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Spin-Offs: Corporate Social Responsibility Perspective

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ABSTRACT:

This thesis investigates the impact of corporate social responsibility on the firm's success in a corporate spin-off. The scope of this study is to explore whether spin-offs announced and completed in the 21st century are able to produce abnormal returns and whether firms with high corporate social responsibility are capable to gain even greater returns around the announcement date. In addition to short-term performance, this thesis also examines how the firms do in the long-term.

An event study is used to investigate stock market reactions to spin-off announcements. In addition to announcement returns, the long-term returns are also computed for the parent companies to determine whether the performance is sustainable. Data used in the study consists of 164 U.S. market spin-offs that were announced and completed between the years 2002 and 2018. To provide new insights on how corporate social responsibility impacts the stock returns, the parent firms initiating the spin-offs are divided into high and low ESG portfolios to analyze how corporate social responsibility affects firms' performance. The resulted cumulative average abnormal returns are regressed against different variables to identify sources of the value.

Consistent with the previous research, this study finds evidence on spin-offs generating abnormal returns around the announcement date. Moreover, the firms with high corporate social responsibility seem to exhibit higher abnormal returns in the short term than low ESG firms. When breaking down the ESG factor to its sub-components and regressing these variables against resulted CAAR, the study finds the environmental and social components to express positive and significant association with announcement returns. Although the study finds high ESG firms to gain superior returns to low ESG firms in the long term, these results appear statistically insignificant. Overall, the results from this study contribute to the existing literature by suggesting that investors do benefit from the company's high corporate social responsibility during the spin-offs and firms should actively manage their responsible image.

KEY WORDS: spin-offs, divestitures, corporate social responsibility, CSR, ESG, event study

Vaasan Yliopisto**Laskentatoimen ja rahoituksen maisteriohjelma**

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TIIVISTELMÄ:

Tämän tutkielman tarkoitus on tarkastella yrityksen yhteiskuntavastuun (corporate social responsibility) vaikutusta yrityksen suoriutumiseen uudelleenjärjestelytilanteessa, jossa tytäryhtiö irtoaa emoyhtiöstä osittaisjakautumisen (spin-off) seurauksena. Tutkielman tavoitteena on selvittää kykenevätkö 2000-luvun aikana julkistetut ja toteutuneet spin-offit tuottamaan ylituottoa emoyhtiön osakkeenomistajille ja erityisesti tukeeko vahva yhteiskuntavastuu yritystä suurempien tuottojen osalta julkistuspäivän tienoilla. Lyhyen ajanjakson suoriutumisen lisäksi tutkielmassa tarkastellaan myös yritysten suoriutumista pidemmällä aikavälillä.

Tutkimus soveltaa event study -menetelmää analysoidakseen osakemarkkinan reaktiota spin-off julkistuksiin. Lyhyen ajanjakson tarkastelun lisäksi tutkimuksessa tarkastellaan yritysten menestystä pidemmällä aikavälillä. Tämä tarkastelu toteutetaan, jotta saamme todennettua suoriutumisen kestävyuden pidemmällä aikavälillä. Työssä käytetty aineisto sisältää 164 spin-off tapahtumaa Yhdysvaltain markkinoilta, jotka on julkistettu sekä toteutettu vuosien 2002 ja 2018 välillä. Yhteiskuntavastuun ja osakkeen tuoton syy-yhteyden löytämiseksi emoyhtiöt jaetaan tutkimuksessa kahteen eri kategoriaan perustuen yhtiöiden ympäristö-, sosiaali- ja hallintotapojen vaikuttavuuteen (ESG). Tunnistaaksemme spin-off tapahtumien arvon luonnin lähteet, event study -menetelmän tuloksena syntynyttä kumulatiivista ylituottoa tarkastellaan eri muuttujia vastaan regressiomallien avustuksella.

Empiiriset tulokset osoittavat tarkasteltavien uudelleenjärjestelytilanteiden olevan kannattavia tapahtumia osakkeenomistajan näkökulmasta, tulosten ollen täten linjassa aiempien spin-offeihin keskittyvien akateemisten tutkimusten kanssa. Lisäksi tulosten mukaan korkean ESG-luokituksen omaavat yritykset yltävät keskimäärin korkeampiin tuottoihin lyhyellä ajanjaksolla kuin heikon ESG-luokituksen omaavat yritykset. Kun ESG-ulottuvuudet rikotaan mittarin alakohteiksi, voidaan havaita, että ympäristö- ja sosiaalikomponenttien sekä lyhyen aikavälin tuottojen välillä vallitsee positiivinen suhde. Tutkimuksen tulokset myös viittaavat korkean ESG-luokituksen vaikuttavan positiivisesti pitkän aikavälin osaketuottoihin, mutta toisaalta nämä tulokset ovat tilastollisesti merkityksettömiä. Yhteenvetona tulokset tuovat arvokasta lisäinformaatiota olemassa olevaan kirjallisuuteen osoittaen, että yhteiskuntavastuulla on merkitystä spin-off uudelleenjärjestelyissä ja että yritysten tulisikin aktiivisesti kehittää yhteiskuntavastuutaan.

Avainsanat: spin-offs, divestitures, corporate social responsibility, CSR, ESG, event study

1. INTRODUCTION

During recent decades, socially responsible practices have gained more endorsement in the business world as investor money is increasingly flowing into investments based on socially responsible values (Renneboog, Ter Horst and Zhang 2011). Simultaneously, the results from academic literature still are somewhat divided on whether there is a relationship between corporate social responsibility (CSR) and firm performance. However, it is evident that investors are continuously demonstrating growing interest in companies that engage in strategical CSR initiatives to boost their financial performance, thereby transforming CSR into a significant matter in the business environment (Wu and Shen 2013).

Corporate social responsibility has witnessed enormous growth during recent years as it has become a more meaningful issue in developed societies (Lee, Faff & Langfield-Smith 2009). The public scrutiny and other external pressure on irresponsible actions have led to rapid growth on all fronts, increased media coverage on corporate responsibility leads to an increase in investors' willingness for taking social issues into account. Moreover, these actions feed the academic research on the topic and as the real-life benefits of CSR become clear, the implementation of CSR initiatives by firm executives accelerates. In a way, corporate social responsibility has turned into a self-fulfilling prophecy.

While the previous studies on corporate social responsibility's influence on stock returns have not reached consensus and the association is unclear, the literature itself is very fragmented and the observations are very dependent on the context. Despite that, a large portion of the studies suggest that ESG scores impact corporate performance (Arx and Ziegler 2010; Guenster, Bauer, Derwall and Koedjik 2011; Mio and Fasan 2012; Jeong, Jeong, Lee & Bae 2018).

Firms that own excellent CSR initiatives from a strategic management point of view enjoy a competitive advantage over their counterparts with weaker CSR activities. Their

employees are more motivated, which may lead to better customer satisfaction, higher stakeholder satisfaction, and better company reputation. In the end, all of this may lead to increased sales and more profitable relationships with customers. Therefore, it is important for a firm to harness CSR from the strategic point of view and include it into the company's culture voluntarily instead of solely as result of external pressure. Moreover, from the perspective of stakeholders, truly focusing on ESG issues may lead to the mitigation of financial, reputational, and legislative risks. All these benefits stemming from responsible behavior should inspire confidence within the investors. (Wu and Shen 2013; Epstein 2018)

Based on this, it would make sense that responsible behavior will have an impact and make a difference during a turning point event such as divestiture by a spin-off. Spin-offs are a natural way to measure the impact of CSR on firm performance as the event affects all stakeholder groups from employees and suppliers to financiers and shareholders. Most of all a successful spin-off requires trust from investors. This raises the question whether shareholders have more trust in firms that are highly responsible and are they willing to follow it through the spin-off. If this holds true, then socially responsible firms should witness higher stock performance during the spin-off announcement than irresponsible firms.

Motivation for this study is driven by the growth in corporate social responsibility and the yet unexplored relationship between CSR and spin-offs. Moreover, the conception that investors are ready to reward the company for its responsible behavior and punish it for irresponsible actions requires more investigation.

Numerous studies have studied either the market reaction on spin-offs or the corporate social responsibility's impact on a firm value but to my knowledge, no study has combined both. This thesis aims to close that gap. The thesis contributes to the existing literature in two ways. Firstly, by providing evidence on the spin-off performance in the

21st century and secondly exploring whether high corporate social responsibility will be beneficial in a spin-off.

1.1 Purpose of the study

The purpose of this study is to investigate the relationship between corporate spin-offs and firms' corporate social responsibility ratings. Specifically, this thesis attempts to find out whether socially responsible companies could benefit from their responsibility in terms of value creation in these divestitures, and whether this performance is sustainable. Furthermore, this thesis provides relevant theories on corporate social responsibility and spin-offs, and attempts to cover issues such as whether spin-offs still create value in the 21st century and where this value effect comes from.

To investigate this relationship, empirical research is done by measuring and analyzing stock market reactions on spin-off announcements followed by an analysis on long-term returns for two distinct portfolios. These portfolios are created based on the companies' three factors of ESG, environmental, social and governance. Moreover, the cumulative average abnormal returns resulting from the event study are regressed against ESG factors and other variables to find out whether being socially responsible has any wealth effects in spin-off announcement.

The possible relationship between corporate social responsibility and spin-off performance is interesting for several reasons. Firstly, although the literature on CSR and its impact on corporate performance is relatively conflicting, theories on CSR and many studies support its positive effects on a firm's financial performance. Based on the Stakeholder theory, a firm that transparently discloses its business and has an excellent relationship with its stakeholders, should enjoy positive consequences. Secondly, although spin-offs are quite uncertain events in the eyes of an investor, previous studies have shown them to be very profitable events in the short-term. This uncertainty might

be mitigated even more if a firm has managed to accumulate trust among investors due to its high responsibility standards which in turn lead to higher returns on a spin-off announcement. This thesis aims to shed a light on this yet unexplored connection.

1.2 Hypotheses

The hypotheses of this study revolve around the questions of whether highly responsible companies can benefit from their responsibility when facing an uncertain event of a spin-off. The main target of this thesis is to find out if ESG measures affect the company's short-term and long-term stock returns. Our first hypothesis serves as a foundation for the other hypotheses and is based on previous studies (Hite & Owers 1983; Miles & Rosenfeld 1984; Daley & Mehrotra & Sivakumar 1997; Desai & Jain 1999; Mulherin & Boone 2000; Veld & Veld-Merkoulova 2004). Most of these previous studies in the U.S. market are based on earlier years before the 21st century and have found spin-offs to generate abnormal returns on announcement date. This paper aims to investigate whether these results hold on the 21st century. Therefore, the first hypothesis of this paper is following,

H1: Spin-offs, on average, generate abnormal returns in short-term.

If the first hypothesis holds, the next objective is to find out whether certain spin-offs can generate even higher abnormal returns. As this thesis is looking to determine if being good in terms of corporate responsibility impacts firm's performance in spin-offs, the main research questions to answer are following:

1. Is strong performance in CSR associated with higher announcement returns?
2. Is strong performance in CSR associated with greater long-term returns?

Although the results from previous studies on corporate social responsibility's relationship with firm performance are somewhat unclear, the literature is fragmented and yet many of the studies find positive results which suggests that CSR plays a role in a firm's financial performance in the current era. Based on these results and from the perspective of the Stakeholder theory (Freeman 1984), my main hypothesis is following,

H2: Strong CSR is associated with higher announcement returns.

The main hypothesis is tested by applying event study approach to compute abnormal returns for a portfolio containing high ESG firms and for a portfolio containing low ESG firms ranging from 2002 to 2019.

Since we are interested if the performance is sustainable, the performance of the parent companies will be also investigated on a longer-term. Based on the previous studies on CSR and spin-offs (Veld & Veld-Merkoulova 2004) it can be assumed that spin-offs are profitable on the longer-term and strong CSR will aid with that. Therefore, our third hypothesis is following,

H3: Strong CSR is associated with higher long-term returns.

1.3 Structure of the thesis

The thesis is structured in the following order: In the second chapter theoretical frameworks and literature review on corporate social responsibility are presented. It is followed by the third chapter which begins with an introduction to spin-offs and other divestiture types. The chapter proceeds with a discussion on why companies might consider divestiture and how divestitures create value. The fourth chapter contains a more detailed literature review on previous studies about spin-offs. In the fifth chapter the data, methodology and variables are presented and discussed. Sixth chapter

presents the obtained empirical results and finally, the seventh chapter concludes the research and gives insight for further work.

2. CORPORATE SOCIAL RESPONSIBILITY

Academic literature on corporate social responsibility has experienced significant growth during past decades (Lee, Faff & Langfield-Smith 2009). A popular theme in the literature has been to prove whether being good in terms of corporate responsibility could impact firm value. Despite the large body of research papers, the findings on the subject are somewhat conflicting and the impact of being highly socially responsible on financial performance is still highly debatable. Although the findings on the subject have been inconsistent, the popularity of CSR has been on a sharp curve upwards and therefore it is signaling that CSR performance measured by ESG metrics, should not be taken lightly anymore.

In order to gain an understanding of how CSR might affect spin-off performance, it is necessary to understand CSR itself. To reach that target, we start this chapter by introducing the stakeholder theory and the concepts of CSR and ESG. After that, the chapter continues by discussing how CSR is practiced and finishes by looking at how responsible behavior might impact firms.

2.1 Stakeholder theory

The area of corporate social responsibility consists of a collection of approaches rather than a uniform group of theories. However, most of these approaches share common ground by including stakeholder groups that have been traditionally omitted from analyses (Freeman 2011). Therefore, the foundation of theoretical examination of corporate social responsibility lies in stakeholder theory. The stakeholder theory is Edward Freeman's (1984) extension of Milton Friedman's (1970) well-known shareholder theory. Friedman (1970) argued that CSR is nothing but an immoral idea which violates the business owners' rights and is only used by managers as means to further their own social or career agenda. Freeman however counterargues that the

shareholder theory does not represent the real world, and the firm's purpose is to consider the perspective of all stakeholders, and therefore CSR arises as a part of the firm's responsibilities to all stakeholders.

The stakeholder theory was formulated as Freeman noticed managers to be battered by remarkable levels of environmental change, and the traditional strategy frameworks could not provide the necessary aid for developing new strategic directions nor understanding of how to create new opportunities throughout the change. Freeman argues that to respond to the rapid changes in the industry, managers must actively formulate and implement processes that satisfy all stakeholder groups the business works with. In other words, to achieve long-term success, the managers of the firm need to understand the concerns of shareholders but also the concerns of employees, customers, lenders, suppliers, and society. (Freeman 2011).

Freeman remarks that while CSR and stakeholder theory are distinct concepts, they share an overlap as both address the importance of incorporating societal interests into business operations. To understand the differences between the two concepts, the perspective of how they look at the company must be explained. Stakeholder theory recognizes all stakeholders equal and sees all stakeholders as interdependent, that is creating value for one stakeholder group creates value for others as well. Therefore, all trade-offs among stakeholders should be avoided. Moreover, the stakeholder theory proposes that the essence of the business consists of relationship building and value creation for all its stakeholders, and as a consequence business executives' main mission lies in directing the interests of stakeholders in the same direction. (Freeman 2017).

CSR however looks at the company from society's perspective. This involves prioritizing the needs of society over the responsibilities to other stakeholders such as financiers and suppliers. Because corporate social responsibility is an umbrella theory that covers corporation's activities such as charity work, volunteering, labor practices, and environmental efforts, it does not aim to understand what business is in its entirety.

Instead, CSR attempts to wholly focus on responsibility to local communities and society at large to ensure business does deliver on it. (Freeman 2017).

Common ground between Stakeholder theory and CSR lies in three elements which are purpose, value creation and stakeholder interdependence. Firstly, both concepts recognize that a company needs a purpose. Purpose determines which direction a firm is heading, its corporate vision, mission, and strategy. Purpose also imposes the corporate responsibilities along the way and in the best case defends the company against false dichotomies should those arise. Secondly, both assume that value creation is meant for all, not only for shareholders. Understanding that business is about value creation for customers, employees, financiers, and communities is the key concept in successful stakeholder management. Thirdly, both concepts realize that creating value for one stakeholder also contributes to creating value for others. Both approaches recognize that helping communities is also beneficial for shareholders as the firm gains more motivated and productive employees, its reputation grows which leads to larger sales and possibly even to higher corporate credit ratings. On the other hand, providing satisfaction to the needs of suppliers and employees is also good for firm's customers. (Freeman 2017).

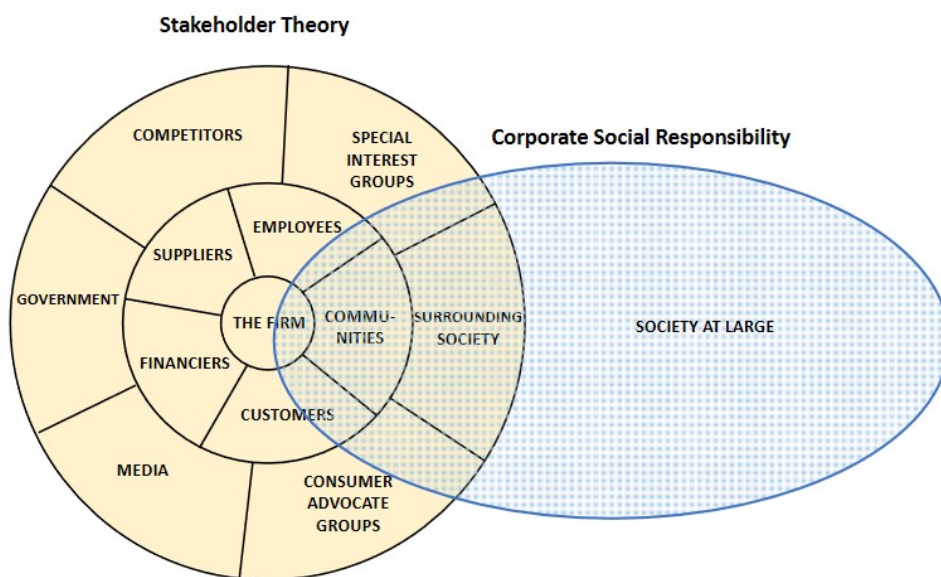


Figure 1. The relationship between Stakeholder Theory and CSR (Freeman 2017).

2.2 Understanding Corporate Social Responsibility

2.2.1. Definition of CSR

The definition and concept of CSR often appear confusing to many for various reasons. Terms like corporate social responsibility (CSR), ESG, sustainability, and corporate social performance are continuously used synonymously in academic literature but also in practice. One reason for that is because firms encounter demands from multiple stakeholder groups, each of which have their own conflicting agenda and definitions what has to be done to do good in terms of social responsibility. There can be found many different descriptions of CSR from the literature. For instance, Sparkes and Cowton (2004) describe it as a business strategy that aims to maximize the financial value of the company while maximizing the benefits from environmental, social and governance perspectives. Here CSR reflects firm's willingness to adopt sustainable development practices into its strategy while truly socially responsible firms go beyond industry norms and what is required by legislation. On the other hand, it is also described to be a set of actions that do social good and go beyond the interests of the firm and that which is required by law (McWilliams & Siegel 2001). In the big picture, globally important climate change, air and water pollution in certain areas, child labor, and workers' rights remain among the key challenges that face corporate executives on daily basis (Epstein 2018).

2.2.2. Corporate social responsibility in practice

As public interest on CSR has increased, the effort organizations put on their responsible behavior has increased as well. The growth in organizations' CSR activities can mainly come from two sources: it is either voluntary or it is a result of pressure from

stakeholders. Wu and Shen (2013) expand on this thought and discuss about three different motives for engaging in CSR which include greenwashing, altruism, and strategic choices.

Greenwashing means activities that a corporation does to enhance its public image without significantly modifying its practices. An example of greenwashing might be a beverage company redesigning their bottle label to indicate that they are more environmental while not making any changes to their current practices. (Wu and Shen 2013). Altruism as a motive indicates that the firm acts responsibly and attends to CSR activities for their own sake. Many companies may start their journey to CSR with small projects such as philanthropy as these activities are swift and easy to undertake. They enhance company's public image but require some effort. Finally, a strategic motive is a set of activities that are integrated into the company strategy. Strategic CSR is conducted to differentiate the firm from its competitors, and it acts as an enabler for higher financial performance (Wu and Shen 2013). To really integrate CSR as a part of the strategy, a firm needs to understand and experience the benefits of well-implemented CSR activities. Potential benefits from strategic activities can be divided into macro and micro-level. Macro-level consists of activities such as environmental improvement and reduction in social inequality while micro-level includes reputation enhancement, potential to charge a premium price for products as well as ability to recruit and retain high-quality employees. A firm that manages to run ESG programs that exceed industry norms may gain the widely known benefit, enhancement of the reputation of a company. A company's reputation, on the other hand, may enable financially valuable targets such as price premiums, enhanced sales, reduced risk of product boycotts, lower costs, and attraction of talented employees. (Wu and Shen 2013).

Even if a firm's management recognizes implementing CSR activities as an unnecessary action, it might be bound to do it anyway. One reason for increased responsible behavior is the all-powerful exogenous source, the legislation. Political systems and nation-level institutions influence the business environment by setting up requirements and

enforcing agreements on issues such as reporting about environmental and social information of the company. In addition to the law, companies also face external pressure from socially aware investors and other stakeholders. Nowadays, especially institutional investors are increasingly taking social issues into account when considering investments. Socially responsible investing which often is described as a values-driven investment approach has been gaining popularity during recent years and so has the use of ethical screens (Derwall, Koedjik & Horst 2011). Not only do these large investors channel more and more cash flows into companies acknowledged as highly responsible firms, but they sit on the boards on these companies and having highly committed investor board members might attract more investors in the uncertain event of spin-off. Other important external stakeholders include parties such as direct customers and employees. A firm that loses its reputation because of an unethical act or negative sustainability may witness a decrease in customers' willingness to buy the product, employees' desire to work for the company and the community's willingness to permit the company a license for operating (Epstein 2018). Moreover, numerous researchers have demonstrated that unethical practices might turn out to be costly to the firm through sales declines and the disappearance of important stakeholders (Haunschild, Sullivan & Page 2006). In addition to that, it has been shown that more positive reporting on a company's business environment behavior leads to a greater increase in stock price (Flammer 2013).

The stock price increase mentioned by Flammer (2013) might be due to an increase in positive moral capital. Godfrey (2005) points out that positive moral capital that is accumulated from previous and continuous responsible actions may offer insurance for a firm against stakeholder sanctions as it protects the firm when deliberate or unintentional unlucky events such as oil spill accidents occur or when the firm must lay-off people. On the contrary, if the firm is seen as irresponsible by stakeholders, the same negative actions may be punished harder by the stakeholders. In our study, a punishable event may be a merger of two companies or a diversification, both of which often appear as uncertain events for the firm's stakeholders. Deng, Kang and Low (2013) point out

that according to a report published by consulting firm McKinsey, mergers may lead to key employees or customers leaving if the management team is ineffective in handling stakeholder relations. The same effect may very well be present during diversification events such as spin-offs.

Due to these reasons, developing CSR has transformed into a key part of creating shareholder value and therefore corporations should not ignore the significance of CSR activities or the impacts of their activities on their stakeholders anymore. To combat the requirements of stakeholders, senior executives face a critical challenge of actively producing innovative sustainability strategies. This quest is nowhere easy as often the financial targets and incentives are driven by both short-term and long-term results. Thus, simultaneous development of CSR activities and achieving financial results can become somewhat a challenge. In the current business world, business units and division managers are pressured to meet sales targets and deliver profits as their performance is typically measured on how successful they are to deliver. Therefore, incentivizing employees and managers to develop and deliver better ESG performance is complicated. Typically, environmental and social aspects are left totally outside from key performance indicators. For these reasons, it is important that the willingness to adapt CSR into strategies comes from the very top of the firm and is carefully implemented throughout the organization. (Epstein 2018).

Implementation of sustainability strategy is fundamentally different from other strategies. For instance, the link between operating goals and profit is usually clear and for innovation-based goals, the goal might be a new product or percentage of sales from new products. However, in sustainability the goal is to achieve excellence in social, environmental and economic performance while simultaneously succeeding in financial performance. This may lead to challenging situation where managers may need to make trade-offs between long-term financial gains and sustainability improvements.

Leading companies have increasingly accepted that managing and controlling social, environmental, and economic performance is a critical task for them. Performing well in all of these areas might require including them to strategy and into measurable internal factors such as management commitment to sustainability. However, not many companies voluntarily do that, and often the sustainability strategy is at least partly forced from outside as external pressures such as regulation from government, market demand or competitors' actions launch the need for creating such strategy. (Epstein 2018).

2.3 ESG and financial performance

Activities and programs around CSR are generally divided into three classes that are environmental, social and governance (ESG). These classes are used to evaluate the impact of actions in the different areas of corporate social responsibility.

Nowadays, especially the environmental side acts a very important role in the firm's CSR activities as it tends to be easiest to understand for the public and thus tends to be the most media-centered part of CSR. For instance, when comparing the year 1980 to the 2000s, the number of news articles about environmental firm activities has increased six-fold. From the point of ESG, environmental activities include issues around eco-friendly behavior and sustainability. (Flammer 2013).

On the other hand, social CSR activities revolve around company's relationships with its employees and outside stakeholders. These activities include, for example, employee diversity, employee relationships and working conditions such as child labor and a payroll system. (Renneboog, Ter Horst & Zhang 2011)

Corporate governance, on the other hand, is an ethical environment in which all business processes are undertaken. The principles are publicly known and outlined in

the Corporate Governance Code. That said, their application and regulation emanates from the very top – the board of directors. Therefore, corporate governance includes various issues around the board of directors, firm's executives and management. More precisely, it includes issues revolving around board diversity, corruption, management compensation and tax strategies. If a certain country does not have a reputation of strong corporate governance, investors are not confident with the level of disclosure or a country has lax accounting and reporting standards, capital will flow elsewhere. (Knell, 2006).

As briefly discussed before, numerous academics have put on an effort to understand whether and how CSR activities enhance firm's profitability or whether it costs to be good. To understand different perspectives on this issue, we will look at two different main views. These two main views on CSR are presented by Deng, Kang and Low (2013) in their study. The first point of view presents CSR activities as a way to maximize shareholder value. From this perspective, CSR activities have a positive effect on shareholder wealth as focusing on the interests of other stakeholders increases their willingness to support a firm's operations which eventually leads to an increase in shareholder wealth. On the contrary, the second point of view, the shareholder expense view, recognizes engagement into socially responsible activities as a tool to help other stakeholders in expense of shareholders. Latter perspective views CSR as a costly maneuver that requests a firm to give up equity that could be otherwise be invested into other value-creating activities (Harjoto and Laksmana 2018). For instance, Deng et al. (2013) present an example of a firm adopting pollution control standards which exceed competitors' equivalent which leads to competitive disadvantage by forcing the firm to spend more on resources aimed at nonproductive CSR activities.

Previous studies on CSR find supporting evidence on both views. For instance, in the M&A market it has been discovered that high CSR acquirers realize higher merger announcement returns and post-merger long-run returns to low CSR acquirers. Furthermore, the acquisitions initiated by these high CSR firms are less likely to fail than

low CSR acquirors' (Deng, Kang & Low 2013). High CSR companies also exhibit positive long-term stock returns implying that the market may not fully value the benefits of CSR immediately (Deng et al. 2013). Mio and Fasan (2012) document that corporate social performance is positively correlated with short-term financial performance during financial crisis. While the top ten percent of the highest CSR scoring firms also experienced negative returns during the financial crisis period, these results were significantly less heavy than the bottom ten percent CSR firms' returns. Their sample consists of 398 different firms from S&P 500 index. To strengthen these results, Jeong, Jeong, Lee and Bae's (2018) investigation concludes that the firm value is more likely to increase if the company decides to apply permanent CSR activities for strategic purposes instead of short-lived activities. Moreover, they hypothesize that temporal activities and managers using CSR for their personal agenda may not lead to any financial benefits.

When examining US and European markets, Arx and Ziegler (2010) find that environmental and social actions of firms are rewarded by financial markets in both regions. In their analysis, these highly socially responsible firms gain higher monthly stock returns than comparable firms in same industry. These positive effects appear to be more robust in US markets than in Europe. Especially strong environmental performance is found to be associated with significantly higher operating profitability in other studies as well. Guenster, Bauer, Derwall and Koedjik (2011) witness environmentally responsible companies to exhibit higher returns on assets than less environmentally responsible companies in the US market. Similarly, Wu and Shen (2013) find high CSR performers to experience higher financial performance in terms of return on assets, return on equity and net interest income than low CSR performers. These results are reinforced by study by Sahut and Pasquini-Descomps (2013) who investigate how ESG scores influence monthly stock market returns in the UK, the U.S. and Switzerland between 2007 and 2011 period. Their study finds that positive changes in ESG ratings exhibit a small but significant impact on stock's performance during limited periods. However, on a larger scale they do not find ESG scores to have an impact on

market returns. This might indicate that in certain markets, investors do not value social responsibility while making investments.

On the other hand, while studying the relationship between adoption of CSR practices and short-term financial performance, Lopez, Garcia and Rodriguez (2007) find the link between a firm's performance and implementation of CSR practices to be negative during the first years when the practices are implemented. Their sample contains 110 firms where high CSR firms are picked from Dow Jones Sustainability Index and counterparts from Dow Jones Global Index. Similarly, Lee and Faff (2009) find a portfolio of strong CSR performers to significantly underperform its counterpart. Moreover, their investigation reveals that high CSR firms have significantly lower idiosyncratic volatility suggesting that ESG performance comes with less volatile returns.

Byun and Oh (2018) document that investors tend to appreciate CSR activities that have a local effect, on the other hand they also appreciate activities that promise tangible benefits for companies' shareholders. Besides that, they conclude that CSR activities lead to improved future operating performance.

Higher CSR disclosure and participation in CSR activities may also help a firm's access to finance. Cheng, Ionnau and Serafeim (2013) investigate the relationship between socially responsible behavior of a company and a company's access to finance. Their results show that a better access to finance may lead to decreased agency costs due to enhanced stakeholder engagement and decreased information asymmetry due to raised transparency. They state that socially responsible behavior, and especially environmental and social dimensions of CSR are linked to a significantly lower capital limitation (Cheng et al. 2013).

3. SPIN-OFFS

The chapter begins by introducing different types of divestiture options followed by a discussion on what motives a firm might have for engaging in a spin-off. Finally, the chapter is wrapped up by identifying the sources of value gains and what factors might explain these gains.

3.1 Understanding spin-offs

Two plus two is five. Four minus two is three. This is how Hite and Owers (1983) explained mergers and spin-offs in their study which created the foundation for corporate spin-off research. Despite being mirror images of each other, spin-offs and mergers share a common characteristic: on average, both are found to increase market value of the firm.

Companies have several alternative options when considering a divestment of certain operations or assets, namely spin-offs, sell-offs, equity carve-outs and split-offs. To gain a better understanding on how these differ from each other, we will explain briefly how three latter work and then focus on spin-offs in more detail. The first suspect, a sell-off is simply a sale of company's assets, say a badly performing division. As a sell-off does not include issuance of new shares, the ownership of the asset will be transferred to the new owners against cash in the transaction. Therefore, we can conclude that one of the main reasons why a parent company would conduct a sell-off is a need for cash. Split-off on the other hand is practically a spin-off but the stocks of the new entity are distributed among existing shareholders with a tender offer. Finally, an equity carve-out (ECO) is an initial public offering of subsidiary's equity. Identical to sell-off, ECO generates cash to the parent company in exchange for subsidiary's shares. Generally, parent companies tend to retain controlling interest in the carved-out subsidiaries and therefore equity carve-outs are considered as partial divestitures. Nonetheless, ECOs

often serve as the first step in the complete divestiture of the subsidiary. They also provide possibility to raise funds to pay-off debt. ECOs appear often initially the more expensive choice to divest as they require assistance of investment banks in issuing new shares. (Hulburt, Miles & Woolridge 2002)

Finally, a spin-off is a type of divestment which is defined as a pro-rata distribution of a firm controlled subsidiary's shares to the existing shareholders of the parent company, thereby forming a new independent public company that has identical initial set of shareholders as the parent company (Miles & Rosenfeld 1983). A spin-off leads in neither a dilution of equity nor a transfer of ownership. Unlike a sell-off, spin-off transactions do not generate cash. Therefore, the companies that have large amount of cash on the balance sheet but are unable to generate high return, may consider a spin-off instead of a sell-off. Prezas and Simonyan (2015) discuss the choice between spin-offs and sell-offs and conclude that the choice might be driven by the pre-divestiture market valuations and asset performance. That is, firms with low market valuations are more likely to spin-off their assets while assets that overperform to their full potential are more likely to be sold-off.

Like ECOs, spin-offs are not entirely costless transactions either but are described to be a low-cost method for transferring control of corporate assets to bidders (Hite & Owers 1983). They also require registration and distribution of new shares, transfer in ownership and listing on a stock exchange like ECOs. Furthermore, any positive synergies that arise from joint operations will be lost in spin-off divestiture. Therefore, one could argue that it is essential that the benefits from spin-off must exceed the costs if the aim of the divestment is to serve stockholders' interests.

What factors guide the success of a spin-off then? On a very high level, besides luck, there can be identified two categories. Firstly, the factor that concerns all companies and which a firm cannot itself control, the growth of market it operates and the fragmentation of its industry. The former management pondering about divestiture

should carefully validate whether the new subsidiary can withstand the competition and still be profitable without the parent company. Secondly, the management should provide necessary financial resources to the soon-to-be established firm. The new firm often inherits assets that have been starved by former management. However, the value of these assets and capabilities might just wait their time to be unlocked. In other words, the management should ensure that the subsidiary can escape the legacy factors which impact the business.

3.2 The rationale for carrying out divestitures

This sub-chapter discusses the motives a firm might have for initiating a divestiture. Firstly, to provide an answer on why a company might consider divestiture, we need to examine the pros and cons of a diversified company since often the divestiture leads to the company being less diversified. Business diversification has both value-enhancing and value-reducing effects. Berger and Ofek (1995) recognize several potential benefits for being diversified which include improved operating efficiency, less incentive to forfeit potentially profitable projects, increased debt capacity and lower taxes. For instance, increased debt capacity creates substantial value by allowing company to leverage higher and have lower tax payments as the firm's interest tax shield increases. As diversified companies appear less risky to banks, they are capable of negotiating better loan deals and then finance different business segments and subsidiaries internally instead of allowing every subsidiary to negotiate high margin loans themselves. Separately valued companies would not be able gain that benefit.

On the flip side, potential disadvantages for having a diversified company include issues such as misallocation of capital and resources between business lines, misalignment of incentives between central and divisional managers, and reduced information to investors (Berger & Ofek 1995). This potential value could be unlocked through the creation of new subsidiary which leads to the new entity losing its former management

who may have neglected the business unit. Moreover, as large diversified firms often have a pristine borrowing capacity combined with superior cash flows, they might be encouraged to undertake value-decreasing investments.

When a company recognizes the need for divestiture, it must decide which option is the most suitable for it. Often the choice tends to be between a spin-off and a sell-off, of which both have their own advantages. Both divestiture choices allow a firm to fully release ownership and control of its asset unlike equity-carve outs. However, these two are quite different from each other. Divesting an asset through sell-off generates cash or securities of another firm and therefore more financially constrained firms may have an incentive for asset sale and use received cash to pay-off debt or fund other parts of the firm (Prazos & Simonyan 2015). This particular matter was investigated by Powers (2001) who documents that firms in the need of cash are more likely to sell-off assets while firms that are in no need of cash are likely to spin-off average performing divisions. Moreover, the large body of corporate finance research shows that, on average diversified companies tend to have lower valuation relative to their potential value than if their divisions or subsidiaries would be valued separately, and these undervalued firms are more likely to spin-off their assets than sell them (Berger & Ofek 1995; Daley et al. 1997; John & Ofek 1995; Prazos et al. 2015). This makes sense as undervalued firm selling its assets would not generate as much cash as possible than when it is correctly valued. Therefore, spinning-off a business unit rather than selling it outright appears to be a more logical choice. In this kind of situation, a spin-off could be carried out to facilitate future merger (Hite and Owers 1983). Moreover, if a potential acquirer is targeting a specific company asset, the firm may spin-off the subsidiary to make the targeted asset easier to acquire (Cusatis et al. 1993).

Additionally, it has been found that spin-off approach is used more frequently when large stock owners own more of the divesting firm's stock and when the size of the divested unit is larger (Bergh and Sharp 2015). The authors study whether external owners owning over five percent of a company have influence over the decision of how

the divestiture is implemented. These results match their expectations of the agency theory that spin-offs allow the large owners to decide whether to hold or sell their interests in the divested firm.

One potential reason for preferring a spin-off over sell-off is its tax advantages (Schipper and Smith 1983). Spin-offs in the United States are identical to stock dividends which makes them tax-free exchange while sale proceeds are subject to capital gains tax (Rosenfeld 1984). Naturally, investors in a sell-off get paid but they are forced to sell their stocks before they planned to. Another suggested explanation for firms' will to carry out spin-off is the possibility to transfer wealth from bondholders to stockholders (Gordon et al. 1984). Their hypothesis states that a spin-off allows restructuring the assets and liabilities in a way that affects existing contracts, namely bonds and preferred stock. In practice, stockholders could steal a portion of collateral from the parent company to the newly formed company (Hite & Owers 1983; Gordon et al. 1984). However, this kind of effect can be limited by set of restrictive covenants in the bond indenture and therefore is unlikely cause for choosing spin-off as choice of divestiture.

3.3 Factors that can explain the value creation from spin-offs

Modigliani and Miller's study (1958) on capital structure provides an excellent foundation for this topic. The authors point out that the firm value cannot be increased by chopping it into fragments as the value of the company is independent of its capital structure and dividend policy. As spin-offs have demonstrated to be able to create value, the source for the value increase must come from Modigliani and Miller's assumptions and their impracticality in the real world, which would be information or transaction costs.

Corporate Focus Hypothesis

Perhaps the most obvious and studied factor contributing to value creation in spin-offs is an improvement in industrial focus or Corporate Focus Hypothesis (CFH). This means improving corporate performance by spinning-off non-core business units and focusing on the core business. Spinning-off non-core business units may lead to higher value through removal of negative synergies, freeing managers from non-core operations and improvement of transparency (Daley et al. 1997; Desai & Jain 1999; Krishnaswami & Subramaniam 1999). Sometimes the reason might be the need to exit from lower growth businesses to increase long-term growth potential of the portfolio (Pearson 1998). Anyhow, it is widely recognized that abnormal returns for the focus-increasing spin-offs are larger than for the non-focus increasing (Comment & Jarrel 1995; Daley et al. 1997; Krishnaswami et. al 1999; Desai et al. 1999). In addition, the motive most frequently mentioned in the literature for conducting a spin-off is indeed the intention of the firm to concentrate on its core business. Mukherjee, Kiyamaz and Baker (2004) identify the focus to be the most critical reason for 36% of managers for engaging into a spin-off.

Focus-increasing spin-offs are defined as events, in which the parent company spins off a subsidiary that does not operate within the parent's core business area whereas non-focus-increasing spin-off means that the parent spins off a unit that operates in its core industry (Daley et al. 1997). For example, a company that builds machinery for the mining industry and valves for power plants might be willing to improve its industrial focus by spinning-out its valve business. The firm's former management may have neglected the valve segment and it might turn out to be a wise decision to divest it to unlock value for other segments of the firm. Technically, in the previous studies, focus-increasing spin-offs are defined as spin-offs where the subsidiary has different two-digit SIC code than the parent.

Daley et al. (1997) used spin-offs to study if a focus increase leads to the wealth increase in diversifications. More accurately, the authors tested whether spin-offs of subsidiaries in unrelated industries create more value than spin-offs of subsidiaries from related industry to parent. They reported abnormal return of 1.6% for focus-decreasing spin-offs and an abnormal return of 4.5% for focus increasing spin-offs. The results were consistent with their initial hypothesis. Daley et al. (1997) results are strengthened by Desai and Jain (1999) who also come to the same conclusion that focus-increasing spin-offs yield higher announcement returns than non-focus increasing. Additionally, the authors interestingly find that superior performance of focus-increasing spin-offs persists on long-run yielding positive returns on 1-year (11.12%), 2-year (20.77%) and 3-year (33.36%) time periods.

Quite similarly John and Ofek (1995) studied 258 assets sales over 1986-1988 and found CAR of 1.5% at announcement date. Again, unrelated assets created more value than sale of related assets suggesting that focused companies operate more efficiently than diversified. The authors reported that the motivation for divestitures and sources for wealth gains were the elimination of negative synergies and improving both the profitability and the efficiency of remaining assets. However, cash transaction present in sale of assets might provide additional motivation to goals of increasing efficiency and focus. All these results suggest that corporate focus creates value and there might exist a diversification discount on diversified companies.

Another type of focus increase is an increase in geographical focus. Practically, this means spinning off a foreign division. Geographical diversification may lead to reduced economies of scale in production. Moreover, spinning-off a foreign division might signal investors that the firm did weak decision previously when expanding to foreign markets. On the other hand, spinning-off foreign division may might make monitoring and coordinating the firm cheaper through due to less complexity of the firm. (Veld & Veld-Merkoulova 2004).

Information Asymmetry

Besides improvement in industrial focus, information asymmetry might explain some portion of value creation in divestitures. Spin-offs may create value by increasing transparency among investors and other stakeholders when spun-off entities start publishing financial reports that are separated from the parent companies. Krishnaswami and Subramaniam (1999) argue that one reason firms may engage in spin-off is because there is considerable information asymmetry between the management of the firm and the external capital market, and this information asymmetry may result in undervaluation of the firm. The authors suggest that separating the firm's business units to independently traded units through spin-off leads to a decrease in information asymmetry.

Krishnaswami et al. (1999) findings reveal that firms engaging in spin-offs have higher information asymmetry levels than their industry and size-matched peers. They note that the information problems decrease significantly after spin-off which results in a share price increase of the parent company. Additionally, they record that companies with high growth opportunities and firms in need of external capital manage to raise more capital following the spin-off, which might suggest that firms aim to reduce information asymmetry before approaching capital markets for fund raising. As their main finding, they conclude that spin-offs with large information asymmetry are associated with higher abnormal returns than spin-offs with low information asymmetry. However, these abnormal returns are available only for announcement period and not after that. This observation indicates that the market efficiently responds to the spin-off announcements by incorporating expected future benefits into stock prices.

As a subsidiary transforms into an independent entity, it must start reporting financial information more extensively which leads to more quantitative and qualitative information. This in turn makes monitoring of management easier, leads to better corporate governance, increases management efficiency, and provides a more accurate

valuation of the spun-off entity (Krishnaswami et al. 1999). As a support to their argument, Pearson (1998) presents that spun-off entities similar to other pure-play companies often enjoy a higher degree of analyst coverage and investor attention which results in more efficient determination of the share price. This makes sense as a firm engaging in many different businesses limits the ability of analysts to accurately forecast earnings, as analysts do not have specific knowledge about each division of the company. Since analysts are unable to accurately forecast, the complete firm usually is punished by the shareholders with a diversification discount.

As a proof of a value discount of diversified companies, Berger and Ofek (1995) discover U.S. conglomerates to be priced at a mean discount of 13% to 15% during 1986 to 1991 by comparing stand-alone values to individual business segments. The authors identify the value loss to be lesser when segments of the diversified firms have the same two-digit SIC code. To support these findings, Lins and Servaes (1999) observe similar discounts in the U.K and Japan. The authors suggest that operating firm divisions as stand-alone firms would discharge the diversification discount and create more value for shareholders. Similarly, Hoechle, Schmid, Walter and Yermack (2012) investigate whether diversification discount occurs partly as a result of poor corporate governance and find discount of 21% when their regression controls include governance variables.

On the other hand, by using a new database that covers the whole U.S. at the establishment level, Villalonga (2004) finds a diversification premium. Similar to previous studies that suggest diversification discount, he finds diversification discount when the firms' activities are broken down into COMPUSTAT segments. However, when the same firms' activities are broken down into BITS business units in the new database, diversified firms are priced at a significant premium relative to comparable firms. Villalonga (2004) suggests that there might be discount to unrelated conglomerate diversification but a premium to related diversification. When both diversification types are grouped together like in BITS the net effect is positive since it is probable that related diversification dominates over conglomeration.

4. PREVIOUS LITERATURE

There has been accumulating an extensive body of literature for spin-offs in the U.S. market. The first studies examining spin-offs were conducted in the 1980s in the papers from Hite and Owers (1983), Schipper and Smith (1983) and Miles and Rosenfeld (1983). Main findings from these early studies conclude that spin-offs generate positive announcement returns for the parent companies. While Schipper and Smith (1983) find positive announcement returns of 2.8%, both Hite & Owers and Miles & Rosenfeld (1983) report returns of 3.3% for their samples of 116 and 55 firms, respectively. Motivated by previous studies conducted in the 1980s, Vijh (1994) also records average excess return of 2.9% on announcement date from period of 1964 to 1990.

Later it has been found that these positive returns are not limited to the announcement period only. In their study, Desai and Jain (1999) report positive and significant abnormal returns at both announcement date and in the long-run. Similar results were obtained by Cusatis, Miles and Woolridge (1993) who investigate value created through diversifications for periods up to three years. They find significantly positive abnormal returns for the spun-off entities, the parents and parent-spinoff combinations. The authors also add that abnormal long-term returns are strongly and positively correlated with the post spin-off takeover activity. The positive long-run returns from U.S. are confirmed in study by Feng, Nandy & Tian (2015) as well who find 5.8% abnormal return against their benchmark.

Markets outside the U.S. have been studied as well. Announcement returns from Europe seem to be consistent with the ones found in U.S. market. In their study, Veld & Veld-Merkoulova (2004) investigate European spin-off activity over the years of 1987-2000 and identical to the studies conducted on the American market, authors find positive announcement effect of 2.62% for the parent's shareholders. On the other hand, in contrast to American studies, their findings in respect of abnormal long-term stock returns appear to be significantly negative for both parent and combined firms. Moreover, after controlling for size and book-to-market effects by creating a matching

portfolio, the long-run excess returns turn insignificant. Authors' conclusion is that the U.S. market may be less efficient than European markets and suggest that the announcement date effect might already entirely capture the value effect of a spin-off.

Besides Europe, Chai, Lin and Veld (2018) have recently studied Australian spin-off market. They discover significant announcement returns on a 3-day period totaling 2.93% which they note are lower than in the most of studies focusing on the U.S. market. Their study finds no evidence on either industry focus, information asymmetry nor bank debt to offer explanation for that. However, the authors find evidence on significant long-run excess returns up to 12 months after the spin-off announcement. Overall, there is strong consensus on spin-offs creating value for companies and excess returns for investors.

There can be identified several main findings from the large body of previous studies regarding spin-offs. Firstly, spun-off subsidiaries that operate in different industries than the parent companies are proven to create significantly more value for the parent company than subsidiaries from similar industry (Daley et al. 1997; Krishnaswami and Subramaniam 1999; Desai and Jain 1999). This also applies from the investor's point of view as these focus-increasing spin-offs are associated with higher abnormal returns than divestitures that do not increase focus (Daley, Mehrotra and Sivakumar 1997; Desai et al. 1999; Hoechle, Schmid, Walter & Yermack 2012). These results imply that the corporate focus has been one of the central value drivers in spin-offs.

Secondly, the larger the divested unit is, the more value is created and the higher are the excess returns for the parent company (Hite & Owers 1983, Miles & Rosenfeld 1983; Krishnaswami & Subramaniam 1999). For instance, Rosenfeld (1984) records excess returns of 5.6% and Hite and Owers 5.5% for samples that include only large spin-offs. Third finding considers tax advantages as more tax-friendly spin-offs are shown to create more value (Krishnaswami & Subramaniam 1999; Veld & Veld-Merkoulova 2004). Krishnaswami et al. (1999) find non-taxable spin-offs to be associated with higher positive abnormal returns than taxable spin-offs. In the United States spin-offs are

identical to a stock dividend and considered a tax-free exchange under Internal Revenue Code Section 355 (Rosenfeld, 1984).

Table 1. Summary of previous literature on spin-offs

Authors	Geographical area	No of events	Sample period	CAR
Hite & Owers (1983)	USA	116	1963 - 1981	3.30 % (-1, 1)
Miles & Rosenfeld (1984)	USA	55	1963 - 1980	3.34 % (0, 1)
Vijh (1994)	USA	113	1964 - 1990	2.90 % (-1, 0)
Daley et al. (1997)	USA	85	1975 - 1991	3.40 % (-1, 1)
Desai & Jain (1999)	USA	155	1975 - 1991	3.84 % (-1, 1)
Krishnaswami & Subramaniam (1999)	USA	118	1978 - 1993	3.28 % (-1, 1)
Mulherin & Boone (2000)	USA	106	1990 - 1999	4.51 % (-1, 1)
Veld & Veld-Merkoulova (2004)	Europe	156	1987 - 2000	2.62 % (-3, 3)
Murray (2018)	UK	60	1992 - 2004	1.82 % (-1, 1)
Uddin (2010)	Singapore	25	1975 - 2005	4.26 %
Feng, Nandy & Tian (2015)	USA	113	1993 - 2000	3.14 % (-1, 1)
Prazos & Simonyan (2015)	Global	378	1980 - 2011	4.30 % (-1, 1)
Chai, Lin & Veld (2018)	Australia	87	1999 – 2013	2.93 % (-1, 1)

5. DATA AND METHODOLOGY

This chapter introduces the data and methodologies used in this study. The chapter begins by discussing what kind of data is retrieved for the analyses and how the final data sample is formed. Then the main variables used in this study are introduced. After that, the event study methodology used for this study is explained and theoretical framework for OLS regression is introduced.

To summarize, the data used in this study consists of two primary groups. Firstly, the financial data and SIC codes for individual companies, and macro-level data on the economy were retrieved from ThomsonReuters database. Secondly, for the purpose of the study, ESG-data was received from ThomsonReuters ASSET4-database. The data covers spin-off transactions that were announced and completed between January 2002 and December 2019. The time period was chosen due to inadequacy of ESG data in the earlier years. All the firms in the sample are publicly traded entities in the US stock exchanges.

5.1 Financial data

The criteria for chosen companies can be found from Table 2. The original data set derived from the ThomsonReuters database contained 2129 divestitures from which all the asset swaps, LBOs, privatizations, restructuring events and block purchases were excluded. As the financial performance of divestiture is measured by companies' stock returns, the sample must consist only publicly traded companies. Thus, all spin-off deals where the company was either private or a joint venture were eliminated. Due to that, the sample size shrank to 1519. Secondly, all deals where the parent company did not issue 100% of the shares to their shareholders or the deal was not completed before the end of year 2018 were removed. After that, all non-US deals were excluded and the sample size ended at 419 spin-offs. From this all events where neither parent or spun-

off entity did not have valid ESG-data and stock market data or accounting data was invalid had to be removed. Final data sample consist of parent companies and their respectable spun-off entities that are members of extensive set of 164 spin-offs.

Table 2: Criteria for choosing data for spin-offs.

Spin-off data criteria
1. Deal announcement and completion between years 2002 to 2019
2. Parent company must trade in United States' stock exchange
3. Only pure spin-offs, no ECOs, assets swaps, privatizations, restructurings or block purchases
4. Company cannot be private or joint venture
5. Parent must issue 100% of shares to shareholders
6. Parent must have valid ESG data before the event
7. Both parent and subsidiary must have valid financial data available

Besides the daily stock price data, various accounting metrics such as market value, total assets and revenue were retrieved to enable creating necessary metrics for the companies. As a final part of the firm-level data, SIC codes for each company were collected to determine the industrial focus of the spin-off event. In addition to firm-level financial data, data for bonds, market index and interest rates were collected for benchmarks.

5.2 ESG data

In order to measure the level of corporate responsibility of the company, ESG data is retrieved ThomsonReuters ASSET4-database. The metrics used are individual scores on Environmental, Social and Governance but also an overall ESG score. Each of these dimensions is rated between 0-100 and if certain indicator is not present on the verge of the event, it is given value of 0. The main ESG variables used in the study are following,

Environmental Score (ENV)

ENV measures a firm's impact on living and non-natural systems. It reflects how well a company uses best management practices to avoid environmental risks and capitalize on environmental opportunities to generate long term shareholder value. The metric consists of sub-categories that deal with emissions, innovation and resource use. (ASSET4).

Social Score (SOC)

SOC measures company's capacity to create trust and loyalty with different stakeholders such as its workforce, customers and society. It reflects the firm's reputation and the health of its license to operate. It includes metrics related to human rights, product responsibility and workforce. (ASSET4).

Governance Score (CGV)

CGV measures firm's systems and processes which ensure that its board members and executives act in the best interest of long-term shareholders. Measure reflects company's capacity through its use of best management practices, to direct and control its rights and responsibilities through the creation of incentives as well as checks and balances. (ASSET4).

ESG Score (ESG)

The overall ESG score is based on the company's self-reported information in the environmental, social and governance pillars. The score acts as a proxy for corporate social responsibility in this study. The score is structured by combining over 400 different metrics on CSR which form ten main sub-categories. The ten sub-categories are given individual weights to form 3 main categories which in turn form the ESG score.



Figure 2. ESG scores formation structure. Source: Thomson Reuters ASSET4 (2020).

5.3 Summary statistics and construction of the portfolios

Table 3. Distribution of spin-offs by year

Year	Full sample	Focus-increasing	Non-focus increasing	Year	Full sample	Focus-increasing	Non-focus increasing
2002	3	3		2011	13	5	8
2003	7	3	4	2012	5	3	2
2004	7	5	2	2013	14	10	4
2005	10	6	4	2014	26	6	20
2006	7	5	2	2015	18	3	15
2007	14	9	5	2016	7	1	6
2008	6	2	4	2017	7	5	2
2009	7	5	2	2018	7	3	4
2010	6	2	4	Total	164	76	88

Table 3 reports the distribution of spin-offs executed by year. Altogether there are 164 spin-offs announced and completed between 2002 and 2018 of which 76 are focus-increasing and 88 non-focus increasing. Somewhat surprisingly the number of spin-offs where the parent divests a non-core business unit (focus-increasing) is smaller than non-focus increasing where parent has divested a unit from the same core industry as parent itself. The sample is visualized in the Figure 3. The distribution of announcement years is fairly even and only the year 2014 stands out from the rest of the years by having 15.9% of 164 total spin-offs. Similarly, the focus-increasing spin-offs do not appear to be

concentrated in a few years. Altogether, the majority of the spin-off activity occurred at the beginning of the 2010s. This might not be a surprise given the end of the global financial crisis took place in those years and many firms had to face restructuring projects.

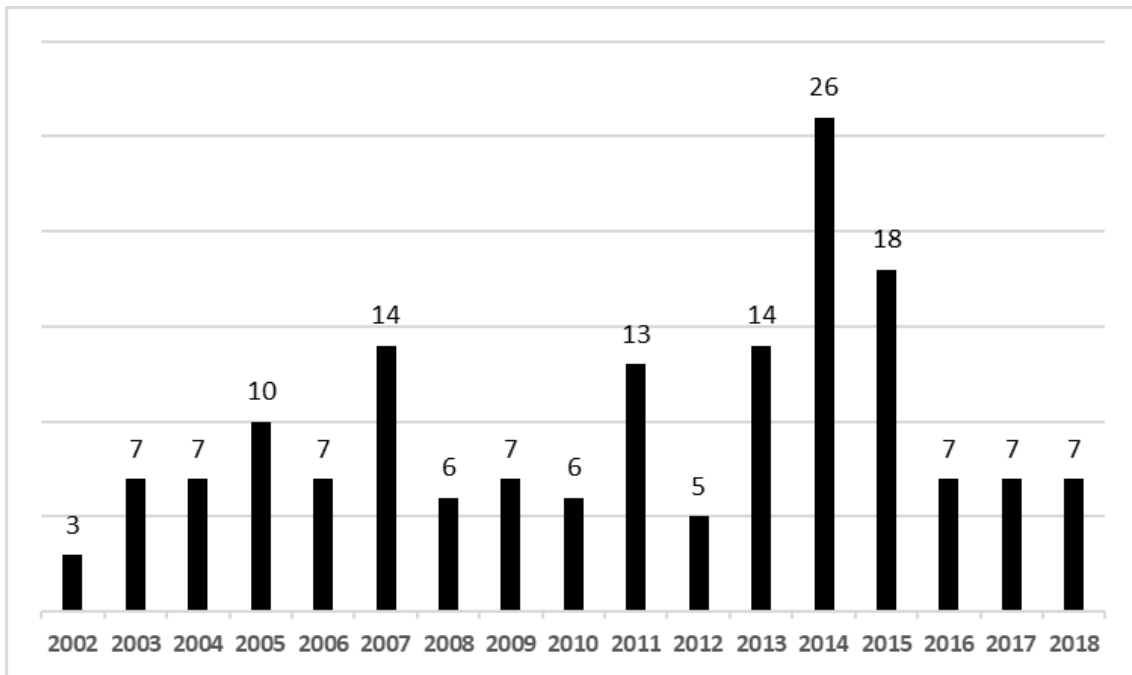


Figure 3. Spin-offs grouped by announcement year.

To provide a more detailed outlook into the data, the parent companies are grouped into industry groups. The industry groups are defined by their 2-digit SIC code and can be found in the Figure 4. Altogether there can be identified 8 different main industries and 44 sub-industries, the largest being Manufacturing with 78 (47.5%) events. Heavily represented Manufacturing itself consists of 15 different sub-industries where largest one is Industrial and Commercial Machinery and Computer Equipment with 17 (10.4%) events. The second largest sub-industry is also within Manufacturing being Chemicals and Allied Products with 14 events while the third-largest is Business Services with 13 events.

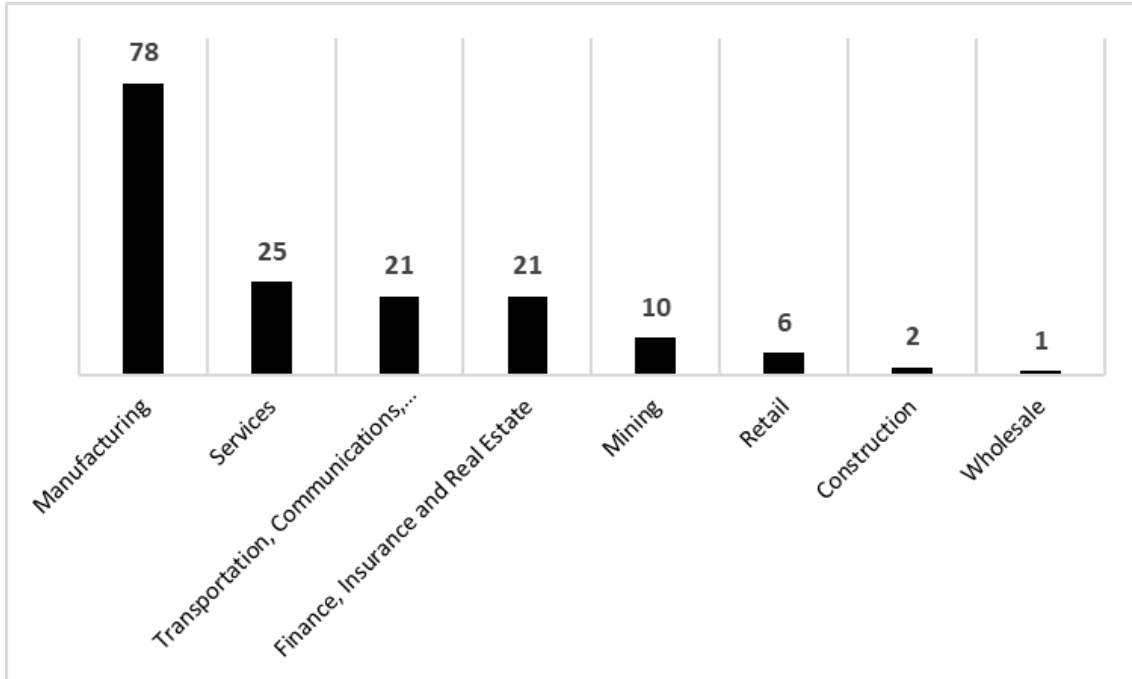


Figure 4. Parent companies grouped by industry (2-digit SIC codes).

Finally, the firm-level variables are presented in the Table 4. The total sample contains 164 parent companies. The table presents the data sample's mean value, median value, maximum value, minimum value, and standard deviation. Panel A provides information on all parent firms, Panels B and C illustrate the statistics for high ESG and low ESG portfolios. The variables are as follows,

ESG score is the overall ESG score which is based on the company's self-reported information in the environmental, social and governance pillars. *Gov score*, *Soc score* and *Env score* are the respective scores for governance, social and environmental pillars which are depicted in section 5.2. To qualify for the high ESG portfolio, a firm needs to have ESG score over 37.46 which represents the top 50 percent of the companies.

Market cap is the firm's market capitalization in US dollars on the spin-off announcement date. The value is represented in millions of dollars. The market cap for the whole sample is on average 22 billion dollars whereas the median is approximately 7 billion. Interestingly we can observe that high ESG firms have an average market

capitalization of 35 billion and a median of 16.7 billion while low ESG portfolio yields an average of 8.4 billion and a median of 4.7 billion.

Size factor describes the natural logarithm of total assets. *Financial structure* stands for the ratio of total debt to total assets. In terms of size and financial structure, there does not seem to be notable differences between high and low ESG portfolios.

ROA is return on assets and measures operating profitability. The value is computed by dividing operating income by total assets on the time period before the spin-off.

Table 4. Summary statistics

	No of obs.	Mean	Median	Max	Min	S.D
Panel A: All firms						
ESG score	164	42.00	36.77	89.30	5.94	22.54
Gov score	164	49.20	50.94	98.23	1.12	25.51
Soc score	164	42.98	40.21	94.77	2.01	23.53
Env score	164	32.03	26.88	96.07	1.05	27.83
Market cap	164	22 027	7 208	197 184	40	34 940.59
Size	164	16.04	16.08	21.72	11.10	1.80
Financial structure (debt/assets)	164	0.28	0.25	0.96	0.00	0.19
ROA	164	1.98 %	1.90 %	30.10 %	-14.18 %	0.03
Panel B: High ESG score						
ESG score	82	61.27	60.89	89.30	37.47	14.19
Gov score	82	65.88	69.41	98.23	15.09	19.50
Soc score	82	61.43	61.85	94.77	22.94	17.36
Env score	82	52.65	56.06	96.07	2.96	23.77
Market cap	82	35 615	16 758	197 184	273	43 342.02
Size	82	16.75	16.79	21.72	12.80	1.75
Financial structure (debt/assets)	82	0.29	0.28	0.96	0.00	0.17
ROA	82	2.30 %	1.96 %	30.00 %	-14.18 %	4.20 %
Panel C: Low ESG score						
ESG score	82	22.72	21.87	36.06	5.94	8.29
Gov score	82	32.51	32.72	75.35	1.12	19.11
Soc score	82	24.53	23.29	49.61	2.01	11.10
Env score	82	11.41	7.60	41.49	1.05	11.55
Market cap	82	8 439	4 780	86 758	40	14 297.60
Size	82	15.32	15.33	19.06	11,10	1.56
Financial structure (debt/assets)	82	0.26	0.24	0.95	0.00	0.21
ROA	82	1.66 %	1.71 %	11.33 %	-6.96 %	2.38 %

5.4 Event study methodology

As the objective of this research is to investigate how a particular event impacts firm value, the correct method to use is an event study. The method was first described in Fama, Fisher, Jensen & Roll (1969) study and has also been covered in the papers of Hite and Owers (1983) and MacKinlay (1997). Event study is used to measure how a specific event such as an earnings announcement, divestiture or a merger impacts the firm value. The impact is computed by utilizing financial market and security price data observed over a certain period. Event study begins by defining the event of interest, which is in this case a divestiture by a spin-off. After that, the event window is defined and estimated returns for the firm are calculated. (MacKinlay 1997).

We begin by computing the percentage rate of returns for each parent company and the benchmark index S&P 500 Composite Index for the period of December 2001 to March 2020. The calculations are conducted by using the following equation:

$$R_{i,t} = \frac{P_t - P_{t-1}}{P_{t-1}} \quad (1)$$

where R is the rate of return for an individual stock or benchmark index i at time t , P_t is the price of the stock or index at time t which indicates the closing price of day t .

By using the percentage rate of returns, we proceed to calculating the abnormal returns (AR) between the individual stocks and the benchmark index. Abnormal returns are defined as the difference between the daily return of individual stock and the daily return of the benchmark and thus the excess return generated from investing into the particular security. Abnormal returns for the stock are calculated with the following formula,

$$AR_{i,t} = R_{i,t} - R_{mkt,t} \quad (2)$$

where $AR_{i,t}$ is the abnormal return for stock i at time t , $R_{i,t}$ is the rate of return for stock i at time t and $R_{mkt,t}$ is the rate of return for the S&P 500 Composite Index at time t .

As there are multiple firms in the sample, it is necessary to calculate the daily average abnormal return (AAR) for each company. Average abnormal return is calculated by averaging N companies in the sample. This is justified by the noisiness of the stock returns and by averaging across large number of firms this noise tends to cancel out. The equation for the calculation is as follows,

$$\overline{AR}_t = \frac{1}{N} \sum_{i=1}^N AR_{i,t} \quad (3)$$

where \overline{AR} is the average abnormal return of the sample events, N is the number of events in the sample data and AR is the abnormal return.

To capture the total impact of an event on returns, the cumulative abnormal returns (CAR) are calculated. In this study, we calculate CAR for four different time windows which are [-10, 10], [-5, 5], [-3, 3] and [-1, 1] days before and after the announcement of the spin-off. The day zero is designated as the spin-off announcement date. The formula for CAR is presented below,

$$CAR_i(\tau_1, \tau_2) = \sum_{\tau=\tau_1}^{\tau_2} AR_{i\tau} \quad (4)$$

where CAR_i is the cumulative abnormal return for stock i and (τ_1, τ_2) refers to the time period or the event window in this study.

Moreover, to investigate the cumulative average abnormal returns for all stocks, the formula is as follows,

$$\overline{CAR}_i(\tau_1, \tau_2) = \sum_{\tau=\tau_1}^{\tau_2} \overline{AR}_\tau \quad (5)$$

where \overline{CAR}_i is the cumulative average abnormal return and \overline{AR}_τ is the average abnormal return (McKinlay 1997)

To test the significance of cumulative average abnormal returns in each event window, we apply the cross-sectional t-test with the following formula,

$$t_{CAAR} = \sqrt{N} \frac{CAAR}{S_{CAAR}} \quad (6)$$

where S_{CAAR} is the standard deviation of the cumulative abnormal returns across the sample

$$S_{CAAR}^2 = \frac{1}{N-1} \sum_{i=1}^N (CAR_i - CAAR)^2 \quad (7)$$

To examine whether t-tests are statistically significant, the level of significances are to be determined. The levels used throughout this study are the most common levels of statistical significance used in academic research: 1%, 5% and 10%.

Finally, to analyze the sources of CAARs, a multivariate ordinary least squares (OLS) regression model is utilized. The dependent variable used in the model is [-1, 1] day CAAR, while independent variables are the following,

Industrial focus. Impact of increase in industrial focus is measured by a dummy variable. The variable is 1 when the 2-digit SIC code of parent is different from spun-off entity's SIC code and 0 when the 2-digit SIC codes are the same.

Relative size. Market cap of the spun-off entity over the market cap of the parent. The value is calculated on the spin-off completion day. Numerous studies find higher

abnormal returns when the divested unit is larger (Miles and Rosenfeld 1983; Hite and Owers 1983).

Profitability. Measured as return on assets (ROA) of the parent company.

Leverage. Measured as total debt of the parent company over total assets of the parent company.

MarketCap. Natural logarithm of the market capitalization of the parent.

In addition to these, the main components of the ESG score which are *Environmental Score*, *Social Score* and *Governance Score* are included in the third, fourth and fifth model.

The following regression models are formed to test the association between ESG scores and [-1, 1] CAARs.

$$(1) \quad CAR_{[-1,1]} = \alpha_t + \beta 1_t(IndFoc) + \beta 2_t(RelSize) + \beta 3_t(Prof) + \beta 4_t(Leverage) + \beta 5_t(MktCap) + \epsilon_{it}$$

$$(2) \quad CAR_{[-1,1]} = \alpha_t + \beta 1_t(IndFoc) + \beta 2_t(RelSize) + \beta 3_t(Prof) + \beta 4_t(Leverage) + \beta 5_t(MktCap) + \beta 6_t(ESG) + \epsilon_{it}$$

$$(3) \quad CAR_{[-1,1]} = \alpha_t + \beta 1_t(IndFoc) + \beta 2_t(RelSize) + \beta 3_t(Prof) + \beta 4_t(Leverage) + \beta 5_t(MktCap) + \beta 6_t(COMP) + \epsilon_{it}$$

where *COMP* is one of the components of ESG and is either *ENV*, *SOC* or *GOV*.

The first regression model includes all independent variables except the ESG variable. The second model aims to test how the regression results change when ESG rating-variable is added to the model. More accurately, the interest is in how the variable

impacts the 3-day CAR. In the third model, the ESG value is broken down to its environmental, social and governance sub-components to explore which component has the most influence.

5.5 Long-run abnormal returns

The method for calculating long-term abnormal returns is described in Barber and Lyon (1997) and is also used in a study by Veld and Veld-Merkoulova (2004). In the Barber and Lyon (1997) approach the aim of the method is to find matching firms based on size, industry (SIC codes) and market-to-book ratio. As for the sample used in this study, it was not viable to find proper matches and therefore the approach is slightly modified. In our approach, the post-spinoff long-run stock performance is benchmarked against suitable stock index S&P 500 Composite, which contains listed stocks of American companies.

The method is executed by computing holding period returns (HPR) for three different time periods by using monthly returns. These periods are [-12, -1], [1, 12] and [1, 24] months before and after the spin-off. After the calculations, the returns are adjusted to benchmark to calculate abnormal returns. The equation for calculating the buy-and-hold abnormal returns (BHARs) is straightforward,

$$BHAR_i = \prod_{t=1}^T (1 + R_{it}) - \prod_{t=1}^T (1 + R_{mkt}) \quad (8)$$

where $R_{i,t}$ is the monthly return on stock i in time t , and R_{mkt} is the monthly return on the benchmark index.

6. EMPIRICAL RESULTS

In this chapter, the empirical results on the hypotheses are presented and discussed. In the first section, hypotheses 1 and 2 are tested. To achieve that, cumulative average abnormal returns are measured for the whole sample, firms with high ESG scores and firms with low ESG scores. The results present how investors react to spin-off announcement news and whether they value high corporate social responsibility in their investment decisions. Following the announcement return analysis, we aim to identify the sources of value creation by regressing announcement returns against other variables. In the second section, the results for hypothesis 3 are provided by testing whether abnormal returns are sustainable.

6.1 Announcement period performance

This thesis examines whether spin-offs are able to generate abnormal returns and whether firms with high corporate social responsibility are rewarded in these uncertain events. The abnormal returns are investigated in $[-10, 10]$, $[-5, 5]$, $[-3, 3]$ and $[-1, 1]$ time windows. The event study results for the whole sample can be found in Table 5. The analysis for the whole sample records a cumulative average abnormal return of 2.64% for the event window $[-1, 1]$ and 2.86% for the event window $[-3, 3]$ indicating that spin-offs on average are profitable for shareholders and investors benefit from the divestiture decision. The abnormal returns are statistically significant at the 1% -level and thus the results are in line with the previous studies. Table 5 also shows that the cumulative abnormal returns are higher when the investigation period is longer. Event window $[-10, 10]$ has CAAR of 4.42% while $[-5, 5]$ window has CAAR of 3.25%. This might indicate that there is either an information leak and insider trading happening before the event, or the information is not absorbed instantly during the announcement date.

Table 5. Cumulative abnormal returns in [-10, 10], [-5, 5], [-3, 3] and [-1, 1] event windows for the whole sample.

Interval	Cumulative average abnormal returns						
	Mean	Median	Max	Min	S.D	t-value	N
[-10, 10]	4.42 %	3.20 %	51.56 %	-32.95 %	0.10	6.00***	164
[-5, 5]	3.25 %	2.46 %	36.03 %	-26.90 %	0.08	5.28***	164
[-3, 3]	2.86 %	2.77 %	34.39 %	-29.93 %	0.07	5.24***	164
[-1, 1]	2.64 %	2.06 %	34.76 %	-14.85 %	0.06	5.61***	164

Significance of means is tested with cross-sectional t-test. Asterisks indicate significance at 10% (*), 5% (**) and 1% (***) level.

Figure 5 illustrates the performance of the whole sample on the spin-off announcement during the [-10, 10] event window. Overall, the market reaction is positive and we can witness the stock price starting to climb several days before the actual announcement date. Following the announcement, the price level stabilizes quickly indicating that the investors might have absorbed the necessary information about the spin-offs and the markets in that sense are efficient. Time window [-10, -1] records CAR of 1.52% while [1, 10] yields only 0.23%. The return on the actual announcement date contributes by 2.59%.

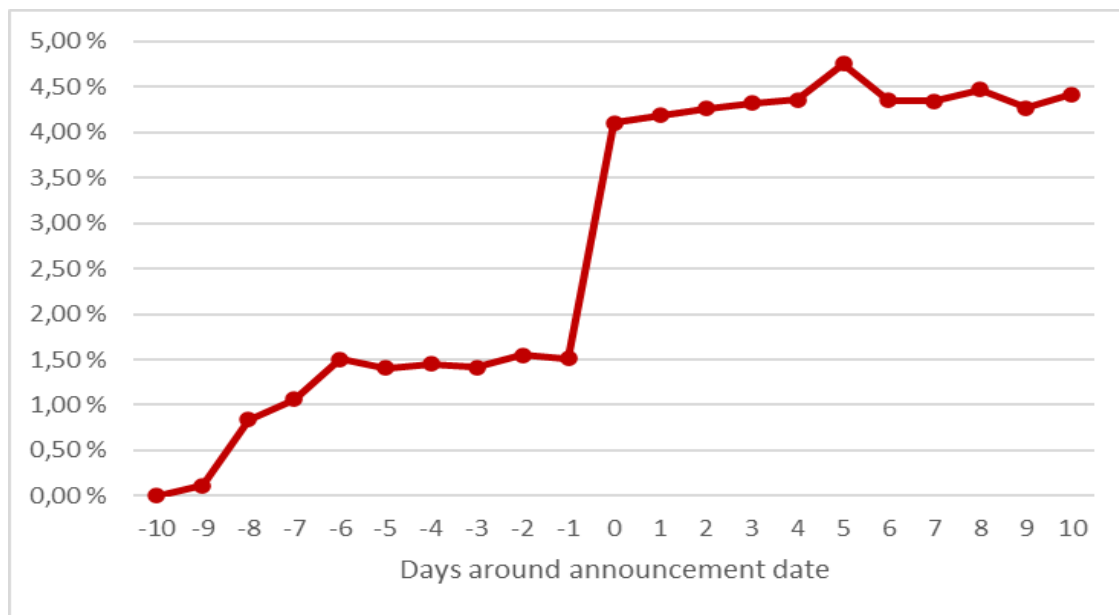


Figure 5. Cumulative average abnormal returns for the whole sample [-10, 10]

In Table 6, the sample is divided into different sub-samples. Panel A compares the results between firms that carry out a spin-off that increases their industrial focus and firms that do not increase industrial focus. In total, there are 76 firms increasing their industrial focus by carrying out a spin-off. The cumulative abnormal return for the focus-increasing companies is 2.86% on [-1, 1] time window while for non-increasers it is 2.46% making the difference of the means between samples 0.40%. CARs for both samples are significant at 1%-level. These findings are consistent with the study by Desai and Jain (1999), who find a significant 4.45% abnormal return for focus-increasing spin-offs in [-1, 1] time window.

Panel B compares results between big companies and small companies based on their market capitalizations. The difference between those who have large and small market capitalization is remarkable. Firms with large market capitalization generate 1.95% abnormal return on [-3, 3] time window while small market cap firms generate 3.86%. The difference shrinks in [-1, 1] time window to 0.67% but still is beneficial for the smaller companies. However, the CAAR results are only significant in [-1, 1] period for firms with large market capitalization.

Table 6: Cumulative abnormal returns for sub-samples

	Increases industry focus			Does not increase industry focus		
Panel A: Industrial focus	Mean	Median	No of obs.	Mean	Median	No of obs.
CAR [-3, 3]	3.14%	0.69%	76	2.64%	0.30%	88
Test	4.85***			3.08***		
CAR [-1, 1]	2.86%	1.20%	76	2.46%	0.42%	88
Test	4.80***			3.45***		
	Large MCAP			Small MCAP		
Panel B: Firm size MCAP	Mean	Median	No of obs.	Mean	Median	No of obs.
CAR [-3, 3]	1.95%	0.49%	82	3.86%	0.99%	82
Test	0.85			1.00		
CAR [-1, 1]	2.32%	1.07%	82	2.99%	0.77%	82
Test	2.06*			0.93		

Significance of means is tested with cross-sectional t-test. Asterisks indicate significance at 10% (*), 5% (**) and 1% (***) level.

In Table 7, the created ESG portfolios are taken into an account. The results show that the high ESG portfolio yields a significant cumulative average abnormal return of 2.83% on [-1, 1] time window while the low ESG portfolio's return is 2.42%. All of the CAARs are significant at 1%-level. Although the difference between the two CAARs is relatively modest, the results in this time window are in line with our initial hypothesis that responsible companies benefit from their good behavior. However, when looking at CAARs on a longer time window, firms with low ESG scores yield higher abnormal returns than firms with high ESG scores.

Table 7. Cumulative abnormal returns grouped by ESG-group.

	High ESG			Low ESG			Difference	
	Mean	Median	N	Mean	Median	N	Mean	Median
CAR [-10, 10]	3,99 %**	3,57 %	82	4,91 %***	4,82 %	82	-0,92 %	-1,25 %
CAR [-5, 5]	2,53 %***	2,26 %	82	4,06 %***	3,63 %	82	-1,53 %	-1,37 %
CAR [-3, 3]	2,45 %***	2,36 %	82	3,33 %***	2,98 %	82	-0,88 %	-0,62 %
CAR [-1, 1]	2,83 %***	2,90 %	82	2,42 %***	2,43 %	82	0,41 %	0,47 %

Significance of means is tested with cross-sectional t-test. Asterisks indicate significance at 10% (*), 5% (**) and 1% (***) level.

The performance of the low ESG portfolio to high ESG portfolio in [-10, 10], [-5, 5] and [-3, 3] time windows is surprising but as Figure 6 shows, low ESG firms start gaining returns much earlier than the responsible firms. Towards the end of the event window, the portfolio containing low ESG stocks starts to gradually decline while high ESG portfolio experiences a modest growth in abnormal returns. This might indicate that low ESG firms experience information leaks on upcoming spin-off announcements which result in insider trading and stock gains before the event. Moreover, as Table 8 indicates when dividing the [-10, 10] event window into smaller sub-windows, it appears that the majority of low ESG portfolio's gains form before the announcement date. For low ESG portfolio, the event window [-10, -1] yields CAAR of 2.79% while high ESG portfolio has CAAR of 0.38% during the same period. In comparison [1, 10] event window yields -0.13% for the portfolio of low ESG firms and positive 0.71% for high ESG firms. High ESG portfolio also surpasses the low ESG portfolio in [-1, 0] and [0, 1] time windows and on

the announcement date. The abnormal returns on the announcement date are 2.90% for the more responsible firms and 2.25% for the lower ESG firms.

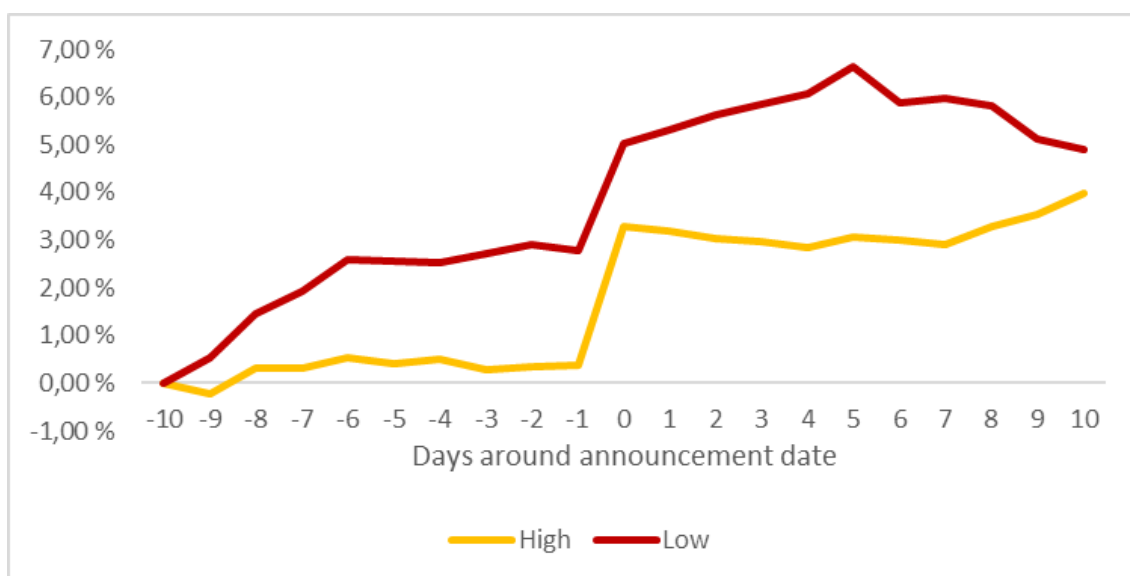


Figure 6. Cumulative average abnormal returns for high and low ESG firms in [-10, 10] period

Table 8. Detailed cumulative average abnormal returns grouped by ESG-group.

	All	High ESG	Low ESG	Difference (H-L)
CAR [-10, -1]	1,52 %*	0,38 %	2,79 %*	-2.41 %
CAR [-1, 0]	2,56 %**	2,93 %*	2,14 %	0.79 %
CAR [0]	2,59 %**	2,90 %*	2,25 %	0.65 %
CAR [0, 1]	2,67 %**	2,80 %*	2,54 %	0.26 %
CAR [1, 10]	0,31 %	0,71 %	-0,13 %	0.84 %

Significance of means is tested with cross-sectional t-test. Asterisks indicate significance at 10% (*), 5% (**) and 1% (***) level.

To provide more evidence on whether ESG scores influence announcement returns, the whole sample's [-1, 1] CAAR is regressed against a set of variables. The results from the regression for the 3-day cumulative average abnormal returns are presented in Table 9. The first regression shows that only the intercept and leverage have statistical significance. Leverage has a negative sign indicating that less levered parent firms earn higher abnormal returns. Furthermore, the coefficient for leverage stays significant in all five regression models. The dummy variable for industrial focus is positive as

expected but insignificant. The same observation can be made for the relative size which measures the size of the spun-off unit to the size of the parent in terms of market capitalization. Consistent with the study by Veld and Veld-Merkoulova (2004), the variable for relative size is positive but appears statistically insignificant in all five models. Also, neither profitability measured by ROA nor MarketCap show any statistical significance.

In the second model, we add a variable for the overall ESG score which is a positive sign and statistically significant at 10%-level. This confirms the second hypothesis that higher corporate social responsibility has a positive impact on the announcement returns. There are no other changes in the significance levels or in the signs of coefficients.

In the models 3, 4 and 5 the overall ESG score is broken down into three sub-variables which are environmental, social and governance. Out of three ESG factors, the environmental factor and social factor appear significant at 5% and 10%-levels while governance factor stays insignificant. The observation on significant environmental factor is supported by studies by Arx and Ziegler (2010) and Guenster et al. (2011) who also witness especially environmentally responsible companies to exhibit higher returns. Interestingly, in the fourth model the coefficient for industrial focus turns statistically significant in this model. Being a positive sign, it supports the findings from previous studies that by spinning-off subsidiaries from non-core industries leads to higher announcement returns. None of the five models produce significant results for relative size, pre-spinoff profitability, nor market capitalization to have an impact on the announcement returns.

Table 9. Regression of abnormal returns of spin-offs [-1, 1]

Variable	(1)	(2)	(3)	(4)	(5)
Intercept	6.31** (0.05)	7.17** (0.03)	7.54** (0.02)	6.94** (0.03)	6.33* (0.05)
Industrial focus	0.23 (0.16)	0.28 (0.13)	0.40 (0.12)	0.17* (0.10)	0.24 (0.29)
Relative size	0.75 (0.65)	0.81 (0.63)	0.70 (0.66)	0.77 (0.64)	0.79 (0.64)
Profitability	-16.29 (0.25)	-21.30 (0.14)	-21.93 (0.12)	-19.60 (0.17)	-16.96 (0.24)
Leverage	-5.51** (0.04)	-6.00** (0.02)	-5.76** (0.02)	-5.73** (0.03)	-5.60** (0.03)
MarketCap	-0.25 (0.42)	-0.54 (0.12)	-0.52 (0.11)	-0.48 (0.19)	-0.28 (0.40)
ESG		0.05* (0.06)			
ENV			0.04** (0.03)		
SOC				0.04* (0.10)	
GOV					0.01 (0.80)
Number of observations	164	164	164	164	164
R2	0.07	0.09	0.11	0.10	0.04
Adjusted R2	0.03	0.05	0.07	0.05	0.00

Regression coefficients for the three-day cumulative average abnormal returns for the whole spin-off sample of 164 firms from 2002 to 2018. P-values are presented in parentheses.

6.2 Long-run performance

To investigate and test the third hypothesis of this thesis, the long-run abnormal returns of the sample firms are analyzed. The focus in this analysis is on periods of 1-year and 2-years after the spin-off completion, and the sample is once again divided into portfolios based on firms' ESG scores.

Table 10 presents abnormal holding-period returns for the parent firms in three different time periods which are [-12, -1], [1, 12] and [1, 24] months around the spin-off completion date. These annualized holding period returns are defined as a firm's stock

return minus the benchmark index's return by the defined time window. The time t_0 indicates the spin-off completion date which often is months or even years after the announcement date. The analysis uses equal-weighted returns since we aim to investigate how a random spin-off will generate long-run returns in excess of the benchmark index.

Panel A presents the results for all parent companies. The average abnormal returns are positive for periods 1 [-12, -1] and 2 [1, 12]. However, for the period of two years after the spin-off completion, the results appear negative. Results for the first year are similar to studies by Chai et al. (2018), Desai and Jain (1999) and Veld et al. (2004) which discover positive but insignificant long-term returns for parent companies in periods of 6 months and 12 months after the event and negative returns on a longer-term. Murray's (2008) results from a study focusing on the UK market suggest that following a spin-off, the long-run performance by parent firms may remain mediocre because the removal of negative synergies may take time or simply because the spin-off may fail.

In Panel B, the results for low ESG companies are presented, while Panel C contains the results for firms with high ESG scores. High ESG firms exhibit a superior abnormal return of 8.51% one year before the completion of spin-off while the abnormal return for low ESG companies is moderate 0.08%. Both portfolios generate superior returns on a period 1-year after spin-off. However, consistent with our hypothesis, high ESG firms manage to generate mean abnormal return of 1.24% while low ESG firms yield 0.87%. Unfortunately, the sample shows only insignificant mean excess returns with exception of high ESG portfolio's [-12, 1] time window. It might be that the announcement date effect might already entirely capture the value effect of the spin-off and there are no additional rewards left.

Table 10. Long-run abnormal returns

	Number of observations	Mean	t-Statistic
<i>Panel A: All parent firms</i>			
-12 to -1 months	164	4,29 %	1.519
1 to 12 months	164	1,06 %	0.547
1 to 24 months	164	-1,05 %	-0.332
<i>Panel B: Low ESG score</i>			
-12 to -1 months	82	0,08 %	0.020
1 to 12 months	82	0,87 %	0.298
1 to 24 months	82	-1,82 %	-0.366
<i>Panel C: High ESG score</i>			
-12 to -1 months	82	8,51 %	2.024**
1 to 12 months	82	1,24 %	0.486
1 to 24 months	82	-0,27 %	-0.069

Significance of means is tested with cross-sectional t-test. Asterisks indicate significance at 10% (*), 5% (**) and 1% (***) level.

7. CONCLUSION

This thesis investigated whether corporate social responsibility has an effect on a firm's performance in corporate spin-offs in the US market. The motivation for this study is driven by the enormous growth in the meaningfulness of corporate social responsibility (Lee, Faff & Langfield-Smith 2009) and its applications in the real world. Additionally, it is interesting to examine whether the conception that investors are ready to reward the company for its responsible behavior and punish it for irresponsible actions holds true.

Previous studies suggest a strong relationship between corporate spin-offs and value creation. Similarly, a lot of research has been done in the field of corporate social responsibility and many of the studies conducted in the area have found evidence on a positive association between corporate social responsibility and firm performance. However, due to quite fragmented research and results, there is still no clear consensus on whether being good in terms of corporate responsibility leads to higher financial performance. To provide more evidence on this association, this study examined the market reactions on spin-off announcements in the U.S. market between 2002 and 2018.

Previous studies have shown that firms may gain a competitive advantage over their competitors if they manage to harness CSR from strategic management point of view (Wu & Shen 2013; Epstein 2018). The employees of these firms are more motivated, their stakeholders and customers are more satisfied, and the firm enjoys better reputation among the public. When these firms create value for their stakeholders, they also create value for their shareholders which increases trust among the shareholder group. It is expected that the highly trusted and responsible firms would be rewarded with higher announcement returns during the uncertain events such as spin-offs.

The analysis is based on a data set containing 164 spin-off events that were announced and completed between the years 2002 and 2018. These events are divided into two portfolios based on the parent firms' scores in different ESG dimensions.

The first hypothesis of this thesis proposes that spin-offs generate abnormal returns on the announcement date. While the previous studies have discovered abnormal returns on spin-off announcements, most of them are conducted decades ago and investigate time periods before the 2000s. This thesis provides recent evidence on this matter. The results on this hypothesis are consistent with previous literature and in line with the expectations as the study finds spin-off announcements to be associated with significant positive abnormal returns. The cumulative average abnormal return for a 3-day time window surrounding the announcement date is 2.86% and for a 7-day time window 2.64% respectively. The returns are slightly lower than in previous research but significant.

Moreover, the results also support our second hypothesis that firms with high corporate social responsibility gain higher returns in spin-off announcement. Results reveal that when a firm belongs to a high ESG portfolio, it is rewarded with significantly higher cumulative abnormal returns than a firm with low ESG score in a 3-day time window. However, when we extend the time window surrounding the announcement date, the results favor low ESG stocks. More precisely, the low ESG portfolio starts to gain abnormal returns before the spin-off is announced. This may result from information leaks which lead to insider trading. As for the firms with high corporate social responsibility, the market reaction tends to stabilize quickly after the announcement indicating that the wealth effects are incorporated to the stock instantly and the markets are efficient.

To provide a more detailed picture on which variables lead the value creation in our spin-off sample, the cumulative average abnormal return for the whole sample was regressed against environmental, social and governance factors, and other variables. The results from the regression reveal that ESG has positive and significant effect on announcement returns in [-1, 1] time window. Furthermore, after breaking down the ESG factor to its sub-factors, the study finds environmental and social factors to express positive and significant connection on announcement returns while governance factor appears insignificant.

The findings on the third hypothesis are also partially consistent with previous studies. While this thesis finds evidence on spin-offs generating small abnormal returns up to 12 months after the spin-off completion and the high ESG firms seem to express greater long-term returns than low ESG firms, all these returns appear statistically insignificant. Moreover, these returns seem to disappear during the second year. While the insignificance of long-term results is unexpected, similar observations have been made in the studies by Chai et al. (2018) and Desai and Jain (1999). The finding suggests that the announcement date effect may already capture the value created from the spin-off and there are no returns left on the table from the divestiture.

Overall, the evidence presented in this thesis partly supports the expectations that higher corporate social responsibility is rewarded with higher returns in spin-offs. Investors' reaction on the spin-off announcements is positive and higher corporate social responsibility seems to be beneficial for the parent firm. However, whether this performance is sustainable in long term still stays up for discussion.

8. REFERENCES

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