The effect of corporate social responsibility on the cost of equity from a legal origin and cultural perspective

Name:	Joëla M. A. Jansen
Student Number:	S2896265
Study Program:	MSc. International Financial Management Double Degree
University:	University of Groningen and Uppsala University
Faculty:	Economics and Business
Supervisor:	Dr. Victoria Purice
Date:	June 9th, 2017

The effect of corporate social responsibility on the cost of equity from a legal origin and cultural perspective

Abstract

This study aims to investigate how legal origin and cultural values can affect the relationship between corporate social responsibility (CSR) and the cost of equity. Specifically, common law and civil law countries (legal origin) and countries with high long-term orientation are compared. The research is conducted by using panel data of 5,533 firm-year observations from 1,492 unique firms during a sample period of 2005 through 2013. The findings suggest that firms with better CSR performance will enjoy lower cost of equity. Furthermore, there is strong evidence in support of the corporate governance practices of CSR performance, which leads to cheaper equity financing. In addition, the findings support previous literature that the negative relationship between CSR and the cost of equity is stronger for civil law countries.

Keywords: Corporate Social Responsibility, Cost of Equity, Legal Origin, Culture

JEL classifications: G32, G34, K15, M14

1. Introduction

In the recent years, corporate social responsibility (CSR) has become very important as evidenced by the growth in academic literature that highlights the practical relevance for firms to incorporate CSR in their practices. Research shows that firms spend millions in CSR-initiatives to satisfy market demands on behaving socially responsible (Bhandari & Javakhadze, 2017). The literature on corporate social responsibility shows two conflicting views. On the one hand, CSR can achieve shareholder wealth maximization as well as contributing to the society at large. On the other hand, the opposite view on CSR states that making money is the only social responsibility of the firm, and argues that engaging in CSR performance can lead to agency problems in the firm (Bhandari & Javakhadze, 2017). Despite the highlighted focus on CSR in the literature, researchers have not reached a consensus on the importance or financial worth of CSR engagement (Cai, Jo, & Pan, 2011). The spotlight on CSR practices has recently fueled research on its relationship with financial performance. Cai et al. (2011) argue that previous studies find mixed results when examining the relation between CSR and financial performance. This is because of the differences in the methodologies applied, where various sample sizes, data sources, CSR measures and performance

measures are used. For example, some studies find that CSR practices have a positive effect on the firm value (Jo, & Harjoto, 2011; Servaes & Tamayo, 2013; Mishra, 2015), while contradictory results are found by other scholars (Haryono & Iskandar, 2015; Chen & Lee, 2016), which show the negative effect of CSR on firm value.

The capital market participants' perspectives of CSR have not been studied extensively, which is why the focus in this research is on the direct influence of CSR on firms' cost of equity. There is limited empirical evidence on this relationship, however, El Ghoul et al. (2011) finds that higher CSR scores are related to significantly lower cost of capital for firms in the United States. Additionally, these authors call for further research of the relationship between CSR and cost of equity capital by investigating the cross-country and cross-cultural variation. The aim therefore is to answer the question whether the negative relationship between CSR and cost of equity hold for firms outside the United States. In this research I will attempt to answer this call. The purpose of this research is to advance our knowledge by investigating the effect of CSR on the cost of equity through legal origin and cultural values. Following El Ghoul et al. (2011), I hypothesize that *ceteris paribus*, firms with high CSR performance have lower cost of equity compared to firms with low CSR performance. Taking the previous arguments into account, this paper will address the following research questions:

(i) *Does the effect of CSR on the cost of equity differ as result of the origin of a country's legal system?*
(ii) *Does the effect of CSR on the cost of equity change among countries that have different cultural values?*

The answers to these research questions are valuable to managers and other stakeholders to comprehend how CSR practices influence their businesses. Also, it will help them shift their attitudes towards engaging in CSR or how to better integrate CSR into their business practices.
From a managerial perspective, by examining the relationship between CSR and cost of equity, managers will be better able to understand the effect of CSR investment on the firm's financing cost, which has implications for strategic planning. Additionally, the cost of equity could be the channel through which capital markets encourage firms to engage in CSR practices (El Ghoul et al., 2011). Furthermore, this research will broaden the managerial perspective into understanding how the effect of legal system and culture on CSR can be incorporated in the firm's strategic planning.
A panel data of 5,533 firm-year observations from 1,492 unique firms during a sample period of 2005 through 2013 is used for the analysis of this research. The findings suggest that firms with higher CSR scores will exhibit lower cost of equity capital. In addition, there is strong evidence that the corporate governance aspects of CSR are significant in decreasing the cost of equity.

Furthermore, the legal origin plays an important role in the the relationship between CSR and the cost of equity, while the cultural dimension long-term orientation takes a backseat.

The findings contribute to the CSR-financial performance literature by examining whether CSR affects firm value using a large global sample to investigate the relationship between CSR and the cost of equity. The empirical results highlight the importance of investing in corporate social responsibility practices by showing how CSR engagement can lead to lower cost of equity capital.

The remainder of this research is organized as follows. The background literature on corporate social responsibility, cost of equity and legal origin and cultural values theory is presented in Section 2. Section 3 gives an overview about the methodology in this research. In section 4, the empirical results are presented and discussed. The research is concluded in section 5.

2. Literature review and hypotheses development

In this section, the background literature on corporate social responsibility and cost of equity is discussed. Theoretical arguments for the effect of corporate social responsibility on the cost of equity are provided and then I highlight the legal origin and cultural perspective of this relationship. Lastly, the hypotheses are developed.

2.1 Corporate Social Responsibility (CSR)

Corporate social responsibility (CSR) has various definitions such as the research by Mackey et al. (2007) adopts the definition as voluntary actions by the firms to improve social or environmental conditions. Additionally, the research by Xie et al. (2017) states that CSR can be characterized as the behavior associated with business ethics. In this context, it is the ethical obligation of the firm's operations to consider social as well as environmental matters. CSR also refers to a firm taking actions in regards to the employees, communities, and the environment, which is above and beyond the firm's legal requirements (Barnea & Rubin, 2010). In addition, CSR is part of the firm's corporate governance, which promotes the firm's sustainability through sound business practices (Cai, Jo, & Pan, 2011). The growth in activities associated with corporate social responsibility has been a significant corporate trend in the past decade. The views on CSR by academics and practitioners have changed during the recent years. Before the 1980s, corporate social responsibility was treated as a burden on the firm, however, after this time period, the importance of CSR grew in the firm's strategy. This importance coincided with development of stakeholder theory of the firm (McCarthy, Oliver, & Song, 2017).

Corporate social responsibility has been transformed from an abstract concept into a lengthy list of business practices. It requires firms to provide both the quantity of products, services, employment and the quality of life for those affected by the firm's operations (Lin, 2010). The authors McCarthy et al. (2017) highlight that CSR has a broad range of activities. For instance, firms may focus on developing products using environmentally-friendly materials or on having a working relationship with the community. Furthermore, the firms may choose to donate funds to some charities. Garriga and Melé (2004) classify corporate social responsibility theories into four groups: (i) instrumental theories, (ii) political theories, (iii) integrative theories and (iv) ethical theories. The first group assumes that the sole social responsibility of a firm is wealth creation. These are the instrumental theories because CSR is the instrument or medium to achieve profit maximization. The group political theories refer to the firm using its power in a responsible way by participating in certain social cooperation. The integrative theories argue that firms need to integrate social demands for the reason that firms depend on society for its existence, continuity and growth. From an ethical perspective (ethical theories), CSR is viewed as the firm's ethical obligation to contribute to a good society (Garriga & Melé, 2004).

The study by Jo & Harjoto (2011) distinguishes two theories to explain why firms engage in CSR: the agency theory and the stakeholder theory. Based on the agency theory, there is a principal-agent relationship between managers and shareholders. The agency conflicts are mostly interpreted as managers making decisions that serve their own interest at the expense of shareholders. The firm resources used for CSR performance results in significant managerial benefits rather than financial benefits for the shareholders (Cheng et al., 2013). In this perspective, managers will over-invest in CSR to obtain private benefits such as the good social citizens reputation, which helps top management with their opportunities (Jo & Harjoto, 2011). Furthermore, shareholder theories about shareholder wealth maximization are instrumental theories that suggest CSR is a mere means to wealth creation for shareholders. Thus, social activity or CSR performance is acceptable only if it is in line with the creation of shareholder wealth (Bhandari, & Javakhadze, 2017).

The societal members who are most important to the firms and to whom it must be responsive are the stakeholders (Cai, Jo, & Pan, 2011). Stakeholders are groups that the firm interacts with based on contractual links such as employees, suppliers and customers or the general public like (non)governmental organizations. Firms can use corporate social responsibility to gain support from stakeholders. According to Cheng et al. (2013), CSR consists of managing multiple stakeholder ties simultaneously and it is not possible to satisfy all these interests. These different stakeholders include the community, society, and the environment. However, the growing literature on the stakeholder theory explains that firms should serve the interests of non-investing stakeholders through the firm's CSR performance (Jo & Harjoto, 2011). The firms are encouraged to consider

their responsibilities to integrate economic, social and environmental interests of stakeholders in their practices (Russo & Perrini, 2009). Further, Russo and Perrini (2009) state that firms avoid the stakeholder pressures by acting in a responsible way to achieve a better society. Firms that have high CSR performance can gain positive attributions from stakeholders. On the other hand, Bhandari and Javakhadze (2017) state that active and committed stakeholders could pressure managers to over-invest in CSR-initiatives that directly contribute to the shareholders' wealth but are damaging to the interest of these stakeholders.

In the context of stakeholder theory, the previously mentioned political, integrative, and ethical theories of CSR are considered. From a political perspective, firms need to find ways for improvement in the community by taking it into account when making business decisions. Integrative theory suggest that firms should integrate social demands into the business model because its success depends on society. Ethical theories posit that firms/managers have the ethical obligation to accept social responsibility, consider legitimate interests of all stakeholders and "do the right thing" (Bhandari, & Javakhadze, 2017).

Besides engaging in corporate social responsibility for managerial benefits or to satisfy stakeholders' needs, there are other reasons why firms engage in CSR such as business strategy (Cai et al., 2011), marketing tool (Gallego-Álvarez et al., 2010) and congruence (Hildebrand et al., 2011). Managers engage in CSR as a business strategy integrated with core business objectives and competencies to simultaneously increase firm value and social/environmental value (Cai, Jo, & Pan, 2011). In other words, firms use their resources to maximize value for itself but also for society. The authors Gallego-Álvarez et al. (2010) state that many corporations can use CSR practices as a marketing tool. By using socially responsible practices, companies can strengthen their reputations and/or create shareholder value. Thus, these practices are used as propaganda to enhance the image of firms. According to Hildebrand et al. (2011), firms engaging in CSR activities should also communicate valuable characteristics of their identity internally and engage employees in CSR activities. This will promote congruence of the perception of corporate identity between external stakeholders (reputation) and internal stakeholders (perceived identity).

Corporate social responsibility has a variety of definitions but in this research, the definition used is inspired by Mackey et al. (2007). It is the following: CSR-initiatives are voluntary actions by firms to engage in social, environmental and governance issues. McCarthy et al. (2017) state that CSR is used nowadays to show all the different stakeholders that the firm is partially altruistic (other-considering) and not entirely agonistic (self-considering). In other words, firms use CSR to indicate that they are not selfish entities only caring about profit but instead are charitable towards society at large. Previous studies (El Ghoul et al., 2011; Dhaliwal et al., 2014) examine the relationship

between CSR and the cost of equity, suggesting that firms with better CSR performance will enjoy lower cost of equity. Based on this, the cost of equity and its relation to corporate social responsibility are discussed in the following two sections, respectively.

2.2 Cost of Equity

The cost of equity plays a crucial role in the corporate financing and operations decisions of a firm (Dhaliwal et al., 2011). It is described by El Ghoul et al. (2011) as the internal rate of return and also referred to as discount rate. They state that given the market's perception of a firm's risk factor, the cost of equity is the required rate of return. Sharfman and Fernando (2008) explain this by stating that the expected rate of return is demanded by investors for the capital they provided to the firm. The higher the cost of equity, the more expensive it is for the firm to be profitable despite the level of revenues generated. Furthermore, investors discount the firm's future cash flows by using the cost of equity and these cash flows will have a low present value if the cost of equity is high. Consequently, firms that have lower cost of equity will be valued highly and thus more attractive to investors compared to firms with higher cost of equity (Sharfman & Fernando, 2008).

Literature suggest that information plays an essential part in determining the cost of equity. Specifically, there is a general consensus that information risk is non-diversifiable and thus influences the pricing of capital (Eliwa, Haslam, & Abraham, 2016). Firms need to determine where to invest its capital and to frequently re-evaluate the quality of its current projects/investments. The cost of equity is a critical measure in a firm's capital budgeting decisions when making such evaluations (Gray, Kang, & Yoo, 2013). Furthermore, firms that are unable to gain access to lower cost of equity will have no choice but to forgo potentially profitable investments. The firm's access to external finance is limited by market imperfections in the form of information asymmetry and agency problems. The mechanisms that can mitigate these imperfections have significant implications for the firm's cost of equity. Therefore, it can be reduced with voluntary (non)financial disclosure or alleviated with managerial social capital (Francis et al., 2005; Ferris et al., 2017). The cost of equity and its relationship with CSR is discussed in the following section, which provides a better understanding on how CSR performance can lead to lower cost of equity. The disclosure can include reporting on corporate social responsibility, thus, by engaging in CSR firms can invest in profitable projects.

2.3 CSR and Cost of Equity

Corporate social responsibility can have a positive effect by attracting financial resources from socially responsible investors and by providing better access to value-enhancing resources (Cheng et al., 2013). The findings by the authors Wu and Shen (2013) show that firms engaging in CSR have more financial gain than the associated costs, thereby improving the financial performance in the long run. this research, improved financial performance is considered as lower cost of equity for the firm. Dhaliwal et al. (2014) state the firms with high CSR performance show better financial performance measures because they attract consumers who support similar social causes. Furthermore, they explain CSR disclosure can possibly lower information asymmetry, which in turn can lead to a lower cost of capital because of the high level of social transparency. The expectations by Richardson and Welker (2001) are very much alike because they expect a direct influence of social disclosure on the cost of equity through either the investor preference to receive lower rate of return from a firm with similar social causes, or through reduced information asymmetry or estimation risk. However, there is an optimal level of voluntary disclosure, which means there is a trade-off between the benefit of lower external financing and cost of revealing too much information (Francis, Khurana, & Pereira, 2005). Thus, companies must consider the amount of costs they are willing to incur to benefit from access to lower cost of equity.

Prior studies (e.g. El Ghoul et al., 2011; Dhaliwal et al., 2011) have found support for this relationship, which is that corporate social responsibility performance/disclosure can lead to lower cost of capital. The findings of El Ghoul et al. (2011) show that US firms with higher CSR scores have significantly lower cost of capital. Dhaliwal et al. (2011) explain that according to corporate executives, the firm's cost of equity can be reduced by communicating information voluntarily. Furthermore, greater disclosure enlarges the firm's investor base by increasing investors' awareness of a firm's existence, which improves risk-sharing and reduces cost of capital. On the contrary, the study by Richardson and Welker (2001) finds a significant positive relationship between social disclosure and the cost of equity capital. Moreover, Barth et al. (2013) provides evidence that firms enjoy lower cost of capital when they have more transparent earnings.

Based on evidence from these studies, I expect that higher CSR engagement by firms will lead to lower cost of equity. Consequently, I hypothesize the following:

H1: There is a negative relationship between corporate social responsibility and the cost of equity.

Legal and regulatory factors have been shown to affect cost of equity. In addition, national culture is identified as a factor that influence the cost of equity capital internationally (Gray, Kang, & Yoo, 2013). The main goal of this research is to investigate whether legal origin and cultural values play a role on the relationship between CSR and cost of equity. Therefore, these characteristics are discussed in the following two sections.

2.4 Legal Origins

A previous study by La Porta, Lopez-de-Silanes and Shleifer (2008) explains that the differences in the legal rules and regulations across countries are accounted for to an extent. The law and finance theory argues that the economic growth of a country is influenced by its legal system (Ciobanu, 2015). Furthermore, the paper by Graff (2008) states that the legal system is classified as one of the causes of economic development; it is essential in influencing the way that financial development in the country is either fostered or hindered. The financial system of a country differs depending on its legal origin. The theory distinguishes a common law tradition inherited from medieval England and a more codified civil law tradition, which is further explained in the following section.

2.4.1 Civil Law and Common Law

There are two types of legal systems that are used around the world: common law and civil law. La Porta et al. (1998) discuss these two broad legal traditions. They first explain that civil law is the oldest, the most influential and the most widely used throughout the world. It originated from Roman law and uses different statutes and comprehensive codes to control any situation, specifically economical ones. Within the civil law are the following family of laws: The French, German and Scandinavian (La Porta et al., 1998; Ciobanu, 2015).
The common law family, on the other hand, originated from England and includes laws modeled on English law. The law in this case is formed by judges who are in charge to resolve disputes based on previous judicial decisions. Common law is fully independent from the executive and legislative powers (La Porta et al., 1998; Ciobanu, 2015).

Cappiello (2010) states that countries with common law legal systems differ systematically from those with civil law legal systems. The preference for common law has been mentioned by several authors such as La Porta et al. (2008). They state that common law countries are more protective of their outside investors compared to civil law countries. Furthermore, Cappiello (2010) states that the governments in common law countries protect property rights and regulate less. In addition, these countries have better economic growth than civil law countries. Graff (2008) agrees that the common law system lays a more favorable foundation for financial development and economic

growth. On the other hand, the research by Ciobanu (2015) states that civil law countries are better in regulating business than the common law countries.

The differences in the two legal systems shown in table 1 can easily be observed and are examined in various studies. The research by Kock and Min (2015) states that common law is shareholder-oriented and relies on low codification law, which means the creating of rules and regulations Common law countries has the system of jurisprudence, meaning it relies on previous cases to decide an outcome of cases. On the other hand, they argue that civil law is stakeholder-oriented and relies on a strong degree of codification. Common law is mainly found in English-speaking countries such as the United States, Canada, the United Kingdom and Australia, while civil law is used in non English-speaking countries such as Germany, France, Sweden and the other Scandinavian countries (Doupnik & Perera, 2015). Furthermore, Ergungor (2004) concludes that legal origin has a significant effect on whether the financial system of a country is either bank-oriented or market-oriented. Additionally, this author states that civil law financial systems are more bank-oriented because banks are willing to lend when individual investors do not wish to lend due to lower shareholder protection. In the paper by La Porta et al. (1997), they also describe civil law as countries with bank-focused financial systems. In common law countries, the courts are effective in protecting shareholders, which is why borrowers prefer markets over banks because markets are less costly (Ergungor, 2004; La Porta et al., 1997). Thus, common law countries have a market-oriented financial structure, where investors can borrow at a lower cost.

Table 1
Description on common law versus civil law.

Common Law	**Civil Law**
Weak codification of law	Strong codification of Law
Shareholder orientation	Stakeholder orientation
English-speaking countries	Non English-speaking countries
Market-based financial system	Bank-based financial system

This table presents the main differences between the legal origins: common law and civil law countries.

Research by Becchetti et al. (2013) finds that common law origin has a significantly positive effect on community and corporate governance, while the French civil law impacts human resources. The findings by Iatridis (2012) suggest that common law countries with effective governance mechanisms can reduce agency costs. Additionally, firm-level performance is a determinant that leads to lower cost of equity. On the contrary, the governance mechanisms have an insignificant

impact in civil law countries. The market beta causes more uncertainty that leads in higher cost of equity (Iatridis, 2012).

Based on these arguments, I expect that firms in common law countries will have lower cost of equity because these countries have better CSR performance compared to civil law countries. Thus, the following hypothesis below:

H2: The negative relationship between CSR and the cost of equity is stronger for firms in common law countries.

2.5 Culture

Culture has many definitions but many scholars agree that culture contains a range of values, beliefs and behavioral norms. These cultural components are shared by members of a specific community or organizations. By having the same national culture background, people can have similar thoughts and behavior (Nguyen, & Truong, 2016). The focus in this research is on national culture and not other forms of culture (e.g. corporate culture) so that countries can be distinguished from each other. Literature recognizes national culture as an important determinant of differences between individuals but also organizations with different cultural backgrounds. Hofstede (2001) defines national culture as "the collective programming of the mind distinguishing the members of one group or category of people from others". In other words, culture is what most members of a group have in common and what distinguishes them from other groups. National culture can affect the characteristics of a business, which in turn will influence the decision-making process including the strategic planning of CSR-initiatives (Thanetsunthorn, 2015).

Hofstede (2001) developed four cultural dimensions, which are power distance, individualism versus collectivism, masculinity versus femininity and uncertainty avoidance. Later on, a fifth dimension, long-term orientation and a sixth dimension, indulgence versus restraint were added to the group. These cultural dimensions are widely used in a variety of cross-cultural studies, however, the fifth and sixth dimensions are less popular compared to the others. The underlying reason is that Hofstede's model provides a quantitative measure for the differences between cultures by giving each dimension and country a score between 0 and 100 (Thanetsunthorn, 2015). These scores make it easier to understand the culture of a country and to compare it with other countries.

In this research, the focus is on the cultural value long-term orientation because CSR practices are a long-term commitment from the firm to society. Corporate social responsibility generates value in the long run and can be used as an instrument for firms to achieve long-term success (Wang, 2013).

2.5.1 Cultural Values: Long-term orientation

Prior studies have investigated the relationship between Hofstede's cultural values and CSR by assessing the effects of national culture on CSR performance. Ringov and Zollo (2007) find significant support their hypotheses that companies in high power distance and masculine countries exhibit lower levels of CSR performance, while there is no significant effect for uncertainty avoidance and individualism. On the contrary, the findings by Peng et al. (2014) suggest individualism and uncertainty avoidance have positive influence on firms' CSR engagement. Furthermore, the authors conclude that power distance and masculinity have a negative influence on firms' CSR engagement, which is in line with the previously mentioned findings by Ringov and Zollo (2007). However, these prior studies have not researched the other cultural dimensions of Hofstede, mainly, long-term orientation and indulgence versus restraint. For this reason, this research focuses on the cultural long-term orientation and also because CSR practices are a long-term commitment from the firm to society. Corporate social responsibility generates value in the long run and can be used as an instrument for firms to achieve long-term success (Wang, 2013).

Hofstede (2001) described long-term orientation (LTO) as a cultural characteristic focused on future rewards, mainly perseverance and thrift. A study by Türker (2015) finds that firms with long-term focus engage in CSR practices related to government, community, employees and ethical issues. Long-term orientation broadens the firm's perception of the future, which allows the firm to recognize the value in CSR engagement. Furthermore, long-term oriented firms decrease CSR-related managerial conflicts by aligning the interests on social and environmental issues of various stakeholders (Wang, & Bansal, 2012). In other words, these firms with LTO focus on the future of the company, so they incorporate CSR into their strategy as a tool for long-term success. I expect that firms with long-term orientation will have lower levels of cost of equity. Thus, the following hypothesis is formulated:

H3: The negative relationship between CSR and the cost of equity is stronger for firms with long-term orientation.

3. Data and variables

The following section presents the methodology of this research. First, the sample construction and the data collection are discussed. Second, the main regression variables are explained and thereafter the regression models are presented. Lastly, the descriptive statistics for the regression variables are reported.

3.1 Data sample and collection

In order to investigate the relationship between CSR and the cost of equity, it is necessary to collect data on both of these variables. The data needed for the analysis was obtained from different sources. The information for the firm's CSR scores were gathered from the Thomson Reuters ASSET4 database. The data for the cost of equity variable was obtained from the Thomson Reuters DataStream database. The research focuses on the legal origin and cultural perspective, which is why I selected the countries as follows. The countries Canada, Australia, the United States and the United Kingdom represent the common law countries, while Germany, France, Sweden, Norway, Finland and Denmark represents the civil law countries in the sample. The civil law countries were selected to portray the family of laws (The French, German and Scandinavian) within civil law. Furthermore, the cultural perspective for these countries are measured with Hofstede's cultural dimension: long-term orientation. The country's scores that ranges between 0 and 100 were retrieved from Hofstede website[1]. Appendix A provides a classification of these scores per country and further includes the legal origin data.

The initial sample consisted of 9,218 firm-year observations for the period 2005 through 2013. This was the resulting sample after all financial firms (SIC codes 6000-6799) were excluded because they are more leveraged than firms in other industries. The other industries are included in the sample and are classified using the SIC codes. Additionally, in order to control for outliers, the dataset was winsorized at 1% level. The final sample after exclusion of missing data consists of 5,533 firm-year observations from 1,492 unique firms between the years 2005 and 2013.

3.2 Regression Variables

The regression variables are as following: the cost of equity is the dependent variable, corporate social responsibility is used as explanatory variable and beta, size, book-to-market and leverage are the control variables.

3.2.1 Cost of Equity Estimation

Estimating a firm's cost of equity is very important for studying the relationship between firm-level characteristics, which is CSR in this study, and the expected returns (Hou, Van Dijk, & Zhang, 2012). The cost of equity is not directly observable because it is the rate of return implied by current prices and future cash flows (Kim & Shi, 2011). The cost of capital can vary cross-sectional and this variation can reflect differences in risk (Barth et al., 2013).

[1] The Hofstede website is www.geert-hofstede.com.

Previous studies use different approaches to calculate the *ex ante* cost of equity (El Ghoul et al., 2011; Dhaliwal et al., 2014; Ferris et al., 2017; Kim & Shi, 2011). The most common measure used is the average cost of equity of the following four different models: The Claus and Thomas model (2001), the Gebhardt et al. model (2001), the Ohlson and Juettner-Nauroth model (2005) and the Easton model (2004).

In this research, the equation used by Lopes et al. (2010) is adopted as measurement for cost of equity. This methodology is based on the Easton (2004) model, which defines the cost of equity (Rcoe) as follows:

$$Rcoe = \sqrt{\frac{EPS_{t+1}}{P_t} \times growth_{t+2}} \quad \textbf{(1)}$$

$$growth_{t+2} = \frac{EPS_{t+2} - EPS_{t+1}}{EPS_{t+1}} \quad \textbf{(2)}$$

where,

Rcoe is the cost of equity, the dependent variable in the regression; EPS_{t+1} is the forecasted earnings per share for the year $t+1$; P_t is the stock price at time t; $Growth_{t+2}$ is the growth rate for EPS between the periods $t+1$ and $t+2$. The cost of equity (Rcoe) is calculated according to the Easton (2004) PEG ratio.

Lopes et al. (2010) explain that this model is derived from the price-earnings growth ratio (PEG). Further, the authors indicate cost of equity as a function of a firm's earnings, which is EPS in the equation, and growth in earnings, which measures the growth rate of EPS. This model is used in this research for its convenience in comparison to the other proxies such as the calculated average of the four previously mentioned models. Additionally, it has feasible data requirements because only the data on price and earnings growth is necessary to calculate the cost of equity, which was beneficial considering the time availability.

3.2.2 Corporate social responsibility

Following the study by Cheng et al. (2013), the ESG scores are used to measure the variable corporate social responsibility. ESG stands for environmental, social and governance, which are three pillars used as proxy for CSR. As mentioned, the data was obtained from ASSET4, a database within Thomson Reuters DataStream. The environmental, social and governance (ESG) information is based on more than 250 key performance indicators and more than 750 data points. The CSR proxy in this research is the average of the environmental score, the social score and the corporate governance score. In other words, the CSR rating is the weighted average on the scores of the three

pillars, which are explained on the Thomson Reuters website[2]. The *environmental pillar* measures the impact a firm has on (non)living natural systems, which in turn reflects how well a firm uses its best practices to capitalize on (avoid) environmental opportunities (risks). The *social pillar* measures the capacity a firm has to to generate trust and loyalty with its workforce, customers and society. The *corporate governance pillar* measures the firm's systems and processes, which guarantees that the executives and board members act according to the interests of long-term shareholders.

The research conducted by El Ghoul et al. (2011) uses KLD STATS, which contains a wide range of CSR ratings instead of the ASSET4 database. The major difference between these two is that ASSET4 has 3 subcategories while KLD STATS has more. However, the former has data on firms globally, while the latter is restricted to US firms. Considering the focus of this research, ASSET4 is used because international data is required for the analysis and for its easy access to the database.

3.2.3 Control Variables

The control variables used in this research were selected based on prior studies (e.g. Lopes et al., 2010; El Ghoul et al., 2011), especially in relation to the most relevant cost of equity literature. These controls are as follows: ***BETA***, which was obtained from Thomson Reuters DataStream, controls for the market element in a firm's cost of equity. ***SIZE*** was measured as the natural logarithm of the firm's total assets. This variable controls for the firm's size because the general consensus is that larger firms are less risky than smaller ones. ***BTM*** is the book-to-market ratio and was calculated as the inverse of market-to-book ratio. ***LEV*** is the leverage and was computed as long term debt divided by total assets. It is an important variable because the level of indebtedness of a firm is likely related to cost of equity. This is from the perspective that high leveraged firms will have higher cost of equity. Following the previous studies (e.g. Lopes et al., 2010; El Ghoul et al., 2011), the predicted signs for these controls are the following: BETA (+), SIZE (-), BTM (+) and LEV (+).

3.3 Regression model

The previously mentioned cost of equity and corporate social responsibility are the dependent variable and independent variable respectively. Following previous studies (Lopes et al., 2010; El Ghoul et al., 2011; Dhaliwal et al., 2014), year and industry dummies are included in the model to capture the industry differences and/or year shocks that may affect the relationship between CSR and cost of equity. The industry dummy variable is used because industry categories could have an

[2] The Thomson Reuters website is www.thomsonreuters.com.

impact on CSR practices, while the year dummy controls for year-specific events. The panel data models are the following:

$$Rcoe_{i,t} = \alpha + \beta_1 CSR_{i,t} + \beta_2 BETA_{i,t} + \beta_3 SIZE_{it} + \beta_4 BTM_{it} + \beta_5 LEV_{i,t} + \beta_6 COMMON + \beta_7 DINDUSTRY_{i,t} + \beta_8 DYEAR_{i,t} + \varepsilon_{i,t} \quad \textbf{(3)}$$

$$Rcoe_{i,t} = \alpha + \beta_1 CSR_{i,t} + \beta_2 BETA_{i,t} + \beta_3 SIZE_{it} + \beta_4 BTM_{it} + \beta_5 LEV_{i,t} + \beta_6 LTO_High + \beta_7 DINDUSTRY_{i,t} + \beta_8 DYEAR_{i,t} + \varepsilon_{i,t} \quad \textbf{(4)}$$

$$Rcoe_{i,t} = \alpha + \beta_1 CSR_{i,t} + \beta_2 CSR_Common + \beta_3 BETA_{i,t} + \beta_4 SIZE_{it} + \beta_5 BTM_{it} + \beta_6 COMMON + \beta_7 LEV_{i,t} + \beta_8 DINDUSTRY_{i,t} + \beta_9 DYEAR_{i,t} + \varepsilon_{i,t} \quad \textbf{(5)}$$

$$Rcoe_{i,t} = \alpha + \beta_1 CSR_{i,t} + \beta_2 CSR_LTO + \beta_3 BETA_{i,t} + \beta_4 SIZE_{it} + \beta_5 BTM_{it} + \beta_6 LTO_High + \beta_7 LEV_{i,t} + \beta_8 DINDUSTRY_{i,t} + \beta_9 DYEAR_{i,t} + \varepsilon_{i,t} \quad \textbf{(6)}$$

where,

Rcoe is the cost of equity for firm *i* in year *t*; **CSR** is the average of the ESG scores for firm *i* in year *t*; **CSR_Common** represents the interaction effect between CSR and the common law countries; **CSR_LTO** means the interaction effect between CSR and the cultural value long-term orientation; **BETA, SIZE, BTM** and **LEV** are the control variables described in 3.2.2 for firm *i* in year *t*; **COMMON** is the dummy variable to control for legal origin; **LTO_High** is the dummy variable to control for countries with high long-term orientation; **DINDUSTRY** and **DYEAR** are dummy variables to control for industry and year effects and ε is the error term.

In order to test the hypotheses developed, the regression models were estimated. Model 1 and model 2 tests the first hypothesis whether there is a negative relationship between CSR and the cost of equity. Model 1 test the first hypothesis by including the common law dummy variable, while model 2 includes the long-term orientation dummy variable. The models 3 and 4 include an interaction effect with the test variable, which is the corporate social responsibility (CSR) in this research. Model 3 includes the interaction effect between CSR and the common law in order to test the second hypothesis whether the negative effect of CSR on the cost of equity is stronger for firms in common law countries. Model 4 tests the third hypothesis by including the interaction effect between CSR and high long-term orientation in order to investigate whether the negative relation between CSR and the cost of equity is stronger for firms with long-term orientation. All models are tested by using the ordinary least squares (OLS) method, which is generally used method.

3.4 Descriptive Statistics

Table 2 shows the descriptive statistics for the explanatory variables in the regression. Panel A provides the statistical properties of the variables divided into firm characteristics and country characteristics. There is a big difference between the minimum (0.000) and the maximum (156.386) of the cost of equity. The higher cost of equity amounts observed were during the financial crisis period, which was an uncontrollable factor affecting the cost of equity. There is a large variation of the CSR scores as well, which explains that some firms have higher CSR performance compared to the others. An overall CSR mean of 59.078 and cost of equity mean of 13.702 can be observed. The long-term orientation variable shows a large range of the country's scores, where the lowest score was 21 and highest score was 83.

Panel B reports the correlation matrix between the dependent variable and its explanatory variables. Beta, book-to-market (BTM) and leverage show the expected positive relation to the dependent variable. The predicted sign for size was negative, however the results shows a positive relation to the cost of equity. Additionally, there is a high correlation between the variables CSR and size, which can suggest a multicollinearity problem. For this reason, it is decided to drop the variable size when estimating the OLS regression. This decision is based on the solutions to multicollinearity problem by Brooks (2014).

Furthermore, table 3 provides descriptive statistics for the regression variables based on legal origin. The cost of equity mean is higher in the civil law countries (14.573) compared to the common law countries (13.254), however, the standard deviation is also higher. In addition, the CSR mean is 62.858 in civil law countries and is 58.306 is common law countries, which shows that firms in civil law countries display better CSR performance. These results are supported in the study by Dhaliwal et al. (2014) that reports how firms in stakeholder-oriented countries are significantly more likely to engage in CSR practices. As is previously shown in table 1, civil law countries are stakeholder-oriented and common law countries are shareholder-oriented.

Moreover, table 4 reports the descriptive statistics by industry for the variables cost of equity and corporate social responsibility. The highest number of observations stem from the manufacturing industry with 2,246 firm-year observations and lowest number of observations comes from agriculture, fishing and forestry (AFF) with 10 firm-year observations. Additionally, the wholesale trade industry has the lowest cost of equity mean of 11.689, while AFF industry has the highest of 19.774. The manufacturing industry also has the highest CSR mean of 65.487, while the services industry had the lowest CSR mean of 50.055. The results show that manufacturing firms have higher CSR performance, which contradicts the findings by Casado-Díaz et al. (2014) that state how CSR-initiatives have a higher positive impact on firm performance in service firms compared to manufacturing firms.

Table 2
Descriptive data for regression variables.

	N	Mean	Median	St. Dev.	Min	Max
Panel A. Descriptive statistics for all variables.						
Firm characteristics						
Cost of Equity	5533	13.702	11.617	9.792	0.000	156.386
CSR	5533	59.078	59.680	22.697	6.097	97.770
Beta	5533	0.991	0.946	0.340	-1.202	3.499
Size	5533	15.444	15.341	1.440	10.002	19.977
Book-to-market	5533	0.466	0.371	0.623	-7.991	22.768
Leverage	5533	0.352	0.345	0.236	0.000	1.000
Country characteristics						
Legal Origin	5533	0.830	1.000	0.375	0.000	1.000
Long-term orientation	5533	36.530	26.000	15.873	21.000	83.000

	Cost of Equity	CSR	Beta	Size	Book-to-market
Panel B. Correlation matrix.					
CSR	-0.0008				
Beta	0.1355	-0.0198			
Size	0.0228	0.5270	-0.0044		
Book-to-market	0.3572	0.0036	0.0278	0.1036	
Leverage	0.0563	0.1112	-0.1003	0.2601	-0.0966

This table presents descriptive statistics for the regression variables for the 5,533 firm-year observations between 2005 and 2013. Panel A shows the mean, median, standard deviation, minimum and maximum of each variable. Panel B provides the correlation matrix for the main variables. The cost of equity (Rcoe) is calculated according to the Easton (2004) PEG ratio and CSR is the average of the ESG scores.

Table 3
Descriptive statistics by legal origin.

	Full Sample			Common Law			Civil Law		
	N	Mean	St. Dev.	N	Mean	St. Dev.	N	Mean	St. Dev.
Firm characteristics									
Cost of Equity	5533	13.702	9.792	4594	13.524	9.456	939	14.573	11.220
CSR	5533	59.078	22.697	4594	58.306	22.667	939	62.858	22.473
Beta	5533	0.991	0.340	4594	1.007	0.352	939	0.913	0.265
Size	5533	15.444	1.440	4594	15.356	1.422	939	15.874	1.450
Book-to-market	5533	0.466	0.623	4594	0.445	0.626	939	0.570	0.597
Leverage	5533	0.352	0.236	4594	0.349	0.244	939	0.370	0.196
Country characteristics									
Legal Origin	5533	0.830	0.375	4594	1.000	0.000	939	0.000	0.000
Long-term orientation	5533	36.530	15.873	4594	31.719	10.407	939	60.067	16.959

This table presents descriptive statistics of the regression variables according to legal origin. Common law countries have 4,594 while civil law countries have 939 firm-year observations between 2005 and 2013.

Table 4
Descriptive statistics by industry.

Industry	N	Rcoe - Mean	Rcoe - St. Dev.	CSR - Mean	CSR - St. Dev.
Agriculture, Forestry & Fishing	10	19.774	11.595	51.954	26.899
Mining	440	17.201	13.915	51.485	22.169
Construction	158	16.036	9.347	62.226	22.319
Manufacturing	2246	14.032	9.653	65.487	21.477
Infrastructure (TCEGS)	836	13.276	10.488	58.814	23.734
Wholesale Trade	211	11.689	7.880	52.730	18.772
Retail Trade	611	12.152	7.034	57.924	22.452
Services	1021	12.740	8.631	50.055	20.997
Total	5533	13.702	9.792	59.078	22.697

This table presents descriptive statistics of the regression variables for the 5,533 firm-year observations between 2005 and 2013 according to industry classified by the SIC codes. The industry classifications included are from the following SIC codes: 0100-5999 and 7000-8999.

4. Results

Despite the growth in academic publications on corporate social responsibility, there is little information available on how CSR performance affects the firm value, which was discussed in the introduction. This research aims to address the gap in literature by examining the relationship between the firms' CSR practices and their cost of equity through legal origin and cultural values. The legal origin perspective is common law and civil law countries and the focus for cultural values is long-term oriented countries. In section 4.1, univariate tests are performed that compare the firm's cost of equity with below and above median CSR scores. The multivariate regression analysis is conducted in section 4.2 and robustness checks are reported in section 4.3.

4.1 Univariate analysis

Similar to the study by El Ghoul et al. (2011), an univariate analysis is conducted to examine the effect of CSR on the cost of equity, which is shown in Appendix B. In this analysis, the sample is divided into firms with below and above median CSR scores. The means and medians of the cost of equity for each group are compared in order to test differences between groups. A t-test is performed for the means, while a Mann-Whitney U test is performed for the medians. The mean (median) cost of equity of firms with above median CSR scores is 13.51% (11.48%), while it is 13.83% (11.69%) for firms with below median CSR scores. These results imply that firms with high CSR score has lower mean (median) cost of equity than firms with low CSR score. These initial findings suggest that firms with better CSR performance will have lower cost of equity, however, they are not statistically significant.

4.2 Multivariate analysis

In order to test the cost of equity effects of CSR, the cost of equity variable is regressed on CSR proxies and control variables. This was conducted by using panel data with robust standard errors. The following tables 5 through 7 reports the main results of the models used in this research. In each model presented, the dependent variable is the cost of equity calculated as a variation of the Easton (2004) model. The explanatory variables are the average CSR score and individual ESG scores. Additionally, three firm-specific control variables are used as well as year and industry fixed effects for the multivariate regression analysis.

In general, the results show evidence of a negative relationship between corporate social responsibility and the cost of equity. The overall CSR score (CSR_S) is used as the test variable in models 1–2b, while individual scores of CSR are used in models 3–5. In table 5, model 1 examines the influence of CSR on cost of equity while controlling for legal origin (Panel A), high long-term orientation (Panel B), year and industry fixed effects. The results suggest a negative coefficient for CSR_S, however, it is not statistically significant when controlling for legal origin nor the cultural dimension. These results differ from the basic regression by El Ghoul et al. (2011), which found a negative and statistically significant coefficient. The firm-specific control variables (beta, book-to-market, leverage) are included in model 2 for further analysis. The results in Panel A give a low negative coefficient for CSR_S, which is statistically significant at 10% level for the legal origin perspective. In comparison to Panel A, the CSR_S coefficient has a higher negative effect and is statistically significant at 5% from the cultural perspective (Panel B). These findings suggest that culture, in this case high long-term orientation (LTO), plays a bigger role on the effect that CSR has on the cost of equity in comparison to legal origin. Next, the relation between CSR and the cost of equity is examined again to see whether there is a difference between common law countries (model 2a) and civil law countries (model 2b). Table 5 reports that there is a difference when comparing the legal origin of countries. Firms in civil law countries show strong evidence of the negative effect CSR has on the cost of equity. Furthermore, the coefficient on CSR_S for common law is not statistically significant, while for civil law it is statistically significant at 5% level. These results support the findings by Dhaliwal et al. (2014) that the negative relationship between CSR disclosure and the cost of equity is stronger in countries with stakeholder orientation (civil law countries). Thus, it appears that firms in civil law countries showing better CSR performance have significantly lower cost of equity capital.

The remaining models in table 5 extend the analysis by investigating the relation between individual CSR scores and the cost of equity. The reason therefore is to determine if some characteristics have more influence than others in affecting the firm's cost of equity. Specifically, the individual CSR scores examined are the following: the environmental score (CSR_Env), the social score (CSR_Soc) and the corporate governance score (CSR_Gov). All of these individual CSR scores have a negative coefficient in both panel A and panel B, where legal origin and cultural values are controlled respectively. However, only the corporate governance scores are statistically significant at 1% level. Additionally, the social score in panel B is statistically significant at 10% level. The statistically insignificant results for the environmental score are in contrast to the findings by El Ghoul et al. (2011), which show highly significant environmental performance. Furthermore, the statistically insignificant result for the social score in panel A that do not affect a firm's equity financing cost is in line with the findings by El Ghoul et al. (2011). However, it differs in panel B where the social score is statistically significant at 10% level. Thus, the corporate governance aspect in CSR practices has the most influence to lower the cost of equity capital. From an economical viewpoint, this suggest that the market requires a lower rate of return for firms with good corporate governance practices.

The findings in table 5 provides evidence in support of hypothesis 1 that there is a negative relationship between corporate social responsibility and the cost of equity. This evidence is shown in model 2. Furthermore, hypothesis 2 is not supported in this table because evidence is provided in model 2b showing that the negative relationship between CSR and the cost of equity is stronger for firms in civil law countries instead of common law countries.

Table 5
Corporate social responsibility and cost of equity.

	CSR_S (1)	CSR_S (2)	Common Law (2a)	Civil Law (2b)	CSR_Env (3)	CSR_Soc (4)	CSR_Gov (5)
Panel A. Regressions results with legal origin dummy variable.							
CSR	-0.005	-0.009*	-0.004	-0.030**	-0.002	-0.006	-0.020***
	(-0.883)	(-1.708)	(-0.622)	(-2.007)	(-0.393)	(-1.460)	(-2.904)
Beta		3.325***	3.639***	1.331	3.329***	3.315***	3.366***
		(7.614)	(8.579)	(0.737)	(7.622)	(7.582)	(7.738)
BTM		5.498***	4.968***	8.220***	5.498***	5.490***	5.493***
		(6.845)	(5.921)	(3.085)	(6.839)	(6.842)	(6.851)
Leverage		4.932***	5.132***	1.157	4.854***	4.914***	4.961***
		(7.213)	(7.185)	(0.639)	(7.098)	(7.211)	(7.274)
Common	-0.804**	-0.362	-	-	-0.373	-0.440	0.223
	(-2.097)	(-1.037)			(-1.051)	(-1.215)	(0.564)
Intercept	13.817***	6.756***	5.819***	10.398***	6.374***	6.662***	7.111***
	(24.670)	(9.150)	(8.727)	(5.612)	(9.049)	(8.881)	(9.793)
Year effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N	5540	5533	4594	939	5533	5533	5533
Adj. R^2	0.052	0.185	0.176	0.251	0.184	0.185	0.186
Panel B. Regressions results with cultural values dummy variable.							
CSR	-0.008	-0.011**	-0.004	-0.030**	-0.003	-0.008*	-0.018***
	(-1.258)	(-1.966)	(-0.622)	(-2.007)	(-0.617)	(-1.753)	(-2.806)
Beta		3.376***	3.639***	1.331	3.367***	3.358***	3.341***
		(7.720)	(8.579)	(0.737)	(7.691)	(7.668)	(7.883)
BTM		5.485***	4.968***	8.220***	5.490***	5.478***	5.469***
		(6.863)	(5.921)	(3.085)	(6.856)	(6.860)	(6.868)
Leverage		4.907***	5.132***	1.157	4.830***	4.889***	4.902***
		(7.171)	(7.185)	(0.639)	(7.053)	(7.167)	(7.188)
LTO_High	0.822***	0.536**	-	-	0.489*	0.576**	0.268
	(2.639)	(1.969)			(1.785)	(2.056)	(1.010)
Intercept	12.977***	6.322***	5.819***	10.398***	5.904***	6.133***	6.996***
	(31.877)	(10.140)	(8.727)	(5.612)	(10.218)	(10.170)	(9.905)
Year effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N	5540	5533	4594	939	5533	5533	5533
Adj. R^2	0.053	0.185	0.176	0.251	0.185	0.185	0.186

This table presents the results from the regression of the cost of equity (Rcoe) on the CSR scores over the period 2005-2013. The cost of equity is calculated according to the Easton (2004) PEG ratio and CSR is the average of the ESG scores. Models 1 and 2 use the overall CSR score (CSR_S) for the whole sample period. Models 2a and 2b repeat model 2 while dividing the total sample period into common law and civil law countries. Models 3–5 reports the regressing of Rcoe on individual scores of the CSR_S, namely, the environmental score (CSR_Env), the social score (CSR_Soc) and the corporate governance score (CSR_Gov). Panel A presents the regression results with the dummy variable for legal origin (common), while Panel B presents the results with the dummy variable for long-term orientation (LTO_High). Year and industry effects are included; robust t-statistics are reported within the parentheses.
*** Statistical significance at the 1% level.
** Statistical significance at the 5% level.
* Statistical significance at the 10% level.

In table 6, the cost of equity is regressed on CSR proxies from a legal origin perspective by using the interaction effect between CSR and common law (CSR*Common). The test variable in the models 1–2 is the overall CSR score (CSR_S), while in the models 3–5, individual scores of CSR are used. The first model is the basic regression, where the relationship of CSR and cost of equity are examined including the interaction effect but excluding any firm-specific control variables. The results show a statistically insignificant and negative coefficient for CSR_S and a positive coefficient for CSR*Common that is statistically significant at 10% level. This result suggest that common law countries have a positive effect on CSR performance. In model 2, the firm-specific (beta, book-to-market, leverage) are included to further examine the relation between the main variables. The results show that the negative coefficient of CSR_S is statistically significant at 1% level, suggesting that firms engaging in CSR practices will enjoy a lower cost of equity. Furthermore, the interaction effect CSR*Common has a positive coefficient that is statistically significant at 5% level, which shows strong evidence of common law effects on corporate social responsibility. Thus, from a legal origin perspective, firms in common law countries will have higher CSR performance, which in turn will provide them with significantly lower cost of equity capital.

The same as in the previous table, the remaining models 3–5 examine the individual scores on the cost of equity, including the interaction effect. Specifically, the environmental score (CSR_Env), the social score (CSR_Soc) and the corporate governance score (CSR_Gov) are investigated. The results show a negative coefficient for all the individual CSR scores, however, only the social score and the corporate governance score are statistically significant at 10% level and 1% level, respectively. Furthermore, the CSR*Common variable for the CSR_Gov is also statistically significant at 10% level, suggesting that firms in common law countries engage more in corporate governance practices. Thus, the market can perceive firms in common law countries with good corporate governance practices to be less risky, which means they will have lower cost of equity capital compared to other firms.

The findings in table 6 support hypothesis 2, *the negative relationship between CSR and the cost of equity is stronger for firms in common law countries*. Common law has a positive effect on CSR, suggesting that firms in common law countries invest more in CSR-initiatives. From a stakeholder perspective, firms that have high CSR performance will have improved stakeholder relationships, which provides better financial performance. In this research, this enhanced performance relates to lower cost of equity, so, firms in common law countries that incorporate CSR into their business practices could enjoy cheaper equity financing.

The cultural perspective of the relationship between corporate social responsibility and the cost of equity is shown in table 7. This relation is examined by including the interaction effect between CSR and long-term orientation (CSR*LTO) in the model. The overall CSR score (CSR_S) is used as the test variable in models 1–2, while individual scores of CSR are used in models 3–5. The basic regression in model 1 examines the effect of CSR on the cost of equity including the interaction effect, year effects and industry effects. The results show a statistically insignificant negative coefficient for CSR_S and CSR*LTO, which suggest that long-term orientation does not have an effect on corporate social responsibility. However, the results changes when the control variables are included in model 2, where the interaction effect CSR*LTO is statistically significant at 5% level. This significant coefficient is per contra negative and thus, long-term orientation is unfavorably affecting corporate social responsibility.

The individual CSR scores in the remaining models 3–5 provide negative coefficients for CSR_Soc and CSR_Gov, while CSR_Env has a positive coefficient. However, only the corporate governance score is statistically significant at 10% level. Additionally, the models show negative coefficients for the CSR*LTO variable. The interaction effect is statistically significant at 1% level, 5% level and 10% level for the environmental score, the social score and the corporate governance score, respectively. Furthermore, the coefficients of CSR*LTO are all negative, suggesting that long-term orientation has a negative effect on CSR performance. In general, this negative effect of long-term orientation is stronger for the environmental score, followed by the social score and as last the governance score. So, from the cultural perspective, firms engaging in corporate governance practices will enjoy lower cost of equity and firms in countries with high long-term orientation will have weaker CSR performance.

The findings in table 7 does not support hypothesis 3, *the negative relationship between CSR and the cost of equity is stronger for firms with long-term orientation*. Long-term orientation negatively affects the the CSR performance, suggest firms with long-term orientation (LTO) will invest less in CSR-initiatives. In this case, the low CSR performance by these firms implies that the cost of equity will not be lower.

Table 6

Legal origin perspective of corporate social responsibility and cost of equity.

	CSR_S	CSR_S	CSR_Env	CSR_Soc	CSR_Gov
	(1)	(2)	(3)	(4)	(5)
CSR	-0.021	-0.040***	0.000	-0.016*	-0.030***
	(-1.401)	(-2.776)	(0.020)	(-1.827)	(-3.289)
CSR*Common	0.019*	0.037**	-0.003	0.016	0.014*
	(1.177)	(2.391)	(-0.244)	(1.332)	(1.876)
Beta		3.394***	3.323***	3.329***	3.414***
		(7.788)	(7.588)	(7.623)	(7.856)
BTM		5.512***	5.495***	5.485***	5.494***
		(6.848)	(6.832)	(6.835)	(6.852)
Leverage		4.879***	4.862***	4.876***	4.875***
		(7.139)	(7.115)	(7.142)	(7.143)
Common	-2.018*	-2.679**	-0.161	-1.555	-0.388
	(-1.726)	(-2.466)	(-0.169)	(-1.576)	(-0.758)
Intercept	14.850***	8.671***	6.255***	7.399***	7.624***
	(13.199)	(7.539)	(7.280)	(7.286)	(9.710)
Year effects	Yes	Yes	Yes	Yes	Yes
Industry effects	Yes	Yes	Yes	Yes	Yes
N	5540	5533	5533	5533	5533
Adj. R^2	0.052	0.186	0.184	0.185	0.186

This table presents the results from the regression of the cost of equity (Rcoe) on the CSR scores over the period 2005-2013 from a legal origin perspective (common law). Rcoe is calculated according to the Easton (2004) PEG ratio and CSR is the average of the ESG scores. Models 1 and 2 use the overall CSR score (CSR_S), while models 3–5 reports the regressing of Rcoe on individual scores of the CSR_S, namely, the environmental score (CSR_Env), the social score (CSR_Soc) and the corporate governance score (CSR_Gov). The regression includes an interaction effect (CSR*Common), the dummy variable for legal origin (common), year effects and industry effects. Robust t-statistics are reported within the parentheses.

*** Statistical significance at the 1% level.

** Statistical significance at the 5% level.

* Statistical significance at the 10% level.

The firm-specific characteristics (beta, book-to-market, leverage) are included in each regression except model 1 to better isolate the effect of CSR on the cost of equity. The control variables in tables 5–7 show their expected signs and are all generally statistically significant at 1% level. Specifically, beta, BTM and leverage have positive and significant coefficients. In summary, the results in table 5–7 show that the corporate governance score is the most significant part of CSR practices whether there is interaction effect of common law or long-term oriented countries. Furthermore, the civil law countries (stakeholder-oriented) show strong evidence that CSR has a negative effect on the cost of equity, suggesting better CSR performance leads to lower cost of equity. Moreover, common law has a significantly and positive relation to CSR performance, while long-term orientation has a significantly and negative interaction effect on CSR performance.

Table 7
Cultural perspective of corporate social responsibility and cost of equity.

	CSR_S (1)	CSR_S (2)	CSR_Env (3)	CSR_Soc (4)	CSR_Gov (5)
CSR	-0.004	-0.004	0.003	-0.002	-0.013*
	(-0.538)	(-0.587)	(0.686)	(-0.522)	(-1.899)
CSR*LTO	-0.016	-0.029**	-0.036***	-0.030**	-0.023*
	(-1.117)	(-2.157)	(-2.692)	(-2.318)	(-1.796)
Beta		3.433***	3.445***	3.429***	3.462***
		(7.848)	(7.885)	(7.827)	(7.950)
BTM		5.490***	5.486***	5.488***	5.477***
		(6.858)	(6.852)	(6.853)	(6.859)
Leverage		4.945***	4.900***	4.941***	4.959***
		(7.196)	(7.119)	(7.200)	(7.214)
LTO_High	1.810*	2.373**	2.722***	2.447***	1.810*
	(1.795)	(2.513)	(2.939)	(2.696)	(1.945)
Intercept	12.751***	5.834***	5.552***	5.762***	6.535***
	(28.307)	(8.607)	(9.202)	(9.024)	(8.582)
Year effects	Yes	Yes	Yes	Yes	Yes
Industry effects	Yes	Yes	Yes	Yes	Yes
N	5540	5533	5533	5533	5533
Adj. R^2	0.052	0.186	0.186	0.185	0.186

This table presents the results from the regression of the cost of equity (Rcoe) on the CSR scores over the period 2005-2013 from a cultural perspective (long-term orientation). Rcoe is calculated according to the Easton (2004) PEG ratio and CSR is the average of the ESG scores. Models 1 and 2 use the overall CSR score (CSR_S), while models 3–5 reports the regressing of Rcoe on individual scores of the CSR_S, namely, the environmental score (CSR_Env), the social score (CSR_Soc) and the corporate governance score (CSR_Gov). The regression includes an interaction effect (CSR*LTO), the dummy variable for long-term orientation (LTO_High), year effects and industry effects. Robust t-statistics are reported within the parentheses.

*** Statistical significance at the 1% level.

** Statistical significance at the 5% level.

* Statistical significance at the 10% level.

4.3 Robustness tests

In this section, following El Ghoul et al. (2011), sensitivity tests are conducted to investigate whether the results in tables 5–7 are robust to alternative measures in the models. Additionally, the problem of endogeneity is discussed. There is hardly no difference between the results from the robustness tests and the previous findings in this research.

4.3.1 Alternative measures for cost of equity

As previously mentioned, the dependent variable cost of equity (Rcoe) is calculated according to the Easton (2004) PEG ratio. The sensitivity of the findings in tables 5–7 are examined by using alternative measures for the cost of equity. The models in table 8 replicate the models in table 5–7, where a variation of the Price-Earnings-Growth (PEG) model and earnings-to-price (EPR) ratio are used as dependent variable. The definitions and data sources for these alternative measures are outlined in Appendix C. The results in table 8 generally show negative CSR_S coefficients, however, they are not statistically significant. The EPR model 3, where LTO_High dummy variable is included, is the only negative CSR_S coefficient that is statistically significant at 10% level. In EPR model 4, the interaction effect between CSR and long-term orientation is statistically significant at 1% level. This suggests that LTO has a strong negative impact on CSR performance while using EPR ratio as dependent variable. In summary, the results reinforce the previous findings that better CSR performance lowers the cost of equity even though they are not statistically significant.

4.3.2 Endogeneity

Similar to previous CSR research, a concern that arises from the analysis is the potential endogeneity. This may hinder the interpretation of the causal relationship between corporate social responsibility and the cost of equity. The analysis may be subject to reverse causality, where better performing firms with low cost of equity will engage more in CSR activities. In other words, the firm's choice to include CSR-initiatives in its business strategy may not be independent from its cost of equity (El Ghoul et al., 2011). In their research, Waddock and Graves (1997), discuss the direction of causality with two theories: slack resources theory and good management theory. The former theory argues that greater financial performance may results in more slack resources, which provides firms with the opportunity to invest in CSR-initiatives. Alternatively, the latter theory argues that increased CSR performance leads to improved stakeholder relationships, which in turn provides greater financial performance.

The robustness tests for endogeneity and reverse causality is reported in Appendix D. The issue of the cost of equity (Rcoe) in previous period affecting the CSR investment in current period is mitigated by including a lagged Rcoe as an explanatory variable. The panel models are estimated by using the generalized methods of moments (GMM). In all of the models, CSR_S coefficients continues to be negative and loads at 1% significance level. These tests results are an indication that endogeneity does not affect the previous findings. In other words, the negative relationship between CSR and the cost of equity hold.

Table 8
Corporate social responsibility and alternative cost of equity measures.

	Alternative cost of equity measures			
	PEG	PEG	PEG	PEG
	(1)	(2)	(3)	(4)
CSR_S	-0.004	-0.011	-0.004	-0.001
	(-1.169)	(-1.324)	(-1.038)	(-0.378)
CSR*Common		0.008		
		(0.990)		
CSR*LTO				-0.009
				(-1.058)
Beta	-0.138	-0.125	-0.130	-0.118
	(-0.349)	(-0.315)	(-0.325)	(-0.297)
BTM	2.062	2.066	2.058	2.060
	(1.598)	(1.600)	(1.597)	(1.598)
Leverage	1.285**	-1.276**	1.293**	1.305**
	(2.422)	(2.413)	(2.419)	(2.431)
Common	0.307	-0.217		
	(1.268)	(-0.359)		
LTO_High			-0.188	0.355
			(-0.967)	(0.585)
Intercept	-0.541	-0.111	-0.246	-0.387
	(-0.741)	(-0.136)	(-0.424)	(-0.638)
Year effects	Yes	Yes	Yes	Yes
Industry effects	Yes	Yes	Yes	Yes
N	9200	9200	9200	9200
Adj. R^2	0.045	0.045	0.045	0.045

Table 8 *(continued)*

	Alternative cost of equity measures			
	EPR	EPR	EPR	EPR
	(1)	(2)	(3)	(4)
CSR_S	-0.005	-0.038***	-0.007*	-0.001
	(-1.189)	(-4.224)	(-1.808)	(-0.252)
CSR*Common		0.041***		
		(4.547)		
CSR*LTO				-0.022***
				(-2.667)
Beta	-0.061	0.004	0.068	0.098
	(-0.173)	(0.010)	(0.193)	(0.403)
BTM	11.467***	11.488***	11.422***	11.427***
	(6.372)	(6.385)	(6.336)	(87.610)
Leverage	4.099***	4.057***	4.043***	4.073***
	(6.655)	(6.601)	(6.519)	(11.491)
Common	0.393	-2.156***		
	(1.237)	(-3.510)		
LTO_High			0.478**	1.853***
			(1.983)	(3.400)
Intercept	0.972	3.062***	1.178*	0.822**
	(1.043)	(3.252)	(1.697)	(2.073)
Year effects	Yes	Yes	Yes	Yes
Industry effects	Yes	Yes	Yes	Yes
N	9200	9200	9200	9200
Adj. R^2	0.463	0.464	0.463	0.464

This table reports the results from regressing alternative cost of equity (Rcoe) measures on the overall CSR score (CSR_S), which include 9200 firm-year observations over the period 2005-2013. The first Rcoe alternative measure is calculated using the Price-Earning-Growth (PEG) ratio, while the second alternative measure for Rcoe is calculated using the earnings-to-price (EPR) ratio. Appendix C provides detailed calculations and definitions for these alternative measures. The regression includes the interaction effects (CSR*Common and CSR*LTO), the dummy variable for legal origin (common), year effects and industry effects. Robust t-statistics are reported within the parentheses.

* Statistical significance at the 10% level.

** Statistical significance at the 5% level.

*** Statistical significance at the 1% level

5. Conclusion

This paper investigates the effect of corporate social responsibility on the firm's cost of equity through legal origin and cultural values perspective. It expands the literature by examining the relationship for firms outside the United States with focus on common law and civil law countries (legal origin) and long-term oriented countries (cultural values). I argue that *ceteris paribus*, firms with high CSR performance have lower cost of equity compared to firms with low CSR performance. In this research, a sample of 5,533 firm-year observations over the period 2005 – 2013 is used while controlling for firm-specific characteristics (beta, book-to-market, leverage) as well as year and industry fixed effects. Generally, I find that lower cost of equity capital is associated with firms that have better CSR performance, which is in support of hypothesis 1. Findings suggest that not all of the individual CSR scores are related to the cost of equity. Specifically, the corporate governance score shows strong significant evidence that it leads to lowering the firm's cost of equity. In addition, the social score is negatively significant when common law affects the CSR performance of firms. Firms engaging in corporate governance practices relates to executives and board members acting in the best interest of the long-term shareholders, while the social aspect of CSR is the trust and loyalty of society at large generated by the firm. Furthermore, the findings show that the negative effect of corporate social responsibility on the cost of equity is stronger for civil law countries, which contradicts hypothesis 2. The evidence displays an insignificant negative relationship between CSR and the cost of equity for common law countries, while the strong negative relationship is significant for civil law countries. This is in line with previous research by Dhaliwal et al. (2014) that find a negative relationship between CSR disclosure and the cost of equity is stronger for stakeholder-oriented (civil law) countries. Additionally, common law does have a positive interaction effect with CSR performance, suggesting that firms invest more in CSR-initiatives in common law countries. On the contrary to previous argument, this finding supports hypothesis 2 considering firms in common law countries engage in more CSR practices and better CSR performance leads to lower cost of equity. Moreover, The findings suggest a negative interaction effect between CSR and LTO, which means firms with long-term orientation will have low CSR performance. Thus, firms in countries with high LTO will not enjoy lower cost of equity because of this negative effect.

The findings contribute to the CSR-financial performance literature on whether CSR-initiatives have a positive, negative or no effect on the firm value by showing that better CSR performance can increase the firm value by lowering the firm's cost of equity. This research highlights why it is important that firms invest resources in corporate social responsibility practices by reporting how CSR can influence the cost of equity capital. These findings have practical implications for

managers. The managers in firms with high CSR performance will be motivated to keep investing in socially responsible practices that contribute to the society at large as well as providing cheaper equity financing for the firm. Based on the findings, the managers in firms with low CSR performance should consider investing or increase investing in CSR, especially the corporate governance practices.

5.1 Limitations and future research

Finally, this research is subject to certain limitations. The proxies used for the cost of equity were a variation of the Easton (2004) model, so it is possible that they not accurately measure the variable. Furthermore, the firm-specific control variable size correlated highly with the CSR, so, it was removed. This means that the research was conducted with one less control variable.

For future research, the following several topics are worth pursuing. This research can be extended by using more countries in the sample, for example, include Asian countries. It would be interesting to examine the differences in legal origin and cultural values from different continents and learn how the effect of CSR on the cost of equity changes. In addition, researches should consider using multiple measure for the cost of equity and/or other proxies for the CSR variable. Furthermore, follow El Ghoul et al. (2011) and control for analyst forecast attributes.

6. References

Barnea, A. & Rubin, A. (2010). Corporate Social Responsibility as a Conflict Between Shareholders. Journal of Business Ethics, 97(1), 71-86.

Barth, M., Konchitchki, Y., & Landsman, W. (2013). Cost of capital and earnings transparency. Journal Of Accounting And Economics, 55(2-3), 206-224.

Becchetti, L., Ciciretti, R., & Conzo, P. (2013). The Legal Origins of Corporate Social Responsibility. SSRN Electronic Journal, 11(12).

Bhandari, A. & Javakhadze, D. (2017). Corporate social responsibility and capital allocation efficiency. Journal of Corporate Finance, 43, 354-377.

Brooks, C. (2014). Introductory econometrics for finance (3rd ed.). United Kingdom: Cambridge University Press.

Cai, Y., Jo, H., & Pan, C. (2011). Doing Well While Doing Bad? CSR in Controversial Industry Sectors. Journal of Business Ethics, 108(4), 467-480.

Cappiello, A. (2010). Legal Origins and Socio-economic Consequences: Can Legal Origins Really Explain the Main Differences in Economic and Juridical Performances? Nordic Journal of International Law, 79(4), 501-541.

Casado-Díaz, A., Nicolau-Gonzálbez, J., Ruiz-Moreno, F., & Sellers-Rubio, R. (2014). The differentiated effects of CSR actions in the service industry. Journal of Services Marketing, 28(7), 558-565.

Chen, R., & Lee, C. (2016). The influence of CSR on firm value: an application of panel smooth transition regression on Taiwan. Applied Economics, 49(34), 3422-3434.

Cheng, B., Ioannou, I., & Serafeim, G. (2013). Corporate social responsibility and access to finance. Strategic Management Journal, 35(1), 1-23.

Ciobanu, R. (2015). Mergers and Acquisitions: Does the Legal Origin Matter? Procedia Economics and Finance, 32, 1236-1247.

Claus, J., & Thomas, J. (2001). Equity Premia as Low as Three Percent? Evidence from Analysts' Earnings Forecasts for Domestic and International Stock Markets. The Journal of Finance, 56(5), 1629-1666.

Dhaliwal, D., Li, O., Tsang, A., & Yang, Y. (2011). Voluntary Nonfinancial Disclosure and the Cost of Equity Capital: The Initiation of Corporate Social Responsibility Reporting. The Accounting Review, 86(1), 59-100.

Dhaliwal, D., Li, O., Tsang, A., & Yang, Y. (2014). Corporate social responsibility disclosure and the cost of equity capital: The roles of stakeholder orientation and financial transparency. Journal of Accounting and Public Policy, 33(4), 328-355.

Doupnik, T. & Perera, M. (2015). International accounting (4th ed., p. 28).

Easton, P. (2004). PE Ratios, PEG Ratios, and Estimating the Implied Expected Rate of Return on Equity Capital. The Accounting Review, 79(1), 73-95.

Eliwa, Y., Haslam, J., & Abraham, S. (2016). The association between earnings quality and the cost of equity capital: Evidence from the UK. International Review of Financial Analysis, 48, 125-139.

El Ghoul, S., Guedhami, O., Kwok, C., & Mishra, D. (2011). Does corporate social responsibility affect the cost of capital? Journal of Banking & Finance, 35(9), 2388-2406.

Ergungor, O. (2004). Market- vs. bank-based financial systems: Do rights and regulations really matter? Journal of Banking & Finance, 28(12), 2869-2887.

Ferris, S., Javakhadze, D., & Rajkovic, T. (2017). The international effect of managerial social capital on the cost of equity. Journal of Banking & Finance, 74, 69-84.

Francis, J., Khurana, I., & Pereira, R. (2005). Disclosure Incentives and Effects on Cost of Capital around the World. The Accounting Review, 80(4), 1125-1162.

Gallego-Álvarez, I., Prado-Lorenzo, J., Rodríguez-Domínguez, L., & García-Sánchez, I. (2010). Are social and environmental practices a marketing tool? Empirical evidence for the biggest European companies. Management Decision, 48(10), 1440-1455.

Garage, E. & Melé, D. (2004). Corporate Social Responsibility Theories: Mapping the Territory. Journal Of Business Ethics, 53(1/2), 51-71.

Gebhardt, W., Lee, C., & Swaminathan, B. (2001). Toward an Implied Cost of Capital. Journal Of Accounting Research, 39, 135–176.

Graff, M. (2008). Law and Finance: Common Law and Civil Law Countries Compared? An Empirical Critique. Economica, 75(297), 60-83.

Gray, S., Kang, T., & Yoo, Y. (2013). National Culture and International Differences in the Cost of Equity Capital. Management International Review, 53(6), 899-916.

Haryono, U., & Iskandar, R. (2015). Corporate Social Performance and Firm Value. International Journal of Business And Management Invention, 4(11), 69-75.

Hildebrand, D., Sen, S., & Bhattacharya, C. (2011). Corporate social responsibility: a corporate marketing perspective. European Journal of Marketing, 45(9/10), 1353-1364.

Hofstede, G. (2001). Culture's Consequences: Comparing Values, Behaviors, Institutions, and Organizations Across Nations. Sage Publication, Beverly Hills, CA.

Hou, K., Van Dijk, M., & Zhang, Y. (2012). The Implied Cost of Capital: A New Approach. Journal of Accounting And Economics, 53, 504–526.

Iatridis, G. (2012). Audit quality in common-law and code-law emerging markets: Evidence on earnings conservatism, agency costs and cost of equity. Emerging Markets Review, 13(2), 101-117.

Jo, H. & Harjoto, M. (2011). Corporate Governance and Firm Value: The Impact of Corporate Social Responsibility. Journal of Business Ethics, 103(3), 351-383.

Kim, J., & Shi, Y. (2011). Voluntary disclosure and the cost of equity capital: Evidence from management earnings forecasts. Journal of Accounting And Public Policy, 30(4), 348-366.

Kock, C. & Min, B. (2015). Legal Origins, Corporate Governance, and Environmental Outcomes. Journal of Business Ethics, 138(3), 507-524.

La Porta, R., Lopez-De-Silanes, F., Shleifer, A., & Vishny, R. (1997). Legal Determinants of External Finance. The Journal Of Finance, 52(3), 1131.

La Porta, R., Lopez-de-Silanes,, F., Shleifer, A., & Vishny, R. (1998). Law and Finance. Journal of Political Economy, 16(6), 1113-1155.

La Porta, R., Lopez-de-Silanes, F., & Shleifer, A. (2008). The Economic Consequences of Legal Origins. Journal of Economic Literature, 46(2), 285-332.

Lin, L. (2010). Corporate Social Responsibility in China: Window Dressing or Structural Change?. Berkeley Journal of International Law, 28(1).

Lopes, A., & de Alencar, R. (2010). Disclosure and cost of equity capital in emerging markets: The Brazilian case. The International Journal Of Accounting, 45(4), 443-464.

Mackey, A., Mackey, T., & Barney, J. (2007). Corporate Social Responsibility and Firm Performance: Investor Preferences and Corporate Strategies. Academy of Management Review, 32(3), 817-835.

McCarthy, S., Oliver, B., & Song, S. (2017). Corporate social responsibility and CEO confidence. Journal of Banking & Finance, 75, 280-291.

Mishra, D. (2015). Post-innovation CSR Performance and Firm Value. Journal Of Business Ethics, 140(2), 285-306.

Nguyen, M., & Truong, M. (2016). The Effect of Culture on Enterprise's Perception of Corporate Social Responsibility: The Case of Vietnam. Procedia CIRP, 40, 680-686.

Ohlson, J., & Juettner-Nauroth, B. (2005). Expected EPS and EPS Growth as Determinants of Value. Review Of Accounting Studies, 10(2-3), 349-365.

Peng, Y., Dashdeleg, A., & Lin Chih, H. (2014). Does National Culture Influence Firm's CSR Engagement: A Cross Country Study. Journal of Marketing And Management, 5(1).

Richardson, A. & Welker, M. (2001). Social disclosure, financial disclosure and the cost of equity capital. Accounting, Organizations and Society, 26(7-8), 597-616.

Ringov, D., & Zollo, M. (2007). The impact of national culture on corporate social performance. Corporate Governance: The International Journal Of Business In Society, 7(4), 476-485.

Russo, A. & Perrini, F. (2009). Investigating Stakeholder Theory and Social Capital: CSR in Large Firms and SMEs. Journal Of Business Ethics, 91(2), 207-221.

Servaes, H., & Tamayo, A. (2013). The Impact of Corporate Social Responsibility on Firm Value: The Role of Customer Awareness. Management Science, 59(5), 1045-1061.

Sharfman, M., & Fernando, C. (2008). Environmental risk management and the cost of capital. Strategic Management Journal, 29(6), 569-592.

Thanetsunthorn, N. (2015). The impact of national culture on corporate social responsibility: evidence from cross-regional comparison. Asian Journal Of Business Ethics, 4(1), 35-56.

Türker, D. (2015). Contrasting Instrumental Views on Corporate Social Responsibility: Short-term Versus Long-term Profit Orientation Approach. Procedia - Social and Behavioral Sciences, 207, 568-576.

Waddock, S., & Graves, S. (1997). The corporate social performance-financial performance link. Strategic Management Journal, 18(4), 303-319.

Wang, T., & Bansal, P. (2012). Social responsibility in new ventures: profiting from a long-term orientation. Strategic Management Journal, 33(10), 1135-1153.

Wang, T. (2013). So different yet so similar: Long-term orientation and CSR in new and mature firms. Academy of Management Proceedings, 2013(1), 13161-13161.

Wu, M. & Shen, C. (2013). Corporate social responsibility in the banking industry: Motives and financial performance. Journal of Banking & Finance, 37(9), 3529-3547.

Xie, X., Jia, Y., Meng, X., & Li, C. (2017). Corporate social responsibility, customer satisfaction, and financial performance: The moderating effect of the institutional environment in two transition economies. Journal of Cleaner Production, 150, 26-39.

Appendix A

Table A
Legal origin and long-term orientation scores.

Country	N	Legal Origin	Long-term orientation
Australia	373	Common Law	21
Canada	434	Common Law	36
United Kingdom	952	Common Law	51
United States	2835	Common Law	26
France	312	Civil Law – French	63
Germany	245	Civil Law – German	83
Sweden	154	Civil Law – Scandinavian	53
Finland	90	Civil Law – Scandinavian	38
Norway	55	Civil Law – Scandinavian	35
Denmark	83	Civil Law – Scandinavian	35

This table presents an overview of the country classification into legal origin and the long-term orientation scores. The legal origin is either common law countries or civil law countries and within the civil law are the following family of laws: The French, German and Scandinavian. The long-term orientation scores are based on cultural dimensions by Hofstede (2001).

Appendix B – Univariate tests

Table B
Univariate analysis of CSR and cost of equity.

		N	Rcoe
Panel A. Means			
CSR_S ≥ Median	(1)	2206	13.511
CSR_S < Median	(2)	3334	13.833
Difference	(1)–(2)		-0.322
T-stat			-1.198
Panel B. Medians			
CSR_S ≥ Median	(1)	2206	11.475
CSR_S < Median	(2)	3334	11.694
Difference	(1)–(2)		-0.219
U-stat			1.605

This table reports the univariate analysis of CSR and the cost of equity. The univariate model compares the means (Panel A) and the medians (Panel B) of the cost of equity of two groups. These two groups are divided into firms with below and above median CSR scores.

Appendix C – Alternative measures for cost of equity

C.1 PEG Model

This model below is a different version of the Price-Earnings-Growth (PEG) ratio proposed by the Easton (2004) model to calculate the cost of equity; it assumes no dividend payments. This approach was used in the research by Francis, Khurana and Pereira (2005) as proxy for *ex ante* the cost of equity. It was defined "the square root of the inverse of the price-earnings growth ratio".

$$R_{PEG} = \sqrt{\frac{EPS_{t+2} - EPS_{t+1}}{P_t}} \qquad \textbf{(6)}$$

C.2 EPR Model

Following El Ghoul et al. (2011), this alternative measure is a special case of the Easton (2004) model. The earnings-per-share (EPR) ratio assumes that abnormal earnings growth is set to zero. The EPR model is the following:

$$R_{EPR} = \frac{EPS_{t+1}}{P_t} \qquad \textbf{(7)}$$

Appendix D – Robustness tests

Table D
Robustness to endogeneity and reverse causality.

	GMM (1)	GMM (2)	GMM (3)
CSR_S	-0.020***	-0.028***	-0.025***
	(-2.893)	(-3.477)	(-3.356)
CSR*Common		0.010*	
		(1.800)	
CSR*LTO			0.010**
			(1.985)
Beta	1.799***	1.757***	1.884***
	(3.208)	(3.152)	(3.321)
BTM	6.096***	6.128***	6.072***
	(12.835)	(12.861)	(12.807)
Leverage	-0.577	-0.583	-0.569
	(-0.830)	(-0.842)	(-0.817)
Lag(Rcoe)	0.245***	0.246***	0.242***
	(6.038)	(6.093)	(5.939)
Intercept	5.253***	5.233***	5.308***
	(6.778)	(6.771)	(6.803)
Year effects	Yes	Yes	Yes
Industry effects	No	No	No
N	2,729	2,729	2,729

This table examines the robustness of the results reported in table 5–7, which include a 2,729 firm-year observations. The robustness to endogeneity and reverse causality is examined by using the generalized method of moments (GMM) models 1, 2 and 3. These GMM models include a lagged cost of equity (Rcoe) as an explanatory variable and year fixed effects. Further, GMM (2) and GMM (3) has an interaction effect between CSR and common law, and CSR and long-term orientation, respectively. Robust t-statistics are reported within the parentheses.
* Statistical significance at the 10% level.
** Statistical significance at the 5% level.
*** Statistical significance at the 1% level