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Does integrated reporting truly address sustainability issues ? A comparative analysis with sustainability reporting

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DOES INTEGRATED REPORTING TRULY ADDRESS SUSTAINABILITY ISSUES? – A COMPARATIVE ANALYSIS WITH SUSTAINABILITY REPORTING

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Abstract

Purpose: This master thesis aims to shed light on the added value of integrated reporting in comparison to sustainability reporting by identifying distinctive features and exploring consequences for businesses and capital markets.

Methodology: The research method will take the shape of an archival study based on document analysis and interviews collated online. After our literature review, we will explore insights on integrated reporting from practitioners' standpoints. We will test our results by comparing an integrated report and a sustainability reports with an assessment grid built on basis of the theoretical part.

Findings: Our results show that integrated reporting did not achieve its primary purpose that was the anchoring of sustainability among mainstream business practices by connecting financial and nonfinancial information. This failure may be the result of the too high complexity of the connectivity principle and the confusions due to a few terminologies used in the <IR> framework. Despite a positive opinion about the consequences linked with this practice, it still requires further improvements and more clarity into the guidelines to facilitate the implementation.

Originality/value: This master thesis sought to materialize the nexus between integrated reporting and some standards of sustainability reporting by building a grid that includes principles and metrics from GRI, SASB and IR.

Key words: integrated reporting, sustainability, nonfinancial information, Stakeholder Theory, Stewardship Theory

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List of abbreviations

A4S	Accounting for Sustainability
CDP	Carbon Disclosure Project
CERES	Coalition for Environmentally Responsible Economies
CSR	Corporate Social Responsibility
ESG	Environmental, Social and Governance
GAAP	Generally Accepted Accounting Principles
GRI	Global Reporting Initiative
GRI4	The Global Reporting initiative guidelines Fourth version
IAASB	International Accounting and Auditing Standards Board
IASB	International Accounting Standard Board
IFAC	The International Federation of Accountants
IFRS	International Financial Reporting Standards
IIRC	International Integrated Reporting Council
IR	Integrated Reporting
<IR>	IIRC's Integrated Reporting Framework
IRC	Integrate Reporting Committee
IT	Integrated Thinking
JSE	Johannesburg Stock Exchange
KPI	Key Performance Indicator
NGOs	Non-governmental organisations
OECD	Organisation for Economic Co-operation and Development
SASB	Sustainability Accounting Standard Board
SDG	Sustainable Development Goals
SE	Sustainability Embeddedness
TFCD	Task Force on Climate-related financial Disclosure
UN	United Nations
WBCSD	World Business Council for Sustainable Development

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Chapter 1: Introduction

1.1. Background to the study

The Business world is subjected to a growing external pressure related to various short and long-term issues. The current pandemic stresses even more the need for resilience among businesses. Risk managements is increasingly perceived as a long-term process that may require drastic short-term initiatives to mitigate the future risks (ICGN, 2020). It needs to be more than ever, a comprehensive and robust process that include both financial and nonfinancial matters (EY, 2020). Sarah Williamson from FCLT Global[1], reckoned during the online IIRC meeting of April 2020 that "Companies with integrated plan will be able to respond better to the Coronavirus crisis than those who are simply focused on their falling earnings per share".

The global crisis of 2008 already shed light on the inadequacy of mainstream financial reporting and its focus on tangible assets (Petkov, 2011). This crisis was partly due to short-term expectations while the capital market should reward long-term decision-making (King IV, 2016). In the aftermath of this systemic shock, many initiatives were developed to produce new standards and frameworks to foster ESG reporting and transparency and thereby provide a more reliable picture of the company (MC Kinsey, 2019). Indeed, there are concerns about the fact that the bias between market value and book value is too high. A study conducted in 2015 on the S&P 500 companies as sample, showed that only 16% of their market capitalisation accounts for their net asset compared to 83% in 1975 (Deloitte, 2019). There is therefore a need for a higher consideration of intangible assets among the balance sheet (Petkov, 2011). By the way, Companies that take into consideration a broader set of capitals are more likely to get a competitive advantage (Petkov, 2011).

However, the interest for sustainability practices emerged a few decades before with the Brundtland Report published in 1987 by the UN that provides the first definition of sustainability: "development that meets the needs of the present without compromising the ability of future generations to meet their own needs." Sustainability consideration stepped up in accounting practices with the Triple Bottom Line introduced by John Elkington in 1994. This concept entails measuring corporate performance in three areas : economic, social and environmental which refer respectively to profit, people and planet (Alhaddi, 2015). Awareness

[1] "FCLT Global is a non-profit organisation that develops research and tools that encourage long-term investing" (https://www.fcltglobal.org/about/)

for ESG issues among businesses has started to increase in the early 2000s notably because of the creation of the GRI in 2002, which published the first sustainable reporting standards. As stated, many frameworks and standards were developed following the financial crisis of 2008. This is notably the case of the IIRC that is the main initiatives promoting integrated reporting. "An integrated report is a concise communication about how an organisation's strategy, governance, performance and prospects, in the context of its external environment, lead to the creation of value over the short, medium, and long term." (IIRC, 2013). Within its discussion paper published in 2011, the IIRC states that its purpose is to align previous reporting standards by fostering a multi-capitalism approach that includes six forms of capitals (financial, manufactured, intellectual, human, natural and social & relationships) and to show the "interdependencies between the success of the organisation and the value it creates for investors, employees, customers and, more broadly, society." The aim is to find a standard that would be more in line with the expectations regarding corporate transparency and accountability in the context of globalisation, environmental concerns, population growth and the prospective of resource scarcity (IIRC, 2011).

There is a growing interest for nonfinancial information from the capital market. As a matter of fact, long-term investors contend that they need to include ESG metrics in their valuation system. Indeed, according to the Global Sustainable Investment Alliance, sustainable investments have risen by more than 200% between 2012 and 2018 and the bank Morgan Stanley contends that most of assets owners include ESG metrics into their valuation model. Furthermore, a survey of McKinsey conducted in 2019 revealed that 82% of investors were calling for more mandatory requirements related to nonfinancial disclosure. However, they also express the need for more standardization in sustainability reporting that would enable a better comparability across industry and would result in a better resource allocation and a higher risks mitigation. This need for more ESG information arises from the fact that many sustainability issues might have a material impact on financial performance. As a matter of fact, nonfinancial topics have become increasingly material for investors in the last decade. While sustainability investments used to be a matter of value[2], nowadays, it is acknowledged by many, as a matter of financial stability (McKinsey, 2019). If we look at the Mega Trends for 2019 published by BlackRock, we have technological breakthrough, climate change & resource scarcity, demographic & social change, rapid urbanisation and emerging global wealth[3]. Those results

[2] In the behavioural sense.

[3] For instance, middle class in China is growing very quickly.

mean that investors might be especially interested in acquiring information about those five topics within a company's report. The world economic forum considers environmental risks as the highest risks in probability and impact in their annual Global Risks Perception Survey 2019. While these sustainability issues are acknowledged as a matter of survival for society and businesses whose operating activities are especially threatened, they seem to address it just as a matter of reputational risks.

Nevertheless, as stated, shareholders need more standardization as well as reporting preparers. We can indeed count dozens of frameworks and standards which make more complicated comparability between companies and let report preparers with more flexibility with their choice of topics to disclose. One of the integrated reporting purposes was the convergence of existing practices into a same coherent framework. However, it only seems to be one more sustainability framework among the proliferation of existing practices.

Furthermore, we will see that many academics questions the achievement of IR toward sustainability. Some assert that it is not the solution to trigger a real change within organisations because it is perceived as close to neoliberalism due to some of its features. For instance, the <IR> framework states that "the primary purpose of an integrated report is to explain to providers of financial capital how an organisation creates value over time" (IIRC, 2013). The shareholders are interested in how the organisation will create value for itself and therefore what returns they could expect. Many debates arise from those statements and around the broad questions of "*what does value mean*?" and "*value to whom?".* Milton Friedman claimed that the organisation should focus only on value to shareholders. On the other hand, Freeman (1984) developed the stakeholder theory according to which an organisation should address all its stakeholders' interests. Most of sustainability frameworks have their tenets in this theory. Despite the shareholders primacy of the <IR> framework, it also states that the organisation should address other stakeholders' needs and it has the merit to consider a broader set of capital than only the financial capital just as Milton Friedman. This thesis will address this question of whether integrated reporting is a response to sustainability issues and will explore paths of alignment with others sustainability standards.

1.2. Motivation

Integrated reporting got many attentions from academics in the last decade and a growing awareness among businesses. However, it remains confusing what is its real added value in comparison with sustainability reporting. In 2019, they were still many companies that issued

an annual report with both financial and nonfinancial statements and called it an integrated report. IR is more than that. To our knowledge, there is a gap in prior literature to explain distinctive features that should have an integrated report to achieve sustainability. Our first motivation is therefore to aggregate normative requirements of IR according to prior literature in order to reduce confusion among practitioners and thereby facilitate their report preparation.

The second motivation is to identify a nexus between sustainability standards. The proliferation of frameworks makes the work of report preparers more complicated and weaken the valuation of investors. We will intend to identify a mean to align all those initiatives.

Finally, the IIRC is in the middle of the revision process of its framework. It may be interesting to bring further insights on IR features and to shed light on what adjustments should undergo the existing framework.

1.3. Problem statement

The problem investigated in this thesis is the question of the value added of integrated reporting to corporate reporting and sustainability. Is this just another framework that increase the confusion of practitioners or does it align sustainability practices and financial reporting? Does it embed more sustainability into the core business, or does it strengthen "business as usual"? Does it bring a real new insight about capitalism or is it dressed-up neoliberalism? We will explore what impact has IR adoption on sustainability embeddedness and what are its incentives in comparison with sustainability reporting.

1.4. Contribution

We will build an assessment grid that can be used to explore if an integrated report complies with normative requirements of IR and if it is in accordance with sustainability practices. We will also shed light on incentives and criticisms headed to IR in prior literature. As stated, this thesis might help report preparers in their reporting process.

1.5. Organisation of the study

First, we will define current disclosure practices and mention various reporting standards in a section that we will call the "normative part". Second, integrated reporting will be defined according to two existing frameworks that we will compare: King Report and <IR> framework. The literature review thereafter will be organized around a list of points that we will identify as

material in the normative section. At last, we will build our assessment grid and summarize incentives and criticisms in a chart.

Regarding the empirical part, we will break down our analysis into two distinctive steps. First, we will look into the perspectives on IR according to practitioners and other stakeholders based on interviews found online and based on market feedback on the Topics Papers published by the IIRC in February 2020 within the scope of the framework revision. Second, we will use our assessment grid to compare the report of two companies from the same industry: one sustainability report and one integrated report.

Chapter 2: Corporate Disclosure

2.1. Mandatory disclosure

Mandatory disclosure aims first and foremost at reducing information asymmetry between managers and investors. Managers have at their disposal more information than investors and without coercive disclosure requirements they would be able to manipulate the data they disclose in order to obtain funding. This bias would result in market imperfections and a deficient resource allocation.

Nowadays, mandatory disclosure still mainly targets shareholders and encompasses exclusively financial metrics. However, throughout the last decade, we have witnessed a nascent interest from governments for the implementation of regulations about nonfinancial disclosure.

2.1.1. Financial information

Financial information can vary a lot depending on the size of the company. The main financial reporting standard are the IFRS developed by the IASB[4]. Those norms are applicable in more than 100 countries. They are mostly applied by listed companies to ensure a better comparability for investors. It is for example compulsory for listed company within the European Union.

It is question of a principle-based approach which let room for manoeuvre concerning the metrics used for reporting.

Three objectives of the IFRS norms:

- Transparency: to reduce information asymmetry and improve financial reporting quality
- Accountability: To allow reduction of information asymmetry and comparability
- Efficiency: By improving resources allocation

The United States have not adopted IFRS yet. The GAAP are used in that country. The main difference is that the IFRS are principle-based while the GAAP are rules-based, hence they are stricter.

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[4] IASB stands for International Accounting Standard Board. This is an independent organisation that develop the IFRS.

The IFRS require qualitative and quantitative information and put an emphasis on materiality principles. From the standpoint of the IFRS, materiality refers to information that, if omitted, it would influence decisions of investors. As stated in the IFRS 8, financial reporting targets providers of financial capital.[5]

It is of relative importance to our study to indicate which principles companies must respect through financial reporting to observe how they could incorporate it with other streams of information. However, it is to be noted that this section is not central to our study.

2.1.2. Nonfinancial information

As mentioned here above, mandatory disclosure is increasingly encompassing the field of CSR disclosure. We can cite the Danish Financial Act that requires larger organisations to account for social responsibility or the UK Companies Act that requires senior management to pay attention to their impact on communities and the environment as well as to take into account the interests of employees (UK Companies Act, 2006). More recently, the European Union has introduced the Directive 2014/95/EU, also called "the non-financial reporting directive". It applies to large public-interest companies whose number of employees is above 500. European Union introduced this regulation with the aim of developing corporate social responsibility. It requires large companies to disclose information about how they manage social and environmental issues. In the Directive, we can read that it aims at providing better information to "meet the needs of investors and other stakeholders as well as the need to provide consumers with easy access to information on the impact of businesses on society". The European Union advises the use of other frameworks such as the OECD Guidelines for Multinational Enterprises, GRI, UN Global Compact and so forth. Assurance of Nonfinancial information is not compulsory but may be enforced by Member States. Regarding materiality, organisations shall disclose information that might have a substantive impact on the financial performances of the company (Baumüller & Schaffhauser-Linzatti, 2018).

Nonfinancial information is useful to show the overall performance of a company (Raucci & Tarquinio, 2020). Prior literature demonstrates that the inclusion of such indicators was a necessity for external and internal decision-making because it enables a better assessment of risks and a reduction of inefficiency (Esch et al., 2019). Professionals bodies have also

[5] For more information, consult: https://www.ifrs.org/issued-standards/list-of-standards/

highlighted the growing relevance of non-financial information. The development of digitalization also facilitates reporting of those type of indicators. (Dhaliwal et al., 2014).

2.2. Voluntary disclosure

Mandatory disclosure regulations may be not sufficient to cover all topics that should be disclosed to eliminate completely information asymmetry between managers and investors. Mostly, while making their reporting, organisations should also consider their whole range of stakeholders that have interest in the firm other than monetary. Indeed, prior literature demonstrates benefits for companies that engage with their stakeholders. In this perspective, voluntary disclosure is rather a strategic decision. (Abeysekera, 2013; Demartini & Trucco, 2017; Shehata, 2014). This choice of adding corporate disclosure must be preceded beforehand by a profitability analysis and it will then apply only if the benefits are higher than the costs (Abeysekera, 2013; Demartini & Trucco, 2017).

Prior literature shows that cost of capital is negatively correlated with voluntary disclosure. Indeed , the more information a company provides, the easier it will be to access funds (Shehata, 2014). It also lowers the reputational risk as long as the information is reliable and accurate. Therefore, some scholars criticised voluntary disclosure, describing it as a “matter of bias information selected by managers” in order to show a positive picture of the company (Einhorn & Ziv, 2012). This problem could be resolved by mean of assurance, but the process of ensuring the reliability of nonfinancial information is not mainstream yet. We will further explore this problematic below.

In the following sections, we will present two sustainability reporting standards that organisations may voluntarily apply.

2.2.1. The Global Reporting Initiative

Several initiatives have been implemented to help companies that are willing to disclose nonfinancial information. This is the case of the Global Reporting Initiative (GRI) which has published a broad set of ESG indicators to foster sustainability reporting among businesses. GRI reporting standards intend to promote the reporting of reliable and comparable information on a company’s activities. Therefore, this standard is designed to push organisations to include

their positive contribution to sustainable development as well as their negative impact on their external environment for a complete transparency.

The Reporting Principles are divided into two groups: "Reporting Principles for defining report content" and "Reporting Principles for defining report quality".

We will tackle the few principles of interest to our study but the whole range is summarized in a chart in appendix I.

Reporting principles for defining report content:

1. Stakeholder inclusiveness:

"*The reporting organisation shall identify its stakeholders, and explain how it has responded to their reasonable expectations and interests*."

The GRI states that organisations should foster stakeholders' engagement. By "stakeholders", they mean all entities or individuals that might be affected by the organisation's activities or those that might have an effect on the organisations' ability to create value. Companies should also identify clearly which input is brought by which stakeholders.

2. Sustainability Context:

"*The report shall present the reporting organisation's performance in the wider context of sustainability*"

Sustainability is a matter of environmental, social and economic performance. Organisations following GRI standards are expected to provide an insight of how they affect their external environment whether it is a positive or a negative influence. In the report, "the organisation describes how economic, environmental, and/or social topics relate to its long-term strategy, risks, opportunities, and goals, including its value chain".

3. Materiality.

"*The report shall cover topics that:*

a. Reflect the reporting organisation's significant economic, environmental, and social impacts; or
b. Substantively influence the assessments and decisions of stakeholders."

The interpretation of materiality under the GRI is not similar to that of IFRS or the European Union. The emphasis is on stakeholders rather than investors. Indeed, a sustainability report

following GRI guidelines must enable an informed decision for stakeholders. Issues of material importance will include matters that might have a substantive impact on the company and the stakeholders. If we look at the GRI materiality map below, we can see the two axes representing degree of importance for stakeholders and the company. However, the GRI does not provide any further guidelines on the materiality assessment. It is up to the company to determine how it identifies its most material topics and explain its methodology in its report.

*Figure 1 : GRI materiality map (source: **GRI 101**: foundation, 2016)*

4. Completeness:

"*The report shall include coverage of material topics and their boundaries, sufficient to reflect significant economic, environmental, and social impacts, and to enable stakeholders to assess the reporting organisation's performance in the reporting period*."

The topics tackled must provide sufficient information to enable the assessment of the organisation. Thus, it should include a long-term forecast and all relevant information about its material impact, whether positive or negative. Therefore, a sustainability report is rather not expected to be concise.

<u>Principles for defining report quality</u>

Organisations are advised to include both qualitative and quantitative data as long as their measurement or estimation methods are well described, and qualitative statements are clear and consistent. Those principles aim at enabling comparability over time and across industries and to enhance reliability of the report. Methodology statement is important to facilitate assurance process because according to GRI, organisations should resort to an external nonfinancial assurance. The information reported must be comparable over time and across industries. As stated above, GRI strongly highlights the need to balance positive and negative information

2.2.2. Sustainability Accounting Standard Board

The Sustainability Accounting Standard Board, for its part, provides a set of industry-specific standards. The main difference with GRI is that it targets investors rather than stakeholders and society at large. The emphasis is put on financial material information that address shareholder's needs. In other words, they focus on sustainability issues that may have an impact on "financial conditions or operating performance" (SASB, 2017). It has been established as a response to the growing investors' interest for ESG disclosure. It has for purpose to enable a better investment allocation. On SASB's website, we can read the assertion that this standard is complementary with other frameworks such as GRI, IIRC, CDP[6], and so forth.

For SASB, sustainability refers to the ability of the company to create value over the long-term. The question is: value to whom? SASB framework targets investors, thus we could draw the conclusion that the term value refers to return for shareholders. It is also stated in the "purpose" section that one of the objectives is a better management of social and environmental capitals. This consideration for economic, social, and environmental dimensions reminds the Triple Bottom Line.

The guiding principles are more concise than GRI and presented differently, but we can find similarities between both frameworks. SASB standards are organised around three main purposes which are materiality, decision-usefulness, and cost effectiveness. To summarize it in one sentence, the goal is to provide material information to investors that in turn lower the cost of capital. Indeed, the fact of allowing access to a broader set of information enables investors

[6] The Carbon Disclosure Project is a non-profit organisation specialized in disclosure on carbon footprint, forest and water management

to avoid time-consuming and costly data collection. [7] Those purposes can be broke down in a range of principles that organisations would have to respect in order to achieve them.

Reporting principles for defining report content:

1. Of interest to investors

As stated, the topics tackled in the report must address shareholders' interests. With a market-based and evidence-based approach, SASB have identified which kind of contents matter most for investors in a report across various industries.

2. Relevant across an industry

As stated here above, SASB metrics are industry specific. Topics tackled are chosen in accordance with the industry. They represent risks and opportunities that have potential to affect operational and financial performance.

3. Materiality

Within the scope of SASB's standards, materiality is regarded as sustainability issues that have a material impact on financial performance which is closer to the interpretation of materiality in the Directive 2014/95/EU or the IFRS than GRI. The following definition stated by the US court is used within the framework:

"Information is material if there is a substantial likelihood that the disclosure of the omitted fact would have been viewed by the reasonable investor as having significantly altered the "total mix" of information made available"

Thus, we can observe here that the conception of materiality is highly different between GRI and SASB. Although both frameworks put the emphasis on the reporting of material information, SASB perspective regards materiality as what topics affect the financial position of the company while GRI rather questions what material impact has the company on its external environment.

The Five following factors are likely to determine materiality according to SASB: financial impacts & risk, legal, regulatory & policy drivers, industry norms & competitive drivers, stakeholder concerns & social trends and opportunities for innovation. SASB has implemented a materiality map[8] for each sector that identifies what kind of matters an investor will want to

[7] Before an investment, analysts need to gather useful data by means of questionnaires (SASB)
[8] http://materiality.sasb.org/

find in a report in a specific industry. Unlike GRI, this tool provides concrete data and metrics to help company in their materiality analysis.

Reporting principles for defining report content:

SASB focus primarily on quantitative data which facilitate assurance process. Indeed, information must be reliable and verifiable to be decision-useful to investors. Qualitative data can be added to explain measurement methods for instance. The report should also be comparable across industry. Finally, an important feature of SASB is its alignments with other existing standards. For more effectiveness in the reporting process, there is a harmonization between metrics already broadly in use and SASB standards.

2.3. Assurance of nonfinancial information

As stated above, assurance of nonfinancial information is not especially mainstream yet while according to a survey, 97% of investors think that it should be audited and 67% believe that it should be as rigorous as assurance for financial reporting (McKinsey, 2019). As a matter of fact, ESG information is mainly qualitative and it is therefore complicated for assurance providers to draw up a set of criteria to be used as a benchmark for evaluating reports faithfully. For example, criteria can be based on frameworks such as GRI and SASB. Accordingly, we may mostly find limited assurance of sustainability report nowadays. However, it can be whether a "reasonable assurance" or a "limited assurance". The difference relies in the extent of topics covered. A reasonable assurance "is achieved when the risk of a material misstatement of the subject matter has been reduced to a low level" while limited assurance "is achieved when the risk of a material misstatement of the subject matter has been reduced through the collection of evidence, but not to the low level required by reasonable assurance." (WCSB, 2019)

We may also hear about "combined assurance" that incorporate the report of various assurance providers specialized in a specific field in a same whole.

We will present the two most famous framework providing guidelines on assurance engagement within the scope of non-financial information.

AA1000AS

The AA1000AS was developed by AccountAbility[9] in 2008. It provides requirements for conducting nonfinancial information assurance and therefore evaluates the reliability of CSR information publicly disclosed. It primarily evaluates compliance with the AA1000 framework on sustainability reporting but can be applied to other frameworks. Regarding the assurance process, the emphasis is put on stakeholders and practitioners[10] must report their findings based on three sustainable principles: completeness, materiality, and responsiveness.

ISAE 3000

ISAE 3000 is a standard for nonfinancial assurance developed by the International Federation of Accountants (IFAC). ISAE 3000 provides requirements on the following components: Ethical requirements, Required planning and audit procedures, Reporting requirements, Quality requirements.

2.4. Literature review on sustainability reporting

Many incentives are assigned to sustainability reporting. As we have seen in the section on voluntary disclosure, it has the ability to reduce information asymmetry between managers and investors and subsequently increase an organisation's market value and lower the cost of capitals (Dhaliwal et al., 2014). Dhaliwal et al. (2011) acknowledge that GRI guidelines contribute to a better comparability between companies for investors and a better understanding of past performance. Nevertheless, sustainability reporting has been subjected to many criticisms throughout prior literature. This practice is not commonly perceived as a response to current environmental and social issues (Milne & Gray, 2013). Reports analysis point out the lack of conciseness and therefore the overwhelming of non-material information. Accordingly, it is rather perceived by some as an impression management[11] tool or greenwashing (Hahn & Kühnen, 2013; Velte & Stawinoga, 2017). According to report observations, there is usually no balance between positive and negative information disclosed (Wensen et al., 2011). To avoid this bias and enhance reliability of sustainability report, the necessity of external assurance is generally advocated (Laufer, 2003). Finally, we reproach companies for a too weak engagement

[9] AccountAbility is a global consulting and standards firm specialized in CSR reporting.
[10] The assurance provider
[11] Impression management is a process through which an organisation attempts to build a positive image of itself. Impression management theory has a negative connotation.

with stakeholders in the sustainability reporting process which is regarded by some as a mere management of legitimacy risks[12] (Hess & Warren, 2008).

After this brief literature review on sustainability reporting, we will see below whether integrated reporting fulfils the gaps identified which are the lack of conciseness, the lack of emphasis on materiality, and selectivity of information.

[12] According to legitimacy theory, a company disclose ESG information to legitimize its behaviours with its stakeholders.

Chapter 3: Integrated reporting – normative approach

3.1 Integrated reporting – Definition and momentum

Integrated reporting is a new standard that promote the integration of financial and nonfinancial information within a same report. It aims at improving corporate disclosure by providing a holistic view of an organisation's business activities. The methodology consists in establishing the connectivity between a range of capitals between which a series of positive or negative trade-offs occurs throughout the value creation process of a company. It also aims at explaining the dependencies between risks & opportunities, strategy, business model and performance over the short, medium, and long-term. The targeted outcome of this reporting practice is a better resource allocation contributing to financial stability and sustainability.

The concept of integrated reporting seems rather new but the movement has started in the early 2000s with a few pioneering companies (Eccles et al., 2015a). It is especially the case of the Danish company, NovoNordisk. After several years on reporting on the Triple Bottom Line, this company decided to issue a single report with both mandatory financial statements and sustainability information. The emergence of IR goes hand in hand with the growing interest for sustainability among society starting in the 2000s. NovoNordisk and other companies saw through this method a good mean to overcome ESG issues. (Demartini & Trucco, 2017)

Afterwards, some scholars and experts began to make observations and attempted to identify basic principles, challenges, and incentives of this new corporate practice. Eccles et al., (2015) named it the "theory building" phase. We can notably cite the paper of Robert Eccles and Michael Krzus named "One report" that they published in 2010. They championed in this book the need for a change and improvement in corporate reporting. Michael Krzus claimed in an interview about their book in 2010 that reporting on the positive and negative trade-offs between financial and nonfinancial performance will in turn provide a better basis for decision-making that will drive better engagement with stakeholders and altogether will lower the company reputational risk. Later in this interview, Robert Eccles put the emphasis on the importance of explaining the relationship between financial and nonfinancial information.

Two non-profit organisations have been created in order to develop awareness of this reporting practice: the Integrated Reporting Committee in South Africa and the International Integrated Reporting Council in United Kingdom. They both act to foster the broadcast of IR among

mainstream reporting practices. However, we will see that there exist a few discrepancies between those frameworks.

Sustainability standards such as SASB and GRI both support integrated reporting and are therefore up to speed the process of its adoption by lending institutional legitimacy to the concept (Eccles et al., 2015a). Furthermore, it is worth noting that integrated reporting is "principle-based" and provide therefore no metrics. Accordingly, organisation using IR principles for their annual report may choose to include metrics from SASB or GRI to disclose ESG information.

3.2. Frameworks

3.2.1. King report

King report is the first set of guidelines on corporate governance to foster integrated reporting. It was indeed introduced in 2009, with King III[13], thus before the creation of the International Integrated Reporting Council. This standard was even enforced by the Johannesburg stock Exchange which made South Africa the first and only country to have introduced a binding regulation about integrated reporting application. Therefore, we can find many studies focussing on the consequences of IR in South Africa. For example, some empirical evidences demonstrate a more long-term investor base for companies complying with IR principles (Serafeim, 2014).

This standard has been revised in 2016 with the introduction of King IV, effective in 2017. The IRC decided to align King Report with the principles provided by the IIRC (Demartini & Trucco, 2017). Although King IV follows mainly the principles established in the <IR> framework of the IIRC, a few discrepancies remain in the fundamental concepts underpinning each report. We will therefore examine the stated objectives and main concepts highlighted within King Report and thereafter we will see what are the similarities and differences with the <IR> framework.

Fundamental concepts:

1. Integrated thinking

[13] There were King I in 1994 and King II in 2002 before. King I was introduced after the Apartheid and promoted already a more integrated approach with more stakeholders' engagement.

King IV strongly advocates the concept of integrated thinking.[14] It relates to the management consideration of "the connectivity and interdependencies between the range of factor that affect an organisation's ability to create value over time." According to King IV, integrated thinking needs to be embedded within daily management before implementing integrated reporting.

2. Corporate citizenship

This is an important concept in King Report's philosophy. As a matter of fact, the tenet is that such a contract is deemed to exist between organisations and society. They should therefore act as an integral part of society with rights and obligations. In this perspective, organisations should report on their positive and negative impact within the triple context of economy, society and environment. From the IRC's standpoint, a proper integrated thinking with a multi-stakeholder approach will ensure benefits for the organisations as well as the society and all of its stakeholders.

3. Stakeholder-inclusive approach

King IV uses an IIRC's statement to justify this approach which is "there is an interdependent relationship between the organisation and its stakeholders, and the organisation's ability to create value for itself depends on its ability to create value for others" (IIRC, 2013). In other words, King Report considers that the utility of the company is positively related to the utility of its stakeholders. However, King Report puts further emphasis on addressing stakeholders' needs first. It is up to the company to find the right balance among stakeholder's interests. With reference to the capitals, King IV states that "a as a logical consequence of this interdependency, one person benefits by serving another". Stakeholders' interests should be taken into consideration on the same level as shareholders and not as "instruments to serve the interests of shareholders, but as having intrinsic value for decision-making in the best interests of the company over time." (King IV, 2016). Both interests are interdependent, thus the stakeholder-inclusive approach allows a "symbiosis to promote the company's long-term sustainability" (King IV, 2016).

4. Sustainable development

The main tenet of King IV is probably sustainable development. As mentioned above, the organisation must be thought in the triple context of environment, economy and society. It is stated that the success and survival of the organisation are intertwined with the triple context

[14] It was mentioned in King III but King IV put more the emphasis on it

and sustainable development should be a primary imperative as respect of its corporate citizenship. King IV put the emphasis on long-term value creation and therefore, organisation's core purpose, its risks and opportunities, strategy, business model, performance and sustainability should all be included in this process.

Principles:

King Report counts 17 principles (see appendix II). They are mostly headed to corporate governance but many of them refer to integrated thinking and integrated reporting. For instance, King Report states in the principle 4 that an organisation should " appreciate that the organisation's core purpose, its risks and opportunities, strategy, business model, performance and sustainable development are all inseparable elements of the value creation process." The report should remain concise and enable stakeholders to make informed decisions. We can therefore work on the assumption that King Report targets all stakeholders rather than only shareholders such as the reporting standard SASB or IFRS. Finally, the emphasis is also put on reliability of information and it is therefore required to disclose both positive and negative information and to resort to an external assurance.

3.2.2. IIRC and the <IR> framework

The second initiative that has strongly participated to the broadcast of integrated reporting around the world is the International Integrated Reporting Council. This non-profit organisation has been founded in 2010. It is a global coalition of regulators, investors, companies, standard setters, the accounting profession and NGOs (IIRC, 2013). Many representatives with different background and from various nationalities composed the IIRC's governance entities.

In 2013, the IIRC published its <IR> framework which became the reference standard providing guidelines on integrated reporting, hence the alignment of King IV on the same principles as stated here above. According to IIRC, an integrated report differs from other reports with its focus on the ability of an organisation to create value in the short, medium and long term. Its most innovative contribution is its interpretation of value (Adams C., 2014)[15] which is central to the framework.

This framework is principle-based just as the IFRS. Indeed, since the topics disclosed will highly depend on the industry, it belongs to each entity to know which KPI will fit best its

[15] Carol Adams is an academic that was part of the Capitals Technical Collaboration Group for the International Integrated Reporting Council.

activities[16]. It also belongs to the reporting entity to choose which standard they can use for the metrics such as GRI and/or SASB. IIRC does not advise one especially and it is even possible to combine multiple standards as long as it is stated in the report.

The <IR> framework is built around seven Contents Elements: organisational overview & external environment, governance, business model, risks & opportunities, strategy & resource allocation, performance, outlook, and basis of preparation & presentation. Those elements must be reported in accordance with the six following principles: connectivity of information, strategic focus & future orientation, stakeholder relationships, materiality, conciseness, reliability & completeness, and consistency & comparability. Among those principles, we can recognize some that were already present in sustainability reporting standards previously discussed. As brand-new reporting principles, we can name connectivity of information and strategic focus & future orientation. Materiality was already mentioned in GRI and SASB but within the scope of integrated reporting, materiality is regarded as the request to report only what "substantively affect the organisation's ability to create value over time" (IIRC, 2013). Nonetheless, we can say it is more linked to SASB interpretation[17] because from the IIRC's perspective, organisations must focus on value creation for itself to enable "returns to the providers of financial capital". In other words, it is implied that the focus is first on getting a highly positive profit and loss statements that will translate into dividends afterwards. Thus, we can compare it to SASB's materiality interpretation as what is material for shareholders' financial returns.

Below, we will do a comparison between King Report and the <IR> framework. Although King IV is aligned with the <IR>, we may find a few discrepancies. Indeed, King Report claims that organisation should follow the capitals interpretation of the IIRC as well as its guiding principles. However, the fundamental concepts are not all the same and they are opposed regarding the target audience which will therefore naturally lead to different points of view on certain elements.

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[16] For example, some industries are more concerned about the environment while other have more issues about labour policy

[17] Materiality is regarded as what matters have an impact on financial performance for shareholders

Similarities between King Report and IIRC

1. Integrated thinking

Integrated thinking is also the tenet of the <IR> framework. According to the IIRC, integrated thinking is "the active consideration by an organisation of the relationships between its various operating and functional units and the capitals that the organisation uses or affects. Integrated thinking is the management mechanism that leads to an integrated report" (IIRC, 2013).

2. Holistic view and connectivity

According to the principle 4 of King IV, an organisation must take into account that its business model, strategy, performance and risks and opportunities are all connected and directly related to the value creation process. The principle stated in the paragraph 3.6 (see appendix III) is in part similar but brings further elements. Connectivity must be established on the following components:

- Content Elements: Organisations should show the interrelatedness between the seven Content Elements. Therefore, it includes performance, business model and risks and opportunities just as stated in King Report.
- External environment: Organisations should report on the external factors affecting its ability to create value and how it is linked to its strategy.
- Past, present and future: The emphasis on the time frame is higher in IIRC. That is a central concept in the framework. The word sustainability is used only once but the value creation over the short, medium and long term is stated many times. It is important to find the right balance and to keep in mind that performance in the short term may be related to performance in the long term.
- Capitals: There are continuous interactions between the capitals an organisation has at its disposal. In other words, an increase in one capital translate in a decrease in another form of capital.
- Financial and nonfinancial information: The connectivity between the six capitals implies a connectivity between financial and nonfinancial information and between financial and ESG performance.
- Quantitative and qualitative: The <IR> framework requires a combination of qualitative and quantitative information. KPIs should go along with narrative explanations for an efficient communication.

3. Stakeholder-inclusive approach

We must be careful with this fundamental concept. A stakeholder-inclusive approach is indeed advocated in both frameworks, but discrepancies remain in both views. As a matter of fact, stakeholders are seen in the IIRC as a factor that influences value creation for shareholders and that is why organisations should engage with them and understand their legitimate needs. In King Report, stakeholders' interests must be addressed because of the "social contract" the organisation holds. There is an equal consideration between providers of financial capital and other stakeholders while in the <IR>, meeting the needs of the latter group has as a sole purpose the satisfaction of the former group. Accordingly, if a relationship with a stakeholder is not material for the organisation's ability to create value for itself, it is not necessary to take it into account. It is also a vision contrary to that of the GRI.

4. Balance between positive and negative information

This similarity is relative as well. In the <IR> framework, it is advised to report on positive and negative information just as King Report. That encompasses increases and decreases in capitals, strengths and weaknesses or positive and negative performance. The non-selectivity of information is stated in the framework in order to avoid bias such as transformation of data to provide a better image. However, there is a substantive difference with King Report. The IIRC states at the beginning of the framework that unfavourable results do not have to be reported if it harms too much a competitive advantage. This is subjected to discussion as it is not consistent with the purpose of transparency. In King Report, it is highlighted that all negative information should be included in the report.

Differences between King Report and IIRC

1. Target

The main difference between King Report and the <IR> is the target. The target within the scope of the <IR> is the shareholders while in King IV it is all the stakeholders. Indeed, the primary purpose of <IR> is to provide higher quality of information for providers of financial capital just as SASB. As stated above, the idea is that if the organisation addresses shareholders' needs with a long-term orientation, it will also benefit stakeholders because they are directly related with value creation for the providers of financial capitals. While from King IV's

perspective, the primary purpose is to address all stakeholders' interests and it will benefit shareholders somehow. However, IIRC has just issued a consultation draft[18] within which it is proposed to make a shift from providers of financial capital toward stakeholders and society as the main targets.

2. Corporate citizenship

The corporate citizenship concept is not mentioned in the <IR> at all. This framework comes closer to neoliberalism with its emphasis on shareholders' needs while King IV could be regarded as more innovative with this idea that companies are part of society and must be accountable toward it.

3. Sustainable development

The term "sustainability" is used only once in the <IR> while King Report put it as the main tenet of the framework.

IIRC's interpretation of capital and value

In its executive summary, the IIRC provides the following definition of the capitals: "The capitals are stock of value that are increased, decreased or transformed through the activities and outputs of the organisation" (IIRC, 2013). As stated above, the <IR> framework encompasses six forms of capitals (financial, manufactured, intellectual, natural, human, social and relationships). Each form is owned either by the company or by a stakeholder or may be not owned at all[19]. According to the definition of capitals, value creation occurs when a stock of capital increase. However, given that organisations should address shareholders' needs, we can work on the assumption that the reference to value creation for the organisation in the <IR> framework refer mainly on its ability to generate cash flow.

[18] Any individuals have the possibility to provide its comment on this draft until 19 august 2020. Final version should be done by the end of 2020. This revision is based on the 300 responses within the scope of the market feedback on topics paper published in February.
[19] Natural capital for instance

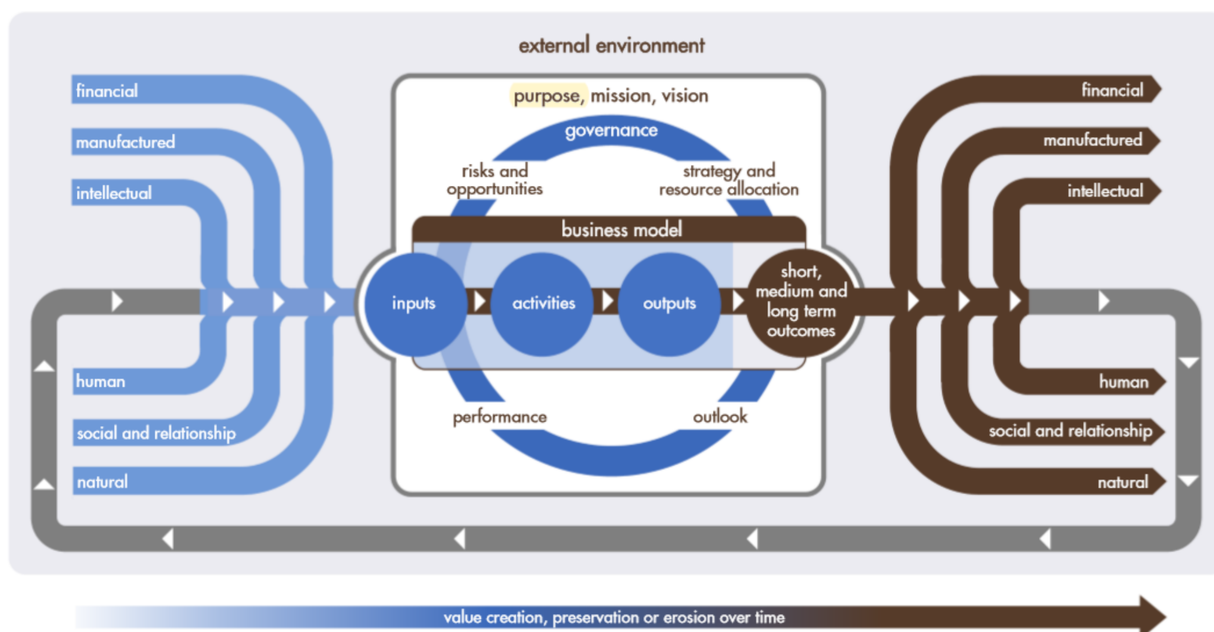

Figure 2: Process through which value is created, preserved or eroded (source: <IR> framework, IIRC, 2013)

3.3. Comparison between integrated reporting and sustainability reporting

The most distinctive feature of integrated reporting is the connectivity of information. It has the ability to gather all essential information from various disclosure streams and to show the dependencies between them. There is also a strategic focus. In other words, all risks and opportunities must be considered in the value creation process. The consideration of six capitals is also new. SASB and GRI did not tackle this question of trade-offs occurring among the resources of a company and stakeholders' interests.

On the other hand, we can find the principle of materiality in all the frameworks although it has not the same meaning. The highest emphasis on materiality belongs to the <IR> framework. It is also interesting to see the differences with the target and the stakeholder relationship approach between King Report and IIRC, while King IV claimed to align itself on IIRC' principles. We may question this narrow focus on shareholders in the <IR> framework.

Table 1: Comparison between sustainability reporting and integrated reporting

	Sustainability reporting		Integrated reporting	
	GRI	*SASB*	*King report*	*IIRC*
Target	stakeholders	shareholders	Stakeholders	shareholders
Stakeholders relationship	Stakeholders are the primary target of a sustainability report in accordance with GRI.	Stakeholders are considered as a factor likely to influence material issues for shareholders (reputational risk, change in customer demand, disruption to business)	There is a social contract between the organisation and its stakeholders. Therefore, the organisation has obligations toward them.	Stakeholders are an instrument for creating value for shareholders. They are a factor influencing the value creation process
Metrics	Combination of quantitative and qualitative information	Primarily quantitative (benchmarking within industry and historical performance) Additional qualitative information for more detailed explanations	Alignment on IIRC	Combination of quantitative and qualitative metrics. (Narrative explanation should accompany KPIs)
Purpose(s)	Embedded ESG performance in decision-making to create benefits for everyone	Provide useful and material information for more efficient and cost-effective investment allocation	To foster transparent corporate governance	Provide a holistic picture of an organisation value creation process
materiality	Material impact that the company have on sustainability	Sustainability issues that have a material impact on financial performance.	Material impact on the organisation's ability to create value and material impact on stakeholders.	Issues that have a material impact on the organisation's ability to create value. (Gather all essential information from other standalone report)
Principles for defining content topics	Stakeholders inclusiveness Sustainability context Materiality completeness	Of interest to shareholders Relevant across an industry Materiality Completeness	Corporate citizenship Sustainable development Stakeholder-inclusive	Materiality Stakeholder relationships strategic focus and future orientation
Principles for defining quality	Reliability Balance Clarity Comparability	Reliability Verifiability Alignment Comparability	Connectivity of information Conciseness Consistency and comparability Reliability and Completeness	Connectivity of information Conciseness consistency and comparability Reliability and Completeness
Content elements	See appendix I	Need to complement quantitative metrics with narrative content to justify materiality such as: Strategy Competitive positioning Degree of control Performance Trend over time	Governance Business model risks and opportunities strategy and resource allocation performance outlook basis of preparation and presentation	Governance Business model Risks and opportunities Strategy and resource allocation Performance Outlook Basis of preparation and presentation

Chapter 4: Integrated reporting – Literature review

4.1. Introduction

In the last decade, we have witnessed a growing interest for integrated reporting among academics. Integrated reporting is fostered by many international bodies and advocated by representatives of the accounting profession and academics. Some see through this practice many benefits and an open door to new business opportunities to seize (de Villiers et al., 2017). Scholars attempted to investigate the consequences of IR adoption. Their findings shed light on incentives for internal management as well as for investors. Nevertheless, studies on integrated reporting have provided heterogeneous results (Reimsbach et al., 2018). Although prior literature tends to identify benefits, we can also find papers that identified some field of inefficiency of this reporting practice. Furthermore, some scholars have strongly criticized the IIRC itself and the <IR> framework such as George Flower that wrote an article named "IIRC, the story of failure". We will further discuss it below.

We may be careful with the fact that many advantages or disadvantages attributed to integrated reporting are related to sustainability reporting in general. In the normative part, we identified the most distinctive features of IR in comparison to GRI and SASB.

So far, prior studies have mainly focused on the factors that influence the adoption of IR either on the country-level[20] or the company level[21]. Literature on the long-term consequences of the implementation of integrated reporting is still poor. The reason is the limit in time frame for the data because this practice remains quite new. However, we can find a few studies regarding the effect on the shareholders base of listed companies using such practice. Studies are mostly quantitative, but we can also find qualitative ones. The research designs used are either experimental, archival or surveys. Main theories used in the literature on IR are the stakeholder theory, institutional theory and legitimacy theory.

To conduct our literature review, we will first go through a series of points related to management decision-making that we have identified as major in the contribution of integrated reporting or which are subjected to discrepancies between existing frameworks. We will shed

[20] Many studies explored the influence of national culture on the adoption of IR.
[21] Many studies focused on the company characteristics such as the size, industry, profitability and board composition.

light on the findings and opinions of academics related to those elements. In a second part, we will observe the market reaction to this new corporate practice.

4.2. Management view

Capitals

As set out in the normative part, a distinctive characteristic of integrated reporting is its multi-capital approach. The IIRC justify its broader consideration of capital with notably the stewardship theory. In other words, the manager – called the steward – will act responsibly with the capitals that the principals – capitals owners – have entrusted to them. Throughout academic literature about integrated reporting, several other organisational theories have been put forward to explain its voluntary use and identify the relationship between capital owners and managers using IR (Camilleri, 2018). For example, the agency theory is a theory broadly applied in the literature on voluntary disclosure and therefore it has also been used in a few studies on integrated reporting (Camilleri, 2018). The meaning is quite similar to the stewardship theory. An agent – the manager – is left with the responsibility of the capitals that the principal – the shareholders – delegate to him. Notwithstanding, it is rather an individualistic theory while the stewardship theory is rather collective. Indeed, the agent acts to maximize the principal's utility in exchange of personal benefits while the steward is guided by the organisation's intrinsic values (Camilleri, 2018; Shehata, 2014). By acting in the best interest of the organisation, shareholders will benefit through an increase in future cash flow that will result in higher dividends. The agency theory implies that organisations reporting on a broad range of capitals do so in order to avoid agency costs resulting from information asymmetry that in turn give rise to market imperfections (Frias-Aceituno et al., 2014). However, the agency theory is mainly focused on financial capital while stewardship encompasses all forms stated in the IIRC's framework. Capital stewardship theory supposes the "preservation and enlargement of multiple forms of capital, all of which contribute to long-term value creation by the firm" (White, 2010). Finally, reporting on a broad set of capitals may also be explained by the legitimacy theory that works on the assumption that there is a social contract existing between the organisation and society, which reminds the concept of corporate citizenship used in the King Report. The firm has rights and obligations toward society and stakeholders, therefore it is its duty to address their legitimate needs and organisations gain legitimacy by disclosing information on a broad set of capitals (Camilleri, 2018; Shehata, 2014; Suchman, 1995).

The definition of capitals and components associated with each form is deemed to be confusing by academics (Demartini & Trucco, 2017). Indeed, there is a vast agreement on the vagueness of the meaning provided by the IIRC about each capital which make assurance process more complex. The boundaries between the six forms are too “fuzzy” (Flower, 2015). Demartini & Trucco (2017) drew up a chart that attempt to gather components linked to each forms of capitals according to King report, IIRC, NovoNordisk, the Un Global Compact and Abeysekera’s template (2013) (see appendix IV).

Others accused integrated reporting to be a “dressed-up neoliberalism” and to reinforce “business as usual” (Flower, 2015; Thomson, 2015). Those authors assume that integrated reporting remains a conventional accounting approach based on capitalism and that sustainability will not be achieved through this kind of mechanism. IR does not achieve capitals’ accountability (Deegan, 2013). However, it is recognized that IR fulfils some gaps of sustainability reporting by connecting financial capital with nonfinancial capital (Jensen & Berg, 2012; Stacchezzini et al., 2016). Scholars also acknowledged the IR’s virtue to get managers to take into consideration in their decision-making process a broader set of capitals (Flower, 2015) and it enables a higher anchorage of sustainability into the core business (Eccles & Churet, 2014)

Performance

Performance is one of the eight Content Elements of the <IR> framework. Organisations are requested to disclose on the extent to which they achieve their strategic objectives and advised to report on both financial and “other” performance (IIRC, 2013). The relationship between IR adoption and corporate performance, whether financial or ESG, have been observed by many academics.

A positive effect on financial stability has been demonstrated. Indeed, balance sheets’ observations assume that firms practicing integrated reporting have a lower level of debt and a higher liquidity (Eccles & Churet, 2014). On the other hand, Churet & Eccles (2014) found no positive link with returns on capital. As a matter of fact, there is basically no general agreement on the positive relationship between financial performance and integrated reporting (de Villiers et al., 2017)

A positive relationship with ESG performance has been confirmed (Eccles & Churet, 2014). However, although studies confirmed a better risk management of issues linked to corporate social responsibility, scholars encountered difficulties to explain the underlying effect leading

to this result. So far, we only know that this relationship is stronger in specific industries. On the other hand, some scholars remain sceptical about the complementarity of a financial and ESG focus and call for more details about ESG performance in an integrated report (Eccles et al., 2015b; Parrot & Tierney, 2012)

Many studies focused on the aspect of corporate governance quality. Empirical evidences showed a positive impact on this variable (Ivan, 2019; Shanti et al., 2020). This is notably explained by the priority given to transparency and reliability of the information in the context of IR (Pavlopoulos et al., 2017).

Integrated reporting would also lead to a reduction of reputational risk (de Villiers et al., 2017; Esch et al., 2019). Although this characteristic is assimilated to sustainability disclosure in general, integrated reporting is not regarded as a "greenwashing practices" or as a tool for impression management because ESG performance is more embedded in the core business. Organisations practicing IR usually undertakes large-scale sustainability initiatives (Eccles et al., 2015b).

Internal decision-making and resources allocation

The holistic view of a company's activities provided in an integrated report enables a better long-term decision-making which is why "A company's motivation to implement IR and thinking should not only be the result of external pressure" (Esch et al., 2019). In prior literature on sustainability reporting, it has been demonstrated that managers consider social and environmental information while evaluating their projects (Madein & Sholihin, 2015). Esch et al. (2019) investigated the impact of the provision of integrated information on managerial resource allocation with an experimental study. The results show that this reporting format leads to decisions with higher sustainability and benefits internal management. CSR is therefore more embedded into the business while keeping alignment with financial targets (Adams, 2015).

Materiality

For the recall, from the IIRC's perspective, material issues are deemed as the matters that might substantively affect the organisation's ability to create value over time as opposed to the materiality principles of GRI which seeks to identify the impact of the organisation on its external environment. The meaning of materiality is subjected to debate in academic literature. Flower (2015) attacked the IIRC for ignoring the impact that the firms might have on the capitals if it does not affect its ability to create value. According to him, this perspective does

not align the <IR> framework with sustainability reporting and he assumes that this deviation is due to the risk of losing competitive advantage by revealing too much.

Nonetheless, many scholars acknowledged the efficiency of materiality emphasis that is specific to integrated reporting (Eccles et al., 2015b; Eccles & Churet, 2014; Farneti et al., 2019). Indeed, literature on CSR reporting has often accused it to be greenwashing or impression management (Raucci & Tarquinio, 2020). The principle of materiality on the other hand lead to more anchoring of sustainability into the core business (Eccles & Churet, 2014). The relationship between sustainability embeddedness and integrated reporting have been observed through an explanatory study that undertook interviews with employees of a company that uses this practice. They all assert a positive relationship between sustainability embeddedness and IR (Pretorius & Le Roux, 2019).

The IIRC materiality assessment process recommendations are also approved by academics (Eccles et al., 2015b). Indeed, in the paragraph 3.20[22], it is recommended to "include regular engagement with providers of financial capital and others[23]". Stakeholders engagement is, among other components, identified as critical in the materiality assessment process of IR, though not deemed as one of "the three most distinctive feature of integrated reporting" (Eccles et al., 2015b). Materiality on the other hand is considered as one of those three distinctive features by Eccles et al. (2015) with strategic focus and connectivity of information.

To make a topic material for a company, there are various mechanisms. Institutional theory identified several fields in a company's external environment that might influence its materiality analysis. For example, new law might influence the materiality assessment or stakeholder pressure.

Connectivity

Connectivity of information is one of the three distinctive pillars of integrated reporting identified by Eccles et al. (2015). Showing the relationships between financial and nonfinancial information figures among its most innovative characteristics. Some companies issue a report with financial statements and sustainability information but without connecting both components and call it an integrated report, which is not right (de Villiers et al., 2017). However, this process appears to be particularly challenging. While communication on

[22] See appendix III

[23] "Others" refers to stakeholders in the <IR> framework.

financial performance has a well-defined format[24], reporting on sustainability is more complicated due, for instance, to the lack of agreed-upon standard for reporting on ESG metrics. Accordingly, establishing the connectivity between ESG and financial metrics is even more challenging. The first problem is that financial information will rather be quantitative while ESG is overall qualitative. Moreover, the financial impact of certain intangible assets could be complicated to materialize. (Eccles & Churet, 2014; Petkov, 2011). It is also worth noting that environmental issues are more tangible than other topics. Indeed, pricing mechanisms are easily found for energy efficiency for example while social performances are more difficult to quantify (Eccles & Churet, 2014). Connectivity of information is also about reporting on past, current and future performance and to find the dependencies between the current results and outlooks (Katsarski, 2019). Finally, to enable comparisons, companies are requested to use sectorial KPIs and explain all their measurement methods in their report (Eccles & Serafeim, 2013; Katsarski, 2019).

Then, a problem is that the IR's standard setters did not provide a clear definition on how to establish the connectivity between the Content Elements and the Capitals (Abeysekera, 2013). Furthermore, showing the interrelatedness between various streams of information is deemed to be a costly practice which requires many resources (Prado-Lorenzo & Garcia-Sanchez, 2010). It is necessary to own sufficient technologies capable to measure and integrate financial and nonfinancial information.

Finally, another problem arising from the connectivity principle is the collaboration between different departments. Managers may be reluctant to the implementation of IR because it might be problematic to build an effective collaboration between the financial department and the CSR department that are known for not being very tight (Argento et al., 2019)

Selectivity of information

In the normative section, we have seen that the IRC and the IIRC do not completely align on the disclosure of negative information. Although they both require disclosure of positive and negative performance, the IIRC states that unfavourable results do not have to be included in the report if there is a too important harm for an organisation's competitive advantage. This statement has led to several criticisms. Flower (2015) estimates that there are not enough binding rules in the <IR> framework. Managers are left with the liberty to select or transform data to show a positive picture of the company which relate to the impression management

[24] Balance Sheet, Income Statement, Cash Flow Statement, Statement of Equity

theory. Prior literature found for instance that ESG performance was negatively correlated with ESG disclosure as "managers disclose more positive environmental news when there is negative information" (de Villiers et al., 2011). Due to this remaining bias in disclosure, information asymmetry still resides in the market. In the end, integrated reporting would reinforce "business as usual" because it does not provide a real additional perspective to value creation (Dillard & Brown, 2013). Integrated reporting is therefore subjected to the same type of criticism than sustainability reporting.

Assurance

External assurance is not compulsory but only advised in the <IR> framework. The IIRC prefers to maintain it voluntary because the preparation of an integrated report is already challenging. Therefore, they do not want to make this process too burdensome in order to let it spread more quickly first (IIRC, 2020).

According to many academics, an external assurance would benefit managers and their stakeholders by reducing agency costs and increase reliability (Reimsbach et al., 2018). In addition, it is demonstrated that report preparers do not follow all the IIRC's guidelines while calling their annual report an "integrated report". An assurance would thus increase the reliability (Eccles et al., 2015b). However, the <IR> framework is principle-based and therefore leaves much room for flexibility. It is therefore challenging to provide assurance and determine whether an annual report comply with the IIRC's principles (de Villiers et al., 2017). Accordingly, scholars call for more binding principles to help auditors to ensure both financial and nonfinancial information and foster compliance. A good practice would be first to provide explanations about measurement bases and sources of data disclosed (Abeysekera, 2013).

Value and target

The target audience and the question of "value to whom" is certainly the most debating subject around integrated reporting. We have seen that there were already discrepancies between King Report and <IR> on this matter. For the recall, IIRC highlights in its framework that providers of financial capital are the readers of an integrated report and organisations should focus on value creation for them first while King Report encompasses all stakeholders in the value creation process by notably arguing on the existence of a corporate citizenship. Stakeholders' interests must be addressed because of the corporate citizenship in King Report while in the <IR>, it is a matter of dependencies with shareholders' utility.

Primarily, this emphasis on shareholders is reproached. It is broadly stated in prior literature on integrated reporting that it should adopt a more stakeholder-inclusive approach (Abeysekera, 2013; Eccles et al., 2015b; Eccles & Serafeim, 2013; Flower, 2015; van Bommel, 2014). One of the reasons is that sustainability would not be achieved by privileging shareholders. The IIRC would have abandoned its first goal with an emphasis on "value for shareholders" rather than "value for society (Flower, 2015). From the IIRC's perspective, which reminds Adam Smith or Friedman philosophy[25], by addressing shareholders' interests, it will benefit the stakeholders in the aftermath. In other words, future cash-flow depends on some specific stakeholders satisfaction such as the customers that will spend more of their income in a product (Flower, 2015). Notwithstanding, for many scholars, stakeholders' interests are not all complementary but rather conflicting (Flower, 2015; Parrot & Tierney, 2012). In addition, there is a call for more detailed disclosure regarding stakeholder identification and prioritisation (Eccles et al., 2015b; Solomon & Maroun, 2012).

On account of this focus on financial capital providers, the <IR> is not unanimously believed to create a real change in mainstream corporate practices and is deemed to be closer to conventional accounting (Flower, 2015; Stubbs & Higgins, 2014). Integrated reporting would be diverging from sustainability accounting or would only be an extension of it (Bouten & Hooze, 2015; Stubbs & Higgins, 2014). This failure is deemed to be the result of the IIRC's governing composition that is mainly represented by the accounting profession and multi-national companies that are therefore able to monitor if the rules established do not undermine their competitive position (Flower, 2015; Reuter & Messner, 2015; van Bommel, 2014).

Carol Adams (2015), in its response to Georges Flower, contended that integrated reporting and sustainability reporting have indeed a diverging purpose. Integrated reporting endeavours to align value for investors and value for society. Given that a sustainability report is addressed to stakeholders, it will likely include more disclosure about environmental and social performances because it has less focus on connectivity between the various capitals and on materiality. Nevertheless, integrated reporting has the potential to make most mainstream investors thinking differently about value and think longer term while GRI did not trigger a real behavioural change among the capital market.

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[25] Smith theory assumes that everybody should follow its individual objectives while Friedman claims that the only purpose of a company is to maximize shareholders' utility.

The problem is that managers are subjected to the constraint of profit maximization for shareholders. Rational decision-making theory contends that managers focus on profitability maximization (Harrison & Harrell, 1993). “Like Flower, I would also prefer it if business embraced the notion of ‘value for society’, but this will not happen unless it is seen as being aligned to ‘value for investors’ ” Carol Adams (2015) said in its response to Flower. That is why integrated reporting intends to find a way to make profit maximization complementary with stakeholders’ interests and society well-being by bringing a new way of thinking about business. The purpose of IR is to align those three diverging utilities.

The stakeholder theory is used to justify the need to engage with more key actors than shareholders. According to this theory, value must be regarded as the “sum of utility created for each of a firm’s legitimate stakeholders” (Freeman, 1984). The IIRC’s perspective is underpinned by Freeman's philosophy that stakeholders’ interests should be seen as joined rather than conflicting (Freeman, 2010; Harrison & Wicks, 2013).

To sum up, researchers consider that the IIRC has deviated from stakeholder accountability toward stakeholder management. (Dillard & Brown, 2013)

However, it needs to be noted that a case study shows that from several employees’ point of view, integrated reporting have enabled a better stakeholder engagement within their company (Pretorius & Le Roux, 2019).

Integrated thinking

Integrated thinking is the concept that the IIRC and the IRC endeavour to foster among mainstream business practices with integrated reporting as the corporate reporting norm. According to the IIRC, integrated thinking should be embedded within an organisation management in order to draw up a high-quality report, otherwise the connectivity between the capitals is difficult to establish (IIRC, 2013). According to Churet & Eccles (2014) there is indeed a positive relationship between IT and IR. However, they could not identify the underlying cause and effect relation. For them, “these are related to each other in a mutually reinforcing cycle” but we do not know which one is main trigger for the other.

The case study undertaken by Pretorius & Le Roux (2019) showed that employees have the feeling that integrated reporting results in a higher embeddedness of integrated thinking within decision-making. The holistic view of their company’s activities enables them to anchor more sustainability within their daily work. They even speak about a cultural and behavioural change among the company.

4.3. Market view

As mentioned in the IIRC's framework, investors are the primary audience of an integrated report. Many researchers have studied the market's reaction to this new practice, and results seems to demonstrate that investors value it more than a stand-alone sustainability report.

There is a growing interest for ESG information among investors. Already in 1999, Lev & and Zarowin claimed that reporting methods were getting obsoletes because of the increasing competition due to globalisation and markets deregulation (Lev & Zarowin, 1999). They indicated that companies need to demonstrate a competitive advantage and a high-quality risk management system with more than only financial metrics. Nowadays, it is well-known that institutional investors increasingly deem relevant ESG performance and may consider nonfinancial performance as a competitive advantage (Dangelico & Pujari, 2010). It is indeed easier for them to identify high-quality business with an integrated information basis (Eccles & Churet, 2014)

The materiality principle that we discussed above is also an incentive for investors because it enables the acquisition of more reliable information (Serafeim, 2014). Moreover, investors care more about strategic issues that will have a material impact on a company's financial performance. By the way, surveys (ACCA, 2013) showed that 92% of investors agreed that financial and sustainability information should be integrated. However, there is still a latent resistance from mainstream financial analysts.

Serafeim (2014) explored the effect on the investor base of firms switching from traditional reporting to integrated reporting. He provided empirical evidences that it attracts more dedicated investors and it has the reverse effect on transient investors. Thus, integrated reporting stimulates a more long-term investor base. This consequence influences thereafter management decision-making. Indeed, managers will furthermore favour emphasis long term value creation if they do not have pressure from transient investors to get short-term financial incentives.

In addition to a tool for reducing information asymmetries and improving decision-making, integrated reporting can be seen as a mean to mobilize equities given this positive market reaction (Knauer & Serafeim, 2014).

Sustainability reporting and its underlying strategy must be reliable for attracting investors. Indeed, they give up on short-term financial performance in order to create nonfinancial

performance. Companies must prove the robustness of their strategy and communicating on an integrated basis increase the investors' confidence in sustainable strategy. (Eccles et al., 2014)

Positive market reaction has also been demonstrated by mean of market measurements. Findings identify a positive relationship between IR and market value (Barth et al., 2017). On the other hand, integrated reporting appears to be more effective than any other practice for the transmission of nonfinancial information to investors because they are more likely to read ESG metrics if it is integrated with financial information (Churet and Eccles, 2014). Later, an experimental study rejected this assumption but confirmed that it does increase the access to sustainability information because investors do not have the choice to read only financial indicators since it is embedded with nonfinancial ones (Reimsbach et al., 2018). In other words, despite the higher cognitive cost related to a stand-alone sustainability report, the investors who choose to read it will have the same comprehension of sustainability data than those who receive it on an integrated basis.

Through this positive market reaction, companies have a better access to finance with an equity cost that lowers. Since it reduces information asymmetry, investors are less likely to require a higher risk premium for compensating a lack of information. (Eccles et al., 2014)

4.4. Assessment grid

We will now build two grids based on our literature review and our normative section. First, we will summarize the incentives and criticisms assimilated with integrated reporting according to prior literature. Second, we will build an assessment grid that we will use in the analytical part. This grid will gather the features that should be found within an integrated report according to academics. We deem corporate performance and integrated thinking as not relevant for our analysis. On the other hand, the focal points that we identified are connectivity, materiality, target, selectivity of information, and assurance. We will also focus on the market reaction and collate opinions from various key actors operating on the market – analysts and business representatives. We will see if they think integrated reporting could indeed trigger a behavioural change among capitals markets.

Table 2: « SWOT » Analysis

	Positive		*Negative*	
Management view	Component	Author	Component	Author
	Multi-capital approach	Flower (2015)	Not a clear meaning of the capitals	Flower, Demartini & Trucco
	Stewardship theory	White (2010)	Agency theory [26]	Thomson (2015)
	Financial stability	Churet & Eccles (2014)	No positive relationship with return on capital	Churet & Eccles, Manoria (2015)
	Positive effect on ESG performance	Churet & Eccles (2014)	Not enough details about ESG performance	Eccles et al., Parrot & Tierney
	Positive effect on corporate governance	Ivan (2019) ; Shanti et al., (2020) ; Pavlopoulos et al., (2017)	Ignorance of the firm's impact on society (materiality definition), IR is not a response to sustainability	Flower (2015); Thomson (2015)
	Reduction of reputational risk	De Villiers et al., (2017) ; Esch et al., (2019)	Connectivity between financial and nonfinancial capitals is challenging	Eccles & Churet (2014)
	Sustainability initiatives more embedded into core business (high emphasis on materiality)	Eccles et al., (2015b); Eccles & Churet (2014); Farneti et al. (2019)	No guidelines about connectivity identification process	Abeysekera (2013)
	Better decision-making	Esch et al., (2019)	Costly practice	Prado-Lorenzo & Garcia-Sanchez (2010)
			Difficult collaboration between various department	Argento et al., 2019
			Not enough binding principles	Flower (2015)
			Target = shareholders	Abeysekera (2013); Eccles et al. (2015b); Eccles & Serafeim (2013); Flower, (2015); van Bommel (2014)
			Stakeholders' management rather than stakeholders' accountability	Dillard & Brown (2013)
			Selectivity	De Villiers et al. (2011) Flower (2015)
Market view	Component	Author	Component	Author
	Better access to sustainability information	Reismbach et al (2018)		
	Better identification of high-quality business	Churet & Eccles, 2014)		
	Dedicated investors	Serafeim (2014)		
	Lower equity cost	Eccles et al. (2014)		

[26] Agency theory is the organisational theory that applies in classic capitalistic companies

Table 3: Assessment grid

Criteria
Materiality
The annual report includes an explanation about the materiality assessment process.
Materiality analysis includes relevant matters that might substantively affect the ability of the firm to create value as well as its material impact on its external environment.
Materiality is especially determined by mean of stakeholder's engagement process.
The firm prioritizes the matters.
Connectivity of information
The firm shows the dependencies between the following components:
Financial and ESG performance
Past, Present and future
Capitals
The Content Elements
The firm connects financial with nonfinancial information.
Assurance
The firm resorts to an external assurance.
Selectivity
The firm balances disclosure between positive and negative information.
The firm discloses information likely to harm its competitive position.
Stakeholder engagement
The firm considers its stakeholders' interests as joined.
The firm keeps an ongoing communication with its stakeholders.
The firm demonstrates its understanding of its stakeholders' needs.
The firm considers its whole range of stakeholders and not only those that have a substantive effect on its ability to create value.
Sustainability embeddedness[27]
The firm embeds sustainability within its governance policy.
The firm demonstrates a strategy converging toward negative impact minimisation and positive impact maximisation.
Employees are involved in the sustainability strategy.
The firm uses suitable industry specific ESG KPIs
The Business Model is consistent with the sustainability strategy.

[27] Prior literature demonstrates more sustainability embeddedness into strategy of firms practicing IR. We have thus built a sustainability embeddedness index that will be presented within the research design section.

Chapter 5: Research Design

This section will include a description of how we will proceed for the empirical analysis and on what criteria we have selected the samples. First, the empirical analysis will be broken down into two distinctive parts. First and foremost, we will resort to a set of interviews from various stakeholders found online along with comments on the IIRC's topic papers published in February 2020. In a second part, we will analyse two reports with our assessment grid. We will compare an integrated report and a sustainability report. Thus, our study is an archival research based on document analysis and interviews.

5.1. Stakeholders interviews and comments analysis

5.1.1. Sample selection and justification

On the basis of our literature review, we have identified several fields of debates. This section will resort to the pros and cons chart that we realised. The components that we will intend to explore are about the organisational challenges resulting from the connectivity principle, the interpretation of materiality, the multi-capitals approach, the meaning of value and mostly, the target of an integrated report. The results will attempt to draw up a response to the question: "Is integrated reporting the reporting solution that will foster sustainability initiatives among businesses?" First, we will collate interviews from various stakeholders speaking about the benefits of integrated reporting and about areas of further improvements. The interviews were mainly retrieved from the IIRC's Youtube Channel. Although they enable to have an opinion from various stakeholders, they show only positive and subjective view about integrated reporting because most of the interviewees are part of the <IR> Business Network or part of the IIRC itself. Furthermore, we have no sufficient data to get a comprehensive opinion from practitioners. Therefore, we will also examine the responses to the IIRC topics papers[28] issued in February 2020 in order to improve the <IR> Framework published seven years ago. Indeed, based on literature and observations made on previous integrated reports, the IIRC noticed remaining gaps and identified grounds for improvement. Those topics paper hinge on around three axes: "Responsibility for an integrated report", "Business model considerations" and

[28] https://integratedreporting.org/2020revision/

"Charting a path forward". We will focus on the questions related to the fields of interests identified in the literature review that are summarized in the chart below.

Table 4 : Fields of analysis

Field	Components
Connectivity	Connectivity between financial and nonfinancial capitals is challenging, No guidelines about connectivity identification process, Costly practice, Difficult collaboration between various departments
Capitals	Not a clear meaning of the capitals, Agency theory, Stewardship theory Selectivity of information
Target & value	Stakeholders management rather than stakeholder's accountability, Target = shareholders
Materiality	Sustainability initiatives more embedded into core business (high emphasis on materiality), Ignorance of the firm's impact on society (materiality definition), IR is not a response to sustainability

The hypotheses identified in prior literature are the following:

H1: The *connectivity principle is too challenging.*

H2: Materiality should be based on the GRI's definition.

H3: sustainability is more embed into the core business.

H4: IR should be subjected to an assurance.

H5: The <IR> framework should be based on stakeholder theory and stewardship theory.

H6: Companies are likely to disclose only positive results.

H7: The target of an integrated report should be the stakeholders.

H8: There are more forward-looking information in an integrated report.

Table 5 : interviews selection

Interviewees	Type of stakeholder	Institution	Year	Title	Field related
Paul Druckman	CEO	IIRC	2016	The meaning of value creating	Target and value
Suresh Gooneratne	Director and CFO	Diesel and Motor Engineering	2015	Impact of IR adoption	Connectivity and target & value
Sarah Williamson	CEO	FCLTGlobal	2020	IIRC Council April 2020: Sarah Williamson, CEO, FCLTGlobal	Target and value
Steve Waygood	Investors	Aviva Investors	2013	Steve Waygood, Aviva Investors, discusses Integrated Reporting	Capitals and Performance
Mark O'Sullivan	Consultant	PWC	2014	Steve Waygood, Aviva Investors, discusses Integrated Reporting	Connectivity
Simon Theeuwes	Investor Relations and Corporate Treasury	Luchthaven Schiphol	2015	Schiphol: The impact of Integrated Reporting on stakeholders and the board	Connectivity
Huub Savelkouls	Chief Sustainability Officer	Philip Morris International	2020	What is our 2019 Integrated Report all about, and why is it important	Materiality
Robert van der Laan	Managing director	PWC	2013	Robert van der Laan's view on new IIRC-framework	Materiality

Topic paper 1: Responsibility for an integrated report

This first topic paper tackles the need for a responsibility statement from those charged with governance. It does not interest us within the scope of our study.

Topic paper 2: Business model considerations

This topic paper, on the other hand, concerns our field of analysis. The lack of connectivity about outcomes and value creation along with the selectivity of information are highlighted. It also emphasizes the ignorance of the firm's impact on its external environment and thus questions its definition of materiality. We will focus on the responses to three out of the four proposed questions.

Q2: *Should the <IR> Framework further explain the link between outcomes and value creation by including an illustrative example?*

Q3: *Should Sections 4C and 4F*[29] *of the <IR> Framework further reinforce:*

i. *That the term 'value creation' also reflects cases in which value is preserved or eroded?*
ii. *The importance of providing evidence to support claims and conclusions made in the integrated report?*

Q4: Should the <IR> Framework clarify its coverage of longer-term impacts on society and nature, under its existing 'outcomes' definition?

Topic paper 3: Charting a path forward

Unlike the two previous papers, the third is rather about long-term revisions of the Framework. The questions concern the most debated statements regarding the target of an integrated report, that being the following two paragraphs:

1.7 The primary purpose of an integrated report is to explain to providers of financial capital how an organisation creates value over time. It therefore contains relevant information, both financial and other.

1.8 An integrated report benefits all stakeholders interested in an organisation's ability to create value over time, including employees, customers, suppliers, business partners, local communities, legislators, regulators and policymakers.

The IIRC proposes the following changes:

[29] Section 4C is about Business model and 4F is about Risks and opportunities

1.7 The primary purpose of an integrated report is to explain to providers of ~~financial~~ capital how an organisation creates value over time. It therefore contains relevant information, both financial and other.

1.8 An integrated report benefits all stakeholders interested in an organisation's ability to create value over time, including providers of financial capital, employees, customers, suppliers, business partners, local communities, legislators, regulators and policymakers.

Therefore, we will focus on the following questions:

Q1. a. Do you agree with the proposed change to Paragraph 1.7? Why or why not?

b. *Do you agree with the proposed change to Paragraph 1.8? Why or why not?*

Finally, the IIRC questions the need to resort to an external assurance, which was strongly advocated by academics as we have seen above.

Q3. Are there further ways in which the <IR> Framework can enhance the assurance-readiness of integrated reports?

5.2. Annual reports analysis

5.2.1. Sample selection and justification

For a comparative purpose, we decided to narrow our sample to European-Union Members and listed companies. We chose European companies because of the directives on nonfinancial disclosure. All large organisations are subjected to this regulation and therefore must disclose some specific information. Then, listed companies will address specific information to their investors as well.

We randomly selected a company in the GRI database with the research criteria "GRI 4" as report type, "2018" as the year of publication and "chemicals" for the industry. For the integrated report, we used the database of the IIRC.

5.2.1.1. Choice of industry

<u>Chemical industry</u>

Companies evolving within this industry are more exposed to environmental issues than other companies. This industry is expected to change in the next few decades because of the growing scarcity of resources and its impact on the environment (Dickson, 2020). Moreover, it is a

sector where labour policy on safety is important. Companies from this sector are typically highly globalised (SASB, 2018) and we can therefore expect a high engagement level with their stakeholders.

If we look at the SASB materiality map[30], the relevant matters that fall into the chemicals sector are the following:

Environment:

- GHG Emissions
- Air quality
- Energy Management
- Water & Wastewater Management
- Waste & Hazardous Materials Management

Social capital:

- Human Rights & Community Relations

Human capital:

- Employee Health & Safety

Business Model & Innovation

- Product Design

Leadership & Governance

- Management of the Legal & Regulatory Environment
- Critical Incident Risk Management

These means that investors and other stakeholders will expect disclosure on those specific topics.

[30]The SASB materiality map identifies matters that might have an impact on the firm's ability to create value over time and not its material impact on society (http://materiality.sasb.org/)

5.2.1.2. Companies

1. Evonik

Sector	Chemicals
Report type	Sustainability report in accordance with GRI 4
Other framework used for the metrics	CDP, OECD
Headquarter	Germany

Evonik sustainability report[31] can be found on its corporate website in the section "corporate relations".

2. Solvay

Sector	Chemicals
Report type	Integrated report
Other framework used for the metrics	GRI, SASB and TFCD
Headquarter	Belgium

We can find Solvay integrated report[32] on its corporate website in the section "investor relations". Its integrated report is also its annual report. They have been publishing an integrated report since 2016 while they used to publish a sustainability report in accordance with GRI since 2008. They do not have a sustainability report aside the annual report. Within the report, the compliance with the IIRC's <IR> framework is stated.

[31] https://corporate.evonik.com/downloads/corporate%20responsibility/evonik_sustainability_report_2018.pdf

[32] https://www.solvay.com/sites/g/files/srpend221/files/2019-04/Solvay%202018%20Annual%20Integrated%20Report%20pdf%20online%20version.pdf

5.2.2. Testing method

Criteria	Scoring		
Materiality	**2**	**1**	**0**
The annual report includes an explanation about the materiality assessment process.	Yes	No, but the firm discloses its materiality matrix	No
Materiality analysis includes relevant matters that might substantively affect the ability of the firm to create value as well as its material impact on its external environment.	The firm discloses both types of matters in a balanced way.	The firm discloses both types of matters but in an unbalanced way.	The firm only discloses material matters that might substantively affect its ability to create value.
Materiality is especially determined by mean of stakeholder's engagement process.	Yes	Yes, but the materiality determination is not sufficiently based on stakeholders' responses	No
The firm prioritizes the matters.	Yes	Yes, but not based on the magnitude or the reason for prioritisation are not stated	No
Connectivity of information	**2**	**1**	**0**
The firm shows the dependencies between the following components:			
Financial and ESG performance	The firm discloses on both cost-savings initiatives and revenue growth	The firm demonstrates either cost-savings ESG initiatives or revenue growth resulting from ESG performance	No
Past, Present, and future	The firm connects the three dimensions.	The firm connects only two dimensions.	No
Capitals[33]	The firm shows the trade-offs and dependencies between its capitals	The firm partially shows the trade-offs and dependencies between its capitals	No
The Content Elements	The firm connects all (or almost) its Content Elements (more than 3 connections)	The firm connects several Content Elements (one or two connections)	No
The firm connects financial with nonfinancial information.	The firm monetizes social and environmental impact	The firm monetizes either environmental or social impact	No
Assurance	**2**	**1**	**0**
The firm resorts to an external assurance.	Reasonable Assurance	Limited assurance	No
Selectivity	**2**	**1**	**0**

[33] See appendix X and XV for more information about the assessment of connectivity between capitals.

The firm balances disclosure between positive and negative information.	Negative information accounts for a ratio above 30%	Negative information accounts for a ratio between [10-30%]	Negative information accounts for a ratio between [0-10%]
The firm discloses information likely to harm its competitive position.	Since we do not have enough knowledge on the competitive environment of the companies, we will withdraw this section		
Stakeholder engagement	**2**	**1**	**0**
The firm considers its stakeholders' interests as joined.	Yes		No
The firm keep an ongoing communication with its stakeholders[34]	The scoring of the stakeholder engagement assessment is higher than 50 points	The scoring of the stakeholder engagement assessment range between 30 and 50 points	The scoring of the stakeholder engagement assessment is lower than 30 points
The firm demonstrates its understanding of its stakeholders' needs.	Yes	They do not explain the outcome of their whole stakeholder engagement process.	No
The firm considers its whole range of stakeholders and not only those that have a substantive effect on its ability to create value.	Yes, stakeholders and society	Yes, some stakeholders	No
Sustainability embeddedness	**2**	**1**	**0**
The firm embed sustainability within its governance policy	2[35]	1	0
The firm demonstrates a strategy converging toward negative impact minimization and positive impact maximization	>5	[3-5]	<3
The employees are engaged in the sustainability strategy.	2	1	0
The firm uses suitable industry specific ESG KPIs.	>8	[5-8]	<5
The Business Model is consistent with the sustainability strategy.	3	2	0 or 1

[34] We will use the AA1000 stakeholder engagement standard of AccountAbility (2015) to assess the level of engagement. (see appendix V for further details on computation)

[35] We affect one point for each component that the firm respect according to our SE index.

Table 6: Sustainability embeddedness index

SE index	Indicators	Author / source
Strategy	1.1Innovations (in products, processes, and business model)	Eccles & Serafeim (2013)
	1.2. Social and environmental issues are internalized (and not regarded as externalities	Eccles et al., 2014
	1.3 The firm has a policy to reduce emissions	Eccles et al., 2014
	1.4 The firm shows an initiative to reduce, reuse, recycle, substitute, phase out, or compensate CO2	Eccles et al., 2014
	1.5 The firm shows an initiative to reduce, reuse, recycle, substitute, phase out, or compensate Waste	Eccles et al., 2014
	1.6 Reporting on progress made on sustainability targets	A4S/IFAC
	1.7 Commitment to public policy sustainability issues	CERES
	1.8 Management commitment to achieve SDGs	CERES
Governance	2.1 Separate board committee for sustainability	(Eccles et al., 2014)
	2.2 Top management compensation is a function of sustainability performance	(Eccles et al., 2014) / CERES
Business model	3.1 Review products sustainability standards	A4S/IFAC
	3.2 Reviews products sustainability performance	(IFAC, 2011)
	3.3 Review suppliers' sustainability management practices	IFAC/CERES
Employees	4.1 The employees receive training on sustainability	A4S/CERES
	4.2 Sustainability is part of assessment and staff remuneration	CERES
Measurement	The firm provides KPI on the following themes 5.1 GHG 5.2 Air quality 5.3 Energy Management 5.4 Water Management 5.5 Hazardous Waste Management 5.6 Community Relations 5.7 Workforce Health & Safety 5.8 Safety & Environmental Stewardship of Chemicals 5.9 Genetically Modified Organisms 5.10Management Of the Legal & Regulatory Environment 5.11 Operational safety, Emergency Preparedness & Response	SASB[36]

[36] It is question of Sustainability Disclosure Topics & Accounting Metrics adapted to Chemicals Industry (SASB, 2018)

Additional information:

The connectivity section is expected to be the most distinctive section between integrated reporting and sustainability reporting. The Total points' column will enable to assess the quality of the report and to explore to what extent differ sustainability reporting and IR. A company that have 100% scoring means that it follows principles characterized by academics as a high sustainability-oriented report. Here above, we have built a sustainability embeddedness index based on various standards aiming at measuring to what extent the company has embedded sustainability into its management and organisational structure. It is to be noted that stakeholder engagement is also a distinctive feature of sustainability embeddedness. As a matter of fact, this chart includes components related to ESG policy which are not specific characteristic to IR[37] but specific to sustainability practices in general. This grid aimed at including a more technical insights to verify *H3* according to which sustainability is more anchored in companies practicing IR.

The differences between scorings and sub-scorings will be deemed significant in case of a 20% interval between the results.

[37] IR is just principle-based and does not provide any ESG metrics.

Chapter 6: Results

6.1. Stakeholders' interview analysis

Interviews 1: Paul Druckman – IIRC's CEO

This interview focusses on the criticisms from academics addressed to the IIRC regarding its emphasis on shareholders primacy and its deviation from its primary purpose of promoting sustainability into mainstream corporate reporting.

Mr Druckman clarifies that the purpose of integrated reporting is about changing rules in capital markets by changing the way investors thinks about value and pushing them to consider a broader range of capitals. Sustainability is only a part of this mindset but according to him, value is not only about sustainability. "Creating value is not only about adding ESG to finance, it is rather about things that matters in business, like brand value, people or customers". According to him, integrated reporting is the best way to embed ESG considerations into capital markets.

He also claims that the accounting profession does not imply restraining the move toward sustainability reporting contrary to what academics seems to believe[38]. It is rather investors and some representatives from the business communities that are more sceptical. This is therefore those key actors they endeavour to trigger a change in behaviours.

Interview 2: Suresh Gooneratne – CFO of Diesel and motor engineering

Mr Gooneratne talks about the benefits of implementing integrated reporting. According to him, it has led to integrated thinking within its company. Indeed, although they used to consider human capital through the HR management, since they adopt IR, they henceforth connect it to other forms of capitals. He also claims that IR promotes stakeholder engagement.

Interview 3: Sarah Williamson – CEO of FCLT Global:

Mrs Williamson proposes various adjustments that the IIRC should undertake in order to get investors' attention. She calls for more quantitative metrics. Indeed, equity investing is mostly driven through algorithms and thus, according to her, qualitative data are not taken into account by investors. Integrated reporting needs to undergo a few changes to enable an easier incorporation into assets owners' decision-making. In addition to quantitative data, an

[38] e.g. George Flower

integrated report should focus on material information for long-term investors. Metrics should be comparable and specific to industries. Finally, an integrated report should be assurance friendly. "We believe that auditor assurance is necessary over time to build credibility and reliance on new metrics".

Interview 4: Steve Waygood – Aviva Investors

Mr Waygood confirms the growing interest from investors' side for integrating ESG within financial information. If we take high-frequency traders, they will indeed not be interested in integrated reporting or any other kind of annual report since they only work with algorithms that incorporate external data other than those disclosed by the company. However, Steve Waygood contends that a significant part of investors is increasingly looking for information on a broader set of capitals that will have an impact on future cash-flow. According to him, nonfinancial information can be critical for the company and, if ignored, the company would risk loosening its licence to operate[39].

Interview 5: Mark O'Sullivan – Consultant at PWC

Mr O'Sullivan believes integrated reporting can benefit companies both externally by attracting long term investors, and internally by improving decision-making. Integrated reporting power is to connect various streams of information. While many companies report on KPIs and on their strategy, they do not align those two components.

He agrees with the need for an assurance because investors need to know they can use the information. However, according to him assurance of integrated reporting should seek to explain where the information comes from and thus should be more narrative than financial reporting assurance.

Interview 6: Simon Theeuwes – Investor Relations and Corporate Treasury at Luchthaven Schiphol

Mr Theeuwes contends that integrated reporting has improved their communication with their stakeholders at Luchthaven Schiphol. It has also enabled them to implement integrated thinking into their daily management by linking strategy with risks and opportunities.

[39] License to operate is the idea that the organisation must have the tacit and more or less broad agreement of the population concerned in order to develop a project. (L'encyclopédie du marketing, 2018)

Interview 7: Huub Savelkouls – Chief sustainability Officer at Philip Morris International

This interview is a corporate video published by Philip Morris International itself in order to bring further explanations to its first annual integrated report issued in 2020. They decided to make an integrated report to provide a more comprehensive picture of the company. It is a way to explain how they achieve their purpose and report on their transformational progress. Regarding materiality, he contends that it should encompass what is material for the company as well as for the society.

Interview 8: Robert Van Der Laan – Managing director at PWC

Mr Van Der Laan believes that integrated reporting is the good framework to address inadequacy in mainstream reporting practices by providing a more holistic view and a higher strategic focus. However, he claims that it will need more language standardisation to enable investors to include the information into their valuation model, which is also what Sarah Williamson agreed above. Furthermore, they should align their materiality definition of the one of GRI.

6.2. Topic papers – market feedback analysis

The respondents are either academics, individuals, representatives of accountant's associations or other reporting frameworks, and practitioners.

Topic paper 2: Business model consideration

Question 2: Should the <IR> Framework further explain the link between outcomes and value creation by including an illustrative example?

92% of the responses are in favour of the inclusion of an illustrative example to further explain how to link outcomes and value creation. However, for several respondents, this should be included in a separated guidance note and this should provide industry-specific examples. There should be examples of positive impacts as well as negative impacts and a linkage with the contribution to SDGs.

Furthermore, there is an agreement that those illustrative examples should tend to be more quantitative and should show how to monetise ESG metrics. For example, an individual proposes the use of discounted cash flow method to evaluate the intrinsic economic value of a company. The forecast on future cash flow would include other factors than the balance sheet

by including more consideration toward intangible assets. According to him, it would be a way to monetise some form of capitals which would make “easier the link between outcomes and value creation”[40]. Another[41] proposes a balance sheet metaphor to present the connections between the capitals. He highlights the fact that “since energy is related to finance via the utility rates and related to carbon emissions via the fuel mix[42], energy thus is a steppingstone that connects financial metrics to carbon metrics.”

The high percentage of positive responses are mostly led by the common acknowledgement that establishing linkage between financial and nonfinancial information is too challenging and IIRC should thus provide several examples and good practices from previous report. Another issue is the vagueness of the value creation definition. For several of the respondents, the IIRC should state more clearly what this is all about. Indeed, in the end, value creation is mainly regarded as financial performance. The framework of 2013 let the reader with the idea that increases in stocks of capitals should lead in increase in the stock of financial capitals. David Herbinet from Mazars group[43] thinks value creation is “the result of an aggregation of value created internally and externally by the organisation”. Furthermore, regarding the debate around materiality interpretation, he supports the idea that value creation should be based on all material outcomes, material for the company as well as society. This opinion is stressed several times in the topic papers.

The several negative responses to this question argue that many other guidelines already exist on the subject, therefore it is not necessary to add illustrative examples.

[40] Response of Carlos Brandão, Independent, Brazil
[41] Jimmy Jia, Oxford University /PHD student, United States of America
[42] More information about the fuel mix on the following link : https://portfoliomanager.energystar.gov/pdf/reference/FuelMixandCost.pdf
[43] Audit company

Question 3: Should Sections 4C and 4F of the <IR> Framework further reinforce:

i. **That the term 'value creation' also reflects cases in which value is preserved or eroded?**
ii. **The importance of providing evidence to support claims and conclusions made in the integrated report?**

There are around 95% of positive responses.

Yes, the IIRC should refer to value erosion or preservation. However, several responses would rather advice the use of positive, negative or neutral value creation just as we talk about negative or positive growth. For Judy Ryan – independent – the negative and positive impact should be defined through the materiality analysis. Indeed, the organisation could create value for itself by undermining natural or social capital. It confirms again the opinion that the materiality analysis should therefore consider what is material for both society and the organisation. According to Leonie Meyer, another independent, the omission of negative information is the highest bias in corporate disclosure. Nonetheless, as already stated, quantifying those changes in value creation is challenging. Therefore, according to some respondents, organisations should at least state the sign of the slope[44], but it should not be required to put numbers on it.

Regarding evidences to support topics disclosed, most of respondents agree that it should be required in order to increase the reliability of the report and facilitate the provision of an external assurance. The few negative responses argue that it would be too challenging to require evidences in addition. Furthermore, it would undermine the conciseness principle and would be too time-consuming.

Question 4: Should the <IR> Framework clarify its coverage of longer-term impacts on society and nature, under its existing 'outcomes' definition?

88% of respondents agree on the need for more emphasize on the long-term impact on society and nature. Organisations appear to focus too much on short-term targets. Beat Schweizer from PETRANIX[45] asserts that it would be a good idea in order to better align IIRC with GRI's principles. However, Veronica Poole from Deloitte UK draws attention on the fact that some long-term targets need strategic decision to be taken as soon as possible, and thus in the short-term. For example, CO2 reduction targets would need major organisational changes in the next few years. According to her, this interrelatedness is not enough captured by the IIRC. Another

[44] "Positive" or "negative" or "neutral" value creation
[45] Consulting agency specialised in corporate and financial communication.

remark is about the distinction between direct and indirect impact. Fernando Portus – an independent – provides the example of the banking sector, that have a rather indirect impact, but the leverage ability may be as much important. Finally, the relationship between financial performance in the long term and ESG performance should be also more emphasized for several of the respondents. “The Framework needs to be seen to incorporate all aspects of value creation representing factors that materially affect future cash flows and therefore market and intrinsic value” stated Stathis Gould from the International Federation of Accountants (IFAC). Indirect effects such as loss of license to operate or loss of reputation due to negative impact on society or environment may be critical for the financial stability over time.

However, there is the same problem with the measurement of impact on some capitals which seems to be more challenging to predict in the long run. Several respondents propose various solutions to overcome this challenge. This is the case of Fatma Öğücü Şen[46] and Dr. Erkin Erimez[47] who propose an alignment between IIRC and OECD Better Life Methodology or the EFQM[48] model. It is also suggested that the IIRC clarifies the time horizon of the short, medium and long term. The fact that the number of years corresponding to each horizon is not globally accepted makes difficult the comparison between companies.

The negative responses are more based on arguments related to the format. In other words, they think it is already clearly stated in the framework and no changes are needed.

Topic paper 3: Charting a path toward:

Topic paper 3 starts on the debated assumption that IR focusses too much on financial resources allocation while it is supposed to trigger a shift toward a more inclusive capitalism.

Question 1: Do you agree with the shift from “providers of financial capitals” to “providers of capitals”?

This question is more debated than previous topics with approximately 74% of positive responses. Most of respondents agree on the shift toward a more stakeholder-inclusive approach. The change in this paragraph could contribute to a better connectivity between

[46] Argüden Governance Academy, Turkey
[47] ARGE Consulting, Turkey
[48] EFQM stands for European Foundation for Quality Management. This is a European foundation that has for mission to provide a framework to measure performance and innovation progress.

financial and nonfinancial capital and would lead to a “double materiality”[49]. In addition, a nonfinancial assurer observed that many organisations switched from GRI to IR because of this primacy on shareholders.

On the other hand, the term “providers” appears to bother several respondents because it would mean that only the stakeholders that provides resources would matter to the organisation. Moreover, it may be difficult and confusing to identify the providers for some type of capitals such as the natural capital. Finally, the definition of value should be clarified as well. Are the increases in stock of all capitals of equal importance?

The opponents to this change indicate that it would lead to more confusion in the reports. All stakeholders do not look for the same information. Furthermore, <IR> added value is believed to be the change in investors behaviour by bringing at the forefront other forms of capitals. Organisations should demonstrate that ROI can be achieved by considering a broader range of capitals. It is already up to GRI to target other stakeholders.

Question 3: Are there further ways in which the <IR> Framework can enhance the assurance readiness of integrated reports?

The most stated advice is the alignment and collaboration with others standard setters such as the IASB, IAASB, GRI and SASB. The companion guide that we mentioned above would be helpful for external assurance practitioners to identify what are the requirements to achieve compliance with the <IR> framework. Quantification and benchmarking would enhance assurance-friendliness of integrated reporting. The IIRC should also further require the disclosure of methodologies and measurement systems used to prepare the report.

Representatives from Deloitte and PWC agree on the need for further details about reporting boundaries and clarity regarding some processes such as materiality, key risks and opportunities identification and KPIs monitoring.

However, a few respondents think that assurance should remain on a voluntary basis likewise the <IR> is voluntary.

[49] impacts for the company, outside-in, and impacts for society, inside out (Paul Hurks, NBA, Netherlands)

6.3. Annual report analysis

If we compare both assessment grids[50], we can see there is no significant difference between the score of Solvay and Evonik[51]. If we analyse sub-scorings, the only significant difference is about the connectivity of information. This result is not surprising since an integrated report is supposed to connect information. However, we can see that Solvay has still a low score for connectivity between its six capitals and the connectivity between financial and nonfinancial information. Indeed, financial statements are barely connected with nonfinancial information. It is normal to have a separated balance sheet and profit and loss statements to comply with stringent mandatory financial disclosure requirements, but Solvay could have demonstrated connections with other sections of its report. As we can see on the example below, it is only stated in additional comments of nonfinancial statements that the information is "*consistent with financial reporting.*"

Figure 3: Extract from Solvay's annual report 2018

Total indirect CO_2 – Gross market-based (Scope 2)

Mt CO_2	2018	2017	2016	2015
Electricity purchased for consumption	1.0	1.2	1.4	1.7
Steam purchased for consumption	0.9	0.9	1.1	1.1
Total	**1.9**	**2.1**	**2.5**	**2.8**

Scope: consistent with financial reporting.

One of the only main connections that we find in Solvay's report and not in Evonik's report is the relationship between GHG emissions or water use expressed in terms of 1€ EBITDA. This is interesting because, it enables to have an idea of the trade-offs between natural capital and financial performance. A decrease in one unit of natural capital could result in a few units of EBITDA. Evonik states its investments and operating costs for environmental protection but does not state the outcomes of those expenditures on natural capital. As example of connectivity between capitals, we can cite the relationship between the number of employees involved in the R&D department and the number of new patents[52] or the number of employees involved in communities' project.[53] Another example with human capital would be the expenditure in training linked with the increase of workers well-being[54]. To continue with the connectivity, Solvay also shows better the dependencies with its financial performance and its ESG

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[50] Appendix VIII for Evonik and Appendix XIII for Solvay
[51] Evonik scoring is 63% while Solvay is 68%
[52] In the report of Solvay
[53] In the report of Solvay
[54] In the report of Evonik

performance. They generate for instance "*50% of revenues in sustainable solutions" (Solvay, 2018).* We can also find more connection between the Content Elements. Solvay highlights the effect that its external environment has on its risks and opportunities assessment and as a result, on its business model and strategy while Evonik briefly states how it adapts its strategy to growing technology development.

They have the same score for materiality. Indeed, they both explain their materiality assessment process and engage with their stakeholders to do so. However, we noticed a higher emphasis on stakeholders' engagement for the materiality analysis at Evonik. Nonetheless, regarding the prioritization, Evonik does not explain on what basis they grant a higher importance to some issues; while Solvay has implemented a good measurement and presentation[55] of its materiality assessment. Regarding the presentation format, the good practices to remind are the materiality map from Evonik on the one hand, and materiality analysis from Solvay (see examples below). Both practices together would show a good picture of the most important issues for the company. Otherwise, we do not see a significant difference between both assessments, except the emphasis on magnitude and addition of a section "evidence of financial impact" at Solvay which is more characteristic to integrated reporting.

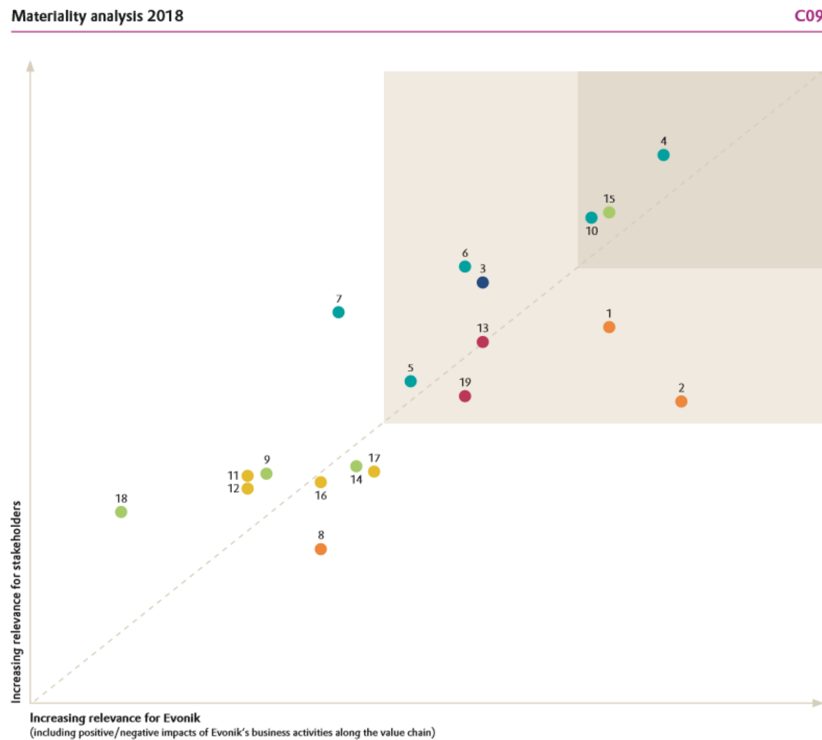
Figure 2 : Materiality analysis at Solvay for the Social Capital (source: Solvay's annual integrated report 2018)

Social Capital

Issues	Definition	Evidence of interest	Evidence of financial impact	Forward looking adjustment	Materiality
Customer welfare	Customer relations management, customer loyalty, Net Promoter Score	Medium High for some business units (access to customers' development pipeline)	High Revenue/cost: yes Asset/liability: no Cost of capital: no	Yes Probability/ magnitude: yes Externalities: yes	
Societal actions	Corporate citizenship and philanthropy Business programs for social needs	High May be linked to license to operate	Low Revenue/cost: no Asset/liability: yes Cost of capital: no	No Probability/ magnitude: no Externalities: no	

[55] Materiality analysis in accordance with SASB guidelines.

Figure 3 : Materiality map at Evonik (source: Evonik's sustainability report 2018)



Regarding sustainability embeddedness, it appears that there is no difference in the scoring of both companies[56]. From our personal impression after the reading, we would say Solvay appears to bring more innovations into its product while Evonik endeavours more ESG practices into its supply chain. Indeed, they have implemented a process of life-cycle assessment that lead them to analyse sustainability of their suppliers. For instance, in 2018, they undertook many suppliers audit focussed on sustainability requirements. Although, Solvay has also carried out supplier audit[57], it seems to be stricter at Evonik according to its report. On the other hand, Solvay put the emphasis on the production of more sustainable products. They developed for instance a Sustainability Portefolio Management tool.

"Sustainable Portfolio Management is designed to identify business accelerators or obstacles with respect to sustainability in order to help Solvay's business deliver higher growth and superior sustainable value." (Solvay, 2018)

Solvay also materialized its environmental costs through a specific investment approval approach that includes a CO2 price. *"One significant part of the Group's approach is its decision to modify its Capex approval procedure to include an internal CO2 price that is higher*

[56] See SE index in appendix IX for Evonik and appendix XIV for Solvay
[57] It is compulsory for European companies to do supplier audit, but some companies will have a more robust process than others. (See norm ISO 9001 for more information)

than the market price (€75 per tonne), with the aim of encouraging a shift toward investments in more sustainable activities." Nevertheless, Solvay barely provides negative information while Evonik shows in its value chain impact assessment more of its negative effect than positive (see appendix).

Regarding corporate governance, on the one hand we have a committee dedicated to sustainability at Evonik and on the other hand, at Solvay[58], we have the executives' compensation that is computed on basis of sustainability targets. Therefore, we can say both companies have implemented sustainability initiatives at the governance level, but it is stronger at Evonik. Indeed, according to Eccles et al. (2013), the presence of a committee dedicated to sustainability especially reflects an anchorage of sustainability into the business.

We confirm the claim of academics and practitioners regarding the difficulty of monetizing social performance. Unlike environmental information, social metrics will be rather qualitative. Solvay participated to a roundtable for producing social metrics[59]. In the handbook, we can find a large range of social indicators. They are mostly qualitative and assessment is therefore based on discussion and analysis. However, this handbook also proposes a range of quantitative metrics.

A general comment for each report is the omission of the frequency of interactions with stakeholders. Concerning stakeholders' engagement, the result of our assessment place both companies on the "medium" level of engagement, even if we can acknowledge a high engagement with some stakeholders. Evonik has, for example, a high engagement with its customers because it has some joint projects with them and we can say that Solvay has a high level of engagement with its employees because of a high level of collaboration with trade unions[60]. However, one information that is missing in both frameworks is a narrative explanation about how the stakeholders' interests could be complementary or if there are rather conflicts of interests.

In both reports, we do not find the holistic picture that academics, standard setters or practitioners are calling for. We would like to highlight a lack of visual presentation in both reports. The connectivity between Content Elements or trade-offs between the capitals could

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[58] A percentage of the CEO's compensation is based on the extent of achievement of GHG intensity reduction.
[59] https://product-social-impact-assessment.com/wp-content/uploads/2018/09/Handbook-for-Product-Social-Impact-Assessment-2018.pdf

[60] Engagement with workers has been embed into Solvay's core values by its founder, Ernest Solvay, that was politically committed to the defence of workers' rights.

have been presented in a chart or graphic. We have indeed a storytelling about the business model, strategy and resources allocation in addition to financial statements, but it still lacks connectivity. At first sight, we would not see any added value from the integrated report in comparison with the sustainability report. We do not see any big difference between the two reports apart from the fact that Solvay has included its financial statements in the same report. Additionally, the forecasted targets remain in the short or medium term. Solvay has targets for 2025 and Evonik established most of its target only for 2020. We do not see any links to cost-savings initiatives in neither of the two report. However, we acknowledge that there is a higher endeavour to connect information from Solvay, but they did not fully achieve the requirements that are supposed to be met in an integrated report as we identified in prior literature.

Chapter 8: Discussion

The results of our study confirm most of hypotheses developed in the literature review. First, most practitioners appear to agree on the need for a shift regarding the target of an integrated report. There is a common agreement that organisations should address the need of all stakeholders, including those that do not influence the organisation's ability to create value. Accordingly, the double-materiality developed by the GRI is strongly supported and besides, we see in the annual report analysis that the company issuing the integrated report uses that definition as well. Those assumptions assume that the <IR> framework's tenets should be built on the stakeholder theory and the stewardship theory. In other words, to pursue its activities an organisation should be accountable for the resources it uses and addresses all stakeholders' interests. However, some individuals are afraid that this shift from shareholders towards stakeholders will not trigger the change expected in capital markets, because it implies too much information that is not material for investors' valuation systems. Therefore, a question we might ask is where is the leverage for more sustainability practices? Shall it come from the capital market? Practitioners confirm prior literature findings according which firms adopting IR has a more long-term investors' base. However, it does not mean that it changes the investment allocation of all type of analysts. ESG information is useful for long-term equity funds such as pension funds while high-frequency traders do not pay any attention to nonfinancial disclosure. Another question we might ask, is whether there is any mean to align stakeholder' interests, even if, at first sight, it seems strongly opposed such as shareholders and society? In the interviews, we have seen that some executives contend that IR improved their stakeholder engagement. However, in our annual report analysis, we found that Evonik has a little bit higher stakeholder engagement level than Solvay (see appendix).

The expression "providers of capitals" that the IIRC uses is too confusing. It is difficult to find an "owner" for some forms of capitals such as the natural capital that is not believed to "belong" to any entity or individuals. Furthermore, capitalism supposes private property, thus the terminology of natural capital can create confusion as well. The definition of value needs further clarity as well. If an integrated report addressed the needs of society and stakeholders, how should the value creation be measured? Should it be the "increase in stocks of capitals" just as the IIRC proposes, and should an increase in one capital be equally considered as an increase in other forms of capitals? Is it a sum of the utility of all stakeholders? On the other hand, there is also a common agreement that the <IR> should put more emphasis on the disclosure of

negative impact. The framework should use the expressions of negative, neutral or positive value creation. Besides, the annual report analysis confirms findings of prior literature that organisations tend to disclose rather favourable results.

Another hypothesis confirmed is the reporting challenge related to the connectivity principles. Both the market feedback on the topics papers and the report analysis show that the dependencies between capitals and the interrelatedness between financial performance and ESG performance, are currently too complicated to identify and to represent. This issue goes hand in hand with the lack of quantitative information. As a matter of fact, many stakeholders contend that the <IR> framework should absolutely require more quantitative data and put the emphasis on monetization to enhance comparability among businesses and enhance investment allocation. Although investors are calling for more ESG information, they also required data format that they could incorporate into their valuation models. This focus on hard data would also improve the assurance process. Indeed, most of stakeholders strongly agree on the need for assurance of nonfinancial information. To facilitate this process, firms should provide evidences to validate information disclosed and should report more on their measurement process.

On the other hand, our results reject the hypotheses H3[61] and H8[62]. Indeed, Evonik has a better sustainability embeddedness score than Solvay. Finally, companies that issue an integrated report still lack forward-looking information according to some respondents to the topics papers, which is confirmed by the annual report analysis.

[61] *H3: sustainability is more embed into the core business.*
[62] *H8: There are more forward-looking information in an integrated report*

Chapter 9: Conclusion

The aim of this master thesis was to analyse the added value of integrated reporting in comparison to sustainability reporting. In this respect, we can bring out the main conclusion that the IIRC has not achieved its primary purpose, which was to align previous standards to foster sustainability. We draw this assumption based on the following key learning points.

First, integrated reporting includes principles such as the connectivity of information that might trigger a move of corporate practices toward further integration of sustainability into company's core business according to prior literature. However, the connectivity principle is currently not achieved yet and therefore there are no real difference between a sustainability report and an integrated report.

Second, companies select the information they disclose. Integrated reporting leaves too much room for flexibility to report preparers. The framework does not bring enough details about negative, neutral and positive value creation. Moreover, it does not require the use of an external assurance which results in a weak reliability of information.

Finally, the principle-based approach results in several issues. Companies are free to choose their KPIs and to report qualitative or quantitative information while it is widely acknowledged that they should disclose mainly quantitative data to be incorporated into investment algorithms.

To fulfil all these issues, we would recommend the IIRC to produce a companion guide[63] that would include the type of KPIs that the organisation should use to establish the connections between ESG performance and financial performance. It should also include visual example of how to report on the dependencies between Content Elements and the capitals. We would recommend adding examples of trade-offs occurring between capitals by the same kind of grid format that we used to assess the interrelatedness between capitals during our annual report analysis. We also like the balance sheet metaphor to establish a link between the capitals and think it should be further studied. This companion guide could also include best practices identified through previous annual integrated report. Finally, from our standpoint, the IIRC should put emphasis on corporate citizenship just as the King Report does, to underpin its companion guide and framework.

[63] As well as it was recommended several times in the topic papers.

Regarding managers, for a better implementation of integrated thinking, we think they should consider the function of profit maximization under the constraint of capitals availability. In other words, they could increase financial capital as long as there is a neutral value creation from other capitals. On the other hand, we think competition and changes in customers and other stakeholders' behaviour could increasingly lead to a profit maximization function that is subjected to the constraint of positive value creation across the six forms of capitals. New regulations could also lead to a materiality analysis that prioritizes further matters linked to the negative impact of companies on society.

This thesis might contribute to reduce the confusion between sustainability standards and integrated reporting. We managed to build an assessment grid that align SASB, GRI and IR. It could serve as a base or draft for assurance practitioners. However, our study has several limits. The annual report analysis lack of reliability because no on-field analysis could be conducted. In other word, we did not visit the companies and verified the evidences of information. This is an issue when wanting to check the balance between negative and positive information disclosed and to check the reliability of the materiality analysis and the stakeholder engagement level. Furthermore, regarding materiality analysis, Baumüller & Schaffhauser-Linzatti (2018) claimed that this is a process "highly specific to the individual context and thus cannot be appropriately addressed by simple checklist-based approach". Another limit is the size of our sample. Future studies could use our grid to conduct report analysis on a large sample and compared annual report across various industries. It could for example be interesting to observe integrated reports from the sector of financial services because it has much more intangible assets and has a rather indirect impact on its external environment, contrary to the chemicals industry. Finally, the scale of our scoring may be too low. Future study could conduct a longitudinal study focussing on one specific section such as the connectivity principles and observe the progress in integrated thinking of a company throughout several years. For this type of more oriented study, we think it would be better to assign more points than 2 points as we did, in order to have a more accurate analysis.

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Appendix I: GRI's principles

Principles for content	Components related	Principles for quality	Components related
Stakeholders inclusiveness	- Statement of key stakeholders - Use of stakeholder engagement process - Consistency between outcome of stakeholder engagement process and topics included in the report	Accuracy	- Indication of the data that have been measured - Description of measurement's methodology - Moderate margin of error - consistency between qualitative and quantitative information
Sustainability context	- Presentation of the performance link to sustainable development objectives - Description of how ESG topics relate to its strategy, risks, opportunities and goals, including its value chain	Balance	- Both positive and negative results are reported - Priority of information
Materiality	- Expertise - benchmarking - Regulations - Key organisational value - Interests raised by internal stakeholders - Interests raised by external stakeholders - Use of a materiality matrix	Clarity	- Avoidance of unnecessary detail - The format is clear. No-cognitive cost during information acquisition. - Avoidance of technical terms
Completeness	- Estimation of future impact - Prioritization of the topics - all topics material for decision-making are covered	Comparability	- Combination of ratios and absolute data - Precision of the context in which the company operates - Appropriate benchmark for the calculation of performance - Use of generally accepted protocols for some measurement (for example, GRI indicators)
		Reliability	- Possibility to identify original sources of information stated in the report
		Timeliness	- Recent information - Statement of the time period to which information relate

Appendix II: King IV's principles

(source: King IV, 2016)

Principle 1: The governing body should lead ethically and effectively.

Principle 2: The governing body should govern the ethics of the organisation in a way that supports the establishment of an ethical culture.

Principle 3: The governing body should ensure that the organisation is and is seen to be a responsible corporate citizen.

Principle 4: The governing body should appreciate that the organisation's core purpose, its risks and opportunities, strategy, business model, performance and sustainable development are all inseparable elements of the value creation process.

Principle 5: The governing body should ensure that reports issued by the organisation enable stakeholders to make informed assessments of the organisation's performance, and its short, medium and long-term prospects.

Principle 6: The governing body should serve as the focal point and custodian of corporate governance in the organisation.

Principle 7: The governing should comprise the appropriate balance of knowledge, skills, experience, diversity and independence for it to discharge its governance role and responsibilities objectively and effectively.

Principle 8: The governing body should ensure that its arrangements for delegation within its own structures promote independent judgment, and assist with balance of power and the effective discharge of its duties.

Principle 9: The governing body should ensure that the evaluation of its own performance and that of its committees, its chair and its individual members, support continued improvement in its performance and effectiveness.

Principle 10: The governing body should ensure that the appointment of, and delegation to, management contribute to role clarity and the effective exercise of authority and responsibilities.

Principle 11: The governing body should govern risk in a way that supports the organisation in setting and achieving its strategic objectives.

Principle 12: The governing body should govern technology and information in a way that supports the organisation setting and achieving its strategic objectives.

Principle 13: The governing body should govern compliance with applicable laws and adopted, non-binding rules, codes and standards in a way that supports the organisation being ethical and a good corporate citizen.

Principle 14: The governing body should ensure that the organisation remunerates fairly, responsibly and transparently so as to promote the achievement of strategic objectives and positive outcomes in the short, medium and long-term.

Principle 15: The governing body should ensure that assurance services and functions enable an effective control environment, and that these support the integrity of information for internal decision-making and of the organisation's external reports.

Principle 16: In the execution of its governance role and responsibilities, the governing body should adopt a stakeholder-inclusive approach that balances the needs, interests and expectations of material stakeholders in the best interests of the organisation over time.

Principle 17: The governing body of an institutional investor organisation should ensure that responsible investment is practiced by the organisation to promote the good governance and the creation of value by the companies in which it invests.

Appendix III: <IR> framework – paragraphs and sections mentioned in the thesis

(source: IIRC's <IR> framework 2013)

3B Connectivity of information

3.6 An integrated report should show a holistic picture of the combination, interrelatedness and dependencies between the factors that affect the organization's ability to create value over time.

3.20 To be most effective, the materiality determination process is integrated into the organization's management processes and includes regular engagement with providers of financial capital and others to ensure the integrated report meets its primary purpose as noted in paragraph 1.7.

4C Business model

4.10 An integrated report should answer the question: What is the organization's business model?

4.11 An organization's business model is its system of transforming inputs, through its business activities, into outputs and outcomes that aims to fulfil the organization's strategic purposes and create value over the short, medium and long term.

4.12 An integrated report describes the business model, including key:

- Inputs (see paragraphs 4.14–4.15)
- Business activities (see paragraphs 4.16– 4.17)
- Outputs (see paragraph 4.18)
- Outcomes (see paragraphs 4.19–4.20).

4.13 Features that can enhance the effectiveness and readability of the description of the business model include:

- Explicit identification of the key elements of the business model
- A simple diagram highlighting key elements, supported by a clear explanation of the relevance of those elements to the organization
- Narrative flow that is logical given the particular circumstances of the organization
- Identification of critical stakeholder and other (e.g., raw material) dependencies and important factors affecting the external environment
- Connection to information covered by other Content Elements, such as strategy, risks and opportunities, and performance (including KPIs and financial considerations, like cost containment and revenues).

Inputs

4.14 An integrated report shows how key inputs relate to the capitals on which the organization depends, or that provide a source of differentiation for the organization, to the extent they are material to understanding the robustness and resilience of the business model.

4.15 An integrated report does not attempt to provide an exhaustive list of all inputs. Rather, the focus is on those that have a material bearing on the ability to create value in the short, medium and long term, whether or not the capitals from which they are derived are owned by the organization. It may also include a discussion of the nature and magnitude of the significant trade-offs that influence the selection of inputs (see paragraph 4.56).

Business activities

4.16 An integrated report describes key business activities. This can include:

• How the organization differentiates itself in the market place (e.g., through product differentiation, market segmentation, delivery channels and marketing)

• The extent to which the business model relies on revenue generation after the initial point of sale (e.g., extended warranty arrangements or network usage charges)

• How the organization approaches the need to innovate

• How the business model has been designed to adapt to change.

4.17 When material, an integrated report discusses the contribution made to the organization's long-term success by initiatives such as process improvement, employee training and relationships management.

Outputs

4.18 An integrated report identifies an organization's key products and services. There might be other outputs, such as by-products and waste (including emissions), that need to be discussed within the business model disclosure depending on their materiality.

Outcomes

4.19 An integrated report describes key outcomes, including:

• Both internal outcomes (e.g., employee morale, organizational reputation, revenue and cash flows) and external outcomes (e.g., customer satisfaction, tax payments, brand loyalty, and social and environmental effects)

• Both positive outcomes (i.e., those that result in a net increase in the capitals and thereby create value) and negative outcomes (i.e., those that result in a net decrease in the capitals and thereby diminish value).

4.20 Identifying and describing outcomes, particularly external outcomes, requires an organization to consider the capitals more broadly than those that are owned or controlled by the organization. For example, it may require disclosure of the effects on capitals up and down the value chain (e.g., carbon emissions caused by products the organization manufactures and labour practices of key suppliers). (See also paragraphs 3.30– 3.35 regarding determination of the reporting boundary.)

Organizations with multiple business models

4.21 Some organizations employ more than one business model (e.g., when operating in different market segments). Disaggregating the organization into its material constituent operations and associated business models is important to an effective explanation of how the organization operates. This requires a distinct consideration of each material business model as well as commentary on the extent of connectivity between the business models (such as the existence of synergistic benefits) unless the organization is run as an investment management business (in which case, it may be appropriate to focus on the investment management business model, rather than the business models of individual investments).

4.22 The integrated report of an organization with multiple businesses often needs to balance disclosure with the need to reduce complexity; however, material information should not be omitted. Aligning external reporting with internal reporting by considering the top level of information that is regularly reported to those charged with governance is ordinarily appropriate.

4F Performance

4.30 An integrated report should answer the question: To what extent has the organization achieved its strategic objectives for the period and what are its outcomes in terms of effects on the capitals?

4.31 An integrated report contains qualitative and quantitative information about performance that may include matters such as:

• Quantitative indicators with respect to targets and risks and opportunities, explaining their significance, their implications, and the methods and assumptions used in compiling them

• The organization's effects (both positive and negative) on the capitals, including material effects on capitals up and down the value chain

• The state of key stakeholder relationships and how the organization has responded to key stakeholders' legitimate needs and interests

• The linkages between past and current performance, and between current performance and the organization's outlook.

4.32 KPIs that combine financial measures with other components (e.g., the ratio of greenhouse gas emissions to sales) or narrative that explains the financial implications of significant effects on other capitals and other causal relationships (e.g., expected revenue growth resulting from efforts to enhance human capital) may be used to demonstrate the connectivity of financial performance with performance regarding other capitals. In some cases, this may also include monetizing certain effects on the capitals (e.g., carbon emissions and water use).

4.33 It may be relevant for the discussion of performance to include instances where regulations have a significant effect on performance (e.g., a constraint on revenues as a result of regulatory rate setting) or the organization's non-compliance with laws or regulations may significantly affect its operations.

Appendix IV: Categorisation of capitals

(source: Demartini & Trucco, 2017, page 19)

	Items of each component of the IR	**Literature streams and standard setters**
Financial	Assets, debt, equity or grants, Intangible, non-current assets, short-term loans	IIRC Abeysekera (2013)
Manufactured	Buildings, equipment, and infrastructure Supplier audits Product recalls Failed inspections	IIRC Novo Nordisk Novo Nordisk Novo Nordisk
Intellectual	New patents Intellectual capital Culture Brands Customers Copyrights Software and organizational systems Procedures, processes, and protocols	IIRC, Novo Nordisk Abeysekera (2013) IIRC, Abeysekera (2013) Abeysekera (2013) IIRC, Abeysekera (2013) Abeysekera (2013), Novo Nordisk IIRC IIRC
Human	Corporate governance Number of employees Employee turnover Gender in management Frequency of accidents Training and development Health and safety Ethical values Leadership	IIRC, King's Report Novo Nordisk Novo Nordisk Novo Nordisk, Abeysekera (2013), UN Global Compact Novo Nordisk Abeysekera (2013) Abeysekera (2013), UN global compact, IIRC, Novo Nordisk, King Report, UN global compact, IIRC
Social and relationship	Donations Animal purchased for research Independent directors Audit committee Common values and behaviours Key relationships Reputation, trust and loyalty	Novo Nordisk Novo Nordisk Abeysekera (2013), King Report Abeysekera (2013), King Report IIRC IIRC IIRC, Novo Nordisk
Natural	Energy consumption Water consumption CO_2 emissions from energy consumption CO_2 emissions from transport Organic residues Waste Non-hazardous waste Breaches of regulatory limit values Minerals and forests Biodiversity Eco-system health	Novo Nordisk, Abeysekera (2013) IIRC, Novo Nordisk, Abeysekera (2013) IIRC, Novo Nordisk, Abeysekera (2013) IIRC, Novo Nordisk Novo Nordisk Novo Nordisk Novo Nordisk, UN global compact IIRC IIRC IIRC, UN global compact

Appendix V: AA1000 stakeholder's engagement standard – Accountability

(source: The AA1000 Stakeholder Engagement Standard (AA1000SES), 2015)

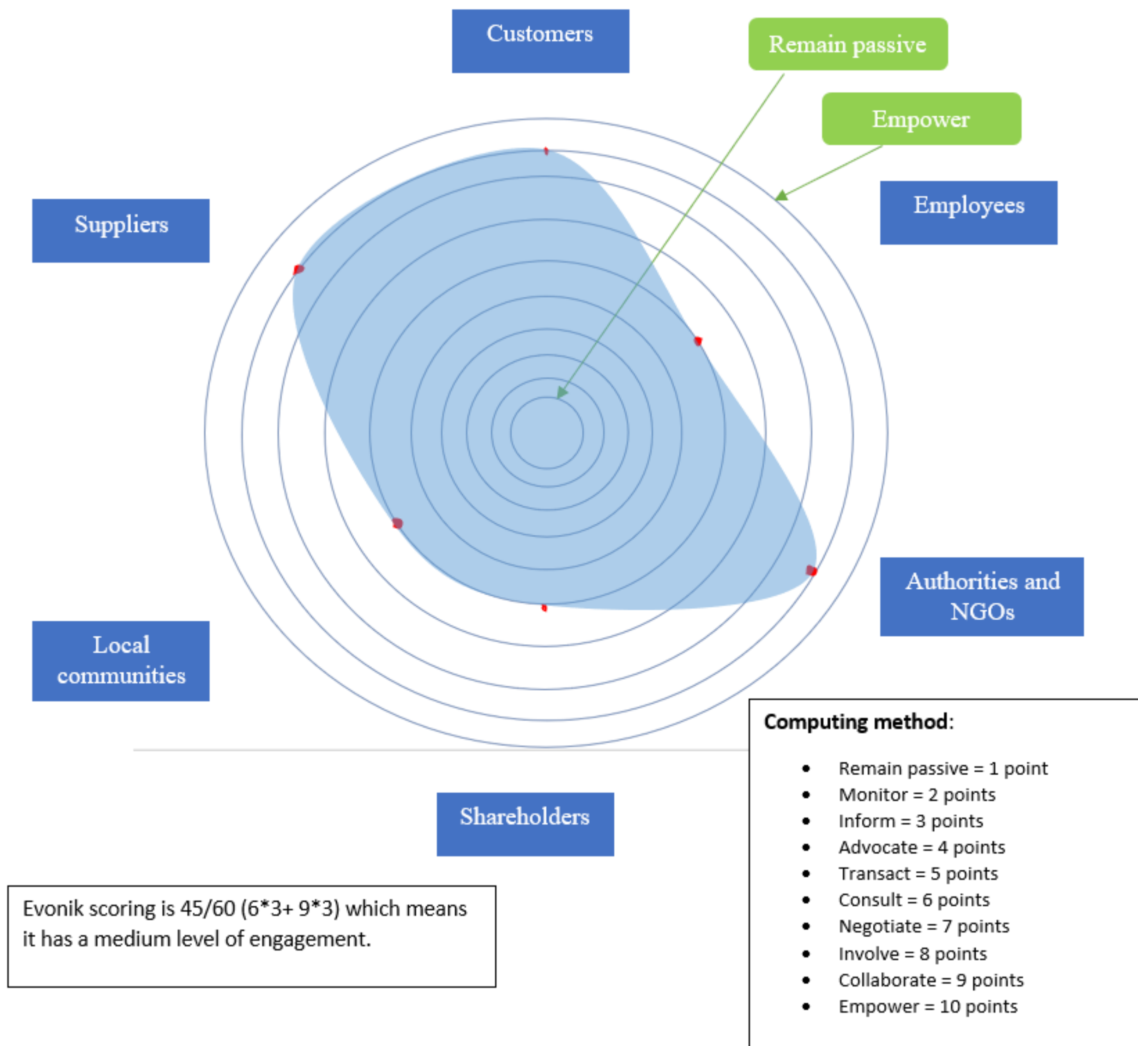
Level of engagement	Methods of engagement
Remain passive No active communication	• Stakeholder concern expressed through protest • Letters • Media • Websites etc.
Monitor One-way communication: stakeholder to organisation	• Media and internet tracking • Second-hand reports from other stakeholders possibly via targeted interviews
Advocate One-way communication: organisation to stakeholder	• Pressure on regulatory bodies • Other advocacy efforts through social media • Lobbying efforts
Inform One-way communication: organisation to stakeholder, there is no invitation to reply	• Bulletins and letters • Brochures • Reports and websites • Speeches, conference and public presentations
Transact Limited two-way engagement: setting and monitoring performance according to terms of contract	• Public-Private partnerships • Private Finance initiatives • Grant-making • Cause-related marketing
Consult Limited two-way engagement: organisation asks questions, stakeholders answer	• Surveys • Focus groups • Meetings with selected stakeholder/s • Public meetings • Workshops
Negotiate Limited two-way engagement: discuss a specific issue of range of issues with the objective of reaching consensus	• Collective bargaining with workers through their trade unions
Involve Two-way or multi-way engagement: learning on all slides but stakeholders and organisation act independently	• Multi-stakeholder forums • Advisory panels • Consensus building processes • Participatory decision-making processes • Focus groups • Online engagement tools
Collaborate Two-way or multi-way engagement: joint learning, decision making and actions	• Joint projects • Joint ventures • Partnerships • Multi-stakeholder initiatives • Online collaborative platforms
Empower New forms of accountability; decisions delegated to stakeholders; stakeholders play a role in shaping organisational agendas	• Integration of stakeholders into governance, strategy and operations of the organisation

Appendix VI: Stakeholder's engagement – Evonik

(source: Evonik sustainability report 2018 – page 17)

Stakeholders	**How Evonik connects**
Customers	• Talks with customers, reports analyses • Stakeholder dialogue: "The two-degree goal – How industry can help meet climate targets" • Workshop: "FReSH Dietary Shifts Proteins" • Customer project: "Prevention of spreading antimicrobial resistance from livestock" • Customer project: "Socially and environmentally more sustainable pharma supply chain" • Meeting customers at trade events, e.g., Convention on Pharmaceutical Ingredients (CPhl)
Employees	• Employee development reviews • Intranet, employee magazine • "Roundtable" discussions and networks • Internal social media platforms ("communities") • Interactive careers website • Employee survey
Suppliers	• Together for Sustainability (TfS) at the ABIQUIM Sustainability Conference in Sao Paulo (Brazil) • Evonik and TfS support the Chemie pilot project 'Sustainability in the supply chain" • Supplier training in Shanghai
Shareholders	• Annual shareholders' meeting • Roadshows/conferences
Creditors	• Talks with rating agencies • Talks with lenders
Legislators	• Stakeholder dialogue "The Future of Europe" • Brainstorming workshop "Pathways to enhance cybersecurity in the EU"
Authorities	• Stakeholder dialogue "The two-degree goal – How industry can help meet climate targets" • Brainstorming workshop "Pathways to enhance cybersecurity in the EU" • Talks with authorities
Local residents	• Magazines for local residents • Environmental and neighbourhood hotlines • Open days at twelve sites

Appendix VII: Evonik's stakeholders' engagement assessment



Appendix VIII: Assessment grid – Evonik

Criteria	Assessment	Comments
Materiality	**7**	
The annual report includes an explanation about the materiality assessment process.	2	yes (p. 24)
Materiality analysis includes relevant matters that might substantively affect the ability of the firm to create value as well as its material impact on its external environment.	2	yes, more than 50% of material issues identified are of higher importance for stakeholders than for the firm (see materiality analysis p - 22)
Materiality is notably determined by mean of stakeholder's engagement process.	2	Yes, the outcomes of stakeholders' engagement are used for the materiality analysis.
The firm prioritizes the matters.	1	They do a classification on p. 22 but they do not refer to the probability of occurrence and some classifications do not fit with the materiality map
Connectivity of information	2	
The firm shows the dependencies between the following components:		
Financial and ESG performance	0	No, Evonik provides indicators of financial performance alongside ESG performance but do not connect them.
Past, Present and future	1	Throughout the report, the degree of achievement of their targets is stated but there is no connection between their current performance and their outlook
Capitals	0	No, only expenditures in intellectual or human capitals are stated, thus no real changes with financial reporting. (see appendix IX)
The Content Elements	1	[Strategy & resource allocation - Performance], [external environment - business model]
The firm connects financial with nonfinancial information.	0	Investment are mentioned but not translated in nonfinancial indicators or performance, and so forth.
The firm provides visual to further explain the connectivity between data	0	No
Assurance	1	
The firm resorts to an external assurance.	1	They had an Independent Practitioner's Limited Assurance (p. 109)
Selectivity	**2**	
The firm balances disclosure between positive and negative information.	2	They consider only 30% of their impact is positive within their value chain against 70% is rather negative (see impact valuation p49)
Stakeholder engagement	5	
The firm considers its stakeholders' interests as joined.	blank	No information
The firm maintains an ongoing communication with its stakeholders	1	See appendix VI
The firm demonstrates its understanding of its stakeholders' needs.	2	Yes, they state the outcome of its stakeholder engagement process and highlight what was mainly wanted from their part
The firm considers its whole range of stakeholders and not only those that have a substantive effect on its ability to create value.	2	yes, they consider both direct and indirect stakeholders
Sustainability embeddedness	9	
The firm embed sustainability within its governance policy	2	2/2
The firm demonstrates a strategy converging toward negative impact minimization and positive impact maximization	2	7/7
The employee are engaged in the sustainability strategy	1	1/2
The firm use proper ESG indicators	2	10/11
The Business Model include sustainability issues	2	3/3
Total Points	**24**	

Appendix IX: Evonik sustainability embeddedness index

SE index	Indicators	Assessment
strategy	1.1Innovations (in products, processes, and business model)	Yes
	1.2 The firm has a policy to reduce emissions	yes
	1.3 The firm shows an initiative to reduce, reuse, recycle, substitute, phase out, or compensate CO2	yes
	1.4 The firm shows an initiative to reduce, reuse, recycle, substitute, phase out, or compensate Waste	yes
	1.5 Reporting on progress made on sustainability targets	yes
	1.6 Commitment to public policy sustainability issues	yes
	1.7 Management commitment to achieve SDGs	yes
governance	2.1 Separate board committee for sustainability	Yes
	2.2 Top management compensation is a function of sustainability performance	Yes (p.29)
Business model	3.1 Review products sustainability standards	Yes (p.57)
	3.2 Reviews products sustainability performance	yes (p. 56)
	3.3 Review suppliers' sustainability management practices	yes (p. 49)
Employees	4.1 The employees receive training on sustainability	yes
	4.2 Sustainability is part of assessment and staff remuneration	No
Measurement	The firm provides KPI on the following themes	
	5.1 GHG	yes (p. 68)
	5.2 Air quality	Yes (p. 70)
	5.3 Energy Management	Yes (p. 67)
	5.4 Water Management	yes
	5.5 Hazardous Waste Management	yes (p. 79)
	5.6 Community Relations	Yes
	5.7 Workforce Health & Safety	yes
	5.8 Safety & Environmental Stewarship of Chemicals	yes
	5.9 Genetically Modified Organisms	No
	5.10Management Of the Legal & Regulatory Environment	yes
	5.11 Operational safety, Emergency Preparedness & Response	yes (p. 77)

Appendix X: Capitals connectivity – Evonik

Evonik	Financial	Manufactured	Intellectual	Human	Social and relationship	Natural	
Financial				yes (++)			+
Manufactured							+
Intellectual	yes						+
Human	yes						+
Social and relationships	yes						+
Natural							+
	-	-	-	-	-	-	

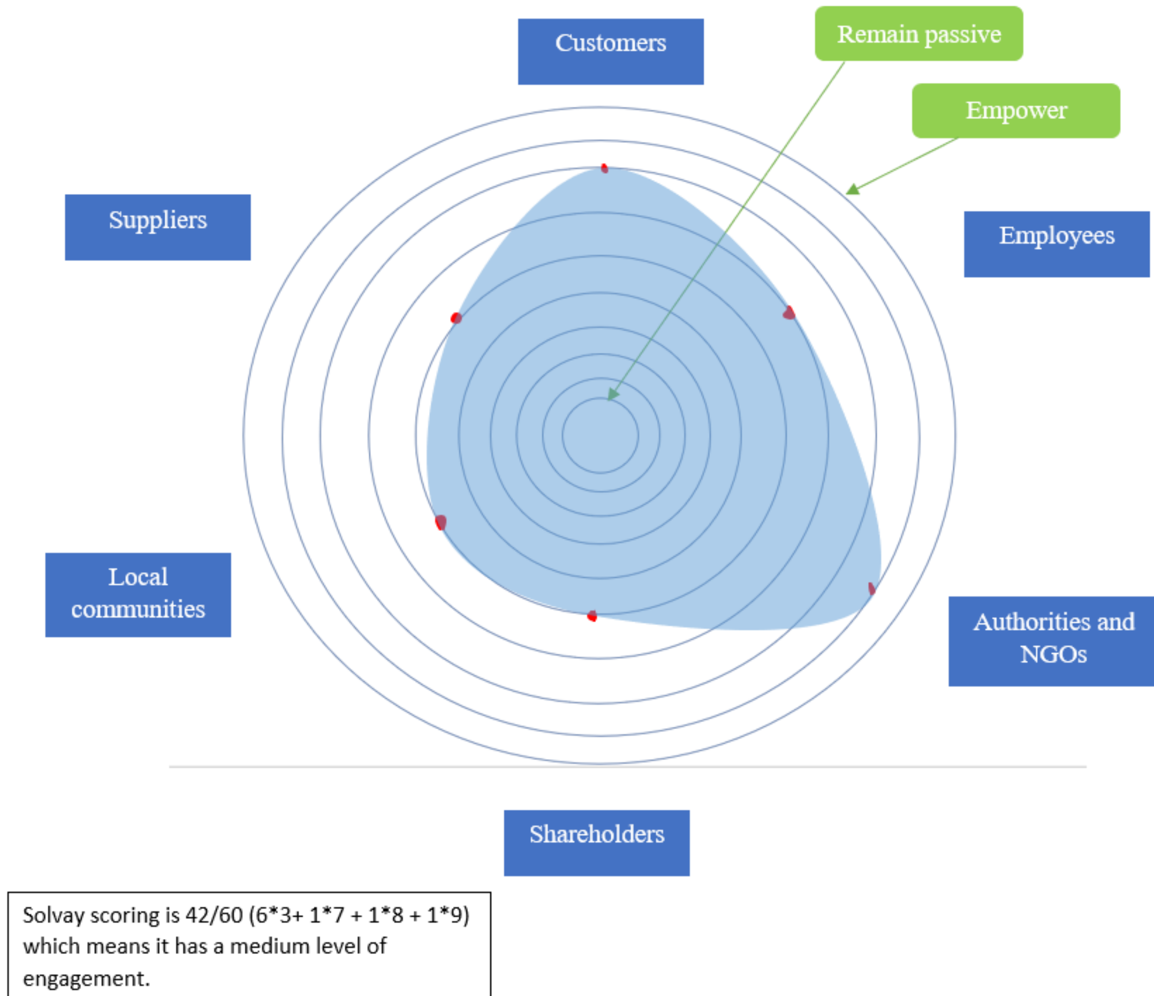
➔ The "minus" below each column relates to a decrease in the capital above the column and the "plus" next to each line relates to an increase in the capitals.

Appendix XI: Stakeholder engagement – Solvay

(source: Solvay's annual integrated report 2018)

Stakeholders	**How Solvay connects**
Customers	• Rating questionnaires (CDP, Ecovadis) • SPM profiles • Respective materiality analysis • Tech days • Direct contacts with Global Business Units' sales & marketing teams
Employees	• IndustriALL agreement • Global Forums, work councils, employee representatives • Annual Solvay employee survey
Communities	• Varied engagement channels depending on location and local configuration, e.g. Isolated plant or industry complex
Suppliers	• Rating questionnaires (TfS, Ecovadis)
Planet	• Dialog with governments and NGOs • Participation in global and reginal trade associations (e.g. WBCSD, ICCA, Business Europe, and Cefic)
Investors	• Engagement by Board of Directors • Direct contacts with investors and shareholders (Capital markets days, roadshows, shareholders meetings) • Rating agency questionnaires

Appendix XII: Solvay stakeholder assessment



Solvay scoring is 42/60 (6*3+ 1*7 + 1*8 + 1*9) which means it has a medium level of engagement.

Appendix XIII: Solvay assessment grid

Criteria	Assessment	Comments
Materiality	**7**	
The annual report includes an explanation about the materiality assessment process.	2	yes (p. 169 - 173)
Materiality analysis includes relevant matters that might substantively affect the ability of the firm to create value as well as its material impact on its external environment.	2	yes, almost 50% of issues included in materiality analysis are regarded as having a low or medium impact on financial performance.
Materiality is notably determined by mean of stakeholder's engagement process.	1	yes (p-173), But SASB' materiality map and internal assessment overlooked the outcome of stakeholders' engagement
The firm prioritizes the matters.	2	yes (prioritization is based on evidence of interest and evidence of financial impact and magnitude)
Connectivity of information	6	
The firm shows the dependencies between the following components:		
Financial and ESG performance	1	Solvay demonstrates revenue growth resulting from its sustainable portfolio management
Past, Present and future	1	Change in business model between 2012 and 2017 and current performance associated, and they explain what they have started now, that will help them achieve future targets
Capitals	1	There are several connections between the capitals, but the trade-offs are not clearly stated or summarized in a chart or graphic (see appendix)
The Content Elements	2	[Resources allocation - business model], [external environment - risks and opportunities], [performance - risks and opportunities - business model]
The firm connects financial with nonfinancial information.	1	Nonfinancial and financial statements are separated but some environmental indicators expressed in percentage of financial metrics (e.g. GHG/€ EBITDA)
The firm provides visual to further explain the connectivity between data	0	No
Assurance	0	
The firm resorts to an external assurance for its nonfinancial information.	0	No (external auditor for environment data, p-168)
Selectivity	**1**	
The firm balances disclosure between positive and negative information.	1	Solvay takes into account its negative impact in its materiality analysis, but negative impact disclosed represents only a weak part.
Stakeholder engagement	5	
The firm considers its stakeholders' interests as joined.	blank	
The firm maintains ongoing communication with its stakeholders	1	see appendix XI
The firm demonstrates its understanding of its stakeholders' needs.	2	They mention investors engagement outcome (p 14-16), general outcomes is stated p49
The firm considers its whole range of stakeholders and not only those that have a substantive effect on its ability to create value.	2	Yes (mettre p50 en annexe)
Sustainability embeddedness	8	
The firm embed sustainability within its governance policy	1	1/2
The firm demonstrates a strategy converging toward negative impact minimization and positive impact maximization	2	8/8
The employee are engaged in the sustainability strategy	2	2/2
The firm uses suitable sectorial ESG indicators	2	10/11
The Business Model include sustainability issues	1	1/3
Total Points	**26**	

Appendix XIV: Solvay's Sustainability Embeddedness index

SE index	Indicators	Assessment
strategy	1.1Innovations (in products, processes, and business model)	yes (new products, circular economy included in business model, new ecological machinery)
	1.3 The firm has a policy to reduce emissions	yes (CAPEX approval includes an internal CO_2 price higher than the market price) p.13
	1.4 The firm shows an initiative to reduce, reuse, recycle, substitute, phase out, or compensate CO_2	yes
	1.5 The firm shows an initiative to reduce, reuse, recycle, substitute, phase out, or compensate Waste	yes (circular economy)
	1.6 Reporting on progress made on sustainability targets	yes
	1.7 Commitment to public policy sustainability issues	yes (p. 165) (Kyoto protocol)
	1.8 Management commitment to achieve SDGs	Yes (p.22)
governance	2.1 Separate board committee for sustainability	No
	2.2 Top management compensation is a function of sustainability performance	Yes (p.74)
Business model	3.1 Review products sustainability standards	
	3.2 Reviews products sustainability performance	yes
	3.3 Review suppliers' sustainability management practices	No
Employees	4.1 The employees receive training on sustainability	Yes (p. 27 and p.61)
	4.2 Sustainability is part of assessment and staff remuneration	yes (p- 74)
Measurement	The firm provides KPI on the following themes	
	5.1 GHG	Yes
	5.2 Air quality	yes (p. 30)
	5.3 Energy Management	yes (p. 150)
	5.4 Water Management	yes (p. 29)
	5.5 Hazardous Waste Management	yes (p. 30)
	5.6 Community Relations	yes (management report)
	5.7 Workforce Health & Safety	yes (management report)
	5.8 Safety & Environmental Stewardship of Chemicals	yes (p. 160)
	5.9 Genetically Modified Organisms	
	5.10Management Of the Legal & Regulatory Environment	yes (p. 151)
	5.11 Operational safety, Emergency Preparedness & Response	yes (p. 22)

Appendix XV: capitals connectivity – Solvay

Solvay							
	Financial	Manufactured	Intellectual	Human	Social and relationship	Natural	
Financial						yes	+
Manufactured							+
Intellectual	yes			yes			+
Human					yes		+
Social and relationships	yes						+
Natural	yes	yes					+
	-	-	-	-	-	-	

Executive summary

ESG information is increasingly deemed relevant for stakeholders including shareholders. Integrating ESG topics in addition to financial statements is necessary to show how a company might respond to future concerns. In the last few decades, sustainability practices among businesses have been foster through various channels. Academics and the accounting profession have been interested in the development of new accounting methodologies to better internalize sustainability issues. Numerous reporting standards have emerged to enable a convergence toward a better communication about an organisation's value creation process. Integrated reporting is one of those new practices that aim to embed sustainability into the core's business. It is designed to enable a better resource allocation and to foster a more forward-looking orientation of businesses. However, there is a proliferation of sustainability standards and this might therefore get report preparers and reports readers confused and thereby might slow down the sustainability embeddedness process among businesses.

This thesis assesses the state of knowledges on integrated reporting and compares it with other sustainability standards. It aims at reducing confusion among frameworks and identifying adjustments that should undergo the <IR> framework. Furthermore, we will build an assessment grid that aligns three standards: <IR>, SASB and GRI. This might serve as a basis for non-financial audits.