

UNIVERSITY OF VAASA
SCHOOL OF ACCOUNTING AND FINANCE

Maiju Hyrkäs

CAN GOOD GUYS FINISH FIRST?

A follow-up study on employee satisfaction and stock prices

Master's Thesis in

Finance

Master's Degree Programme in Finance

VAASA 2020

TABLE OF CONTENTS	page
LIST OF FIGURES	3
LIST OF TABLES	3
ABSTRACT	5
1. INTRODUCTION	7
1.1. The purpose of the thesis	10
1.2. Development of the hypothesis	11
1.3. The structure of the thesis	12
2. THEORETICAL FRAMEWORK	13
2.1. Efficient market theory	13
2.2. Modern portfolio theory	17
2.3. Human relation theories	19
2.4. Socially responsible investing	22
3. LITERATURE REVIEW	25
3.1. CSR and value	25
3.2. Market learning	30
3.3. Intangible assets and firm value	32
4. DATA AND SUMMARY STATISTICS	34
5. METHODOLOGY AND EMPIRICAL RESULTS	40
6. CONCLUSIONS	47

LIST OF FIGURES **page**

Figure 1. The three forms of market efficiency. 14

Figure 2. The efficient frontier. 18

Figure 3. Growth of responsible investing in the United States 1995–2018. 24

LIST OF TABLES **page**

Table 1. Summary statistics. 36

Table 2. Summary characteristics. 37

Table 3. GICS sector distributions. 38

Table 4. Risk-adjusted returns. 41

Table 5. Risk-adjusted excess returns over the industry-benchmark. 45

UNIVERSITY OF VAASA**School of Accounting and Finance**

Author:	Maiju Hyrkäs
Topic of the thesis:	CAN GOOD GUYS FINISH FIRST? A follow-up study on employee satisfaction and stock prices
Name of the Supervisor:	Nebojsa Dimic
Degree:	Master of Science in Economics and Business Administration
Master's Programme:	Master's Degree Programme in Finance
Year of Entering the University:	2009
Year of Completing the Thesis:	2020

Pages: 57**ABSTRACT**

The rapid growth of both investor and academic interest towards socially responsible investing has produced a large number of scientific papers studying the relationship between corporate social responsibility and returns. In 2011 Edmans published a paper that reported abnormal superior returns for a portfolio constructed of the annual "100 Best Places to Work For in America" list. The study concluded that the superior returns were caused by the market's inability to incorporate employee satisfaction into stock prices.

The modern financial theory and empirical evidence have shown nonetheless that when the market learns to adjust their valuations of underpriced assets, and superior returns do not persist in the long run. The thesis employs the Carhart four-factor model on a Best Companies portfolio to investigate whether the returns shown by Edmans still occur on a more recent period.

The results of the analysis show negative returns for the Best Companies portfolio, and after adjusting for industries the results stay negative yet slightly less so. The results confirm the initial expectations that market learning has taken place, most likely due to the increasing level visibility of the 100 Best Companies list and public's interest towards socially responsible investing.

KEYWORDS: market efficiency, intangibles, corporate social responsibility, human capital, socially responsible investing

1. INTRODUCTION

The public eye in the financial world has been turning at an increasingly rapid pace over the past few decades towards the socially responsible aspect of investing. Environmental concerns, data privacy problems, and gender equality issues among other topics concerning the socially responsible behavior of corporations have received plenty of attention in media, and the number of investors who are concerned about the ethical aspects of their investments has grown significantly over the years from a niche to a mainstream trend. According to the United States Social Investment Forum (US SIF 2018) the amount of professionally invested assets applying some social responsibility criteria has grown at a 13.6% compounded annual rate from 1995 to 2018, even during the financial crisis in 2007–2009 when the growth of investments in other assets in general were stagnant. Corporate social responsibility agendas are not considered as mere philanthropic handshakes or public relation stunts to polish a soiled public image anymore. An increasing number of companies are incorporating corporate social responsibility practices as an integral part of the corporate strategy.

The practice of applying socially responsible investment strategies or screens has drawn interest largely from the academic audience as well, specifically how the returns are affected consequently. The results reported in these papers however are ambiguous at their best and often contested by their peers. A particularly interesting study from Edmans (2011) examines the stock prices of “100 Great Places to Work for in America” listed companies and their respective association with firm value. Edmans discovers that the stocks of the companies included in the list earned

superior returns during 1984–2009. The research concludes that because of the market's tendency to undervalue intangible assets, high level of employee satisfaction yields superior returns. The results of the study are surprising considering that the data employed in the paper is collected from 25 years, and the "100 Great Places to Work for in America" list has been publicly available since its beginning. Moreover, the list is published by the Fortune magazine in their January issue every year signifying a high level of visibility, and the data is measured from a point where any information provided by a new list is reasonably expected to be impounded into stock prices.

From a theoretical viewpoint employee satisfaction is not unambiguously expected to affect firm value positively, especially under the inspection of traditional management theories. For example Taylorism (Taylor 1911) regards cost-efficiency as the key driver of firm value which is why the goal of management should be in maximizing the labor output while minimizing the input cost. Taylorism views employee satisfaction as a byproduct of overpaying or insufficient workload, thus signaling inefficient use of company resources. Employee satisfaction is not supported by the principal-agent theory either as it focuses on the zero-sum aspect of wages and workload. Agency problems arise easily with pay negotiations and insufficient work effort when they jeopardize the manager's personal benefits, such as a pleasant working environment (Jensen & Meckling 1976). These traditional theories however have been largely replaced with more humane approaches over time (Sonnenfeld 1985; Maslow 1943; Herzberg 1959; McGregor, 1960). For example, Zingales (2000) argues that in modern management world that values innovation and quality, human capital should be highly prioritized over physical.

Human relations theories emphasize the importance of employees as key drivers of performance, and that increasing employee welfare ultimately benefits the shareholders too. The role of employee satisfaction is therefore not insignificant to managers nor investors. If employee satisfaction cannot be shown to boost firm performance, managers should follow the advice of classic management theories and only allocate minimal resources to employee benefits, and reasonable investors should avoid involvement with companies that do otherwise.

Edmans' (2011) paper is interesting from the financial theories' perspective as well. Market efficiency and the disappearing nature of price irregularities are some of the basic pillars that the modern financial theory stands on. From the viewpoint of the efficient market theory the abnormally high positive returns found by Edmans (2011) are not expected to persist over time. Other studies have shown with comparable data that even if superior returns occur in the market periodically, the returns are not persistent (Bebchuk, Cohen & Wang 2013; Borgers, Derwall, Koedjik & Ter Horst 2013; Chordia, Subrahmanyam & Tong 2014). Bebhuk et al. (2013) reason that the positive results produced by their study were due to investors not having sufficient experience at the time to be able to forecast the expected difference in performance between well-governed and poorly governed firms. Nonetheless, the accuracy of the financial theories is debatable. The findings reported by Edmans (2011) easily qualify as long-run evidence of systematic superior returns. The data employed by Edmans has also been publicly available and easily attainable information throughout its existence which means that the superior returns were not due to lack of salient information.

This thesis performs a follow-up test to Edmans' (2011) study, and attempts to answer whether those superior returns persist when the dataset is replaced with a more recent set of data, and whether investors have learnt to value employee satisfaction as an intangible correctly. In order to produce superior returns, employee satisfaction needs to be beneficial for firm value and that benefit cannot immediately nor correctly be capitalized by the market. The methodology applied in this thesis follows Edmans (2011) methodology as closely as possible to allow a comparison of results. It is assumable considering the remarkable growth of interest in socially responsible investing and the attention that Edmans (2011) papers has received that the market has become in so much aware of the incorrect valuation of the companies' stocks included in the 100 Best Companies' list that the superior returns will not to be found in the empirical analysis section of this thesis.

1.1. The purpose of the thesis

The purpose of this thesis is to examine the positive relationship between employee satisfaction and stock prices discovered by Edmans in 2011 first from the point of view of financial theories and relevant literature, and then from an empirical perspective. Edmans uses the "100 Best Companies to Work for in America" list from years 1984 to 2009 as his main data, and at the start of this thesis there was additional data available for 10 more years. Following Edmans' methodology a portfolio of Best Companies is created with a more recent dataset of 2009–2018 to test in a similar manner whether abnormal positive returns still occur in the market

in association to employee satisfaction, or whether the superior returns reported by Edmans (2011) have vanished due to market learning.

1.2. Development of the hypothesis

As mentioned earlier, the theory, the literature and the evidence concerning employee satisfaction and its association with firm value is ambiguous. From the point of view of human relations, employee satisfaction has value-adding capabilities while the financial theory argues that the effect will not translate into equity prices, and if momentarily undervaluations occur, any capitalization opportunities will be drained due to market learning. However, Edmans' (2011) argues and proves that employee satisfaction has a positive effect of on firm value and the companies' stocks ranked as Best Companies in regard to employee satisfaction yield superior returns in the long run.

The results of our empirical tests in Section 5 of this thesis will be determined to a large degree by the market's ability to value intangibles correctly. In addition to Edmans (2011), Lev & Sougiannis (1996), Chan, Lakonishok & Sougiannis (2001), and others have detected a strong investor tendency to overlook intangible assets and value them incorrectly. In Edman's case, the poor incorporation of intangibles which he detects as the underlying reason for the undervaluation of the Best Companies' stocks, continues for several decades. However, in the light of modern financial theories and existing literature, which are discussed and reviewed further in Section 2 and 3 of this thesis, the initial expectation of this thesis i.e. the *null*

hypothesis of this thesis is that investing in a portfolio comprised of Best Companies collected from the list “100 Best Companies to Work for in America” does not produce superior returns.

1.3. The structure of the thesis

This thesis is structured as follows. Section 1 serves as an introduction to the topic of the thesis and provides a brief discussion about the motivation and development of the topic. Section 2 builds the theoretical framework for the thesis and Section 3 reviews a number of relevant studies concerning the topic. Section 4 describes the data applied in this thesis which is followed by a presentation of the applied methodology and empirical results in Section 5. Finally, Section 6 concludes the thesis reviewing the main results found in this study and provides further discussion.

2. THEORETICAL FRAMEWORK

The purpose of Section 2 of the thesis is to discuss the theoretical framework behind the hypothesis presented in Section 1. This section introduces the theory of efficient markets, modern portfolio theory, human relations theory, and the concept of socially responsible investing. The literature concerning the relationship between socially responsible investing and returns is reviewed in the following section of the thesis.

2.1. Efficient market theory

Capital markets play the main role in the allocation process of resources and effective ownership of capital. The efficient market hypothesis (EMH) assumes that stock prices reflect all the relevant information and therefore, the market cannot be consistently beaten without considerable risk-taking. The full information content of stock prices also implies that undervalued or overvalued stocks do not exist in efficiently functioning markets. (Fama 1970.)

The EMH is inarguably one of the most influential theories in finance and still a generally accepted explanation of how information affects stock prices. Other basic assumption of the EMH are that the market values prices correctly, and that on average investors make rational decisions. The random walk hypothesis (RWH) has a key role in explaining why investors fail to beat the markets. According to the RWH, price patterns are unpredictable, and that whenever new information is

released, the markets immediately absorb the information and fully interpret the information into stock prices. (Malkiel 2003.)

In reality, the information content of prices is not as perfect as the efficient market theory suggests. Fama (1970) recognizes these imperfections as well, and further develops different subcategories for market efficiency that are more applicable to the real-life capital markets. The weak form of market efficiency is absorbed by the semi-strong form of market efficiency, and the strong form of market efficiency contains both lower forms of market efficiency. This relationship is illustrated in Figure 1.

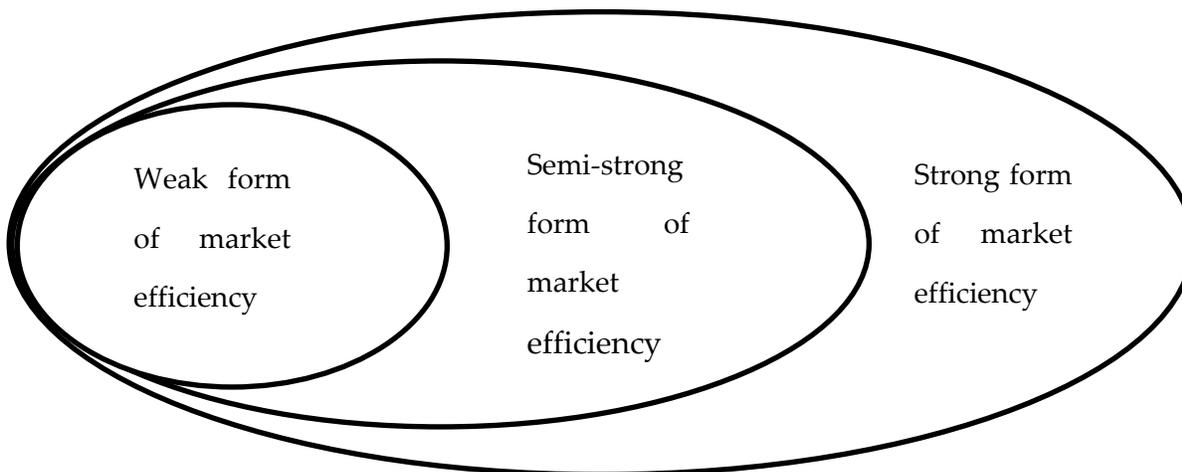


Figure 1. The three forms of market efficiency.

The weak form of market efficiency argues that the market cannot be consistently beaten by analyzing historical security prices. The weak form of market efficiency assumes that

the current prices already reflect the past information that is available to investors, and therefore predictable price patterns do not exist. The weak form however does not assume prices to be always correct thus acknowledging the appearance of occasional, temporary mispricing. The occurrence of anomalies is sometimes perceived as a contradiction to the efficient market theory. Nevertheless, in normal competitive market conditions investors learn quickly, and when an occurrence of an anomaly receives a sufficient level of attention so that it becomes public knowledge, the anomaly or mispricing tends to disappear soon after. (Fama 1970; Malkiel 2003; Bebchuk et al. 2013.)

The semi-strong form of market efficiency contains the same assumptions as the weak form with one exception. The semi-strong form presumes that current prices reflect not only information that can be derived from looking at historical prices, but also reflect all the information that is publicly available to investors. The semi-strong form acknowledges that security prices may not absorb all information immediately, but those momentary mispricings cannot be exploited by investors. (Fama 1970.)

Finally, the strong form of market efficiency expects security prices to reflect a combination of both public and private information. The strong form suggests that security prices are not only affected by generally acknowledged information but insider information as well. This implies that besides occasional strokes of luck, the market prices are correct on average and cannot be beaten systematically. The strong form of market efficiency is more theoretical than the other two forms and has been criticized for lacking real world applications. (Fama 1970.)

As it is with all theoretical frameworks, the EMH is also susceptible to frictions and criticism when re-examined through real life scenarios. A notable body of academic

literature is dedicated to the discussion of issues that contest the theory. Grossman & Stiglitz (1980) demonstrate that due to the costly, resource-requiring nature of information, markets can never be perfectly efficient. Lehmann (1990) finds significant return reversals in weekly security prices reflecting arbitrage opportunities, which he interprets as a violation of the EMH. Jegadeesh (1990) discovers strong predictable behavior in security prices, arguing against the EMH. Daniel & Titman (1999) criticize the idea by which investors are assumed to act rationally and to possess required abilities to observe, process and interpret pertinent information in an equal manner, and find the assumption unrealistic. Rather, they suggest that investors are more likely to be overconfident and affected by their personal biases. They introduce another alternative form of market efficiency, the “adaptive efficiency”, which acknowledges that behavioral biases and anomalies exist, but investors learn from past prices which makes these irregularities non-persistent.

Fama responds to the critique by reviewing in his 1998 paper a wide range of studies that find evidence against the EMH. He discusses in depth the applied methodology and the results of these papers, and strongly suggests that selecting an alternative method or sample period is the main cause for the non-anomalistic results. Fama argues that in market efficiency price overreactions and underreactions are on average equally likely to occur, and examining individual studies accompanied with results that in his opinion are debatable, are not to be interpreted as signals of market inefficiency. Moreover, he states the following:

“A problem in developing an overall perspective on long-term return studies is that they rarely test a specific alternative to market efficiency. Instead, the alternative hypothesis is vague, market inefficiency. This is unacceptable. Like all models, market efficiency (the hypothesis that prices fully reflect available information) is a faulty description of price formation. Following the standard scientific rule, however, market efficiency can only be replaced by a better specific model of price formation, itself potentially rejectable by empirical tests.” (Fama 1998: 284.)

Even if the evidence against the EMH discussed above does raises questions and doubts perhaps about the accuracy or real-world applicability of the theory, Fama (1998) makes a compelling case in support of the EMH. The body of literature concerning anomalies is vast, yet insufficient to abolish the merits that the EMH offers as a theoretical standpoint and a cornerstone in security pricing.

2.2. Modern portfolio theory

Modern portfolio theory (MPT) is a mathematical framework presented by Harry Markowitz in 1952. In his essay Markowitz introduces a portfolio-building model that allows investors to construct a portfolio that maximizes the expected return for any given level of risk. MPT suggests that instead of focusing on the risk and return relationship of individual assets, investors should consider the collection of individual investments as a portfolio and the proportion of different assets therein. One of the basic assumptions that the theory makes is that investors are risk averse by default. Whenever investors are given the option to choose between two

portfolios with different levels of risk, investors require a higher level of expected return for the riskier portfolio as a compensation for bearing the higher level of risk. (Markowitz 1952.)

According to MPT, investors can adjust the level of risk of the portfolio by selecting a combination of mutually uncorrelated assets in the portfolio. This process that is known as diversification is the core of the modern portfolio theory. It enables investors to expect the same level of return as before but with a lower level of risk. The minimum-variance frontier in Figure 1 represents all available investment opportunities with the lowest possible variance, and the corresponding expected return. Portfolios lying on the minimum-variance frontier, i.e. the efficient frontier, and above offer optimal portfolio returns. The efficient frontier marks the area that provides the highest possible return for any given level of risk, from which investors can choose accordingly to their preferences. (Bodie, Kane & Marcus 2018: 208-209.)

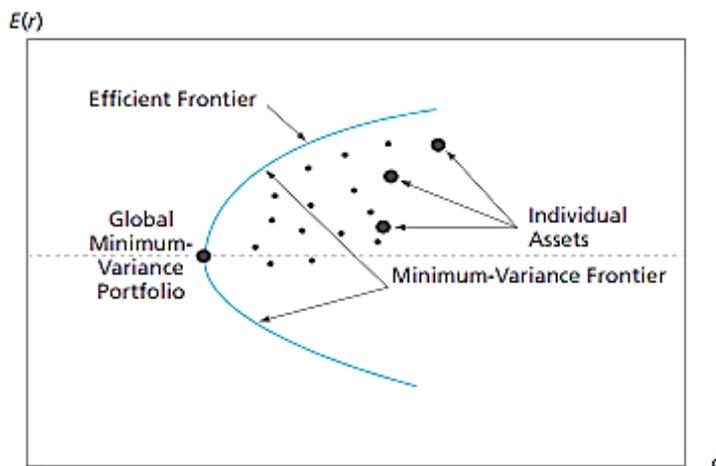


Figure 2. The efficient frontier. (Bodie et al. 2018: 209)

The modern portfolio theory is centered around the idea of investors being able to maximize their portfolio returns while minimizing the total risk. However, the theoretical model is built on the assumption that investors are free to choose any assets in their portfolio and are not subjects to any kind of limitations which is not often the reality. For instance, many institutional investors are bound by regulations that prohibit them from taking short positions which automatically narrows the selection range of available assets. Many investors also have self-imposed constraints which may exclude certain industries, countries and firms from their investment pool. These type of investment preferences are referred to as *socially responsible investing*. The implications of socially responsible investing are discussed later in this section of the thesis. Limiting the investment pool in this manner however diminishes the portfolio diversification opportunities which theoretically always leads into a suboptimal portfolio composition, thus compromising the portfolio's earning potential in the form of increased level of risk or lower returns. (Bodie et al. 2018: 211.)

2.3. Human relation theories

The human relations movement in organization theory is generally seen to have developed as a response to the precedingly prevalent scientific management philosophy i.e. taylorism. The conventional managerial approach to leadership at the time was solely fixated on the measurable outcomes of productivity, and enforcing productivity by dividing work into deskilled tasks, occasionally offering low financial compensation as an incentive. A key-feature in the output-centric

management approach was to not differentiate between human labor and machine labor which historically often resulted in alienation and discontentment among employees and frictions with labor organizations. (Bruce & Nyland 2011.)

The long-running series of Elton Mayo's and Fritz Roethlisberger's experiments starting in 1924 at the Western Electric's Hawthorne power plant are generally regarded as the starting point of a new era in organization management theory and the beginning mark of the human relations theory. The original goal of the experiments was to examine the effect that different lighting conditions had on industrial workers' productivity. However, Mayo and his team quickly discovered that physical working conditions had very little to no effect on the worker productivity, but employees were highly responsive to the social aspects of their work. For example, having a role as a part of a team or a social group, receiving attention from superiors, and recognition for their work appeared to have far greater influence on the workers' productivity. These landmark studies which later came to know as the Hawthorne Studies or Experiments, conclude that employee satisfaction is mainly driven by the socio-psychological factors of the work, and applying a human-centered management style rewards in higher levels of employee productivity. (Shafritz, Ott & Jang 2005: 158-166; Sonnenfeld 1985.)

The human relations movement developed further during the following decades. Abraham Maslow (1943) studies extensively the drivers of human motivation gaining sustainable inspiration from Mayo's work. According to Maslow's theory humans are affected by a multitude of hierarchical wants, needs and drives, and that companies and organization can profit from them by setting up "social institutions

which will encourage individuals to be synergic with each other” (Maslow 1971: 213) to enable “the goals of the individual merge with the goals of the organization” (Maslow 1971: 237). Maslow envisions that individuals can seek development and personal growth through the tasks they perform in communities, teams, groups and organizations. Integrating the needs of individuals into the organization’s work culture ideally reforms employees into more altruistic and less selfish individuals who identify themselves strongly through performing the tasks given to them (Maslow 1965: 122).

McGregor’s work shares many similarities with Maslow’s model of individuals’ hierarchical needs. McGregor recognizes physiological and safety needs at the bottom of the hierarchy upon which other needs of social-, egoistic- and self-fulfillment are built. Concurring Maslow’s idea, McGregor argues that when the very basic low-level needs are satisfied, individuals need more engaging tasks that continue to satisfy their needs on another level in order to stay motivated. In other words decent wages, good working conditions and stable employment situation in the work place produce employee satisfaction only when those conditions are not met yet. Once the needs on that level are met the motivational emphasis shifts onto higher levels of needs. According to McGregor the managers’ main role is to create conditions where employees can discover and cultivate their skills and potential while aligning the goals of individuals’ personal growth with those of the organization’s. McGregor calls this view as “Theory Y” to mark a shift from conventional managerial responsibilities of arranging physical resources and exercising authoritative control over the organization (“Theory X”) giving an

opportunity for employees to exercise self-control and self-direction. (McGregor 1966: 240; Shafritz et al. 2005: 179-184.)

2.4. Socially responsible investing

The origins of socially responsive investing can be traced to the early 1800s where several religious groups have been documented to incorporate certain socially conscious criteria in their wealth management practices to ensure that their behavior remained in harmony with their religious beliefs. Even though the origins are sometimes contested, the reverence for socially responsible wealth management practices among many religious denominations are still in place. The modern perception of what is generally considered as socially responsible investing today stems from the rising political discontent in the US, global civil rights confrontations, and gender equality issues in the 1960s and 1970s. The continuous rise of public interest and demand towards improvements in labor conditions, environmental issues and socially conscious corporate practices over the following decades expanded onto the financial markets as investors grew increasingly critical of their support of questionable industries, institutional investors leading the way. (Schueth 2003.)

Socially responsible investing (SRI) is closely connected and often assimilated with the concept of corporate social responsibility (CSR). The European Commission defines CSR as “a concept whereby companies integrate social and environmental concerns in their business operations and in their interaction with their stakeholders

on a voluntary basis” (Commission of the European Communities, 2001). CSR is often used to describe firm-level engagement in these matters while SRI (sometimes also referred to as ethical investing) is used when the topic is examined from a larger perspective. Socially responsible investing often employs some environmental, social and corporate governance (ESG) criteria and either positive or negative screens. Negative screens are intended to filter out all companies that operate in controversial industries, while positive screens rely on companies that have received the highest ratings based on their socially responsible behavior disregarding the industry. (Kempf & Osthoff 2007; Renneboog, Ter Horst & Zhang 2008a.)

Over the past few decades the interest in SRI as well as the amount of assets invested in socially responsible funds have grown substantially. The United States Social Investment Forum’s “Report on US Sustainable, Responsible and Impact Investing Trends” (2018) has recorded a compounded annual level growth rate of 13.6% over the 1995–2018 period on the US-domicile assets invested in the sustainable and responsible investment universe. According to US SIF’s report the net total of SRI assets invested under professional management in the US at the beginning of 2018 was \$12.0 trillion meaning that one of every four dollars was invested in funds applying a responsible investment strategy. Interestingly, during the financial crises in 2007–2009 when the development of investments in practically all other assets were stagnant, the amount of dollars invested in SRI kept growing at a steady pace which signals a strong public support in the growing SRI trend. (US SIF 2018.)

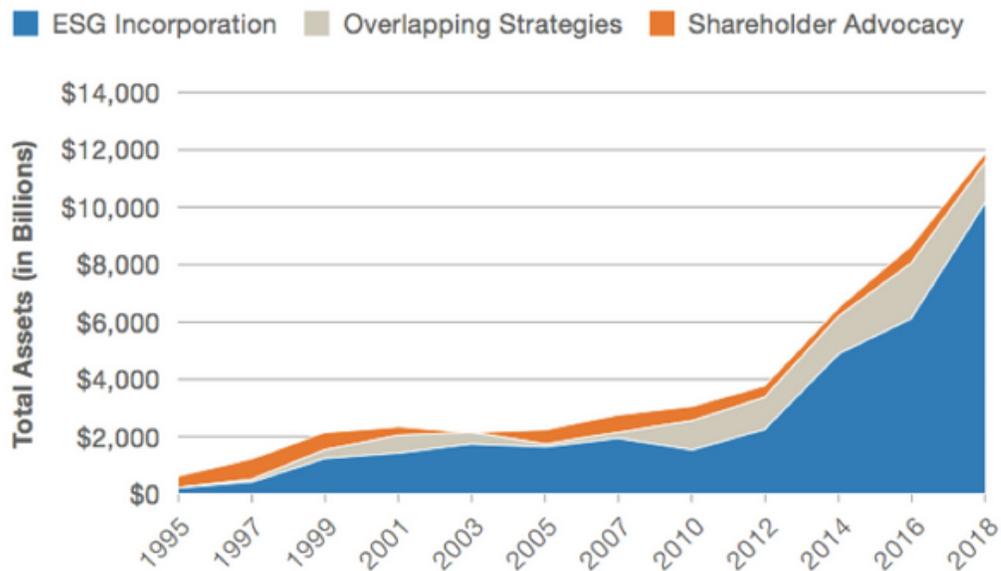


Figure 3. Growth of responsible investing in the United States 1995–2018.

The rapid growth of SRI trend is very important to the development of the initial hypothesis described in Section 1. The topic has received an increasing amount of attention in the academic financial journals which is a quintessential contributing factor in market learning that will be discussed more in depth in the Section 3.2. of this thesis. A study by Gompers, Ishii & Metrick (2003) was the first paper to publish a strong evidence about the positive relationship between stock performance and CSR, and the study has been particularly influential in inspiring other researches to contribute to the CSR and SRI literature. However, further examinations have shown that the superior returns on CSR fund or portfolios tend to disappear over time (Bebchuk et al. 2013; Core, Guay & Rusticus 2006; Borgers et al. 2013).

3. LITERATURE REVIEW

The Section three of this thesis expands the theoretical framework by reviewing a range of research papers from three relevant branches of literature concerning the topic of this thesis: corporate social responsibility (CSR), valuing of intangibles, and market learning. All three branches are proven to have a close connection to employee satisfaction, and the following chapters inspect that relationship further.

3.1. CSR and value

The relationship between CSR and returns has been studied extensively over the past few decades but the evidence found in these studies is mixed at its best. The literature review in this part of Section 3 can be roughly divided into three categories: studies that report a negative relationship, studies that discover a positive relationship, and studies where the results are inconclusive. The most relevant papers concerning the topic of the thesis are reviewed here.

Renneboog, Ter Horst & Zhang (2008b) conduct a wide-scale global research on ethical and socially responsible mutual funds and discover that in certain regions investors appear to pay a price as ethical funds show strong underperformance. The comparison of alphas however shows that the differences are not in fact significant with the exception of few countries for which the alphas are considerably lower (4%–7% per annum) than for their respective peers. Geczy, Stambaugh & Levin (2005) perform a series of tests on socially responsible mutual funds that show similar

implications. Geczy et al. (2005) discover that allocating investments in socially responsible mutual funds can have economically significant costs depending on the investor's pricing model beliefs, the fund-manager's skills, and investment proportions.

Brammer, Brooks & Pavelin (2006) investigate the relationship between CSR and stock returns in the UK market, and discover a negative link between them. The results of their study suggest that firms with higher level of corporate social performance experience underperformance while the lowest level firms outperform the market. Their conclusion is that some corporate social activities can be damaging to shareholder value. Hong & Kacperczyk (2009) expand the research to examine the stocks of companies involved in industries that are generally publicly viewed as socially irresponsible (tobacco, alcohol and gambling) identifying these stocks as "sin stocks". Their study detects a higher level in expected returns for these less sought-after stocks supposedly due to being largely disregarded by many major groups of investors.

Bhandari & Javakhadze (2017) examine the behavior of CSR strategies and the relationship with firm's resource allocation efficiency. The results of their study suggest that CSR investment strategies can be counterproductive to shareholder wealth in three cases: first, when preferring to invest in CSR creates a trade-off of resources that could be deployed in identifying other, potentially more profitable investment opportunities, second, in case of self-serving, agency-conflicted managers, and third, if firms are willing to forego profits in order to promote social goodness.

Auer (2016) on the other end shows evidence that investing in a socially responsible manner does not necessarily imply sacrificing performance, and that including negative screens in portfolios can even in fact yield outperformance. He however acknowledges that adding some positive screens may cause the portfolio to underperform due to inadequate diversification.

Buchanan, Cao & Chen (2018) document a relationship between CSR activities and firm value but discover that the causal effect of that relationship is heavily impacted by influential institutional ownership. Both presence of the influential institutional ownership and lack of presence as well as economic conditions are revealed to be influential. Buchanan et al. find that firms with high-level of CSR activities exhibit higher firm value in a pre-crisis period, but the effect becomes negative during the crisis. Interestingly, the effect of CSR activities is significantly less pronounced in a pre-crisis period for firms with a high level of institutional ownership, yet during a crisis the CSR-firm value relationship stays positive unlike in firms with low level of institutional ownership. (Buchanan et al. 2018.)

Bauer, Koedjik & Otten (2005) compare ethical and conventional mutual funds, and they find no significant difference in their financial performance. Interestingly, on a shorter sub-period in the 1990's the ethical funds perform significantly worse than the conventional funds, but the differences disappear during the following sub-period which Bauer et al. interpret as a sign of market learning.

Groening & Kanuri (2013) notice that corporate social events (CSE) which can be positive such as corporate philanthropy, job creation, and promoting education, or

negative such as pollution or staff layoffs, cause significant short-term effects among the shareholders, but the implications of their results are incongruent. In about 50% of the cases positive CSE affects the return negatively and vice versa. The investors react strongly to CSE news but they do not consistently reward or penalize the firms. Aouadi & Marsat (2018) receive similar mixed signals as they discover that ESG controversies in some cases seems to increase the firm's market value which appears to be caused by the ability to capture and redirect investor attention.

On the other hand, there are several papers that have shown that CSR can have a positive effect on firm value. A famous study by Gompers et al. (2003) has been very influential in motivating other CSR studies. Their governance provision research detects a strong positive correlation between stock performance and corporate governance practices. Gompers et al. (2003) however restrain from making any definite conclusions about the causative nature of the relationship and whether poor governance causes bad performance, even if the evidence appears to point in that direction.

Derwall, Guenster, Bauer & Koedijk (2005) compare the performance of a highly "eco-efficient" and less "eco-efficient" portfolios where eco-efficiency is defined as the ratio of a company's ability to create economic value to the amount of waste they produce. They document a strong outperformance for the most eco-efficient portfolio, and the results stay robust even when they are controlled market sensitivity, investment style and industry bias.

Kempf & Osthoff (2007) study the effect that using a range of social responsibility criteria has on investment performance, namely whether SRI screen-based trading style leads to abnormal returns. The comparison between portfolios of high SRI rating and low SRI rating reveals that the high-rated portfolio distinctly outperforms the low-rated portfolio on a period of 1992-2004. Later Derwall, Koedijk & Ter Horst (2011) make similar observations that certain types of screen combined with certain initial investment style does yield abnormal profits, but the effect does not persist in the test of time.

Interestingly, Nguyen, Kecskés & Mansi (2020) side in favor of CSR increasing shareholder value as they find significantly higher stock valuations for firms that invest in CSR on a long-term. Nguyen et al. argue that the higher valuations are the result of lower volatility of profitability. Jeong, Jeong, Lee & Bae (2018) also find evidence supporting long-term strategic CSR activities. They show that companies exercising permanent CSR activities are more likely to have a persistent increase in their earnings whereas companies that only engage in CSR activities temporarily are expected to be negatively impacted by them. The results imply that permanent CSR activities are positively linked to future financial performance and firm value.

Flammer (2015) investigates from a managerial viewpoint whether CSR practices lead to superior financial performance and finds support for a positive link. The evidence also suggests that adopting certain CSR proposals also affects sales growth and labor productivity positively. Flammer's (2015) study suggests that improving employee satisfaction by implementing CSR activities translates into share prices and into shareholder value.

Lins, Servaes & Tamayo (2017) study the relationship between CSR activities and firm performance during the latest financial crisis. Lins et al. (2017) discover that building social capital – namely trust – through a high level of activity in social responsibility is remarkably profitable during the crisis period in comparison to firms with low level of CSR activity. In a period when a lack of trust is the predominant sentiment in the market, highly active firms outperform less-active firms by at least four percentage points, as well as earn higher levels of profitability, margins, sales growth, and employee productivity. Even if the differences in stock performance between high CSR activity and low CSR activity firms are leveled in the post-crisis period, collecting social capital still pays off as some of the benefits persist even after the crisis.

3.2. Market learning

The influential paper by Gompers et al. (2003) has also motivated the paper of Bebchuk et al. (2013) who investigate the relationship between governance and abnormal returns essentially providing a follow-up study to Gompers et al. (2003). Bebchuk et al. (2003) replicate the investment strategy employed by Gompers et al. (2003) while replacing the data set with the subsequent sample period (2000–2008). Their initial expectation which they define as “the learning hypothesis” anticipates the superior returns to disappear once the markets learn to differentiate between well governed and poorly governed firms, and to adequately value them. Bebchuk et al.’s (2013) findings confirm those expectations and show that as the number of

published articles concerning corporate governance in the media and the general awareness of institutional investors rose, the abnormal returns disappeared accordingly. Core et al. (2006) detect a similar disappearance of abnormal returns, yet the conclusions that can be drawn from a four-year period (2000-2003) are more limited. Bebchuk et al. (2013) however make a remark that while the focus of their study was in governance-based indices, the market learning did not necessarily concern the indices per se but happened rather as a byproduct of learning to estimate the effects of governance practices correctly. Even though the general awareness of CSR matters has grown steadily over the decade, it is still uncertain whether employee satisfaction as a topic has received a sufficiently large amount of attention from the market to reject the null hypothesis of this paper.

Borgers et al. (2013) expand the investigation of CSR and returns onto institutional investors and the effect of including ESG criteria in the portfolio construction process. Institutional investors generally believe that improving stakeholder relations yields long-term economic benefits that are not captured in companies' financial statements nor correctly valued by the market. Borgers et al. however argue that "Even if better stakeholder relations are associated with higher future earnings in a manner that the market has not properly understood, economic logic predicts that such information provides investors with a competitive advantage *in the short-run, but not in the long-run.*" (Borgers et al. 2013:160). By using an annual stakeholder index, they study how predictive stakeholder information is of future earnings announcement returns. While the study does find a link between stakeholder information and risk-adjusted returns due to errors in investors forecasts and thus unexpected earnings, the findings also confirm that in the long run the market learns

to assess such information properly, and the superior returns disappear as a result of that learning. Chordia et al. (2014) also draw a similar conclusion as they documented a decrease in anomaly-based trading strategies profitability over time

3.3. Intangible assets and firm value

The idea of considering employees as an organizational key asset has received support from many academics. Rajan & Zingales (1998), Carlin & Gervais (2009), and Berk, Stanton & Zechner (2010) all acknowledge the importance of human capital and its role as an essential part in the company's core. More recently Huang, Li, Meschke & Guthrie (2015) study the connection between family firms, employee satisfaction and firm value, and find indications that family firms who tend to promote human-capital-centered corporate culture are associated with higher firm performance. Moreover, the importance of corporate culture is underlined in another study by Guiso, Sapienza & Zingales (2015) that shows a strong positive link between integrity as a firm culture, i.e. acting responsibly, and firm value. The conclusion of Guiso et al. (2015) is that corporate culture is not merely a question of conscience but it in fact makes also an economic difference in the firm.

The topic of intangible assets, such as human capital, and their valuation has been covered in several studies and discussions. For example, Lev & Sougiannis (1996) discover a 4.6% abnormal return on R&D capital which can be a potential indicator of systematic mispricing. Chan et al. (2001) observe even higher excess returns (6.1%) for firms belonging in the top quintile of R&D to equity market value ratio.

Chan et al. (2001) also detect a similar relationship between advertising and stock prices. Deng, Lev & Narin (1999) notice that companies operating in science and technology industries generally have a low level of publicly disclosing information about their innovation-oriented activities. The inadequate amount of available information affects the investors' capability to correctly assess the companies' future earning-capabilities. The results of Deng et al. (1999) imply that by scrutinizing patent citations investors would have been able to earn abnormally high returns. Aboody & Lev (1998) make similar conclusions on software developments, and Jiao (2010) finds a positive correlation between the welfare score and firm value identifying the intangibles, which in his case are firm's success in employee relations and environmental issues, as the main drivers of the positive valuation effect.

These aforementioned studies along with Edmans (2011) accentuate the same weakness that investors seem to have with evaluations of intangible assets. The theory reviewed in chapter 2 suggests that abnormal returns do not appear in the modern, efficient markets and whenever anomalies occur, they do not endure in the test of time, yet the reality is not quite as unambiguous. The results documented by Edmans (2011) should not have occurred in the first place according to the efficient market hypothesis as the annual listing of Best Companies has been publicly available since 1984, and the information should have been fully absorbed by the markets already at that point. It is assumable that some level of market learning has taken place since Edmans (2011) publication but as has been discussed, the economic significance of intangibles is hard to incorporate in economic evaluations, particularly during tumultuous times as shown by Lins et al. (2017).

4. DATA AND SUMMARY STATISTICS

The main source of data employed in this thesis is collected from the annually published “100 Best Companies to Work for in America” list. The list has been available to the public since 1984 and was originally released in book form by Levering, Moskowitz and Katz. From 1998 onwards the Fortune magazine has been publishing the full list annually in their first issue of the year. The “100 Best Companies to Work for in America” survey is conducted by the Great Places to Work Institute which is an independent and separate organization. For the credibility of the results, it is important that the magazine is not involved in the survey or evaluation process of the companies. Having another party to conduct the reviewing process is likely to increase the credibility of the survey as the reviewing process is unlikely to be biased or influenced by the candidate companies if for example one of the candidates were a major advertiser in the Fortune magazine (Reuter & Zitzewitz 2006).

The Great Place to Work Institute uses two types of data to rank the candidate companies. Two-thirds of the data is gathered directly from the companies’ employees in a questionnaire. Employees from all levels of the firm are asked to anonymously answer 57 questions concerning attitudes towards management, work satisfaction, camaraderie, fairness and equality, among few other altering topics, and the results are communicated directly to the Institute. The general response rate in the survey is around 60%. The remaining one-third of the data is provided by the Institute which evaluates each company based on factors such as demographic makeup, pay and benefits programs, and firm culture. The companies receive scores

in five spectrums total: credibility, respect, fairness, pride, and camaraderie, which are further divided into smaller subsections. (Edmans 2011: 625)

The list is published each year in January, and the stock prices of those companies included in the list are collected from February to prevent the prices being affected by short-term announcement-drift effects, and to only reflect the long-term effects. To ensure that the results are not affected by any individual events, the data is collected from a ten-year period starting in 2009 and ending in 2018. As the purpose of this thesis is to investigate whether the abnormal returns documented by Edmans (2011) still exist in the market, the data collection and portfolio construction imitates his methodology as closely as possible. Roughly two-thirds of the listed 100 Best Companies (from here on referred to as BCs) are privately owned and do not have stock price data available. Also, some companies that were publicly listed at the time of publishing the 100 Best Companies list have since then undergone a ticker symbol change due to a merger or an acquisition, and the historical stock price data is no longer available. The stock returns for the available BCs are collected from the Datastream database.

To emulate Edmans' (2011) paper, the starting date for the portfolio construction is February 1, 2009. In order to compare the results with Edmans (2011), both equal-weighted and value-weighted portfolios are constructed. As shown in Table 1, in February 1, 2009 the stock returns were available for 36 BCs and the returns are calculated through January 2010. The portfolios are revised in February 2010 to reflect the updates in the 100 BC list shown in Table 1, and this process is repeated until January 2019. If a BC at the time of the annual construction is private and goes

public later during that year, the BC is added to the portfolio from the first full month of stock price data. As illustrated in Table 1, the BCs tend to stay listed for several years indicating that employee satisfaction is a rather persistent attribute, yet not permanent. It is noticeable however that the number of available BCs is much lower than for Edmans (2011) where there are 39 to 78 BCs available per year and 58 BCs available on average per year.

Table 1. Summary statistics.

The second column shows the number of BCs that have historical stock prices available in Datastream for at the time of constructing the portfolio. The third column indicates the number of new companies appearing on the list that were not featured on the previous year's list. The fourth column shows the number of companies dropped from the list.

Year of list	Best Companies	Added	Dropped
2009	36		
2010	35	6	7
2011	36	6	5
2012	37	3	2
2013	35	3	5
2014	37	7	5
2015	34	6	9
2016	32	3	5
2017	36	6	2
2018	40	6	2

Using long-run stock returns have three major benefits. First, they are less prone to issues with reverse causality than profits or valuation ratios. A well-performing firm could show a positive relationship between satisfaction and valuation or profits if the performance was the reason for the satisfaction, but it should not produce

superior returns since the profits would already be incorporated in the current stock price. Second, the link between stock returns and shareholder value is more direct than it is with profits as stock returns offer a more diverse set of ways to benefit the shareholders. Third, using valuation ratios or event-study returns have a high risk of underestimating the relationship with satisfaction as shown by the evidence in chapter 2 of this thesis how the market has failed to correctly value and incorporate intangibles on multiple occasions. (Edmans 2011.)

Table 2. Summary characteristics.

Summary characteristics for the BCs that have data available in Datastream at the time of constructing the portfolios.

Year of list	Obs.	Mean Price (\$)	Median Price (\$)	Mean Market Cap (bn \$)	Median Market Cap (bn \$)	Std. Dev.	Min. Price (\$)	Max. Price (\$)	Min. Market Cap (bn \$)	Max. Market Cap (bn \$)
2009	36	26.09	16.36	19.44	8.23	29.83	4.34	170.45	0.02	158.52
2010	35	43.07	30.11	33.72	16.53	47.14	4.75	266.77	0.10	249.17
2011	36	54.48	42.11	35.79	17.20	53.81	7.73	305.82	0.15	235.20
2012	37	48.16	37.00	35.10	15.43	46.19	8.44	290.70	0.15	250.80
2013	35	63.14	41.94	40.92	18.63	69.28	5.05	388.18	0.09	233.95
2014	37	68.63	47.47	45.41	17.29	89.52	8.54	567.26	0.15	317.23
2015	34	90.09	62.69	31.28	18.19	104.92	17.90	532.20	0.35	152.71
2016	32	95.23	52.32	32.45	13.26	144.56	4.33	770.77	0.21	225.51
2017	36	105.61	71.62	43.87	28.74	139.51	4.77	815.24	0.19	258.27
2018	40	107.51	81.50	53.42	35.26	84.48	4.76	345.79	0.14	240.40

Table 2 has the summary characteristics of the BCs that are included in the dataset of this thesis for each year. The BCs have a notably large mean (median) market

value of \$19bn (\$8bn) already in 2009, and it keeps growing significantly over the 10-year period. The minimum market value column shows that some smaller firms are also included in the BC portfolio, but the mean and median values show that those smaller firms are more of an exception. The values in the standard deviation column are also very high which speaks in favor of constructing a value-weighted portfolio in addition to an equally weighted portfolio.

Table 3. GICS sector distributions.

The distribution of BC portfolios' proportions across the MCSI's Global Industry Classification Standard (GICS) sectors. The BCs are categorized according to current sector classifications.

Year of list	Energy	Industrials	Consumer Discr.	Consumer Staples	Health Care	Financials	Inform. Tech.	Comm. Services
2009	13 %	3 %	22 %	6 %	6 %	13 %	31 %	6 %
2010	11 %	3 %	20 %	14 %	3 %	14 %	31 %	3 %
2011	11 %	3 %	22 %	8 %	6 %	14 %	33 %	3 %
2012	11 %		24 %	5 %	5 %	16 %	35 %	3 %
2013	11 %	6 %	26 %	3 %	6 %	17 %	29 %	3 %
2014	11 %		27 %	3 %	5 %	19 %	33 %	3 %
2015	6 %		26 %	3 %	9 %	18 %	32 %	6 %
2016	3 %		28 %		13 %	19 %	31 %	6 %
2017	3 %	3 %	31 %		11 %	19 %	28 %	6 %
2018	5 %	2 %	25 %		13 %	23 %	28 %	5 %

Table 3 presents the proportions of the portfolios allocated across GICS sectors. The highest proportions are distributed to information technology, consumer discretionary, and financials. Three of the GICS sectors (materials, utilities, and real

estate) are omitted from the table as they receive zero funds from the BC portfolio. The GICS sectors are further divided into industry groups and industries but the sector classifications are used here to avoid the spread becoming too wide for illustrative purposes. The sector names have had some changes over the years and companies have adjusted their classifications accordingly. The sector names and company classifications are shown here as they are at the time of writing this thesis. Table 3 shows that the sector proportions stay relatively the same through the whole sample period, and that the portfolios are not necessarily well-diversified.

The Best Companies list makes a good measure for several reasons. Measuring the effects of employee satisfaction on firm value is challenging. Other previously used satisfaction measures from CEP (Center for Effective Philanthropy) and KLD are based on observational data such as representation which are easier to manipulate and are therefore less informative. The BC list addresses these concerns as it is a thoroughly constructed survey among the employees by an independent institution, and the results receive widespread exposure from management, shareholders, employees, and the media. The high level of visibility and accessibility to all investors as well as the high level of assumable accuracy makes the list a great subject for studying the market's ability to assess intangibles, and a salient source of information.

5. METHODOLOGY AND EMPIRICAL RESULTS

To calculate the risk-adjusted returns, the thesis employs the same methodology as applied in Edmans' (2011) study, i.e. the Carhart four-factor model. The four-factor model is an extension of the popular Fama-French three-factor model (Fama & French 1996) used widely in asset pricing. To better explain the cross-sectional variations of portfolio returns, Carhart adds a momentum factor discovered by Jegadeesh & Titman (1993) to his model. According to Carhart (1997), including the momentum factor, which is essentially a portfolio of one-year winner stocks minus one-year loser stocks, reduces the average pricing errors. The four-factor model is often used in CSR or SRI related research, most relevant to this thesis by Bebchuk et al. (2013), Bauer et al. (2005), and Borgers et al. 2013 in addition to Edmans (2011). The four-factor model is fitted in the following OLS regression:

$$(1) R_t = \alpha + \beta_{MKT}MKT_t + \beta_{HML}HML_t + \beta_{SMB}SMB_t + \beta_{MOM}MOM_t + \varepsilon_{it}$$

where R_{it} is the return on the constructed portfolio of BCs in month t in excess of the risk-free rate, α denotes the intercept, MKT_t , HML_t , SMB_t , and MOM_t are respectively the returns on the market factor (market portfolio minus the risk-free rate), value factor (a portfolio of high book-to-market stocks minus low book-to-market stocks), size factor (portfolio of small stocks minus big stocks), and momentum factor, and finally ε_{it} captures the standard error. The data for the factors is taken from Kenneth French's (2020) data library, similarly to Edmans (2011). Standard errors are calculated with Newey West (1987) allowing ε_{it} to be heteroskedastic and serially correlated.

Table 4. Risk-adjusted returns.

Monthly returns to a portfolio comprised of the “100 Best Companies to Work For in America” list on the four Carhart (1997) factors. Panel A presents the regression results for the equal-weighted portfolio and Panel B presents the results for the value-weighted portfolio. The alpha captures the risk-adjusted returns. t -Statistics are reported in parentheses. The sample period is February 2009–January 2010.

<i>Panel A: Equal-weighted portfolio</i>		
α	-0.10 (-0.60)	
β_{MKT}	1.04 (22.69)	***
β_{HML}	-0.10 (-1.19)	
β_{SMB}	0.16 (2.28)	**
β_{MOM}	-0.20 (-2.84)	***
N	120	
<i>Panel B: Value-weighted portfolio</i>		
α	-0.35 (-1.46)	
β_{MKT}	1.12 (24.23)	***
β_{HML}	-0.17 (-2.11)	**
β_{SMB}	-0.21 (-3.85)	*
β_{MOM}	-0.03 (-0.60)	

***: Significant at the 1% level; **: Significant at the 5% level; *: Significant at the 10% level.

The results for the monthly regression shown in Table 4 conform with the initial expectations of this thesis as the BC portfolio does not generate positive excess return but instead, both weighing methods produce negative returns. The equal-weighted portfolio reported in Panel A has an alpha of -0.1% monthly below the risk-free rate (-1.2% annually), and the for value-weighted portfolio reported in Panel B the alpha is -0.4% monthly (-4.1% annually) yet the intercept is found insignificant in both cases. The returns in Table 4 differ from the findings reported by Edmans (2011) in an expected way: the magnitude of the coefficients remains approximately the same, particularly for the equal-weighted portfolio, but the superior returns disappear over time, and the equal-weighted portfolio beats the value-weighted portfolio.

In Panel A the negative alpha is explained by three of the four factors. The market factor and the momentum factor are both highly significant at the 1% confidence level. The market factor β_{MKT} has a coefficient of 1.04 which implies that the market's movements are very closely followed by the BC portfolio's returns. The coefficient for the size factor β_{SMB} is 0.16 and significant at the 5% level indicating that the portfolio returns are partially driven by the outperformance of small cap firms in comparison to large cap firms. The momentum factor's β_{MOM} coefficient is -0.20 and as a highly significant factor it strongly affects the portfolio returns to underperform. The coefficient for the value factor β_{HML} is insignificant therefore failing to explain the portfolio returns.

For the value-weighted portfolio shown in Panel B, the significance for the latter two is reversed and β_{MOM} becomes insignificant while β_{HML} is significant at the 5% level

of confidence, and the coefficient is -0.17. This indicates a bias in the portfolio towards growth stocks, and the underperformance of the BC portfolio is explained to a degree by the underperformance of growth stocks. In Panel B the coefficient for β_{MKT} remains highly positive and significant (1.12 at the 1% level), whereas for β_{SMB} the coefficient is negative and highly significant (-0.21 at the 1%) implying that the returns in the value-weighted portfolio are negatively affected by a larger proportion of small cap stocks' underperformance. Both equal- and weighted portfolios have a reasonably high adjusted R-squared value (0.83 and 0.80 respectively) which indicates that the model explains the portfolio returns rather well.

To examine the portfolio returns for their robustness, an industry-matched portfolio is created using the Fama-French (1997) 49-industry classification benchmark which contains monthly returns for 49 industry portfolios. The data for this is available on Kenneth French's (2020) Web site, and the data is similarly used by Edmans (2011). The industry-adjusted portfolio is created by determining the industry weights first for each BC portfolio year, and then matched with the 49-industry returns. The regression model introduced in the section 5.1. is run again where R_{it} is the monthly BC portfolio returns minus the monthly industry-matched portfolio returns instead of the risk-free rate. Running the model against an industry-matched benchmark allows to inspect whether the BC portfolio's returns are driven by the over-all performance of any specific industries.

The results of the regression against industry-matched benchmark in Table 5 show that the alphas for both equal- and value-weight portfolios are slightly less negative

but remain insignificant (-0.06 and -0.31 respectively). For the equal-weight portfolio, β_{MKT} and β_{MOM} stay strongly significant but the coefficient for the market factor is noticeably smaller which indicates that the industry-adjusted returns are much less affected by the market than the returns of the equal-weight BC portfolio. β_{SMB} however becomes insignificant while β_{HML} becomes moderately significant. For the value-weight portfolio the factors do not alter much apart from the market factor that follows the same pattern as reviewed earlier i.e. the coefficient becoming less pronounced and the returns less influenced by the market. Based on the findings presented in Table 5 it appears that the BC portfolio returns are to some extent driven by the underperformance of the industries where the BCs operate, and more importantly that the BC portfolio not only follows closely but amplifies the market's movements, as indicated by the highly positive and significant reported coefficients for β_{MKT} .

The negative returns produced by the BC portfolio validate the initial hypothesis and show that superior returns for BCs reported by Edmans (2011) are not persistent over time even if employee satisfaction as a characteristic may be. The results of the model support the claims of Bebchuk et al. (2013) and Borgers et al. (2013) as well as conform with the efficient market theory that market learning does in fact take place, and the undervaluation disappears in the long run. In this case the investors seem to have learnt to incorporate employee satisfaction into equity prices which is not surprising as the amount of media attention and investor interest towards CSR as well as the number of academic papers on the topic has substantially grown over the years.

Table 5. Risk-adjusted excess returns over the industry-benchmark.

Monthly returns of the BC portfolio on the four Carhart (1997) factors. Panel A presents the regression results for the equal-weighted portfolio and Panel B presents the results for the value-weighted portfolio. The dependent variable is the BC portfolio return minus the industry-match portfolio return. *t*-Statistics are reported in parentheses. The sample period is February 2009–January 2010.

<i>Panel A: Equal-weighted portfolio</i>		
α	-0.06 (-0.38)	
β_{MKT}	0.21 (3.48)	***
β_{HML}	-0.15 (-1.70)	*
β_{SMB}	0.11 (1.39)	
β_{MOM}	-0.21 (-4.08)	***
<i>N</i>	105	
<i>Panel B: Value-weighted portfolio</i>		
α	-0.31 (-1.42)	
β_{MKT}	0.28 (5.97)	***
β_{HML}	-0.22 (-2.68)	***
β_{SMB}	-0.26 (-3.90)	***
β_{MOM}	-0.04 (-1.26)	

***: Significant at the 1% level; **: Significant at the 5% level; *: Significant at the 10% level.

The results of this empirical test may differ from Edmans' (2011) results for few other reasons too. The datasets between this thesis and Edmans' are not entirely coequal since his dataset covers 25 years and has a considerably higher ratio of publicly listed BCs to total count of BCs. The BC portfolio constructed in this thesis also holds a considerable proportion of large cap companies that generally attract plenty of interest from the markets wherefore undervaluation is unlikely to occur. These two features signal a lack of diversification in the BC portfolio which is known to cause inferior performance (Auer 2016; Renneboog et al. 2008b). More importantly, Edmans (2011) dataset ends in 2009 which means that his results are reported for a large part from a time of relatively sound economic conditions and do not fully capture the fall-out effects of the financial crisis. In fact, 2009 appears to be a rather common cut-off date for positive excess returns in the CSR literature. Many of the studies reporting abnormally high positive returns reviewed in Section 3 employ a dataset cover a period from the early 1990s to the mid or end 2000s (Nguyen et al. 2020; Lins et al. 2017; Jeong et al. 2018; Kempf & Osthoff 2007).

6. CONCLUSIONS

The purpose of this thesis is to contribute to our understanding of valuation of intangibles and market learning, more specifically the market's ability to correctly assess employee satisfaction and to incorporate the intangible into stock valuations, as well as to further expand the existing literature on the relationship between socially responsible investing and stock returns. The main motivation for this thesis stems from the study by Edmans (2011) detecting abnormally high positive excess returns for companies included in the "100 Best Companies to Work for in America" list for an exceptionally long time period, and from the continuous rise of both investor and academic interest towards socially responsible investing. The findings of Edmans (2011) are contradictory to some of the main financial theories which is why the topic deserves additional investigation. Prior empirical evidence suggests that such returns do not persist however as the public attention reaches a sufficient level of awareness, and the undervaluation disappears eventually (Bebchuk et al. 2013; Borgers et al. 2013; Chordia et al. 2014).

The empirical section of the thesis performs a follow-up examination in order to test the longevity of the superior returns found by Edmans (2011) employing the same methodology and data while updating the dataset with a more recent 10-year period. The results of the analysis confirm the hypothesis outlined in Section 1 as the Best Companies portfolio yields negative returns with an insignificant alpha for both equal-weighted and value-weighted portfolios. After controlling for industry performance, the alpha remains negative and insignificant, even if slightly less so. The tests reveal that the BC portfolio returns are largely dominated by the BC

portfolios bias towards large cap companies which are known to follow the market. Moreover, the market factor is found highly positive and significant which implies that the BC portfolio's returns not only follow closely but amplify the market's movements. The conclusion of the empirical tests is that the market has learnt to incorporate employee satisfaction into stock prices, and the valuation of the Best Companies has been adjusted to their correct level.

The results of this thesis may differ from Edmans' (2011) for other reasons as well. A potentially important factor is Edmans' (2011) sample period that ends in 2009 which means his study does not capture the long-term effects of the financial crisis but rather the results are reported for a period of relatively stable economic conditions. In fact, the mid 2000s appears to be a rather common cut-off date in CSR related studies (Nguyen et al. 2020; Jeong et al. 2018; Kempf & Osthoff 2007; Derwall et al. 2005), and the empirical evidence reaching beyond the financial crisis is scarce which makes it an interesting area for future research. Another reason for the negative returns found in Section 5 is the lack of diversification in the BC portfolio, which has been shown to cause underperformance in CSR portfolios (Renneboog et al. 2008b; Auer's 2016). In contrast, Edmans' (2011) dataset has significantly more historical BC stock prices available implying a better level of diversification.

Overall, it appears that with the continuous rise of public and academic attention towards socially responsibility investing and the growing level of visibility of the "100 Best Companies to Work for in America" list has resulted in investor adjustments in the assessment of employee satisfaction as an asset as they perform firm valuations. However, the importance and role of human capital in companies

should can be only expected to rise in the future. The study by Lins et al. (2017) conducted in the tumultuous economic climate in 2007–2009 shows that during the financial crisis *trust* was a significant indicator of firm profitability. Currently, the market is experiencing substantial turbulence again due to the COVID-19 pandemic, and the world has seen a wave of mass lay-offs and downsizing. The data generated in this time period is likely to offer very interesting insights of the relationship of employee satisfaction and stock prices and the significance of human capital for another future study.

REFERENCES

- Aboody, D. & Lev, B. (1998). The value relevance of intangibles: the case of software capitalization. *Journal of Accounting Research Annual*, 36, 161-191.
- Auer, B. R. (2016). Do socially responsible investment policies add or destroy European stock portfolio value? *Journal of Business Ethics*, 135:2, 381-397.
- Aouadi, A. & Marsat, S. (2018). Do ESG controversies matter for firm value? Evidence from international data. *Journal of Business Ethics*, 151, 1027–1047.
- Bauer, R., Koedjik, K., & Otten, R. (2005). International evidence on ethical mutual fund performance and investment style. *Journal of Banking and Finance*, 29:7, 1751-1767.
- Bebchuk, L., Cohen, A. & Wang, C. (2013). Learning and the disappearing association between governance and stock returns. *Journal of Financial Economics*, 108:2, 783-827.
- Berk, J., Stanton, R., & Zechner, J. (2010). Human capital, bankruptcy, and capital structure. *Journal of Finance*, 65:3, 891-926.
- Bhandari, A., & Javakhadze, D. (2017). Corporate social responsibility and capital allocation efficiency. *Journal of Corporate Finance*, 43, 354-377.
- Bodie, Z., Kane, A. & Marcus, A. (2018). *Investments*. 11th ed. New York: McGraw-Hill Education. 1014 p. ISBN 978-0-07-786167-4.

- Borgers, A., Derwall, J., Koedjik, K. & Ter Horst, J. (2013). Stakeholder relations and stock returns: On errors in investors' expectations and learning. *Journal of Empirical Finance*, 22:1, 159-175.
- Brammer, S., Brooks, C. & Pavelin, S. (2006). Corporate social performance and stock returns: UK evidence from disaggregate measures. *Financial Management*, 35:3, 97-116.
- Bruce, K. & Nyland, C. (2011). Elton Mayo and the deification of human relations. *Organization Studies*, 32:3, 383-405.
- Buchanan, B., Cao, C. & Chen, C. (2018). Corporate social responsibility, firm value, and influential institutional ownership. *Journal of Corporate Finance*, 52, 73-95.
- Carhart, M. (1997). On persistence in mutual fund performance. *Journal of Finance*, 52:1, 57-82.
- Carlin, B. & Gervais, S. (2009). Work ethic, employment contracts, and firm value. *Journal of Finance*, 64:2, 785-821.
- Chan, L., Lakonishok, J. & Sougiannis, T. (2001). The stock market valuation of research and development expenditures. *Journal of Finance*, 56:6, 2431-2456.
- Chordia, T., Subrahmanyam, A. & Tong, Q. (2014). Have capital market anomalies attenuated in the recent era of high liquidity and trading activity? *Journal of Accounting and Economics*, 58:1, 41-58.
- Commission of the European Communities. Green Paper Promoting a European framework for Corporate Social Responsibility. Brussels: COM(2001)366.

- Core, J., Guay, W. & Rusticus, T. (2006). Does weak governance cause weak stock returns? An examination of firm performance and investors' expectations. *Journal of Finance*, 61:2, 655-687.
- Daniel, K. & Titman, S. (1999). Market efficiency in an irrational world. *Financial Analysts Journal*, 55:6, 28-40.
- Deng, Z., Lev, B. & Narin, F. (1999). Science and technology as predictors of stock performance. *Financial Analysts Journal*, 55:3, 20-32.
- Derwall, J., Guenster, N., Bauer, R. & Koedijk, K. (2005). The eco-efficiency premium puzzle. *Financial Analysts Journal*, 61:2, 51-63.
- Derwall, J., Koedijk, K., & Ter Horst, J. (2011). A tale of values-driven and profit-seeking social investors. *Journal of Banking and Finance*, 35:8, 2137-2147.
- Edmans, A. (2011). Does the stock market fully value intangibles? Employee satisfaction and equity prices. *Journal of Financial Economics*. 101:3, 621-640.
- Fama, E. (1970). Efficient capital markets: a review of theoretical and empirical work. *The Journal of Finance*, 25:2, 383-417.
- Fama, E. (1998). Market efficiency, long-term returns, and behavioral finance. *Journal of Financial Economics*, 49: 3, 283-306.
- Fama, E. & French, K. (1996). Multifactor explanations of asset pricing anomalies. *Journal of Finance* 51:1, 55-84.

- Flammer, C. (2015). Does corporate social responsibility lead to superior financial performance? A regression discontinuity approach. *Management Science*, 61:11, 2549-2824.
- French, K. (2019). *Data library* [online]. [cited 18.04.2020]. Available from World Wide Web: <URL: https://mba.tuck.dartmouth.edu/pages/faculty/ken.french/data_library.html>.
- Geczy, C., Stambaugh, R. & Levin, D. (2005). Investing in socially responsible mutual funds. SSRN Electronic Library. Available from World Wide Web: <URL: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=416380>.
- Gompers, P., Ishii, J. & Metrick, A. (2003). Corporate governance and equity prices. *Quarterly Journal of Economics*, 118:1, 107-155.
- Groening, C. & Kanuri, V. (2013). Investor reaction to positive and negative corporate social events. *Journal of Business Research*, 66:10, 1852–1860.
- Grossman, S. & Stiglitz, J. (1980). On the impossibility of informationally efficient markets. *The American Economic Review*, 70:3, 393-408.
- Guiso, L., Sapienza, P. & Zingales, L. (2015). The value of corporate culture. *Journal of Financial Economics*, 117:1, 60-76.
- Hertzberg, F. (1959). *The Motivation to Work*. J. Wiley & Sons, New York. 173 p.
- Hong, H. & Kacperczyk, M. (2009). The price of sin: The effects of social norms on markets. *Journal of Financial Economics*, 93:1, 15-36.

- Huang, M., Li, P., Meschke, F. & Guthrie, J. (2015). Family firms, employee satisfaction, and corporate performance. *Journal of Corporate Finance*, 34, 108-127.
- Jegadeesh, N. (1990). Evidence of predictable behavior of security returns. *The Journal of Finance*, 45:3, 881-898.
- Jegadeesh, N., & Titman, S. (1993). Returns to buying winners and selling losers: Implications for stock market efficiency. *The Journal of Finance*. 48:1, 65-91.
- Jensen, M. & Meckling, W. (1976). Theory of the firm: managerial behavior, agency costs, and capital structure. *Journal of Financial Economics*, 3:4, 305-360.
- Jeong, K., Jeong, S., Lee, W. & Bae, S. (2018). Permanency of CSR activities and firm value. *Journal of Business Ethics*, 152:1, 207-223.
- Jiao, Y. (2010). Stakeholder welfare and firm value. *Journal of Banking and Finance*, 34:10, 2549-2561.
- Kempf, A., & Osthoff, P. (2007). The effect of socially responsible investing on portfolio performance. *European Financial Management*, 13:5, 908-922.
- Lehmann, B. (1990). Fads, martingales, and market efficiency. *The Quarterly Journal of Economics*, 105:1, 1-28.
- Lev, B. & Sougiannis, T. (1996). The capitalization, amortization, and value-relevance of R&D. *Journal of Accounting and Economics*, 21:1, 107-138.
- Levering, R., Moskowitz, M., & Katz, M. (1984). *The 100 Best Companies to Work for in America*. Addison-Wesley, Reading. 503 p. ISBN: 9780385265485.

- Lins, K., Servaes, H., & Tamayo, A. (2017). Social capital, trust, and firm performance: The value of corporate social responsibility during the financial crisis. *The Journal of Finance*, 72:4, 1785-1824.
- Malkiel, B. (2003). The efficient market hypothesis and its critics. *Journal of Economic Perspectives*, 17:1, 59–82.
- Markowitz, H. (1952). Portfolio selection. *The Journal of Finance*, 7:1, 77-91.
- Maslow, A. (1943). A theory of human motivation. *Psychological Review*, 50:4, 370-396.
- Maslow, A. (1965). *Eupsychian Management*. Richard D. Irwin, Homewood. 277 p. ISBN: 978-0256003536.
- Maslow, A. (1971). *The Farther Reaches of Human Nature*. Penguin, New York. 432 p. ISBN: 978-0140194708.
- McGregor, D., (1966). *Leadership and Motivation: Essays of Douglas McGregor*. Cambridge, M.I.T. Press. 300 p. ISBN: 9780262130233.
- Newey, W. & West, K. (1987). Hypothesis testing with efficient method of moments estimation. *International Economic Review*, 28:3, 777-787.
- Nguyen, P. Kecskés, A. & Mansi, S. (2020). Does corporate social responsibility create shareholder value? The importance of long-term investors. *Journal of Banking & Finance*, 112, 105-217.
- Rajan, R. & Zingales, L. (1998). Power in a theory of the firm. *Quarterly Journal of Economics*, 113:2, 387-432.

Renneboog, L., Ter Horst, J., & Zhang, C. (2008a). Socially responsible investments: Institutional aspects, performance, and investor behavior. *Journal of Banking and Finance*, 32:9, 1723-1742.

Renneboog, L., Ter Horst, J., & Zhang, C. (2008b). The price of ethics and stakeholder governance: The performance of socially responsible mutual funds. *Journal of Corporate Finance*, 14:3, 302-322.

Reuter, J. & Zitzewitz, E. (2006). Do ads influence editors? Advertising and bias in the financial media. *Quarterly Journal of Economics*, 121:1, 197-227.

Shafritz, J., Ott, J. & Jang, Y. (2005). *Classics of Organization Theory*. 6th edition. Boston, MA, Thomson Higher Education. 544 p. ISBN: 978-0-534-63156-7.

Schueth, S. (2003). Socially responsible investing in the United States. *Journal of Business Ethics*, 43:3, 189-194.

Sonnenfeld, J. (1985). Shedding light on the Hawthorne Studies. *Journal of Organizational Behavior*, 6:2, 111-130.

Taylor, F., (1911). *The Principles of Scientific Management*. Harper Brothers, New York. 144 p.

The Forum for Sustainable and Responsible Investment (2018). Report on US Sustainable, Responsible and Impact Investing Trends 2018. [online] Available from World Wide Web: <URL: <https://www.ussif.org/files/Trends/Trends%202018%20executive%20summary%20FINAL.pdf>>.

Zingales, L. (2000). In search of new foundations. *Journal of Finance*, 55:4, 1623-1653.