Integrated reporting in France: a failure of reducing the information asymmetries about sustainability

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Abstract

Purpose: This paper aims to determine how integrated reporting (IR) can effectively report on multiple capitals that, when taken together, should create value in a sustainable way, with the objective of reducing information asymmetry.

Design/methodology/approach: To answer this research question, a qualitative content analysis was conducted of the IR disclosed by the French companies in the period 2013 –16.

Findings: The study reveals that information asymmetry is not reduced since companies mention only some capitals as inputs to their value creation process while almost entirely excluding natural capital. Moreover, companies disclose only positive information, mainly about their financial capital, without mentioning any destruction of capital, especially natural capital. Finally, the lack of compulsory reporting prevents any comparison between companies or over time.

Research limitations/implications: Given its exploratory nature, this research presents several limitations. First, only a few companies have disclosed an IR in France, preventing the generalization of the findings to a larger number of companies. Second, the IR studied covered a period of only four years, preventing the generalization of the findings over a longer period of time.

Practical implications: This paper provides insights about the information disclosed through IR in French companies and has implications for adopters and regulators.

Originality/value: As an emerging phenomenon, there are few empirical studies exploring IR disclosure and no other studies on IR in the specific French context, enabling this study to enhance the knowledge in this field.

Keywords: Integrated reporting, information asymmetry, sustainability disclosure, French companies.

Integrated reporting in France: a failure of reducing the information asymmetries

1. Introduction

In recent years, companies have faced increasing pressure from their stakeholders and to a larger extent from civil society, to disclose more complete and reliable information about their sustainable activities (Burrit and Schaltegger, 2010, Dienes *et al.*, 2016). The growing focus on organisational accountability and transparency has forced companies to integrate sustainability information into their corporate disclosure (Kolk, 2008, Déjean and Oxibar, 2010). Furthermore, the complexity of the business world has led to growing demands for companies to provide information about their financial performance, corporate governance and contribution to developing sustainability (Frias-Aceituno *et al.*, 2014). Indeed, the sustainability performance of a company can be analysed as asymmetric information since it is difficult for stakeholders outside the company to gain credible information about it.

In addition, there are increasing needs for investors to obtain more information about the value creation process since financial reporting systems account imperfectly for most intangible assets an more generall the intellectual capital generated by companies (Wyatt, 2008, Guthrie *et al.*, 2012). There are increasing concerns that financial reporting is insufficient to meet the information needs of a variety of stakeholders (Cohen *et al.*, 2012). Moreover, companies' business models are rely increasingly on a combination of different capitals, particularly intellectual capital, that together creates value (Martin de Castro *et al.*, 2011). Hence, there is a need to enhance the understanding of these relationships and how one capital might be transformed into another in a multi-capitals perspective (Simnett and Huggins, 2015, Coulson *et al.*, 2015).

In this context, integrated reporting (IR) can be a powerful means to satisfy the increasing need for sustainable information about the value creation process from a multiple capitals perspective to reduce information asymmetry (Adams, 2015). Indeed, there is a need for a new reporting model to show how corporate reporting has developed in recent years, that is, longer and more complex financial reports, increased reporting on governance and standalone sustainability reporting (Steyn, 2014, Petit *et al.*, 2013).

In 2013, the International Integrated Reporting Council (IIRC) issued the International IR Framework (IIRC., 2013), which defines integrated reporting as *"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 a short, medium and long term"* (IIRC, 2013, p7). At the heart of the IR conceptual framework is the notion that companies should expand their reporting to include all the resources they use as inputs to their business activities. The IIRC uses the term "capital" to denote these various resources, identifying six forms of capital: financial, manufactured, intellectual, human, social and relationship, and natural (IIRC., 2013). Hence, an IR should benefit all stakeholders, including employees, customers, suppliers, business partners, local communities, legislators, regulators, policy makers, who are interested in an organisation's ability to create value over time (IIRC., 2013).

Yet, the IR framework has triggered a great deal of controversy. Flower (2015) argues that the IIRC has failed to address the issue of sustainability reporting since the concept of value is *"value for investors"* and not *"value for society"* and that the IIRC places no obligation to report damages inflicted outside the firm, for example, on the environment. Thomson (2015) posits that *"integrated reporting reduces sustainability into five sources of corporate value, but sources of value that need to be better managed in order to increase the wealth of individual investors not society's prosperity"*. However, Adams (2015) argues that IR has the potential to change the thinking of corporate actors, leading to the further integration of

sustainability actions and impacts in corporate strategic planning and decision making. Coulson *et al.* (2015) argue that multiple capitals and their relationships are critical to the debate on sustainable development and practices.

Drawing on current debates, the question arises of how IR can effectively report on multiple capitals that, when taken together, should create value in a sustainable way, with the objective of reducing information asymmetry.

To answer this research question, a content analysis was conducted of the IR disclosed by French companies. Content analysis can be used to identify the intentions and other characteristics of the communicating entity, reveal the focus of attention of individuals, groups, institutions or society, and describe trends in communication content (Weber, 1990, Bournois and Point, 2006). Its goal is to provide knowledge and understanding of the phenomenon under study (Bolden and Moscarola, 2000). French companies have been chosen since French regulations on social and environmental reporting provide an interesting context in which to study disclosure and reporting practices between mandatory and voluntary corporate initiatives (Chauvey *et al.*, 2015). Indeed, French companies must disclose social, economic and environmental information for more than 10 years to conform to the New Economic Regulations (NRE) voted in 2001 and the "Grenelle 2" voted in 2010. In this context, French companies are used to reporting extra-financial indicators and so can be considered well prepared to edit an IR.

This paper addresses several calls for research to explore multiple capitals reporting, such as whether and how trade-off between capitals owned by organisations, those owned by others and those not owned at all are reported (Coulson *et al.,* 2015); to enhance knowledge about how the connectivity between multiple capitals is achieved (Simnett and Huggins, 2015); and to understand the role of the multiple capitals concept in identifying business risks and opportunities in the sustainability field (Adams, 2015). Moreover, in the signalling theory

field, this research answers calls for qualitative research to examine in more depth and more carefully the various qualities signalled, including negative signals. Finally, to our knowledge there is no existing study of IR practices in France, hence this research contributes to the emerging body of literature that has adopted an internal approach to investigate IR practices in different countries (Robertson and Samy, 2015).

This research contributes to the signalling theory by providing conceptualized typologies of signals, such as intent signals indicating possible future actions, camouflage signals indicating possible liabilities of an organization and need signals communicating requirements to the receivers (Connelly *et al.*, 2011). The research provides useful information for those preparing reports about how to describe their business model and categorize the capitals that provide meaningful, concise information over different industries (Simnett and Huggins, 2015).

The remainder of the paper is organized as follow. The next section reviews the background literature on IR and signalling theory, while subsequent sections describe the methodology used to analyse the content of IR reporting in French companies and present the results. Finally, the contributions and limitations of the study are outlined and implications for managers and futures research examined.

2. Literature review

There is growing recognition that intangible assets form a significant part of an organization's business value that are not reflected in the financial statements (Graham *et al.*, 2005). While physical and financial assets explained 83 per cent of market value in 1975, they explained only 19 per cent of this value in 2009 (IIRC., 2011, KPMG, 2012). Indeed, the current financial reporting system struggles to handle the economic properties of intangible assets

since value is no longer measured solely on the basis of financial outcomes (Guthrie et al., 2012, Powell, 2003). Moreover, there are now prominent gaps in traditional reporting, which no longer presents the increasing complexity of business models and how companies create value over a short-, medium- and long-term period (Wyatt, 2008, Barth, 2015). An essential concept in value creation is that companies should expand their reporting to include all the resources they use as inputs to their business activities (Robertson and Samy, 2015).

There is increasing demand from investors to be informed about the risks and opportunities the company is facing. Indeed, traditional annual and corporate social reporting is retrospective and does not reflect targets and crucial risks that may become relevant in the future (Jensen and Berg, 2012). Hence, companies are encouraged to disclose financial as well as environmental, social and governance information (Frias-Aceituno et al., 2014, Déjean and Oxibar, 2010). In this context, an IR benefits all stakeholders interested in an organization's ability to create value over time (IIRC., 2011). Indeed, value is not created by or within an organization alone but rather is influenced by the external environment, created through relationships with stakeholders and dependent on various resources (Crook *et al.*, 2008, Murthy and Mouritsen, 2011).

Although financial statements prepared in accordance with internally accepted International Financial Reporting Standards (IFRS) play a significant role in capital markets and the decision making of market participants, regulators and key organizational stakeholders increasingly recognise the need for relevant non-financial information not contained in the financial annual statements (IFAC, 2013). Accordingly, along with the movement of business towards more stakeholder-oriented approaches, and sustainable business practices, the demand for reporting on sustainability performance has increased significantly (Steyn, 2014, Cho, 2009, Jensen and Berg, 2012).

IR can address these needs since "*[i]ntegrated reporting brings together material information about an organization's strategy, governance, performance and prospects in a way that reflects the commercial, social and environmental context within which it operates. It provides a clear and concise representation of how an organization can demonstrate stewardship and how it creates and sustains value"* (IIRC, 2011, p. 2).

At the heart of the IR conceptual framework is the notion that companies should expand their reporting to include all the resources they use as inputs to their business activities. The IIRC uses the term "capitals" to denote these resources, identifying six: financial, manufactured, intellectual, human, social and relationship, and natural (IIRC, 2013). Moreover, the framework requires that a description of the company's business model should be included in the IR, with particular emphasis on how this business model and the underlying strategies integrate these six capitals. In the IR framework, capitals store the value (or relationships) that are input into a company's business model. Through the activities and outputs of the company these capitals are enhanced, consumed, modified, destroyed or otherwise affected (IIRC 2013, p. 11). According to Flower (2015) these capitals can be internal or external to the company. When internal, they can be either owned or not owned by the legal entity, while when external, they are either renewable or not renewable.

Financial capital (FC) refers to the pool of funds available to an organization for use in the production of goods or the provision of services and obtained through financing, such as debt, equity or grants, or generated through operations or investments. According to Flower (2015), FC is exclusively internal capital, owned by the company that describes its cash flow or its ability to issue bonds on the stock exchange where the company is listed. Manufactured capital (MC) refers to manufactured physical objects (as distinct from natural physical objects) that are available to an organization for use in the production of goods or the provision of services. According to Flower (2015), this capital can be either internal to the company that

owns it, such as building and equipment, or external and renewable, such as infrastructure, roads, ports and waste and water treatment plants. Intellectual capital (IC) refers to organizational knowledge-based intangibles, including intellectual property and organizational capital. IC is internal capital either owned by the company, like patents, copyrights, software, rights and licences (intellectual property), or not owned by the company, such as tacit knowledge, systems, procedures and protocols (organizational property) (Flower, 2015). Human capital (HC) includes people's competencies, capabilities and experience and their motivation to innovate. This comprises their alignment and support for an organization's governance framework, risk management approach, and ethical values, ability to understand, develop and implement the organization's strategy, loyalties and motivations for improving processes, goods and services, and their ability to lead, manage and collaborate. As Flower (2015) has noted, HC (that is, the company's work force) is internal to the company but not owned by it. Social and relationship capital (SRC) refers to institutions and the relationships within and between communities, groups of stakeholders and other networks, and the ability to share information to enhance individual and collective well being. SRC is one of the few capitals that can be either external or internal to the company. When external, SRC is renewable, involving key external stakeholder relationships, trust and willingness to engage in long-term relationships. When internal, SRC can be owned (brand, reputation) or not owned (shared norms, common values or behaviours) (Flower, 2015). Finally, natural capital (NC) includes all renewable and non-renewable environmental resources and processes that provide goods and services to support the past, current or future prosperity of an organization (IIRC, 2013, p11). It includes air, water, land, minerals and forests, biodiversity and eco-system health (IIRC, 2013, p11). As Flower (2015) notes, NC is external to the company and clearly non-renewable.

Even if IR is seen as an essential requirement to achieve a more sustainable economy and greater accountability and transparency at corporate level (King and Roberts, 2013, Eccles and Krus, 2010, Adams, 2015), several academics consider it to be exclusively investor focused with little to say about sustainability (Flower, 2015, Milne and Gray, 2013, Brown and Dillard, 2014, Cheng *et al.*, 2014). Indeed, de Villiers *et al.* (2014) underline that the IIRC definition of sustainability, which considers value creation within planetary limits and societal expectations, can create conflicts between economic and social/environmental outcomes. Moreover, since the primary purpose of an IR is to explain the firm's value creation to providers of financial capital, value has to be interpreted according to their interests (Flower, 2015). Hence, the question arises to what extent the value creation generated by company is for society as a whole and not just for investors.

Furthermore, a company's IR indicates how the firm, through its activities, has created value measured by the increase in the value of the six capitals described earlier. Yet, the IIRC's concept of capitals covers not only firm capital in the conventional sense, but also social capital, for example, the natural environment. The firm does not own half the capitals included in the IR – HC, IC and SRC. Moreover, some capitals are external to the company such as NC and some components of MC, such as road infrastructure, airports and port installations (Flower, 2015). Since NC does not belong to an organization, stakeholders other than investors support the costs of a net decrease in NC (Cheng *et al*., 2014).

Moreover, the framework states: *"where a stewardship responsibility is not imposed by law or regulation, the organization may nonetheless accept stewardship responsibilities in accordance with growing stakeholder expectations"* (IIRC, 2013, p18). Hence, IIRC requires a firm to report on the effect of its activities on stakeholders, society and the natural environment only to the extent that there is a material impact on its own operations (Flower, 2015).

While the IIRC (2013) recognizes that trade-offs between social, economic and environmental objectives exist and should be reported when material, this does not acknowledge the need to combine different desirable but often incompatible sustainability dimensions (Robertson and Samy, 2015, Coulson et al., 2015). Indeed, a development is called sustainable when it leaves the capital stock at least unchanged (Van den Bergh, 2010). Yet, the question of whether one form of capital can be substituted by another lies at the heart of the distinction between weak and strong sustainability. Weak sustainability assumes unconditional substitution between various capitals while advocates of strong sustainability argue that capitals are complementary but not necessarily interchangeable (Ekins *et al.*, 2003). The weak sustainability criterion is based on the assumption that welfare is not dependent on a specific form of capital and that there is near-perfect substitutability between man-made capital and natural resources (Figge, 2005). If such a substitution is possible, an economy is recognized as sustainable even if it reduces its stock of natural capital as soon as it creates enough manufactured capital to compensate for the loss of natural capital. The strong sustainability criterion requires maintaining different kinds of capital intact separately (Ekins *et al.*, 2003). According to this view, natural capital at least is non-substitutable and should be maintained at or above some threshold levels (De Groot *et al.*, 2003). In the IR framework, some reported capitals are renewable, such as manufactured, social and relationship, as are some components of natural capital (flora and fauna). Yet the main elements of natural capital, such as air, water, land and fossil fuels, are not renewable, raising the question of what level of sustainability companies are going to report.

In that context, several other issues can be raised about how IR can effectively report on multiple capitals in either a weak or strong sustainability business model with the objective of reducing information asymmetry.

First, the lack of mandatory reporting allows companies to disclose either their value creation process or the impact their activities have on various capitals, in either an IR or a standalone report (Flower, 2015). Indeed, this principle-based approach recognizes the wide variation in different organizations' circumstances while enabling a sufficient degree of comparability across organizations to meet the need for relevant information (IIRC., 2013). Yet, the obligations of those preparing IR are couched in very broad terms: *"Any communication claiming to be an integrated report and referencing the framework should apply all the requirements identified in broad italic type, unless the unavailability of reliable information or specific legal prohibitions result in an inability to disclose material information or disclosure of material information would cause significant competitive harm"* (IIRC, 2013, p8). Hence, in cases of non-disclosure of information for these reasons, companies simply have to explain why this information has been omitted, emphasizing the IIRC's lack of compulsoriness.

Second, the lack of compulsory key performance indicators (KPI) allows companies to decide what kind of information about their value creation process to disclose and how (Coulson *et al.*, 2015). Indeed, the framework acknowledges that *"quantitative indicators such as KPIs and monetized metrics … can be very helpful in explaining how an organization creates value and how it uses and affects various capitals*"; however, it explicitly states that: "*It is not the purpose of an integrated reporting to quantify or monetize the value of the organization at a point of time, the value it creates over a period, or its uses of or effects on all capitals*" (IIRC, 2013, p8). Moreover, the framework accepts that it is appropriate to trade-off a decrease in the value of one category of capital against an increase in another category (IIRC., 2013). Apart from the fact that this assumption clearly refers to weak sustainability, the little guidance from the IIRC on how to measure the use of various capitals may greatly enhance the complexity of the IR for those preparing it. Indeed, the lack of KPIs may increase the complexity of the

capital measurement concept and then impact adoption of IR practices (Robertson and Samy, 2015). In this context, the question is raised whether more companies, some for the first time, will consider and report on the direct and indirect negative impacts that their operations have on human, social and environmental capitals, thus reducing information asymmetry (de Villiers *et al.*, 2014).

Third, the comprehensive reporting of capitals may reduce the comparability of information disclosed over time and between companies. Indeed, the framework does not require an IR to adopt the categories it identifies or to be structured along the lines of the capitals (Simnett and Huggins, 2015). Hence, it could be difficult to report the use of these capitals in consistent or comparable ways (Thomson, 2015). Moreover, the "apply or explain" approach by which organizations should disclose the reason they consider any capital as immaterial, and thus exclude it from the IR, might enhance the comparability of information between companies (Flower, 2015).

Voluntary disclosure theory argues that enhanced disclosures result in the reduction of information asymmetry (Frias-Aceituno et al., 2014, Flower, 2015). According to the signalling theory (Spence, 1973, Spence, 2002), signals disclosed by these companies can be classified in three categories: intent, camouflage and need (Connelly *et al*., 2011). *Intent signals* indicate possible future actions; *camouflage signals* disguise a possible liability and *need signals* communicate the company's requirements to receivers of the signal. In this context, Stiglitz (2000) has highlighted two broad types of information where asymmetry is particularly important: information about quality and intent. Information asymmetry about the quality of the organization is particularly important when one party is not fully aware of the other party's characteristics. Information asymmetry is also important when one party is concerned about the other party's behaviour or behavioural intentions (Connelly *et al*., 2011). According to the signalling theory, information disclosure is a signal conveyed to the market

to reduce asymmetries, optimize financing costs and increase the value of the firm (Baiman and Verrecchia, 1996). Indeed, externalities caused by the business activity may be positive or negative in the sense that they can increase or reduce the value embodied in the capitals (including natural capital), and thus increase or reduce value created for the organization (Villalonga, 2004). Hence, providers of financial capital need information about material externalities to assess their effects and allocate resources accordingly (Beattie and Smith, 2013). Moreover, from the signalling theory perspective, benefits will accrue to "good" corporate citizens and stakeholders will punish "bad" corporate citizens (Li *et al.*, 1997). Consequently, "good" corporate citizens issue standalone corporate social responsibility (CSR) reports to eliminate information asymmetries that may prevent them from reaping the benefits of their actions (Prado-Lorenzo and Garcia-Sanchez, 2010). Signalling theory suggests that the firms use standalone CSR reports as a signal of their superior commitment to CSR, and "good" firms are prepared to undertake the "costs" of voluntary CSR reporting to obtain the benefits conferred on "good" corporate citizens (Mahoney *et al.*, 2013). When applied to the context of IR, companies that issue this specific report can be expected to be involved in a sustainable value creation process and should identify all the capitals they use during that process and how they renew them.

Thus, in the signalling perspective theory and drawing upon current debates, it can be speculated how IR can effectively report on multiple capitals that, when taken together, should create value in a sustainable way, with the objective of reducing information asymmetry.

3. Methodology

To answer the research question, a qualitative content analysis was conducted of the IR disclosed by French companies.

French companies were chosen since French regulations on social and environmental reporting provide an interesting context to study disclosure and reporting practices between mandatory and voluntary corporate initiatives (Chauvey *et al*., 2015). In France, the New Economic Regulations (NER) law voted in 2001 obliges almost 700 publicly listed companies to report nearly 60 indicators related to CSR engagement in their annual report. With this regulation, France became one of the few countries in the world to mandate CSR disclosure. In 2005, the French government went a step further and implemented a national environmental charter with the goal of protecting people's living conditions and to guarantee that public decisions respected the natural environment. More recently, the "Grenelle 2" (2010) laws listed social and environmental indicators that must be disclosed by all companies with more than 500 employees or a turnover above €100 million. Since 2016, CSR reporting must be included in companies' annual reports and certified by a third-party auditor. In this context, French companies are well prepared to issue an IR voluntarily, since they have been used to disclosing extra financial KPIs related to their CSR performance and activities for more than 10 years. Hence, it can be assumed that French companies successfully practise IR disclosure. Seven French companies disclosing an IR were selected: Vivendi (integrated media and content group); Eurazeo (listed investment company); Valeo (automotive supplier); ENGIE (energy provider); Gecina (real estate agency); Danone (food company); and Capgemini (technology and outsourcing consultancy). These companies disclosed an IR in either 2013 (Vivendi), 2014 (Eurazeo), 2015 (Eurazeo, Vivendi, Valeo, Gecina, Danone, ENGIE) or 2016 (ENGIE, Danone, Capgemini). To answer the research question, the decision was taken to study all the IR disclosed by these French companies, in total 11 covering the period 2013–16.

The qualitative content analysis research method uses a set of procedures to make valid inferences from the text about the sender of the message, the message itself and its intended

audience (Weber, 1990, Morris, 1994). Following the recommendations of Miles and Huberman (1994), each IR was examined comprehensively so that the researchers became familiar with all the information it contained. Qualitative coding is defined as "*the process by which segments of data are identified as relating to, or being an example of a more general idea, instance, theme or category*" (Lewins and Silver, 2007) p. 81). A code is assigned to a fragment of text when researchers identify an item associated with a theme within it. The length of the passages of text coded for this study ranged from one sentence to several paragraphs. Codes can overlap in any given passage of text when more than one theme item is found., QSR NVivo qualitative software was used to carry out the administrative task of organizing the data efficiently (Welsh, 2002, Jiang and Bansal, 2003). NVivo facilitates data management, coding, text retrieval and theory testing and has become a widely used tool for qualitative research (Crowley *et al.*, 2002).

The IR published by the companies of the sample was coded using *ex ante* constructed codes derived from the IIRC framework (typology of capitals) and the Flower (2015) classification (internal or external, owned or not owned, renewable or not renewable). New codes emerged from the analysis with respect to the research question to incorporate important new factors in the theoretical framework (Krippendorf, 2013, Yin, 2009) (see Appendix A). A search was made for relationships among the codes in order to group them into second-order themes with the theoretical orientation towards understanding how IR can effectively report on multiple capitals that, when taken together, should sustainably create value, with the objective of reducing information asymmetry. Following the second-order coding, 29 first-order codes were consolidated to four emerging themes in an abductive loop (O'Reilly *et al.*, 2012): intent signals (input and outcome); quality signals (input and outcome); camouflage signals; and value created.

4. Findings

According to the IR framework (IIRC., 2013), *"an organization's business model is its system of transforming* inputs*, through its business activities, into outputs and* outcomes *that aim to fulfil the organization's strategic purposes and create value over the short, medium and long term"* (IIRC, 2013, p25. In this context, all companies refer to the six forms of capitals mentioned by the IIRC as inputs in their value creation process. The most cited capital is SRC (131 codings), far ahead of FC (59 codings), HC (50 codings), MC (38 codings), IC (37 codings) and NC (9 codings). The lack of consideration companies give NC is notable; they do not mention it as an input even if they consume air, water and energy during their manufacturing process or their service offering.

When talking about outcomes, the IR framework (IIRC., 2013) refers to them as "*the internal or external consequences (positive or negative) for the capitals as a result of an organization's business activities and outputs*" (IIRC, 2013, p14). A positive outcome is a net increase in the capitals reflecting the creation of value, while a negative outcome is a net reduction in the capitals reflecting the destruction of value. It is worth highlighting that companies have disclosed much more about their internal (72 codings) than their external outcomes (59 codings). It is not surprising that companies consider they have created more value (52 codings for positive outcomes) than they have destroyed (14 codings for negative outcomes).

4.1 Intent signals

Since the receivers of signals are concerned with the attitude of the signaller, companies indicate in a very detailed and positive way the future actions they will implement as a significant part of their strategies. In this context, suppliers, consumers, shareholders, local

authorities and NGOs are presented as key partners. This means that companies mainly disclose information about their externally owned SRC as a meaningful way of creating value from a long-term perspective. *"Valeo forms partnerships and strengthens its ties with communities of innovative entrepreneurs and start-ups with a view to acquiring technological building blocks"* (Valeo, IR 2015). When referring to their internally owned SRC, companies frequently mention their brands as a meaningful way of building a strong capital that the company can rely on in its value creation process. *"In 2015, GDF SUEZ became ENGIE. A strong, simple name that evokes energy for all and in every culture. A name that conveys a humane and positive vision of the energy that the Group wants to share. ENGIE is therefore not just the Group's new name, but also its global brand, the banner that brings together all employees and expresses all our values and activities worldwide"* (ENGIE, IR 2016).

Since receivers can be the shareholders that are interested in the value creation process, companies disclose some detailed and positive information about the different capitals that can explain how the company is going to improve its performance. "*ENGIE's growth relies on various projects of acquisition or construction of industrial assets, such as gas and electricity plants or dams where it acts as owner and/or operator*" (ENGIE, IR 2015). "*The group develops its own distribution materials and its digital platforms (Dailymotion, Canalplay, Watchever) as well as its satellite capabilities. It manages a vast stock of set-top boxes. It also has facilities (e.g., buildings and performance halls) in numerous cities in Europe and internationally*" (Vivendi, IR 2015).

When referring to IC, companies mention in the same proportion their owned (patents, copyrights, software) or non-owned capitals (tacit knowledge, procedures or protocol) in their IR over the period. "*The 'Innovation, Marketing and New Business' entity, which has the task of rapidly developing new activities, works closely with the Research and Technologies Department, whose mission is to improve the operational performance of the various*

businesses, as well as to anticipate medium-term developments and manage and bring to maturity tomorrow's technologies, which will make all the difference in setting apart the offers and activities of the Group's businesses" (ENGIE, IR 2015). "*We have thus developed an intelligent monitoring system that is fed by multiple exchanges with an ecosystem of professional associations, specialized networks, senior advisors, local experts on four continents"* (Eurazeo, IR 2015).

Since receivers can be stakeholders, companies significantly mention their external outcomes, such as the benefit of their CSR activities. "*One million people have benefited from Danone communities projects, 3 million people have benefited from Danone Ecosystem Fund projects, 1.2 million people have benefited from Livelihoods projects*" (Danone, IR 2015). Companies also describe the impact of their environmental practices in terms of the reduction of energy or water consumption during the manufacturing process. "*In 2014, the Group's greenhouse gas emissions (scope 1 excluding tertiary emissions) totaled 131 Mt CO2 eq, down 7.6% year-on-year*" (ENGIE, IR 2015).

4.2 Quality signals

Companies can use quality signals to inform their receivers about the characteristics of their creation value process. When disclosing information to shareholders, all companies highlight that FC is a significant input in their value creation process. All the companies mention this capital from a very stable perspective over the period studied. *"Valeo has sufficient cash flow to finance its investments. The Group generated €565 million in cash flow (after investments in property, plant and equipment and intangible assets) in 2015"* (Valeo, IR 2015). *"Capitalizing on a particularly attractive year for companies in 2015, Gecina raised or renegotiated €2.7 billion of financing on the bond and bank markets during the year. In particular, it successfully placed two bond issues for €500 million each, in January and June"*

(Gecina, IR 2015). Moreover, when referring to internal outcomes, companies mainly refer to their financial results, presenting financial KPIs usually used in their balance sheet and income statement. Hence, the most cited internal outcome is the cash and revenue gained. "*This growth resulted in a 22% increase in our operating margin to 7.7% of sales, as well as a 30% increase in net income and a 73% increase in free cash flow*" (Valeo, IR 2015). "*Sales grew by 6.7% (1.4% at constant currency and perimeter), the current operating margin is 10.2% (at constant currency and perimeter) and adjusted net income reached €697 million, up 11.3%*" (Vivendi, IR 2015).

When disclosing information to stakeholders, companies mention HC as another key element in their value creation process. They give some details about number of employees and how this has evolved, human resources management, training programmes or job policy. *"At the end of 2015, Valeo had 82,800 employees in 30 countries, compared with 54,000 employees at the end of 2010. The Human Resources Department prepares and accompanies the Group's growth, through a dynamic hiring policy – especially in high-growth potential regions"* (Valeo, IR 2015). It should be stressed that companies mention HC in a very detailed way, disclosing information about their skills, employability, motivation and ability to work together to implement the company's strategies. *"The group must also provide for the excellent management of its employees to attract them, retain them and support them. Involving the employees in the company's strategies and results and satisfying their expectations regarding employability and the quality of their work environment life are both priorities for the group"* (Vivendi, IR 2015). *"Training and mobilization are key vectors of success. In 2015, nearly 6,500 managers took part in a programme conducted by ENGIE University, and one-third of employees in France attended external training courses (20% more than in 2014). Furthermore, an e-learning offering can be accessed and used by all employees through the dedicated 'e.campus' platform"* (ENGIE, IR 2015).

There are a lot of references to external outcomes, such as customer satisfaction, commercial success or customer retention. Companies often mention the surveys that have been implemented to monitor customer satisfaction rates over time, without disclosing much about the survey results. "*At end-December 2015, the Group recorded a level of customer returns of less than 4.2 parts per million products delivered*" (Valeo, IR 2015). Rather, companies mention their overall commercial successes. "*2014 was marked by a large number of operational and commercial successes*" (ENGIE, IR 2015).

Finally, only one company mentions its tax commitment as an outcome without specifying the amount of taxes paid. "*As a global corporation, Danone recognizes the importance of taxation for the budgets and development of the countries where we do business"* (Danone, IR 2015).

4.3 Camouflage signals

Camouflage signals disguise a potential liability and are mainly designed to divert attention away from the potential vulnerability of some other characteristics (Connelly *et al*., 2011). Hence, when companies disclose internal MC as a significant key element of their value creation process, they never mention external MC, such as roads, infrastructure or water and waste treatment plants as inputs in their value creation process over the period studied. The same goes for IC, since companies refer to IC in very generic terms without disclosing too many details. "*Vivendi owns intellectual property rights (exploitation rights for films, audiovisual programs, music catalogs, broadcast rights for sporting events) that it markets via its own distribution networks and media, its digital platforms or those of its partners. These intellectual property rights also include trademarks, labels and patents"* (Vivendi, IR 2015). Moreover, the word "patent" is mentioned only six times in the IR analyzed while the word "copyright" never appears. "*Valeo protects its innovations with an active patent filing*

policy: 1,406 patents were filed in 2015, a 27% increase on 2014" (Valeo, IR 2015). The same goes for HC. Companies often mention surveys about employee satisfaction, yet very few provide the results of these surveys, more usually disclosing the decreasing rate of workplace accidents. "*74% of average satisfaction rate for employees, 8.2% staff turnover • 3.38% of absenteeism rate*" (Gecina, IR 2015). "*Thanks to a managerial system comprising an action plan for 2010–2015, training courses, certifications, benchmarks, internal controls and audits, external feedback, ENGIE has succeeded in reducing its employees' occupational accidents frequency (down 56% since 2008)*" (ENGIE, IR 2015). It should be noted that companies never mention their shared value or their internal behaviours as a key input in their value creation process.

Yet the most significant camouflage signals are about NC. All the companies mention their use of NC in very generic terms. "*The group, its suppliers and its service providers use raw materials necessary to produce and distribute their offerings of content, services (data centers; transport flows; consumer equipment) and goods (CDs and DVDs)"* (Vivendi, IR 2015). The word "natural" is mostly associated with programs implemented by companies to preserve the environment and not merely with the concept of capitals or resources. Overall, there is very little information about the NC consumed by companies other than water and energy consumption. Most of the companies disclose the pollution for which they are responsible during their manufacturing processes while no company quantifies its consumption of NC.

All the companies studied have to comply with the NRE and the "Grenelle 2" regulations that have a set list of environmental KPIs that must be disclosed and certified by an independent third-party auditor. Those companies therefore present their CSR, environmental practices and environmental impact in much more detail in their annual reports. It is worth underlining that NC is the least mentioned capital, suggesting that NC is either not essential or not used in the companies' value creation process.

Finally, companies disclose much more detail about their positive than their negative outcomes. They present the positive consequences of the business activities for all capitals. When referring to SRC, companies might describe an increase in a brand preference. "*Kiteiras also has a positive impact on our business, helping Danone Brazil secure a new direct-to-consumer distribution channel and build consumer brand preference*" (Danone, IR 2015). Companies disclose the increase in their internal MC through descriptions of new plants. "*In Oman: inauguration of the Sohar 2 and Barka 3 power stations with a total installed capacity of 1,488 MW, in Pakistan: the inauguration of the Uch II gas power plant (375 MW) and in the United Kingdom: inauguration of Stublach, a natural gas storage site*" (ENGIE, IR 2015). The increase in FC is reported through traditional financial KPIs. "*The value of our portfolio has increased from €23 million in 2006 to more than €414 million today*" (Eurazeo, IR 2015). Some companies mention an increase in HC by reporting on job creation. "*The group created close to 4,500 indirect jobs through its distribution network, its purchases of communication services and the technician services that it used to install the equipment necessary for subscribers to receive the packages"* (Vivendi, IR 2015). Finally, only one company (Danone) details the increase of NC by describing some environmental activities. "*47 000 hectares restored. Alongside restoration of degraded lands, projects aim at empowering farmers with smart agricultural practices to sustainably preserve their ecosystems: 24 800 hectares restored in 2015 (…) 130 millions of trees planted in 2015*" (Danone, IR 2015).

Only one company (ENGIE) refers to a negative outcome in FC, since it has faced some significant financial difficulties. "*Revenues of €74,686 million are in decrease of −6.6% (gross) compared to 2013 and in organic decrease of −7.2%"* (ENGIE, IR 2015). Or "*EBITDA, which amounted to €12,138 million, was down −6.7% (gross) and −4.2% (organic decrease)*" (ENGIE, IR 2015).

Unsurprisingly, it must be highlighted that no companies have presented negative outcomes regarding NC, in an attempt to convince that they have either replaced the NC they have consumed or have not consumed any NC in their manufacturing process.

4.4 Value for shareholders or value for society?

The value creation mainly benefits shareholders since all companies disclose details about the dividend they have paid. "*Based on these results, at the next Shareholders' Meeting, shareholders will be asked to vote on the payment of a dividend of 3 euros per share, an increase of 36% compared with the dividend paid in respect of 2014"* (Valeo, IR 2015). "*During the 2016–2018 transformation phase, ENGIE wishes to provide shareholders with visibility by implementing a clear dividend policy. The Group has thus confirmed the distribution of a dividend of €1 per share and per year with respect to 2015 and 2016 profits, payable in cash. It has undertaken to pay a dividend of €0.70 per share per year for 2017 and 2018 profits, also payable in cash*" (ENGIE, IR 2016).

Few companies refer to value creation for stakeholders, associating this specific value creation with non-financial objectives such as CSR activities. *"In order to share the value created with its stakeholders, ENGIE has committed to six non-financial objectives to be achieved by 2020, in close relation with the Group's strategy and transformation plan. The CSR functional line has been structured to adapt to the reorganization and to manage the achievement of objectives with a direct impact on the Group's reputation and stakeholder trust"* (ENGIE, IR 2016).

5. Discussion and conclusion

The objective of this research is to raise he question of how IR can report effectively on multiple capitals that, when taken together, should create value in a sustainable way, with the objective of reducing information asymmetry.

The findings show some interesting issues that should be addressed to improve the reliability of the companies' IR.

First, we can highlight that, for all companies, the most important capital, either as an input or an outcome of the value creation process, is SRC, which is far ahead of the other forms of capitals. SRC embraces the relationships of an organization's staff with its clients, customers, suppliers, allies and society in general (Martin de Castro *et al.*, 2011). Indeed, stronger relationships foster continuous improvements in new product development through shared knowledge among suppliers, customers and firms (Yarbrough *et al.*, 2011). Such relationships also secure long-term sales through customer loyalty, credibility and superior reputation (Hsu and Wang, 2012). Hence, this finding confirms the strategic value of SRC, since it provides some useful information about market needs, opportunities and competitive dynamics.

Second, it is notable that IC, considered as the basis of the knowledge-based economy and a key resource for gaining sustained competitive advantage (Dean and Kretschmer, 2007), is the second least-cited capital either as an input or an outcome (above NC). IC provides a supportive culture that encourages employees to acquire new knowledge (Andreou and Bontis, 2007). Moreover, IC such as operations, procedures and processes has a positive effect on the financial performance of companies since organizations are increasingly employing advanced technologies to compete in today's economy (do Rosario-Cabrita and Bontis, 2008). Finally, firms' R&D investments generate persistent profits, high stock returns and superior market value, and the innovative propensity of a firm positively influences the degree to which above-average profits persist over time (Artz *et al.*, 2010). Without any doubt, companies rely on their IC as a significant part of their competitive advantages. Yet, the companies studied

have not reported much about this capital, either because they do not want to disclose to competitors information about the role of IC in their value creation process or because this kind of capital is very difficult to measure as an input or output. Indeed, accounting frameworks were developed in an era dominated by tangible assets, and firms' reporting systems have mirrored this approach. This finding shows that companies are not comfortable with IC reporting and both financial and non-financial indicators lead to the conclusion that there is no reduction of information asymmetry in this strategic field.

Third, there is some confusion between CSR reporting and IR; indeed, some companies present IR as an extension of their CSR reporting. This confusion shows that companies do not understand fully the concepts of sustainability and multi capitals in relation to the value creation process. The operationalization of CSR principles is difficult to elaborate since there is no standardized definition of CSR (Montiel and Delgado-Ceballos, 2014, Scherer and Palazzo, 2007). Moreover, the implementation and management of CSR practices is becoming more complex due to companies' extended responsibilities towards numerous and varied stakeholders. Hence, the confusion between CSR and IR decreases credibility of the reporting of both. These concepts need clarification so that companies disclose information about their value creation process over time in a more credible way (IIRC., 2013).

Fourth, for the sustainability academic field, these findings raise very interesting issues that must be considered deeply. The IRs disclosed by companies describe a very weak sustainable perspective. NC is the least-cited capital, suggesting that it is virtually not consumed through manufacturing or value creation processes. No company mentions any reduction in this capital. For these companies, it seems that NC is either not necessary to their business model or that companies do not consider the consumption of NC while producing their goods or selling their services. This finding confirms that companies are not weighing NC as an input like other capitals, perhaps because NC is considered free capital. While companies disclose

about their pollution reduction through multiple quantitative indicators indicating the evolution over time, they never mention the reduction in NC for which they are responsible. Again, this finding leads to the conclusion that companies still do not recognize the negative externalities their activities have on NC. From companies' perspective, NC, hardly ever mentioned, is perfectly substituted by one of the other capitals, leading to the conclusion that these IRs are clearly oriented towards a weak sustainability model.

Five, from a signalling theory perspective, how does the information disclosed by companies reduce information asymmetry? Companies do not disclose any negative information about the capitals they use during their manufacturing and selling processes. Only one company (EDF) has disclosed a reduction in FC, having been through significant financial difficulties. With the exception of this company, no companies have reported any reduction in any capitals. They have only disclosed increases in capital or positive information, as though their business models were only creating value without reducing any capitals. Without the disclosure of negative information, companies are not reducing information asymmetry. When disclosing intent signals, companies describe in detail the associations and partnerships implemented, or about to be, in order to be more competitive by offering either a differentiation or an effect size advantage. These intent signals are mainly composed of information about SRC and the expected positive consequences either for the SRC field or from a financial perspective. When disclosing quality signals, companies highlight that FC and HC are significant inputs in their value creation process. These signals highlight the significant amount of FC companies need to implement their strategy. Furthermore, companies underline the characteristics of their HC that participate in the success of their strategy. Camouflage signals refer to some information disclosed by these companies to distract the receivers' attention from the real consequences of their business model. The fact that companies detail the positive consequences of their CSR activities or proactive

environmental strategies as external outcomes while failing to mention the destruction of NC is a camouflage signal. This signal is mainly composed of information on NC that presents the positive consequences of practices instead of negative information about the reduction in this capital. Need signals refer to requirements these companies send to receivers to influence their decisions about resource allocation. Indeed, companies seek financial resources from shareholders as much as legitimacy and licence to operate from their stakeholders. Hence, companies that disclose significant information about the dividend they have distributed to shareholders send a signal encouraging them to maintain their financial support. Furthermore, when companies refer to the value they have created for society as a whole they send a signal to stakeholders to maintain their legitimacy to operate as company serving the interests of society. Thus, information about value creation can be considered as need signals.

Finally, these IRs, disclosed by companies, fail to complete the IIRC (2013) objectives. Indeed, from a multi-capitals perspective, only three capitals (SRC, FC and HC) out of six are really mentioned by companies. The others (MC, IC and NC) are significantly less cited leading to the conclusion that companies did not succeed in presenting a concise multi-capital perspective in the period studied. According to Flower's (2015) internal or external classification, companies have disclosed a lot of information about their internal capitals, such as FC, when detailing their equity and fundraising, internal MC when referring to their plants and HC when presenting their work force. This information is not difficult to present in an IR since companies already report it in various mandatory reports, such as annual financial statement for FC and MC, and "NRE" or "Grenelle 2" for HC. The SRC is the only external capital that is significantly cited since companies rely on it to succeed in their strategic goal of gaining competitive advantage from their partnerships. These collaborations are measured and managed by companies from a return on investment perspective. Hence, information about this external capital is not difficult to report since companies depend on it from a long-term

perspective. The other external capitals– MC (public infrastructure) and NC (natural environment) – are not mentioned, leading to the conclusion that companies do not consider public goods important in the value creation process. Hence, companies consume these public goods without considering their reduction or replacement.

It should be noted that the IRs studied are very different from one to another; this reduces the comparability of the information disclosed about either the multi-capitals or the sustainability perspective. Indeed, the lack of compulsory reporting allows companies to present information in a way that emphasizes the positive aspects of their business model while negative aspects, such as the reduction in NC, are concealed, confirming Chauvey *et al*. (2015). The question might arise to what extent the specific context of France's regulation prevents companies from implementing IR since they have to comply with extended and certified CSR reporting in their annual reports.

To conclude, the objectives of the IR to report on multiple capitals that could underpin models for sustainability remain unmet. Indeed, the goal of IR is to provide insights about the external environment that affects an organization and the resources and relationships used and influenced by the organization – more generally, how an organization interacts with the external environment and the six capitals to create value over the short, medium and long term (IIRC., 2013). Moreover, the IR seeks to enable a sufficient degree of comparability across organizations to meet relevant information needs despite recognising a wide variation in individual organizations' circumstances and contexts (IIRC., 2013). Finally, IR is expected to connect financial disclosures with sustainability in a way that makes them more relevant to a broader audience, encouraging and supporting the integration of sustainability in strategic planning, decision making and operations (Adams, 2015). As has been shown, the information disclosed by companies through IR clearly remains incomplete, leading to the

conclusion that asymmetries of information are not reduced either about multi-capitals or sustainability.

Given its exploratory nature, this research has several limitations. First, only a few companies have disclosed an IR in France, preventing the generalization of these findings to a larger number of companies. Second, the IR studied is over a period of only four years, preventing the generalization of these findings over a longer period of time. Research could be extended productively along each of these limitations.

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Appendix A: Coding framework, based on the IIRC Framework and Flower (2015)

INPUTS	**Internal**		**External**	
Based on Flower (2015) / *Based on IIRC Framework*	**Owned**	**Not Owned**	**Renewable**	**Non-renewable**
Financial capital	Cash, debt, equity			
Manufactured capital (manufactured physical objects)	Factories, buildings, equipment		Public infrastructure (roads, ports, bridges, waste and water treatment plants)	
Intellectual capital (organizational knowledge-based intangibles)	Patents, copyrights, software, rights and licences	Organizational capital: tacit knowledge, systems, procedures and protocols		
Human capital (people's competencies, capabilities, experience, motivations)		Alignment with and support for an organization's governance framework, risk management approach, ethical values, ability to understand, develop and implement strategy, loyalties, motivations, ability to lead, manage and collaborate		
Social and relationship capital (institution and relationships with and between communities, group of stakeholders and other networks)	Intangibles: brand, reputation	Shared norms, common values, behaviours	Key external stakeholder relationships, trust and willingness to engage in a long-term relationship; organization's licence to operate	
Natural capital (all renewable and non-renewable environmental resources and processes)				Air, water, land, minerals and forests; biodiversity and eco-system health

Appendix A (continued): Coding framework, based on the IIRC Framework and signalling theory

Value creation process	
Intent signals	Indicate possible future actions
Camouflage signals	Indicate possible liabilities
Need signals	Requirements of receivers
External environment	Economic conditions, technological change, societal issues and environmental challenges => set the context within which the organization operates
Mission and vision	Encompass the whole organization, identifying its purpose and intention in clear and concise terms
Governance	Creating an appropriate oversight structure to support the ability of the organization to create value
Business model	Draws on **various capitals** as **inputs** and, through its business activities, converts them into **outputs** (products, services, by-products and waste).
Risks and opportunities	Continuous monitoring and analysis of external environment in the context of the organization's mission and vision; identifies risks and opportunities relevant to the organization, its strategy and its business model
Strategy and resource allocation	Identifies how the company intends to mitigate or manage risks and maximize opportunities. It sets out strategic objectives and strategies to achieve them, which are implemented through **resource allocation**
Outlook	Regular review of each component and its interactions with other components => revision and refinement
Performance	Measurement and monitoring systems to provide information for decision making
Outcomes: effects on the capitals = **internal and external consequences (positive or negative)** for the capitals as a result of an organization's business activities and outputs Internal outcomes = employee morale, organizational reputation, revenue and cash flow External outcomes = customer satisfaction, tax payments, brand loyalty, social and environmental effects Positive outcomes = increase in capital, thereby creating value Negative outcomes = decrease in capitals, thereby reducing value	
Emerging codes during the content analysis	
CSR	Corporate Social Responsibility
Value for society	Value creation for society as a whole
Value for shareholders	Relations with shareholders
Intent signals	Future strategies or actions of the companies. Information asymmetry is important when one party is concerned about another party's behaviour or behavioural intentions.
Quality signals	Unobservable ability of an organization to earn financial resources. Reputation, prestige. Information asymmetry is important when one party is not fully aware of the characteristics of another party.
Camouflage signals	Disguise possible liabilities
Need signals	Communicate needs of the company
Purpose of IR	Reasons why companies have decided to edit an IR