

# Determining the value of Integrated Reporting



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8-12-2014



# DETERMINING THE VALUE OF INTEGRATED REPORTING

## **Preface**

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**Abstract**

The research question in this thesis is "What is Integrated Reporting and is it a value increasing practice for DJSI-listed European companies?" The first part of this thesis elaborates on the question what Integrated Reporting is and why it is getting a lot of attention at the moment: its power to disclose true value. The content elements and guiding principles behind Integrated Reporting are explained and also is the way they relate to the capitals that a company influences by operating: financial, manufactured, intellectual, human, social and natural. The reason that companies want to engage in Integrated Reporting is among others to communicate value to stakeholders in a more transparent way. Besides communicating with the stakeholders, Integrated Thinking helps companies make strategic choices. A distinction is made between three phases of Integrated Reporting in which companies are currently active. After explaining our view on Integrated Reporting, the empirical part of the thesis uses hypothesis tests regarding the status of Integrated Reporting at the moment, the evolvement of the phenomenon and the influence of Integrated Reporting on financial performance. Using a sample of 260 firms from Dow Jones Sustainability Index Europe, I conclude that IR is gaining popularity in the sample and that companies are working on improving the standards of their reports. However, no evidence was found for value creation. Tobin's Q and Return On Assets measured financial performance. Despite the lack of empirical evidence for value creation, there are still reasons for companies to seriously consider what the benefits of Integrated Reporting are. Especially when they want to avoid loss of market value, keep their access to the capital market and when they want to be prepared for the future of corporate reporting. This research also emphasizes on the fact that improvements in the reporting standard are desired.



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# 1 Introduction

## 1.1 Introduction

In today's business environment, with a lot of technological changes and increasing expectations by society, companies are constantly monitored. A small misstep can have an immense impact on organizational financial performance. An example of a misstep includes that of BP DeepwaterHorizon's oil spill that caused \$37,2 billion of direct costs and led to a loss in market value of \$105 billion. We can also remember the 2008 financial crisis, where the image and profitability of a lot of companies was seriously harmed and are still struggling to regain trust. Times are changing and so is our planet. This is an important reason why the classical role of financial accounting and reporting is not meeting the current requirements of stakeholders anymore. The demand of stakeholders for transparency is also illustrated by cases like that of WikiLeaks.org whereby a lot of sensitive information has been leaked. As a result of the above mentioned facts the landscape of corporate reporting is about to change considerably (Busco, Frigo, Quattrone & Riccaboni, 2013).

In order to prevent situations that destroy value in companies, companies tend to report in a more transparent way. Environmental reporting started in the 1980's and has evolved to extensive Sustainability Reporting and several mandatory standards supplemented with voluntary guidelines (e.g. Global Reporting Initiative guidelines). Problems with those standards include the facts that there is no clear relation with financial reporting, the size of the reports result in stakeholders getting an information overload and do not know where to focus on any more.

Integrated Reporting is a new form of voluntary disclosure that helps in reporting more transparent and gives a more complete view on the company's efforts to create value over time. In Integrated Reporting, the focus moves from pure financial information to an integrated focus between financial and non-financial information. An Integrated Report (abbreviated: IR) offers providers of financial capital, as well as other stakeholders, a concise, standalone communication about how an organization's

strategy, performance and prospects that lead to performance over short, medium and long term (IIRC, 2013b).

This thesis helps those interested in Integrated Reporting in understanding the relevance and content of Integrated Reporting for companies, investors, and other stakeholders. The most important concepts are explained. After analysing a sample of 260 European listed firms from Dow Jones Sustainability Index between 2011 and 2013 we conclude that Integrated Reporting is gaining popularity among firms, and companies using Integrated Reporting are improving their Integrated Reports. However, Integrated Reporting was found to be in its infancy at the moment, and needs improvements to become more common ground as a reporting standard. Although we did not find any evidence for value creation we argue that Integrated Reporting is a valuable practice for companies and suppose that evidence for value creation is more likely to be found when Integrated Reporting is more mature.

## **1.2 Research aim and relevance**

International Integrated Reporting Council (abbreviated: IIRC), practitioners and some academics claim that Integrated Reporting helps in preventing serious costs caused by sustainability issues. It would even lower the cost of capital and create value for the stakeholders (Black Sun, 2012). How this is supposed to be achieved is however unclear. There is hardly any research done on the topic of IR related to the content and value and this is a clear gap in the literature. This is probably because the topic is really new: The first Integrated Report dates from 2002, and after forming the IIRC in 2010 a provisional framework was presented in 2011. After running a pilot programme for two years, the official framework was released December 3th, 2013. As Sierra-Garcia, Zorio-Grima & Garcia-Benau (2013) point out; further research should study the actual content of the IR and the effect of this reporting strategy on performance or value. The IIRC also recognizes this lack of academic reference related to Integrated Reporting and therefore even awarded GB£50.000 to academic research projects in 2014, which clearly explains the academic value of this research (Association of Chartered Certified Accountants, 2014).

As we have noticed there are some problems with the literature on Integrated Reporting. The first problem with the literature (and the practice) is that there is no consensus yet on the actual contents of Integrated Reports. The framework is open for own interpretations, which means that companies might not know how to commit to Integrated Reporting in a proper way. This thesis helps interested parties in their decision making process by explaining what Integrated Reporting is, and by defining and explaining the capitals, principles, and content elements of the Integrated Reporting framework. It seems costly to invest in a disclosure that is not mandatory. Furthermore, it is common knowledge that disclosing information on strategy can hurt your competitive position and those are major concerns for companies considering Integrated Reporting. Maybe a less transparent sustainable strategy is more efficient in protecting companies' valuable resources (Barney, Wright & Ketchen, 2001).

There are however indications that Integrated Reporting may add value to a company such as that of Eccles & Saltzman (2011); Black Sun (2012); among others; where the informational benefit to stakeholders is emphasized. The indications for value-increasing benefits are still not empirically tested, which is the second problem in the literature. This research therefore gives indications about the value relevance of Integrated Reporting. Despite the thin body of research on Integrated Reporting and value creation, academics have been interested in voluntary disclosures and sustainability for a long time and in the past they focused a lot on financial aspects of voluntary disclosure. Integrated Reporting is a combination of financial and non-financial voluntary disclosure. There is some evidence that non-financial voluntary disclosure can lower the cost of capital and have a positive impact on firm value (Plumlee, Brown, Hayes & Marshall 2010). Knoepfel (2001), Konar & Kohen (2001) and Lo & Sheu (2007); among others, already found a beneficial relationship between sustainability reporting and riskiness, Tobin's Q and cost of equity. However, these studies do not distinguish between the quality of those reports, which provides academics with a challenge to improve the current literature. Another problem with the literature is that the evidence for a beneficial influence of voluntary disclosure is still inconclusive. For instance, Richardson & Welker (2001) found a positive relationship between social disclosure and the cost of equity.

Integrated Reporting is a new phenomenon that is expected to gain popularity in the next years (IIRC, 2011; Churet & Eccles, 2014). This is one of many reasons it is interesting to do research on Integrated Reporting at this moment. Because this study has started quickly after the official release of the IIRC framework there are disadvantages with the research design and maturity of Integrated Reports. However, it still is able to contribute in the form of a scientific status quo on this topic. Integrated reporting practitioners frequently state that Integrated Reporting is a good practice for companies. There is a presumed benefit for stakeholders that are able to get a better, honest view of a company they are investing in. Therefore having an idea of actual content of Integrated Reports, and the impact of Integrated Reporting on financial performance of companies is a really valuable matter. In the past academics did a lot of research on financial aspects of voluntary disclosure. Integrated Reporting is an unexplored form of financial and non-financial disclosure in the literature. Besides the academic relevance it would be helpful for practitioners that are interested in the topic of Integrated Reporting to have an indication on the potential (financial) effects of Integrated Reporting on their company or the company they consider investing in.

### 1.3 Research questions

The first part of this thesis is descriptive and maps the topic of Integrated Reporting with the content elements and interpretation, presumed benefits and reasons for using Integrated Reporting. The second part of the research tests hypotheses about developments and effects of Integrated Reporting on a sample of 260 sustainable firms from the Dow Jones Sustainability Index Europe (DJSI Europe) between the years 2011 and 2013. Some of these firms use a form of Integrated Reporting (37,5%). Based on existing literature on information asymmetry, voluntary disclosures, Integrated Reporting, and also management literature and information from IIRC, GRI, among others, the following research question has been formulated:

*“What is Integrated Reporting and is it a value-increasing practice for DJSI-listed European companies?”*

The following sub-questions have to be answered to be able to give a proper answer to that question:

- i. Why do listed firms produce annual, sustainability and integrated reports?
- ii. What are Sustainability, Sustainability Reporting and Corporate Social Responsibility and why are they important?
- iii. What are the benefits of Integrated Reporting, what are the contents of Integrated Reports and what are the differences between Integrated Reports?
- iv. What are determinants of value in listed firms and how are they measured?
- v. Is there a tendency towards Integrated Reporting?
- vi. Is Integrated Reporting more than a buzzword and will it continue to develop in the near future?
- vii. Do companies that use Integrated Reporting in our sample perform better than those that do not?

## 1.4 Research approach

To answer the research question and the sub-questions the thesis is divided in four research phases:

Phase A: Theoretical framework. This part serves to answer sub questions i until iv In the theoretical framework we address theories of corporate performance in listed firms and how managers (try to) influence corporate performance. Examples include the agency theory and signaling theory. After that, corporate disclosure of companies is treated and distinctions are made between mandatory and voluntary disclosures. It is shown that sustainability and social issues are gaining importance in the literature and practice, and that stakeholders demand more and more information. A new phenomenon in which corporate financial and sustainability disclosure are combined called Integrated Reporting is the variable of interest in this study. A clear and extensive description on the capitals, content elements and guiding principles that is essential to really understand Integrated Reporting is given in his part of the thesis.

After elaborating on our view on Integrated Reporting, value creation within listed firms and empirical evidence on value creation related to the theory are discussed. Phase A ends with the presentation of the conceptual research model in this thesis.

In phase B of the thesis the research method and data collection for the empirical part of this study is described. The theoretical part already serves to answer questions i till iv. The empirical part is needed to answer questions v till vii in phase C. It discusses how and why the Dow Jones Sustainability Europe index was chosen to test effects of Integrated Reporting. It also elaborates on the size and time frame of the sample, as well as the selection of companies at RobecoSAM. Furthermore the variables of interest like Tobin's Q and Return On Assets and their operationalization is explained.

In phase C the collected data among 260 firms from 2011 till 2013 is analyzed and discussed. The assumptions for statistical analysis are treated. Because the data are not normally distributed data non-parametric tests should be applied. This section gives answers sub-questions v till vii Based on those answers, combined with the answers from previous chapter the main research question is answered. This is done in the conclusions and discussion section.

Phase D finalizes the study and gives interpretations of the findings from the theory. The same applies to the results from the data. The research question can be answered and the consequences of this study on the topic of Integrated Reporting are discussed. Furthermore, Phase D gives advice to (potential) practitioners and academics that are struggling with Integrated Reporting.





## 2 Theoretical framework

This is Phase A of the thesis. This part aims at answering sub-questions i till iv.

Important for answering the sub-questions are several theories, namely; agency theory, stakeholder theory and signaling theory. Part A also elaborates on the concept of Integrated Reporting and how the content elements and guiding principles are related to the several capitals that a company influences by operating. When Integrated Reporting is explained, there is some attention to value creation within listed firms and empirical evidence for value creation. Finally, the conceptual framework that serves to answer sub-questions v. till vii is presented.

The research question in this thesis is:

*“What is Integrated Reporting and is it a value-increasing voluntary disclosure practice for DJSI-listed European companies?”*

To be able to give a proper answer the research question in phase D of the thesis the following sub-questions are formulated. Sub-question i till iv will be answered in phase A of the thesis, the theoretical framework:

- i. Why do listed firms produce annual, sustainable and integrated reports?
- ii. What are Sustainability, Sustainability Reporting and Corporate Social Responsibility and why are they important?
- iii. What are the benefits of Integrated Reporting, what are the contents of Integrated Reports and what are the differences between Integrated Reports?
- iv. What are determinants of value in listed firms and how are they measured?
- v. How far are companies in implementing Integrated Reporting?
- vi. Is Integrated Reporting more than a buzzword and will it continue to develop in the near future?
- vii. Do companies that use Integrated Reporting in our sample perform better than those that do not?

## 2.1 Reasons for corporate disclosure of information

There are several regulations about the information that companies are obliged to disclose and how this has to be done (e.g. IFRS and GAAP). The results of these regulations are called *mandatory disclosures* and comprise mostly financial information. However, a company can choose to disclose more information than regulations obligate the company. This is called *voluntary disclosure*. Voluntary disclosures can represent information that a company is not required, but prepared to give in their annual report, in order to provide the stakeholders with their decision needs. Voluntary disclosures can include the company's long-term strategy, nonfinancial indicators that are useful in judging the effectiveness of the strategy. Examples of non-financial voluntary disclosures include absenteeism, information about what went wrong in a company last year or environmental performance goals. An example of financial voluntary disclosure is an estimate of future profits or performance.

Companies involve in voluntary disclosure because investors need this information to assess the timing and uncertainty of the current and future cash flows when they are valuing firms for their investment decisions (Meek, Roberts & Gray, 1995; Healy & Palepu, 2001). Clearly, information on strategy can hurt the competitive position of the company, so the benefit of the lower cost of capital has to exceed the potential direct or indirect costs of the disclosure. Other disadvantages may include legal liability of management when the estimates did not materialize and skeptics when management faces credibility issues (Palepu et. al. 2010). Another reason managers involve in voluntary disclosure is based on agency theory. The owners of the firm, also known as the agents are an important group of stakeholders. Agency theory predicts conflicts between owners and managers, as well as between managers (or owners) and creditors. This is because their goals are not always in perfect agreement. The monitoring costs incurred in the agency contract reduce the compensation of managers. Therefore, they are inclined to disclose information on a voluntary basis (Depoers, 2010).

The previous section describes the relevance of firm performance for shareholders, but stakeholder theory tells us that there are also other stakeholders that place demands upon firms. That is why managers should consider them in their decision making

process. A practical example of why they should do this is to avoid claims against the company, or to keep up their positive brand image. Stakeholder management requires, and this is key, simultaneous attention to the interests of all stakeholders. This does not mean that all stakeholders should be involved in all processes and decisions equally, but their interests should be weighted (Donaldson & Preston, 1995; Perrini & Tencati, 2006).

It seems like there is a negative relation between the quality of voluntary disclosures and the cost of capital. The first reason for this relation is that greater disclosure is supposed to increase investors' awareness of the existence and image of the firm, and thereby is enlarging its investor base. In this case, risk sharing reduces the cost of capital. Secondly, higher quality disclosures decrease the covariance of a firm's cash flows compared to those of other firms. This reduces beta, and therefore also the cost of equity capital. Similarly, information asymmetry is reduced among investors or between managers and investors. Finally, when a firm adapts low standards in disclosure, and some investors are less willing to trade, information asymmetry increases the bid-ask spread and transaction costs. The result of this is a higher required rate of return or cost of equity capital (Coller & John, 1997; Healy & Palepu, 2001; Clarkson et al., 2008; Hillier, et. al., 2010; Dhaliwal, Tsang & Yang, 2011).

## **2.2 The emergence and importance of Sustainability and Sustainability Reporting**

The importance of Sustainability is getting more and more visible in our daily life. WWF and SustainAbility (2007) explain: the Earth cannot keep up with the demand our economy is placing on its ecological assets. The immense volume of resources flowing through the global economy has become today's key environmental challenge and as the demand for resources grows, the Earth's life supporting natural capital will be liquidated at increasing rates. The awareness of these issues made the business environment more and more complex in the last decades while the market shows an increased interest in nonfinancial information. Companies respond by giving more and more information in their annual reports and (separate) sustainability / CSR reports

(Eccles, Serafeim & Krzus, 2011; Frias-Aceituno, Rodriguez-Ariza & Garcia-Sanchez, 2012).

Before this environmental awareness, in the 1960's, companies produced only financial statements. Since the 1980's companies started to give more and more information; this includes management commentary, governance and remuneration issues and environmental performance. At the same time, the ratio between tangible assets and intangible assets shifted from 80/20 ratio in the 1970's to a situation where intangible assets comprise most of the value of a company, 20/80 ratio in 2009. To be able to judge a company's performance stakeholders and suppliers of financial capital became more and more interested in non-financial performance indicators and corporate social responsibility issues (IIRC, 2011; Eccles et. al., 2011). As stated before, companies have been active in voluntary environmental disclosures to reduce information asymmetry since the 1980's. Back then the chemical industry had serious image problems and was using environmental disclosures to show their efforts in protecting the environment. But more recently, non-financial disclosures became important because companies shifted their corporate focus from shareholder value (the cash is king paradigm) to the triple bottom line (people, planet, profit), and now to a society that demands the shared value from corporations (Porter & Kramer, 2011). In this thesis the following definition of shared value is used: "shared value is defined as policies and practices that enhance the competitiveness of a company while simultaneously advancing the economic and social conditions in the communities in which it operates. Shared value creation focuses on identifying and expanding the connections between social and economic progress" (Porter & Kramer, 2011, p. 2).

Porter & Kramer (2011) describe how in recent years business have been viewed as a source of environmental, social and economic problems. After that, businesses embraced corporate social responsibility. In 2006, already 90% of the Fortune 500 companies had explicit CSR initiatives (Lou & Bhattacharya, 2006). The problem for them is, that after they embraced corporate social responsibility they were held accountable for the problems mentioned earlier even more than before. With the concept of shared value, businesses try to create economic value in a way that also creates value for society; this lies in the heart of CSR/Sustainability. Transparency is an

important tool for those companies. That is also why numerous companies are producing sustainability and corporate social responsibility reports. These reports however have no linkage between financial performance indicators and the non-financial performance indicators. Different work groups from different departments prepare them; that is why cohesion is missing. A possible solution to the missing cohesion is Integrated Reporting.

### **2.3 Integrated Reporting: an answer to corporate reporting needs?**

In response to stakeholders needs, several companies already started to give more and more information in their annual reports, ultimately leading to the recent phenomenon called "Integrated Reporting". However, a unified framework was lacking for a long time and that made it hard to compare the performance of companies for (not only) investment analysis (Ness, Urbel-Piirsalu, Anderberg & Olsson, 2007; Eccles & Saltzman, 2011). That is why Eccles & Saltzman (2011) suggested an early form of Integrated Reporting, to which three benefits were allocated. The first benefits are internal operating benefits from better internal resource allocation decisions, greater engagement with shareholders and other stakeholders (information asymmetry theory), and a lower reputational risk (corporate image). External market benefits might increase the liquidity of the equity, reducing information asymmetry by meeting information needs of the investors on ESG, environment, sustainability and governance. Furthermore companies might appear in sustainability indices. Also, Integrated Reporting helps ensuring that data providers give accurate non-financial information on the company since the data is more easily accessible to them. The last benefit mentioned by Eccles & Saltzman is from the management of regulatory risk. Companies are prepared for a wave of future regulations and have a seat at the table when frameworks and standards are developed when they join early. This makes them more able to respond to the request of stock exchanges.

Eccles and Saltzman's study is a start point for forming the Integrated Reporting Council (IIRC) and ultimately presenting the Integrated Reporting Framework in which Eccles (Professor of Management Practice at the Harvard Business School) has an important contribution. This framework is meant to enable the earlier mentioned benefits to grow

in organizations and to promote Integrated Thinking. Before presenting the framework a pilot programme with a business network of over 100 businesses, and an investor network with over 35 investor organizations ran for two years.

After running the pilot programme for a year, companies already saw improvements in their organization:

- Improvements in connecting teams. 93% breaks down silos.
- Improved internal processes. 93% says Integrated Reporting leads to better quality of data collection.
- Board focus. 95% says they increased focus on what the right KPI's are.
- 95%: Better view of strategy and business model.

Combined these elements create value for stakeholders, by improved communications, mutual opportunities, greater confidence in business, lower cost of capital (Black Sun, 2012). It is expected that Integrated Reporting will gain popularity and will grow into a common practice by 2020 (IIRC, 2011). As Meek et al. (1995) noticed, voluntary disclosures often foreshadow trends in transnational financial reporting. Philips for example already started with Integrated Reporting in 2007.

A few years later, the International Integrated Reporting Council (IIRC) was formed. The IIRC is a global coalition of regulators, investors, companies, standard setters, accounting professionals and nongovernment organizations. This coalition shares the idea that communication about value creation should be the next step in the evolution of corporate reporting; in the form of Integrated Reporting (IR). To achieve this goal they have developed the International Integrated Reporting Framework (or: The International IR framework). The long-term vision of the IIRC is a world in which integrated thinking is embedded within mainstream business practice facilitated by Integrated Reporting as the corporate reporting norm. The IIRC claims this will lead to efficient and productive capital allocation, financial stability and sustainability (IIRC, 2013b).

After two years of developing the framework with a pilot programme, The International Integrated Reporting Framework was officially presented by the IIRC in December 2013.

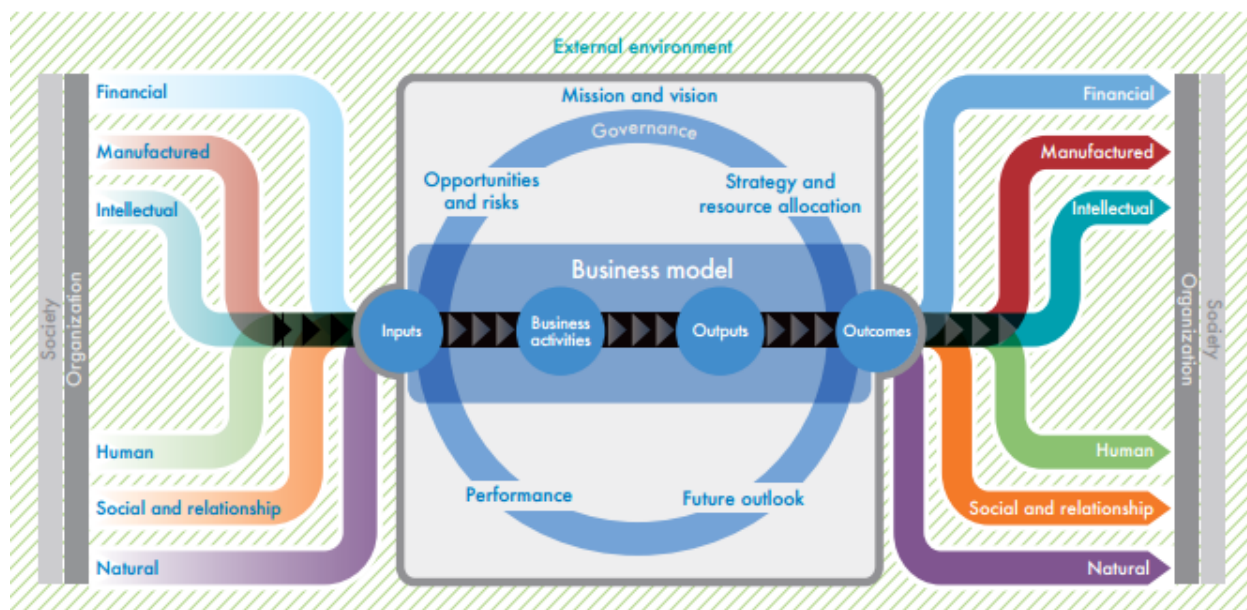


Figure 1: IIRC's organizational value creation model (source: IIRC, 2013a).

Figure 1 shows the value creation process with the several capitals that an organization influences (financial, manufactured, intellectual, human, social and relationship, natural) and the business model with factors that influence the inputs and outputs of the business process on the organization and society as a whole. The IIRC also provides us with several content elements that are related to those capitals. These elements are guided by the guiding principles. The guiding principles and content elements are conducted after running the pilot programme by the IIRC and are essential to understanding Integrated Reporting. The guiding principles and content elements are as stated below:

#### *Guiding principles (IIRC, 2013b)*

- *Connectivity of information:* 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
- *Stakeholder relationships:* An integrated report should provide insight into the nature and quality of the organization's relationships with its key stakeholders, including how and to what extent the organization understands, takes into account and responds to their legitimate needs and interests
- *Materiality:* An integrated report should disclose information about matters that

substantively affect the organization's ability to create value over the short, medium and long term

- *Conciseness*: An integrated report should be concise
- *Reliability and completeness*: An integrated report should include all material matters, both positive and negative, in a balanced way and without material error
- *Consistency and comparability*: The information in an integrated report should be presented: (a) on a basis that is consistent over time; and (b) in a way that enables comparison with other organizations to the extent it is material to the organization's own ability to create value over time.

#### *Content elements (IIRC, 2013b)*

- *Organizational overview and external environment*: What does the organization do and what are the circumstances under which it operates?
- *Governance*: How does the organization's governance structure support its ability to create value in the short, medium and long term?
- *Business model*: What is the organization's business model?
- *Risks and opportunities*: What are the specific risks and opportunities that affect the organization's ability to create value over the short, medium and long term, and how is the organization dealing with them?
- *Strategy and resource allocation*: Where does the organization want to go and how does it intend to get there?
- *Performance*: 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?
- *Outlook*: What challenges and uncertainties is the organization likely to encounter in pursuing its strategy, and what are the potential implications for its business model and future performance?
- *Basis of presentation*: How does the organization determine what matters to include in the integrated report and how are such matters quantified or evaluated?

The Integrated Report focuses on creating (and communicating) value over the short, medium and long term. Doing so, it emphasizes on conciseness, strategic focus, future



orientation, the connectivity of information and the capitals and their interdependencies (see figure 1). Integrated thinking within the whole organization is hereby encouraged. IR aims at improving the quality of information for investors so that capital can be allocated more efficient and productive. It also encourages a more efficient approach to corporate reporting so that all the factors that affect the ability of an organization to create value can be communicated. Furthermore, it enhances accountability and stewardship for the broad base of the capitals mentioned by the IIRC, and promotes understanding of their relationships. Lastly, it supports integrated thinking, decision-making and actions that focus on creating value over short, medium and long term.



Figure 2: Mutually reinforcing relationship between Integrated Thinking and Integrated Reporting (adapted from IIRC, 2013c).

Integrated thinking (see figure 2) will help a company to create value over time, considering the several capitals, capacity of the organization to respond to key stakeholders needs and interests, tailor the business model and competitive strategy, ultimately fostering corporate financial performance and other capitals (IIRC, 2013b). The mechanisms of voluntary disclosure are likely to apply to both financial and non-financial disclosures, as long as the information is (value) relevant. If Integrated

Reporting indeed produces value relevant information, the effects should be measurable.

Bohlhoff and Starnitzky articulate the power of Integrated Reporting in The Guardian Professional;

*“Integrated Reporting is more than just merging financial and non-financial information. It is the outcome of an organizations integrated thinking and makes it possible to disclose true value (Bohlhoff & Starnitzky, 2014).”*

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## 2.4 Relationship between Integrated Reporting and Sustainability Reporting

It is expected that Integrated Reporting will lead to more value creation than Sustainability Reporting on itself. There are some similarities between the two but also important differences. The reason that Integrated Reporting might be superlative to sustainability reporting is described in the following description from the Global Reporting Initiative (GRI):

*“Sustainability reporting is a process that assists organizations in setting goals, measuring performance and managing change towards a sustainable global economy – one that combines long term profitability with social responsibility and environmental care. Sustainability reporting – mainly through but not limited to a sustainability report – is the key platform for communicating the organization’s economic, environmental, social and governance performance, reflecting positive and negative impacts.*

*Integrated reporting is an emerging and evolving trend in corporate reporting, which in general aims primarily to offer an organization’s providers of financial capital with an integrated representation of the key factors that are material to its present and future value creation.*

*Integrated reporters build on sustainability reporting foundations and disclosures in preparing their integrated report. Through the integrated report, an organization provides a concise communication about how its strategy, governance, performance and prospects lead to the creation of value over time. Therefore, the integrated report is not intended to be an extract of the traditional annual report nor a combination of the annual financial statements and the sustainability report. However, the integrated report interacts with other reports and communications by making reference to additional detailed information that is provided separately.*

*Although the objectives of sustainability reporting and integrated reporting may be different, sustainability reporting is an intrinsic element of integrated reporting. Sustainability reporting considers the relevance of sustainability to an organization and also addresses sustainability priorities and key topics, focusing on the impact of sustainability trends, risks and opportunities on the long term prospects and financial performance of the organization. Sustainability reporting is fundamental to an organization's integrated thinking and reporting process in providing input into the organization's identification of its material issues, its strategic objectives, and the assessment of its ability to achieve those objectives and create value over time." (Global Reporting Initiative, n.d.)*

Key here is that sustainability reporting is only a part of Integrated Reporting, and an Integrated Report will provide the stakeholder with more value relevant information than a sustainability report ever will (although the sustainability strategy is an important part of integrated thinking). This lies at the heart of why it is expected that companies using Integrated Reporting will perform better than those that do not. The Integrated Report gives stakeholders insight in the considerations that companies make relating to strategy, performance, and stakeholder relationships. The combined view and the value over time principle make the Integrated Report distinctive. Moreover, in contrast to regular reporting the Integrated Report is a document that takes future performance into account rather than only past performance. This would provide the stakeholder with an indication about future performance, and thereby reduce the information asymmetry between managers and stakeholders, provide stakeholders with their requirements and when done well give a positive signal which may contribute to corporate image.

## 2.5 Phases in Integrated Reporting; degree of integration

Because of the hypothesis that the degree of integration has a relation with firm value, this research needs to distinguish between several forms of integrated reporting. The GRI (2013) and NEMACC do this in a similar way compared to this in our research:

1. Phase 1: The first step towards Integrated Reporting is including a sustainability or corporate social responsibility report in the annual report. In practice, this means that the sustainability report is a (large) chapter of the annual report, but the link between financial and sustainability reporting is not made. The sustainability part is not prepared in cooperation with the financial part.
2. Phase 2: In phase two Integrated Reporting the financial and non-financial indicators are presented together in tables or graphs. However, there is no clear link between sustainability and financial performance. Considerations between financial and non-financial indicators are not clearly explained.
3. Phase 3: Reports with an embedded structure, with clear linkage between financial and sustainability reporting (these are the ones that most resemble the criteria of the IIRC framework) are phase 3 Integrated Reports. The company shows the considerations that can affect both financial and non-financial performance indicators. These reports tend to be more transparent and forward-looking and are the result of Integrated Thinking in a company.

The phases in Integrated Reporting are also helpful for shaping an idea about the state of Integrated Reporting in the practice. There are however some problems with this degree of integration. Even though a report can be prepared according the provisional framework from the IIRC it is not always giving the information that it is expected to give. A reason for this is that IIRC framework was not officially released yet till end 2013 and even IIRC Pilot companies are still struggling with how to report. Distinguishing between the 3 phases of Integrated Reporting gives an indication about the kind of report we are dealing with. It is expected that companies

with phase 3 Integrated Reports are the closest to meet the ideal standards of IIRC and therefor are most likely to create value compared to earlier phases or non-Integrated Reports. They are considered to report in a more transparent and value-relevant way.

## 2.6 Operationalization of value in listed companies; book value versus market value

Listed firms basically exist for performing well to create value for the stakeholders. In this section the operationalization of financial performance in listed firms is elaborated on. Prior literature has operationalized corporate performance in different ways. Frequently used examples are: Return on Assets (e.g. Clarkson, Li, Richardson & Vasvari, 2007), Tobin's q which is a proxy for market value of the firm (e.g. Konar & Cohen, 2001; Lo & Sheu, 2007; Fauver & Naranjo, 2010) Stock return (e.g. Lou & Bhattacharya, 2006; Bachoo, Tan & Wilson, 2013), and Cash flow from operations (e.g. Clarkson, Li, Fang & Richardson, 2011). To increase the value of a company has to improve financial performance by increasing revenues or reducing costs. Or even better: both at the same time (Horngren, Sundem, Stratton, Burgstahler & Schatzberg, 2008).

Profit, expected cash flows and cost of capital are very important determinants of the market value of a firm, and its ability to exist in the long term. Investors (shareholders) are an important source of financial resources for listed firms and they demand a return on their investment. The return that shareholders will ask for their investment is based on the risk that the investor will not get his or her money back. The expected return on a security (i.e.: cost of equity) can be estimated using the capital asset pricing model (CAPM):

*Cost of equity =*

*risk free rate + beta of the security \* (risk free rate – risk market)*

Cost of equity is an important discount rate that is used to value a company's equity (Palepu, Healy & Peek, 2010). In order to reduce the cost of capital, companies would like to reduce the risk (beta). This however, is quite difficult (Hillier, Ross, Westerfield,

Jaffe & Jordan, 2010). Another way is to increase the liquidity of the equity. When equity is liquid, the costs of selling and buying are lower. Brokerage fees determine the cost to trade, together with the bid-ask spread and market impact costs.

An important distinction to make between the measures of performance is based on the book value or the market value of the assets. Book value of assets (as used in financial accounting) is the amount of assets that are accounted for in the accounts of a company. Companies depreciate their assets in a particular way because of IFRS and General Accepted Accountancy Principles (GAAP). This value can differ from the actual replacement costs of those assets, which is the first source of differences in book value and market value. The growing importance of intangible assets is a second source of differences between book values and market values. The efficient market hypothesis (EMH) tells us 'the market is always right' (Hillier et al., 2010). Therefore, in this study market value will be the dominant measure for organizational performance. The proxy used for market value in this thesis is measured with Tobin's Q.

## **2.7 Empirical evidence on voluntary disclosure and value creation**

Other academics already did research on voluntary disclosures. However, these researchers mainly focused on financial disclosures (Botosan, 1997). As mentioned before, there is not much research done on IR, since the phenomenon is so young. But because of the close resemblance to Sustainability Reporting and Corporate Social Responsibility/Reporting, the article from Knoepfel (2001) about the Dow Jones Sustainability Group Index (DJSI) is very indicative on how important sustainability, and presumably IR, is on the stock exchange. Knoepfel (2001) adequately mentions that more and more investors are interested in the concept of Corporate Sustainability. Corporate Sustainability promises long-term shareholder value by reducing risks from economic, environmental and social developments. In the DJSI only the top 10% of leading sustainability companies of the 64 industry groups are selected. They are continuously monitored and eventually downgraded or excluded from the index. From the article it seems that in the long run, sustainability companies deliver more predictable results. Also, Return on Equity, Return on Investments and Return on Assets

are higher at the sustainability companies, making these companies more interesting for investors.

The reasons why companies involve in voluntary disclosure are important for this research, since they might have a significant influence in the model. Meek et al. (1995) analyzed 226 large U.S., U.K., and continental European countries and found company size, country or region and international listing status the three most important variables that explain voluntary disclosures. Continental European firms seemed to publish more information than U.K. and U.S. firms. Larger companies also published more information. The same holds for companies that were international listed. Industry appeared to be influential in some cases. In the oil, chemicals and mining industry companies were more inclined to provide non-financial information.

Looking at non-financial information from a different perspective, Konar and Cohen (2001) conclude that bad environmental performance is negatively correlated with the intangible assets of a firm. Bad environmental performance is one of the reputational risks as mentioned by Eccles and Saltzman (2011), and explains why preventing bad environmental performance with integrated reporting and integrated thinking in an organization can add value, since any risk will ultimately reflect in the share price of a company. In line with the previous, Lo & Sheu (2007) did research on corporate sustainability and value creation and that study has some similarities to this research. The authors notice a new movement of investors embracing the topic of Corporate Sustainability and examine the impact on the market value of the firm. They argue that the topic of Sustainability is gaining importance due to scandals and corporate failures in the past, which destroyed a lot of value. Examples of these scandals and corporate failures include corporate fraud, the abuse of managerial power and business social irresponsibility. Corporate Responsible behavior of firms is thus becoming an important part of being competitive. Corporate Sustainability is even a step further, in which a business hopes to create long-term shareholder value (reliable above average growth). These business also use non-financial criteria to measure their performance; such as the quality of the management, the structure of corporate governance, image, human resource management, relations with all kinds of stakeholders, carbon footprint and other environmental measures, and corporate social responsibility.

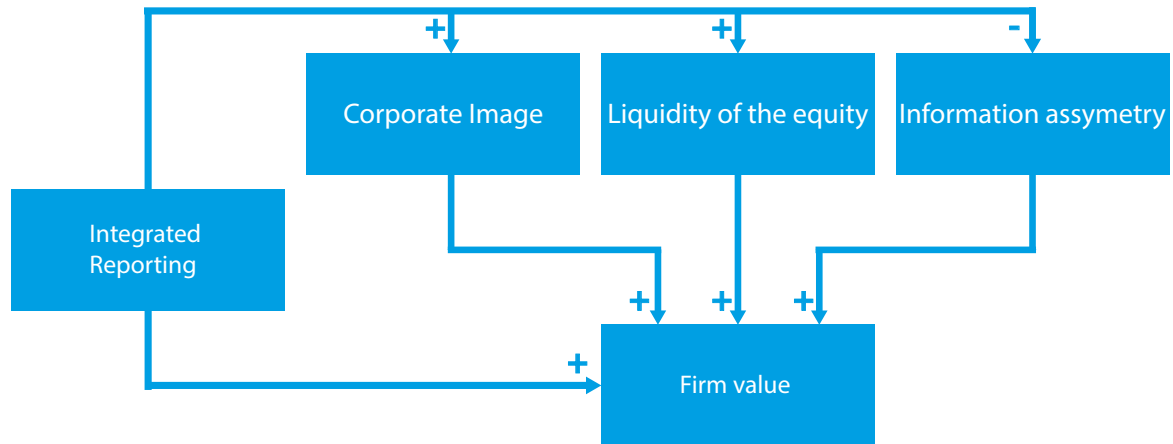
The question that both academics and professionals would like to answer is how value is added. Will firms with high sustainability standards become unprofitable when their competitors adopt lower ones? Lo & Sheu (2007) point out that potential customers discount their demand prices when there is uncertainty about the quality of the product. By promising to act ethically, firms can adapt a differentiation strategy and thereby increasing demand for their products and being able to ask higher prices. Also, firms that have a reputation for being unethical lose current and future customers, and thereby earnings drop, which suggests an accelerating positive effect. Lo & Sheu find that sustainable companies have a higher Tobin's Q. The same sign is detected by Lou & Bhattacharya (2006). Dowell et al. (2000) also use Tobin's Q as dependent variable in their analysis of US multinationals and find that the implementation of global environment management standards is positively associated with firm value. Bachoo, Tan & Wilson (2013) add that the traditional signaling theory suggests an incentive to high sustainability reporting standards; firms that adopt low standards in sustainability reporting may be conceived to be hiding information regarding their current or future risk exposure. Firms with a good sustainability report (or at best; an Integrated Report) will therefore be perceived to have lower riskiness, a higher expected level of long-run earnings which will lead to investors to be willing to pay a higher price, thereby increasing the market value of the firm. Referring to signaling theory, Wagner (2010) finds evidence for his hypothesis that corporate sustainability impacts economic performance less positively in firms with low advertisement intensity compared to companies with high advertisement intensity. Figge & Hahn (2005) suggest that synergies between economic and environmental performance may lead to the creation of corporate value. Integrated Reporting could enhance those synergies. In Europe, Integrated Reporting is a form of voluntary disclosure. Voluntary disclosures are known to enhance firm value because it provides incremental information that investors can use to assess a firm's future environmental and future performance (Clarkson, et al., 2011). A good report not only reflects a firm's current strategy but also the commitment to future environmental and financial performance. However, in 2007, Clarkson et al. did not find significant evidence for this hypothesis. Richardson & Welker (2001) even found a positive relationship between social disclosures and cost of capital. However, they consider that some biases may contribute to that result, and find that those



companies have higher financial performance. The empirical evidence appears to suggest that Integrated Reporting closes the gap between Sustainability Reporting and traditional Financial Reporting, ultimately leading to even higher market value for Integrated Reporting companies compared to other Sustainable companies (Eccles & Krzus, 2010; Busco et al. 2013)

## 2.8 Conceptual research model

The literature review showed enough evidence to assume that sustainable firms have higher firm value (measured with e.g. Tobin's q) than non-sustainable firms (Lou & Bhattacharya, 2006; Lo & Sheu, 2007; Clarkson et al., 2011). Measuring the effects of a sustainability strategy is thus no part of this research. This study examines the effect of Integrated Reporting compared to only Sustainability Reporting and hypothesizes that Integrated Reporting is superlative to Sustainability Reporting. This hypothesis is established by combining with the knowledge of the literature review and the expectations of professionals (see: Presentation on Integrated Reporting by PwC, 2013; Eccles & Saltzman, 2011). It is thus also expected that companies that use Integrated Reporting have higher firm value than 'normal' sustainable firms. This expectation is also based on the pilot programme yearbook, stating: "an immediate achievement of IR has been a better understanding of how non-financial issues are vital to driving financial performance" (IIRC 2013c). The by Eccles (2011) described benefits of Integrated Reporting give us an idea how it contributes to firm value due to internal operating benefits, external market benefits and the management of regulatory risk. The benefits of Integrated reporting as a form of voluntary disclosure might improve financial performance by building on the image of a company (signaling theory), improving the liquidity of the equity, reducing information asymmetry and reducing the risk of the company (beta). Figure 3 shows the theoretical relationship between Integrated Reporting and firm value. Because of the fact that we did not find a relation between firm value and Integrated Reporting, combined with the fact that the status of Integrated Reporting at the moment is poor it was decided that analyzing the individual variables corporate image, liquidity of the equity and information asymmetry would be arbitrary and could lead to wrong conclusions. It is recommended to consider this conceptual research model in future studies when IR is more mature.



**Figure 3: Research model.** It is expected that Integrated Reporting causes an increase in corporate image, an increase in the liquidity of the equity and a reduction in the information asymmetry between managers and stakeholders. This will contribute to firm value. However, there may be more variables that have a positive or negative influence on firm value; hence the direct connection between Integrated Reporting and Firm value.

### 3 Research design

The theoretical framework answers sub-question i till iv and treats among others the question why companies produce financial and non-financial disclosures and what corporate sustainability is. A clear and extensive description on the capitals, content elements and guiding principles that are essential to really understand Integrated Reporting is given and finally it explained the choice for Tobin's Q as a proxy for firm value. Empirical evidence for sustainability and value creation is also presented, which led to a conceptual research model. The research design is Phase B of this study and it explains the design of the empirical part of this study. The aim of the empirical part is answering sub-question v till vii and thereby giving an indication about the use and growth of Integrated Reporting in the last couple of years and to test the effects of Integrated Reporting on financial performance.

In this study Tobin's q is used as a proxy for firm value because it makes comparison across firms easier than comparison with for example stock returns or accounting measures (Lo & Sheu, 2007. p. 351). It is based on market value, which is the most accurate estimate of a company's value because all information is reflected and it incorporates future cash flows. This is a more reliable estimate than looking backwards at firm profitability with accounting based views like on return on investment or return on assets. In this longitudinal study, results of three years are used to measure the effects of IR, namely 2011, 2012, and 2013. It would have been possible to use an even longer time frame but going back in time further would mean even more immature Integrated Reporting so it would not complement this study.

The research method resembles that of Lo & Sheu (2007). In this study Tobin's q was used to determine the market value of the firm. Using a sample of 349 large US non-financial firms, a positive relation between a firm's value and corporate sustainability was found. Panel data was used to control for unobservable firm heterogeneity to test the hypothesis. The mean q for sustainable firms in their study is 2.55 higher than the mean q of 1.66 for others. Other control variables; size, dividend, debt to equity ratio, return on assets, diversification and credit rating are also more favorable at sustainable

firms. Concluding Lo & Sheu showed a positive relation between corporate sustainability and firm value, which our research also explores on the appliance of Integrated Reporting and firm value. A disadvantage of Lo & Sheu's method is that they do not distinguish between the qualities of the reports.

It would also be very interesting to look into future outlook in the form of cash flow prediction like Clarkson et al. (2011) or cost of capital with a dividend discount model but unfortunately the data was unavailable for this sample. Using a proxy like cost of capital would help in gaining insight in the process of value creation, when there is a significant difference between corporate performance between IR and non-IR firms.

### 3.1 Self-constructed index

Besides distinguishing between the several phases in integrated reports, a self-constructed index for the quality of disclosure in integrated reports was created (see appendix 1). This index is based on the guiding principles and guidelines from the IIRC. This approach is also used by Churet & Eccles (2014) with an example illustrating how The Coca Cola Hellenic Bottling Company uses the principles. Self-constructed indexes are used in the literature quite often due to the fact that a single measure for the quality of voluntary disclosures is still lacking, and might be dependent on the type of research question (Botasan, 1997; Vanstraelen, Zarzeski & Roob, 2003; among others). This self-constructed index was intended to measure the quality of the reports with a ratio variable and set an example to close the gap in the current literature that only uses bivariate measures for sustainability related researches. However, in an advanced stadium of the project it was decided to stick with IR phases 1, 2 and 3 because the stadium of Integrated Reporting is premature. This means that it is quite fruitless to assess the reports at the moment of writing. When Integrated Reporting is more common practice in the next years (maybe 3-5 years) it would be interesting to reconsider using a self-constructed index to assess Integrated Reports and explain value.

### 3.2 Data sources & sampling; Dow Jones Sustainability Index Europe

In this thesis a sample of Sustainable firms is used to isolate the Integrated Reporting effects on performance. The assessment of Sustainability can be done in several ways, namely via integrated assessment (combination of several analysis; for instance risk analysis and environmental impact analysis), product-related assessment (product material flow analysis, product energy analysis) or via indices and indicators (Ness, Urbel-Piirsalu, Anderberg & Olsson, 2007). Due to reasons of simplicity and accuracy there was chosen to use one of the top Sustainability indices in the world: RobecoSAM's Dow Jones Sustainability Index.

The sample in this study is based on RobecoSAM's European version of Down Jones Sustainability Index (see Figure 4). Selection of firms is done according to the dimensions of the RobecoSAM; these companies are constantly monitored by an extensive methodology applied by them. The dimensions are Economic (33%), Environment (33%) and Social (33%) and include corporate governance, financial robustness, environmental policy / performance / reporting, corporate citizenship, labour practice indicator and others. The companies in our sample are the top 10% performers in their industry. Given RobecoSAM her reputation it is assumed that these companies are indeed sustainable.

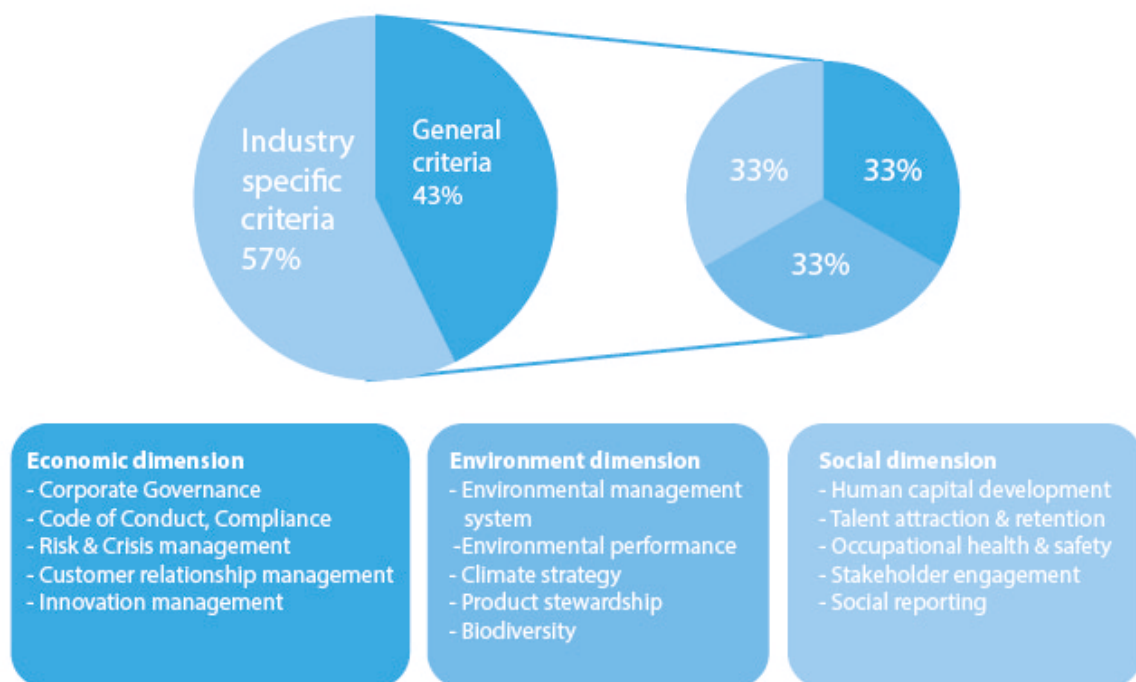


Figure 4: Dow Jones Sustainability Index (DJSI) corporate sustainability assessment criteria

Access to the data from RobecoSAM was gained. The data from RobecoSAM / Dow Jones Sustainability Index Europe from 2011-2013 was used in this study. The financial data and industry codes are imported using the Orbis (Bureau van Dijk) database. The advantage of using a sustainable sample is that it is possible to isolate the effects of Integrated Reporting. The disadvantage of this method is that the selection of the sample is non-random, since the top sustainability performers are selected. This means the study will deal with problems regarding to external validity (De Veaux, Velleman & Bock, 2012). An advantage of using Orbis database is its reputation to be accurate and is therefor used as an important resource for (academic) researchers.

Within this sample there are companies using a form of Integrated Reporting (approximately 37,5%). There are 100 companies in the pilot of the IIRC, but not all companies using Integrated Reporting use the IIRC standards or are available at their website. To solve this problem all the annual reports were downloaded and read. While reading the phase of Integrated Reporting was determined (if integrated at all).

### 3.3 Sample

After deleting companies with missing values, the sample included 160 European sustainable companies from the DJSI Europe as can be seen in table 1. The time frame is 3 years and the data of 2011, 2012 and 2013 is used. Of the 480 observations 37,5% were Integrated Reports as can be seen in table 2. Europe was chosen because of reasons for comparability and the fact that 58% of the participants in the Pilot Programme are European (IIRC 2013c).

Sample overview					
Count		year			Total
		2011	2012	2013	
IR	Not Integrated	105	98	93	296
	Integrated	55	62	67	184
Total		160	160	160	480

Table 1: Sample overview by year Integrated Reporting versus not Integrated Reporting

**Sample overview IR Phase 3**

Count		year			Total
		2011	2012	2013	
IR phase 3	Not integrated	149	140	134	423
	Integrated Phase 3	11	20	26	57
Total		160	160	160	480

**Table 2: Sample overview Integrated Reporting Phase 3 by year**

### 3.4 Operationalization of variables in the model

The selection and operationalization of the variables used in this study is done based on previous empirical work and the literature search. These variables are frequently used in existing literature and are presumed to have a correlation with our dependent variables (see: Lo & Sheu (2007); Fauver & Naranjo, (2010); Sierra-Garcia, Zorio-Grima & Garcia-Benau (2013); among others). All variables were used in one or more tests of the analysis of the data.

#### *Dependent variable for firm performance 1: Tobin's Q*

The financial market usually assesses the value of a firm based on its future profitability (Lo & Scheu, 2007). Under the assumption of a perfect capital market, the best available and unbiased measurement of firm performance and valuation is based on Tobin's Q. It was decided to follow the efficient market hypothesis this use this as the primary measure for firm value.

Tobin's Q is calculated by; market value of equity plus book value of assets minus the book value of equity divided by the book value of assets (Fauver & Naranjo, 2010).

$$Tobin's\ Q = \frac{Market\ value\ of\ equity + book\ value\ of\ assets - book\ value\ of\ equity}{Book\ value\ of\ assets}$$

#### *Dependent variable for performance 2: Return on assets (ROA)*

Although we acknowledge market value gives the best estimate of firm performance and valuation return on assets is also included as a control variable. When a firm is more profitable it is more likely to trade with a premium, so it might affect our dependent

variable. Profit or loss before tax is used as a basis for calculating the ratio instead of net income because country differences in tax regimes and accounting measures may cause bias in the sample.

$$\text{Return on assets} = \frac{\text{Profit / loss before tax}}{\text{Total assets}}$$

#### *Independent variable: Integrated Reporting phases*

The Integrated Reporting phase was used as a multivariate variable (ranging from 0 to 3) and several dummies (IRDummy) which equal 0 if the report of a company in year  $x$  is not integrated; 1 if the report is classified as phase 1 Integrated Reporting; 2 if the report is classified as phase 2 Integrated Reporting and 3 if the report is classified as phase 3 Integrated. The scores were recorded by reading all the annual reports. This classification for the different stadia of Integrated Reporting was used because of the expectation that they could have an influence on the dependent variable. Although done with the intention of pinpoint accuracy a disadvantage of the method is that it is executed by only one person and therefor vulnerable for bias and mistakes.

#### *Integrated Reporting index*

A checklist (see appendix 1) was compiled based on the Integrated Reporting Framework (IIRC, 2013). The index was meant to score individual Integrated Reports for quality. Due to the fact that there is no consensus on the actual standards and contents of Integrated Reporting and the fact that no significant differences in terms of our dependent variable occur, it was decided that the Integrated Reporting index is neither feasible nor useful for this study.

#### *Industry type*

A vector of dummy variables is used to indicate a company's membership of a certain industry. The industry codes used are NACE rev. 2 core codes (4 digits) imported from Orbis database. In previous empirical studies industries were sometimes responsible for significant differences within the sample. Also; because of the dissimilarities in accounting; banks, financial companies and insurance companies may also be a cause for bias because of the existence of differences in the evaluation of their financial



performance and corporate structures (Garcia-Sanchez, Rodriguez-Ariza & Frias-Aceituno, 2013).

#### *Cost of equity capital*

The cost of equity capital is not available in the Orbis database. We attempted to calculate it with the capital asset pricing model. The beta estimate was also unavailable and with a lack of reliable estimates of future cash flows and dividends we were unable to calculate beta with a dividend discount model (Plumlee, 2001). This made it impossible for this study to test the effects of Integrated Reporting on cost of equity capital.

#### *Firm size: total assets*

Size is included because previous studies (e.g. Botasan and Plumlee, 2005) showed larger firms have the benefit of a lower cost of capital because of lower perceived risk. The measure used in this study is total assets.

#### *R&D investment*

As firm value depends on future investments and opportunities the proportion of R&D expenses in relation to operating revenue might also influence q. This variable is imported from Orbis database directly.

#### *Sales growth*

Sales growth: sales of year x divided by sales of year x-1. Sales growth is included because it is found to be positively correlated with firm value (Hirsch, 1991).

#### *Country of origin*

Even though Europe uses some common standards there might be regional differences in regulations and tax regimes.

#### *Market capitalization*

Market capitalization is known to affect stock returns (Palepu et al., 2010). Empirical evidence tells us that small firms generate higher returns. The reasons for this are unclear, according to Palepu et al.

### 3.5 Hypotheses

The hypotheses that help answering sub-question v till vii are formulated as follows:

H1. The amount of Integrated Reporting in the sample is increasing.

H2. The companies using Integrated Reporting are getting more advanced in their Integrated Reporting.

H3a. IR companies have higher Tobin's Q than other DJSI Europe companies.

H3b. IR companies have higher Return On Assets (ROA) than other DJSI Europe companies.

H4a. Firms with more advanced Integrated Reporting have higher Tobin's Q than firms with less advanced levels of Integrated Reporting.

H4b. Firms with more advanced Integrated Reporting have higher ROA than firms with less advanced levels of Integrated Reporting.

## 4 Data analysis

This is Phase C of the thesis, which answers sub-questions v till vii. The questions are answered by testing the hypotheses formulated in phase B. The control variables from the research design are considered in the hypotheses tests. Based on the answers on the sub-questions the main research question is answered in the conclusions and discussion part.

Sub-questions to be answered in this part:

- v. Is there a tendency towards Integrated Reporting?
- vi. Is Integrated Reporting more than a buzzword and will it therefor continue to develop in the near future?
- vii. Do companies that use Integrated Reporting in our sample perform better than those that do not?

### 4.1 Assumptions

Prior to statistical analysis the data first the assumptions have to be checked to decide which test is appropriate. Many of the statistical procedures used in the literature are based on parametric tests; based on the normal distribution (Field, 2009; De Veaux et al., 2012). The assumptions for parametric tests are that the data is normally distributed (Saphiro-Wilk test, normal distribution if  $p < 0,5$ ), that there is homogeneity of variance (Levene's test) and that the data measurements are independent and are measured at least at interval level. Table 3 shows some descriptives that help decide whether or not parametric tests can be used.

		Cases					
		Valid		Missing		Total	
		N	Percent	N	Percent	N	Percent
Tobin's Q jaar	IR phase 1 Not Integrated	296	100,0%	0	0,0%	296	100,0%
	Integrated phase 1	184	100,0%	0	0,0%	184	100,0%

## Descriptives

IR phase 1			Statistic	Std. Error
Tobin's Q jaar	Not Integrated	Mean	1,44537666	,048807414
		95% Confidence Interval for Mean	1,34932181	
		Lower Bound	1,54143152	
		Upper Bound		
		5% Trimmed Mean	1,32029613	
		Median	1,14542689	
		Variance	,705	
		Std. Deviation	,839714499	
		Minimum	,746773619	
		Maximum	6,69669080	
		Range	5,94991718	
		Interquartile Range	,614434666	
		Skewness	3,222	,142
		Kurtosis	13,222	,282
	Integrated phase 1	Mean	1,51513767	,066504693
		95% Confidence Interval for Mean	1,38392312	
		Lower Bound	1,64635222	
		Upper Bound		
		5% Trimmed Mean	1,39347982	
		Median	1,23991020	
		Variance	,814	
		Std. Deviation	,902113546	
		Minimum	,805479172	
		Maximum	8,29238811	
		Range	7,48690894	
		Interquartile Range	,715490165	
		Skewness	3,987	,179
		Kurtosis	22,848	,356

Table 3: Sample descriptives

As can be seen, the first assumption of normally distributed data has not been met. This is because the data is not normally distributed as can be seen by the high values of skewness and kurtosis (3,987 and 22,848). In the literature a log transformation and square root transformation of the data sometimes solved the problem of not fulfilling the normal distribution assumption but unfortunately this was not the case for this sample because of some extreme outliers. After a check of the outliers it was decided not to remove them because they were not caused by measurement errors and therefore are extreme cases that exist in the population. The same problem exists with the use of ROA as dependent variable. Also, the relationship between IRdummy and Tobin's Q does not seem to be linear which means regression analysis or parametric tests cannot be used (De Veaux et al., 2012). This means non-parametric tests are necessary to analyze the data (Mann-Whitney U test). Although the assumptions were not met we tried running a

regression analysis to see if it would produce any significant output which was not the case.

## 4.2 The tendency towards and the evolvement of Integrated Reporting

With a quick overview of the distribution of Integrated Reporting phases in the sample immediately enough information is available to answer the first two hypotheses:

H1. The amount of Integrated Reporting in the sample is increasing.

H2. The companies using Integrated Reporting are getting more advanced in their Integrated Reporting.

To illustrate the data used in answering hypothesis 1 and 2 figure 5 is produced. The first thing that is notable is the fact that the amount of companies *not* using Integrated Reporting has declined every year in the sample. This is in line with the literature study and gives enough reason to accept hypothesis one: there is enough evidence to state that the amount of companies using Integrated Reporting in the sample is increasing. If this tendency continues, most companies in the sample will be using a form of Integrated Reporting within 10 years.

The increase in phase 3 of Integrated Reporting tells that companies are also getting more advanced in Integrated Reporting. Companies reporting in phase 1 have decreased which suggest companies are advancing to the next phases; and the amount of companies in phase 2 have also increased. Those companies might transition from phase 2 to phase 3 in the future; which is a common sign that was detected in this sample. All together, it is expected that the development of Integrated Reporting is still in an early phase. The development over the next years will be crucial; if companies lose faith in the usefulness they might abandon Integrated Reporting. However, the tendency seems to be in favor of Integrated Reporting and that is why it is expected that Integrated Reporting is going to gain ground in the next decade.

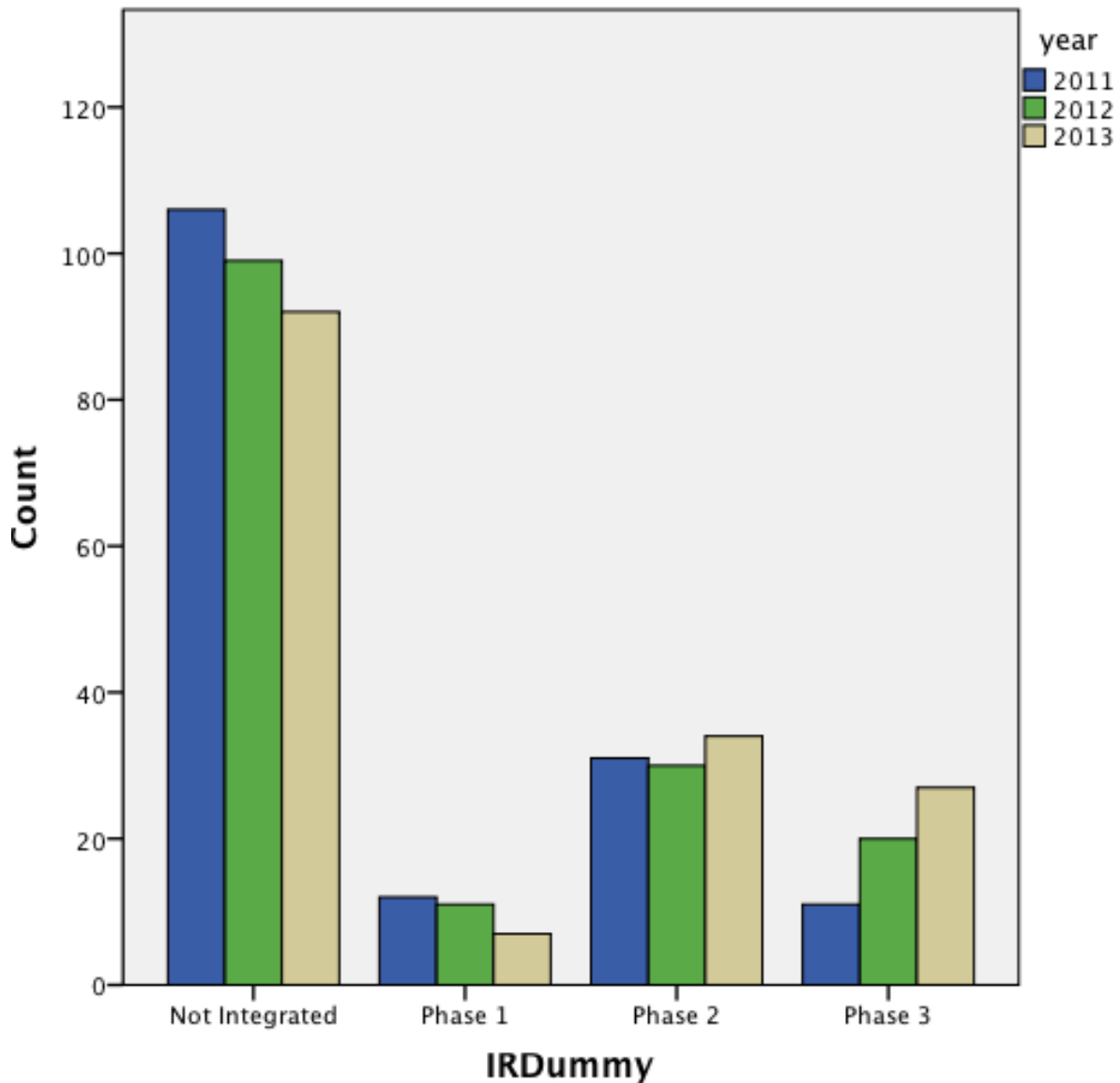


Figure 5: Phases of IR by Year

### 4.3 Linking Integrated Reporting to financial performance

To answer the last research question concerning the financial performance of companies using Integrated Reporting the following hypotheses are tested with more sophisticated statistical techniques:

H3a. IR companies have higher Tobin's Q than other DJSI Europe companies.

H3b. IR companies have higher Return On Assets (ROA) than other DJSI Europe companies.

H4a. Firms with more advanced Integrated Reporting have higher Tobin's Q than firms with less advanced levels of Integrated Reporting.

H4b. Firms with more advanced Integrated Reporting have higher ROA than firms with less advanced levels of Integrated Reporting.

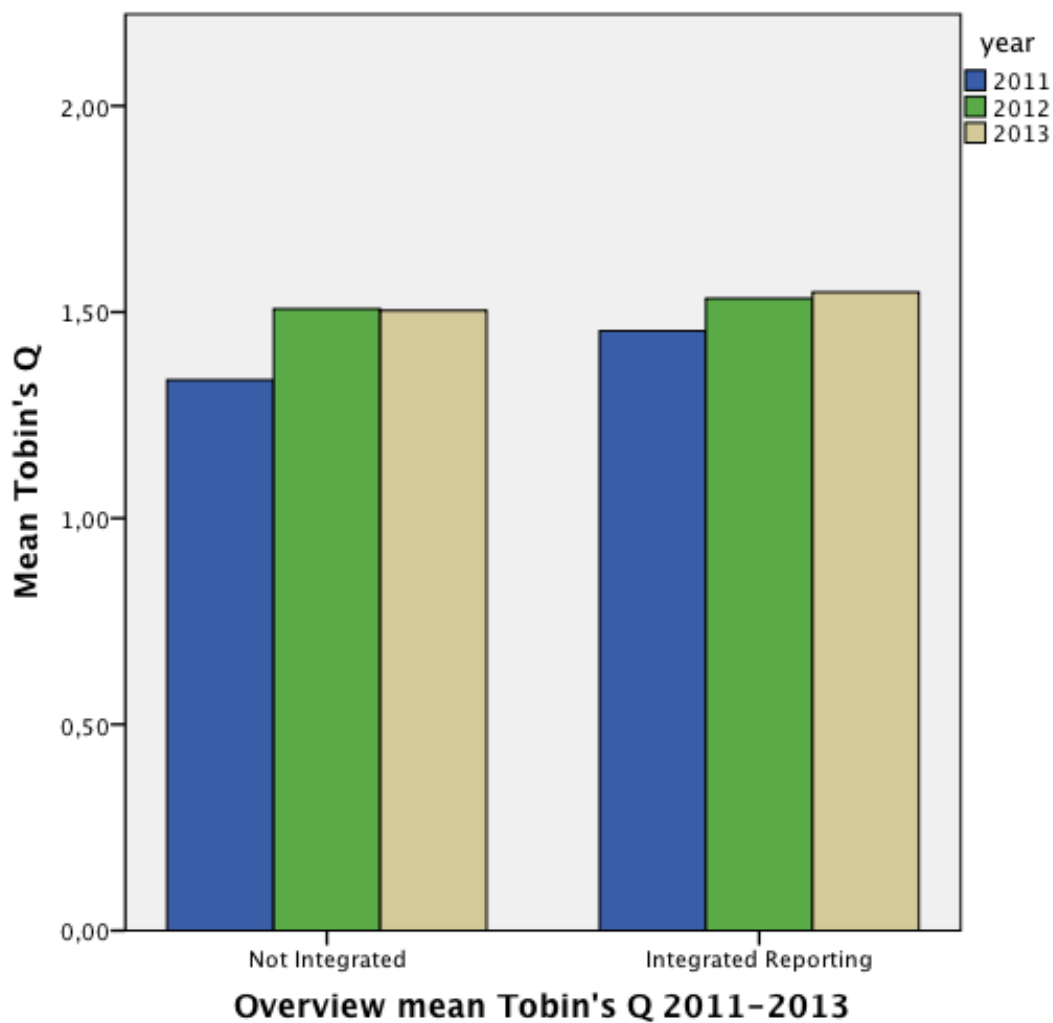


Figure 6: Overview mean Tobin's Q 2011-2013

For answering H3a figure 6 was made first. It already shows the lack of difference in Tobin's Q between companies that use Integrated Reporting and those that do not in our sample. The same image is shown when controlling for phases of Integrated Reporting, industry, Return On Assets and other relevant control variables. However, further statistical analysis was done to avoid errors in the analysis. Using non-parametric tests no evidence was found for a difference in financial performance measured by Tobin's Q and Return on Assets between companies that use Integrated Reporting compared to those that do not. The tests were executed with both mean and median as the center of

the distribution. Significance levels of the Mann-Whitney U test range from .138 until .737, so even at an arbitrary alpha of 10% ( $\alpha = .10$ ) the null hypothesis cannot be rejected; using ANOVA and regression (although the assumptions were not completely fulfilled) led to the same conclusion. The effects of Integrated Reporting were tested in 3 years; 2011, 2012, 2013. For all of those years no significant variations within the sample were found. To improve the power of the test a bivariate dummy for Integrated Reporting that only separated IR and non-IR companies instead of distinguishing between phases of Integrated Reporting is also used. This still led to the same conclusion to retain the null hypothesis. The decision for all hypothesis 3 and 4 was thus to retain the null hypothesis. Examples of SPSS output include:

### Hypothesis Test Summary

	Null Hypothesis	Test	Sig.	Decision
1	The distribution of Tobin's Q 2013 is the same across categories of IRDummy.	Independent-Samples Kruskal-Wallis Test	,898	Retain the null hypothesis.

Asymptotic significances are displayed. The significance level is ,05.

Table 4: Tobin's Q 2013 and IR-phases

### Hypothesis Test Summary

	Null Hypothesis	Test	Sig.	Decision
1	The distribution of Tobin's Q 2011 is the same across categories of NotIntegrated.	Independent-Samples Mann-Whitney U Test	,640	Retain the null hypothesis.

Asymptotic significances are displayed. The significance level is ,05.

Table 5: Tobin's Q 2011 and bivariate IR dummy



SquareTQ2013

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	,128	3	,043	,672	,570
Within Groups	29,614	467	,063		
Total	29,741	470			

Table 6: ANOVA of square root of Tobin's Q 2013 and IRdummy; F ratio 0,672; P value 0,570.



## 5 Conclusions and discussion

### 5.1 Conclusions

The research question in this thesis was: "What is Integrated Reporting and is it a value-increasing voluntary disclosure practice for DJSI-listed European companies?" The literature review gave insight in how and why companies are involving in Sustainability Reporting and in the motives for and benefits of Integrated Reporting. Phase A gives an answer to the first part of the research question: "What is Integrated Reporting?"

Integrated reporting is a new form of voluntary disclosure that helps companies disclose true value. The content of Phase A of the thesis helps in understanding the content of Integrated Reports and the guiding principles that are used when preparing and interpreting Integrated Reports and understanding the whole Integrated Reporting phenomenon. After analyzing the collected data from RobecoSAM's Dow Jones Sustainability Index Europe hypothesis 1 and 2 were confirmed: companies are more and more involving in Integrated Reporting and the extent to which they are giving information and the way they present their information is evolving. If the detected sign continues in the same pace most of the companies will be publishing an advanced Integrated Report within 10 years. This suggests that Integrated Reporting is not just a buzzword, in all sectors and leading companies within the sectors Integrated Reporting is used more every year.

The literature review gave us some indications on why Integrated Reporting could create value. However, in an attempt to answer the second part of the research question: "Is Integrated Reporting a value increasing voluntary disclosure practice?" evidence for hypothesis 3 and 4 was not found within this sample. Studying 480 financial reports of the top sustainability performers in Europe made it clear that companies in the sample are not in an advanced stadium of integratedness at the moment. This might have an influence on our conclusions. The finding that companies are not in an advanced stadium of integratedness is also consistent with the report of Eccles & Serafeim (2014) in which they concluded that only 30% of the companies of the IIRC pilot programme reported detailed capital specific information. As mentioned, our data do show an increase in firms using Integrated Reporting between 2011 and 2013, which is also supported by the literature review. Also, the stadium of Integrated Reporting is evolving.

In the sample there are only 19 companies that are in phase 3 of Integrated Reporting, which is the most advanced and transparent stage. These companies showed not to be different in financial performance. This also applies at companies reporting in other stages of Integrated Reporting.

## 5.2 Discussion

As humans are known to resist change since decades, there are opponents to Integrated Reporting. Those opponents include entrepreneurs, managers, accountants and academics (Coch & French, 1948; Flower, 2014). Known complaints are: it will only cost me money; this is only for large companies; disclosing information hurts my competitive position, an Integrated Report is just a combination of a Sustainability Report and a Financial Report. We hope that people that have those complaints will read this report and give Integrated Reporting a serious consideration. This is because we have seen that there are a lot of advantages to Integrated Reporting.

In this thesis we focused on Integrated Reporting from the perspective of managers, owners and investors in listed companies. The presumed advantage is however not just for large and listed firms, since medium and small enterprises might also benefit from Integrated Reporting. The same benefits of transparency apply when SME's need a loan from a bank for instance; if they are able to communicate how they intend to create value of the small, medium and long-term banks will be more willing to invest (more) in their corporations. Drs. de Brie, managing director of Rabobank Enschede-Haaksbergen, also acknowledged this presumed benefit at the Symposium on Integrated Reporting in Enschede, 11th of September 2014. Integrated Reporting may have no measurable financial benefits at the moment but it might have within a few years, and the early adopters will benefit from being prepared for the future and having a seat on the table while the framework is being developed.

Another area of concern is the role of the accountant in and the assurance of Integrated Reporting. Should accountants involve in this type of disclosure or should they be responsible only for the financial part? What is the role of the Chief Financial Officer in this? These questions are still open for debate, especially as long as Integrated Reporting is a voluntary disclosure for companies.

### 5.3 Scientific implications

Although no empirical evidence for value creation was found in this study, in a later stadium there might be more bases for value-relevant conclusions about Integrated Reporting. Therefor, future research in better circumstances should still emphasize on value creation, as well as the actual content of the Integrated Reports. A (raw) proposal for measuring the content of the reports is included in Appendix 1, which should give an example on how to grade reports. A distinction in motives for Integrated Reporting would be a sensible control factor, as Eccles & Serafeim (2014) describe a difference between the ideas in some companies that Integrated Reporting is a good practice while others are facing isomorphic pressures and provide Integrated Reports on an almost mandatory basis (DiMaggio & Powell, 1983). Another factor that might catalyze the motives of companies to start with Integrated Reporting is based on signaling theory, as some companies may have an incentive to overstate their efforts. The positive effects of Integrated Reporting on financial performance may take a while to appear so waiting till Integrated Reporting is more common practice is advised to academics (approximately 5 years). Academics interested in the topic should at least realize there might be no measurable effect at the moment. Future studies should under every circumstance control for sustainability, that is clear from this study since no significant differences between sustainable firms and firms that use Integrated Reporting were found; the sustainability effect may be an important explaining variable for value. The variables from our conceptual research model; corporate image, liquidity of the equity and information asymmetry are expected to be important variables in explaining value for Integrated Reporting companies.

### 5.4 Implications for practice

The findings from this study indicate that if there are financial benefits to Integrated Reporting, it might be too soon to reap them. Despite the lack of empirical evidence for value creation at this moment, it is probably premature to dismiss the whole Integrated Reporting practice. That is also what Eccles & Serafeim (2014) conclude in their recent paper on Integrated Reporting. At a symposium on the topic of Integrated Reporting, which took place September 11, 2014 in Enschede, academics, accountants, bankers, students and businesspeople agreed on the statement that Integrated Reporting would

gain popularity and importance in the near future. There are however some shortcomings in the IR framework that make Integrated Reporting quite open-ended. Those open ends include the lack of key performance indicators, sustainability guidelines and auditing. This makes the Integrated Report as transparent as a company might like and therefore vulnerable for signaling purposes and manipulation. Stated otherwise: "the potential for strategic disclosure from the part of management is high (Eccles & Serafeim, 2014)".

Based on this report, Integrated Reporting is advised only to companies that have sincere motives for being more transparent and sustainable. Integrated thinking will help them in making corporate decisions and communicating with stakeholders. This might also include a perceived friendliness to interested security analysts (especially interesting for low profile companies). In this case information asymmetry between informed and uninformed investors is reduced (Hillier et al., 2010). Companies implementing Integrated Reporting for pure financial reasons or signaling will probably fail to achieve their objectives. Especially when they get caught hiding value relevant information. They will risk being perceived as untrustworthy, which will certainly have a negative impact on firm value (Bachoo, Tan & Wilson, 2013). Using Integrated Reporting for signaling motives only is therefor not advised.

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## Appendix A: Integrated Reporting Index

(A) Guiding principles:	Score		
1. Strategic focus / future orientation	1	2	3
2. Connectivity of information	1	2	3
3. Stakeholder relationships	1	3	3
4. Materiality	1	2	3
5. Conciseness	1	2	3
6. Reliability / completeness	1	2	3
7. Consistency / comparability	1	2	3

Sub-total (A):

(B) Content elements	Score		
1. Organizational overview / external environment	1	2	3
2. Governance	1	2	3
3. Business model	1	2	3
4. Risks / opportunities	1	3	3
5. Strategy / resource allocation	1	2	3
6. Performance	1	2	3
7. Outlook	1	2	3
8. Basis of presentation			

Sub-total (B):

Total (IRindex)

Explanation guiding principles (A)

1. Strategic focus and future orientation: an integrated report should provide insight into the organization's strategy, and how it relates to the organization's

ability to create value in the short, medium and long term, and to its use of and effects on the capitals

2. Connectivity of information: does the integrated report 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. Stakeholder relationships: does the report provide insight into the nature and quality of the organization's relationships with its key stakeholders, including how and to what extent the organization understands, takes into account and responds to their legitimate needs and interests?
4. Materiality: does the report disclose information about matters that affect the organization's ability to create value over the short, medium and long term?
5. Conciseness: is the report concise?
6. Reliability and completeness: does the report include all material matters, both positive and negative, in a balanced way without material error?
7. Consistency and comparability: is the information consistent over time and presented in a way that enables comparison with other organizations?

#### Explanation content elements (B)

1. Organizational overview and external environment: what does the organization do and what are the circumstances under which it operates?
2. Governance: How does the organization's governance structure support its ability to create value in the short, medium and long term?
3. Business model: What is the organization's business model?
4. Risks and opportunities: What are the specific risks and opportunities that affect the organization's ability to create value over the short, medium and long term, and how is the organization dealing with them?
5. Strategy and resource allocation: Where does the organization want to go and how does it intend to get there?
6. Performance: 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?
7. Outlook: What challenges and uncertainties is the organization likely to encounter in pursuing its strategy, and what are the potential implications for its

business model and future performance?

8. Basis of presentation: How does the organization determine what matters to include in the integrated report and how are such matters quantified or evaluated?

Short term = <1 year

Medium term = 1-3 year

Long term = >3 year