting, the one-size-fits-all problem has already sparked numerous discussions around the introduction of IFRS arguing that benefits of harmonised rules are not achieved through standards themselves but heavily depend on incentives on how to use the standards as well as the institutional settings (Ball et al. 2000; Ball et al. 2003; Christensen et al. 2015). For information on sustainability issues, the problem is even more pronounced as the identification and particularly measurement of the different types of non-financial performance indicators and other “softer” information is much more challenging with significant differences across countries, industries and firms.
As the focus of sustainability reporting should be to provide informative disclosures to different stakeholders, CSR standards need to be flexible and allow for reasonable discretion to ensure useful information.

### 6.3.1. Industry-specific Conditions

In the current landscape of regulatory frameworks, GRI and SASB offer industry-specific disclosures and standards. The U.S. SASB Standards follow an industry-specific approach with Standards for 77 industries. Through the merge with IIRC to the Value Reporting Foundation in June 2021, integrated reporting can also be expected to be more industry-specific in the future. Such high focus on industries is beneficial for sustainability reporting to provide information that is more specific and by that potentially also more informative and useful. However, it also results in lower across-industry comparability. Such an approach that heavily relies on industry-specific metrics may also ignore important information on management skills and plans that indeed may be harder to measure (Adams and Abhayawansa 2021).

Hence, there is a trade-off between a one-size-fits-all approach with maximised comparability and potentially more informative industry-specific disclosures that diminish harmonisation. Given the vast heterogeneity in sustainability issues, certain specificities are needed though. The GRI are also moving towards such a direction. Its GRI Sector Program was initiated in 2019 to direct the focus on sectoral impacts and the identification of issues that are most important for sustainable development to achieve better information for sustainable decision-making. The objective is to improve and extend the GRI Standards themselves by providing insights into the impact of specific sectors and their stakeholder expectations (Global Sustainability Standards Board 2019). The plan is the development of 40 industry-specific standards that should complement the current GRI framework. To date, two sector standard projects (agriculture, aquaculture, and fishing as well as coal) were subject to public comments until 30 July 2021 (Global Reporting Initiative 2021d). This extends the current approach of the GRI Standards being complemented by voluntary GRI G4 Sector Disclosures. Companies can use these sector-based disclosures to support identifying material topics.

Any further developments in sustainability reporting should account for industry-specific differences without giving up a holistic approach that still ensures comparability at a higher level across industries and beyond.

### 6.3.2. Specifics of the Financial Sector

Financial intermediaries like banks and insurance providers have a highly responsible position in the economy as they can indirectly impact the global ESG performance through their investing and underwriting activities. The research summarised above suggests that some financial institutions still underestimate their own climate-related risk and that banks’ disclosures on sustainability are not focusing on the issues that actually matter.

Hence, specific sustainability disclosures in the financial services sector are needed to ensure a high transparency on the activities and investment decisions of financial market participants and financial advisers. In line with Regulation (EU) 2019/2088 on sustainability-related disclosures in the financial services sector, such specific disclosures are needed to inform end investors ex-ante about how these financial intermediaries consider sustainability risks in their investment decisions and how these risks impact their financial products’ return. Independent from the future of global sustainability standards in general, given the high responsibility and economic importance of the financial sector, disclosures on sustainability issues need to go beyond those of non-financial firms to provide information on their overall – both direct and indirect – impact on the environment and society.
6.3.3. Proportionality for SMEs

In Europe, SMEs make about 99% of all businesses, employ about 100 million people and generate more than 50% of its Gross Domestic Product (European Commission 2021b). Hence, the economic importance of these types of firms is undisputed. Literature on the effect of sustainability reporting for SMEs is scarce given the lack of publicly available information. However, the research discussed above has shown that particularly internally, SMEs do embrace sustainability issues but they oftentimes do not have the resources and means to also externally report about them.

As such, SMEs need simplified approaches and guidance to ensure they also follow specific guidelines like the GRI standards to provide comparable and relevant information on sustainability to stakeholders (Adams et al. 2021). Flexibility is highly needed for these types of firms and specific requirements such as a mandate to provide ESG information should consider a proportional regulation, i.e. larger firms that also tend to have a larger impact on the global ESG performance should also share more of the burden. Besides the potential high bureaucratic pitfalls and overburdening costs particularly for smaller firms, they also may suffer more from higher proprietary costs when revealing such information with negative consequences on further development and innovation in the sustainability domain. Hence, in the discussions on the future of sustainability reporting, specific emphasis has to be given to SMEs considering their constrains and challenges without ignoring their importance in the steps needed for a greener future.

6.4. Demanding Assurance and Enforcement

The usefulness of sustainability information highly depends on its quality and credibility. Hence, the role of assurance is crucial in this context to have the accuracy of information verified by a third party. Indeed, assurance is the base for enforceable standards. Private assurance of sustainability information can be provided by accounting firms, particularly the Big 4. This may facilitate the whole auditing and assurance process from a firm’s perspective. However, for many of the non-financial performance indicators, specific technical expertise is necessary, and the needed infrastructure is only just starting to be set up on a larger scale. For example, PwC announced in June 2021 to invest USD 12b over five years for 100,000 new jobs related to ESG to meet their clients’ demands and also integrating the topic holistically into its business (PwC 2021). The demand for assurance of non-financial information is most likely to increase further as more disclosures are requested by investors and other stakeholders including regulators.

As the literature review suggests, assurance is an important credibility factor with several benefits including higher efficiency of sustainability investments due to higher monitoring of the management. However, there is still a large portion of CSR reports that are not audited with neither a reasonable nor a limited assurance with the risk of containing incomplete and misleading information. Companies may also fear unfavourable results from an assurance and opt against it. Especially for smaller firms the additional costs for such an assurance can be too high. Given the partly large number of different non-financial performance indicators that companies report nowadays, it may be more efficient to report or measure less but better, i.e. have the fewer disclosures properly assured (Pucker 2021). The review of the literature has shown that information with reasonable assurance is perceived more credibly than if only a limited assurance has been performed and also when numerical details are verified.

It may not be enough to have the assurer solely test how a firm has complied with certain criteria though. In fact, the future of assuring non-financial information may be to provide insights for users to look beyond the numbers themselves and conclude whether the information is trustworthy (Tyson and Adams 2020).
Finally, mandatory private assurance through accounting firms, consulting companies or technical experts should be combined with public oversight. Without proper assurance and only a voluntary regime and limited assurance, the benefits themselves will be limited as well.

6.5. Focusing on a Multi-Stakeholder Perspective

Despite its challenges and limitations, sustainability reporting not only may contain informational value but as the literature suggests can also result in real effects and hence, bring about change, which is needed for a greener future. This is not possible when focusing on investors only as their incentives are primarily financially driven, which oftentimes is at odds with increasing global CSR performance.

Hence, the double materiality criterion is key. The underlying concept is needed to ensure that sustainability reporting is targeted towards a more diverse set of stakeholders and that social, environmental and governance impacts together with the financial impact are disclosed. Only through such an inclusive approach a firm’s products, services and broader value chain will also become subject to actual change, all necessary to achieve the SDGs (Adams and Abhayawansa 2021). This may in turn also be beneficial for shareholders that increasingly demand non-financial information and show preferences for investments with positive environmental impact. Therefore, the broader materiality concept that does not focus on financial materiality alone may also be the one needed to satisfy investors’ needs (Christensen et al. 2021).

Contrary to SASB and IIRC, or now the Value Reporting Foundation as well as the IFRS Foundation, that are all rather investor-driven, the GRI standards take a holistic view. In fact, those engaged in the founding of the GRI back then comprised impact investors, whose main concerns are the achievement of the SDGs and firms’ externalities, i.e. topics material for economy, society, and environment but not yet financially material (Adams and Abhayawansa 2021). As such, opposed to a rules-based metrics approach followed by FASB and SASB, the GRI Standards, the International <IR> Framework and the TCFD recommendations all mostly align with the SDG Disclosure Recommendations (Adams and Abhayawansa 2021).

In order to address the urgent challenges of climate change and if sustainability reporting were to contribute to a more sustainable future, taking a multi-stakeholder perspective with a broader materiality definition is paramount. Again, the double-materiality criterion already inherent in the EU NFRD and still present in the EC CSRD is a powerful tool that needs to be the base for the future of sustainability reporting.
7. FINAL CONCLUSION

As UN Secretary-General António Guterres stated in view of the COVID-19 pandemic in his speech on 2 December, 2020, the world is asked to react urgently to respond to the crisis but in a way that will also fight the challenges set by climate change:

“We have a chance to not simply reset the world economy but to transform it. A sustainable economy driven by renewable energies will create new jobs, cleaner infrastructure and a resilient future. An inclusive world will help ensure that people can enjoy better health and the full respect of their human rights, and live with dignity on a healthy planet. COVID recovery and our planet’s repair must be the two sides of the same coin” (International Institute for Sustainable Development 2020).

Transforming the world economy into a greener future implies at least developing the underlying economic tools further. Accounting plays a key role when making economic decisions as it provides the information for both internal and external stakeholders. As the world economy needs to experience a transformation through continuous sustainable development, the information set also needs to change. The idea of sustainability reporting is not new and to date globally, particularly the majority of mid- and large-cap firms are already issuing CSR reports (KPMG 2020b). However, most of the information that is provided is voluntary in nature as only few jurisdictions mandate sustainability information. In addition, there is large heterogeneity in the form of the report (stand-alone vs integrated), the assurance (presence or absence) and the underlying regulatory framework that can take a pure investor perspective vs a multi-stakeholder view.

Against this background, this study provides a structured review of the scientific literature to date. Given the broad and diverse academic discourse that goes back into the 70s’, it focuses on the more recent discussion with studies published in top ranked accounting, finance and management academic journals from 2015-2021.

In Chapter 2, the study first provides the definitions for sustainability reporting, non-financial performance indicators and integrated reporting. Firms are free to provide sustainability information in a stand-alone CSR report or combined with financial information in an integrated report. Non-financial performance indicators are disclosed in both types of reports to give users measurable information on a firm's ESG activities and the impact it has on the environment and society as a whole.

The presentation of the different international initiatives on sustainability reporting shows how complex the landscape of regulatory frameworks has become, which is challenging both for preparers and for users. Current efforts to consolidate like the merge of SASB and IIRC into the Value Reporting Foundation in June 2021 and the public announcement of the intent to work together by CDP, CDSB, GRI, IIRC and SASB in September 2020 are encouraging.

The main body of the study are Chapter 3, 4 and 5 summarising findings of previous literature on sustainability reporting. The review suggests that there are several external effects related to non-financial disclosures through higher transparency and information for market valuation, associations with liquidity, risk and cost of equity and debt capital. At the same time there are also observable real effects, i.e. actual changes in firms’ decision-making and risk management, e.g. through increased working safety and less GHG emissions following a disclosure mandate. As such, sustainability disclosures can also have an impact on ESG performance and non-financial factors. The evidence is not unambiguous as the findings depend on various factors such as the quality of the disclosures, their credibility and the institutional environment.

Given the scattered landscape of sustainability information, measures, regulatory frameworks and institutional settings, it is not surprising that the evidence on the benefits of sustainability reporting is
mixed, partly also showing no or negative effects. However, certain recurring patterns emerge that allow deriving some suggestions for the future of sustainability reporting that are presented in Chapter 6.

Overall, sustainability reporting should be mandatory at least for public firms but also for non-listed firms above specific thresholds. The literature review has shown that voluntary reporting carries the risk of firms providing incomplete and misleading information making the CSR report a tool for greenwashing and impression management. The symbolic act to maintain legitimacy in society and to respond to external stakeholder pressure provide further reasons why firms voluntarily provide information on sustainability other than a genuine desire to be transparent.

Combined with a mandate to provide sustainability information, a regulatory framework is needed to allow meaningful comparisons ideally across countries, industries and firms. The aforementioned current developments in harmonising sustainability reporting may help preparers and users to result in better and more comparable information. However, there is still a need to consider material industry-specific differences calling standards to be reasonably flexible and allow for managerial discretion. Otherwise, the sustainability report ends up being a compliance exercise with less informative disclosures. This would be highly detrimental in view of the need to provide stakeholders with information to make decisions that are necessary for the transformation of the global economy mentioned before. In addition, sustainability regulations for the financial sector and SMEs have to be considered separately as they are key players in the economy but with very specific needs as discussed in Chapter 5.

As for the assurance of sustainability reports, it has to be mandatory and preferably also reasonable. Only then the information disclosed can be ensured to be credible, of higher quality and hence, useful for decision-making. The assurance sector has already started setting up the infrastructure needed with new jobs being created but more investments will be necessary to meet the increasing demand of assuring non-financial information. Such private assurance offered by experienced accounting firms (particularly the Big 4), consulting companies and technical experts should be accompanied by public oversight for the needed degree of commitment.

Finally, it is important to not have a narrow investor-oriented view on sustainability reporting but an inclusive multi-stakeholder perspective. Only the latter can ensure that the information provided addresses the various needs for a holistic sustainable development and potential transformation of the economy. The double-materiality criterion with an outside-in and inside-out view that is used in the EU NFRD as well as in the EC CSRD proposal is a powerful tool that needs to be maintained. Only such a holistic view on sustainability reporting will be able to address the UN SDGs.
REFERENCES


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This study provides a structured analysis of the current scientific evidence on the effects of sustainability reporting including non-financial performance indicators, stand-alone sustainability reporting as well as integrated reporting. It discusses the benefits and challenges particularly related to internal decision-making, external transparency as well as financial and non-financial/environmental, social and governance effects. Further, it offers policy recommendations in view of the European Commission’s proposal on the Corporate Sustainability Reporting Directive.

This document was commissioned by the Policy Department for Economic, Scientific and Quality of Life Policies at the request of the ECON Committee.