Where Do Banks Value Corporate Social Responsibility More?

Evidence on the Role of National Culture

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Abstract

Using a sample of loan facilities from 30 countries around the world, we investigate how national cultures affect the relationship between a firm's corporate social responsibility (CSR) performance and its bank borrowing costs. We find that firms with superior CSR performance are more likely to enjoy lower loan interest spreads in countries that exhibit higher levels of egalitarianism and harmony and/or lower levels of hierarchy and mastery. Further analyses reveal that the impact of national culture on the relationship between CSR performance and loan interest spreads is especially significant for borrowing firms with higher customer awareness, heavier R&D intensity, and more opaque information environment. We find national culture of the bank lender itself play an important role in shaping the relation between CSR performance and loan contracting as well. Overall, our findings highlight the important role of national culture in determining the economic consequences of CSR commitments and provide implications for corporate managers who make decisions about CSR strategies.

Key words: national culture; CSR; loan spreads; information opacity

1. Introduction

The advocacy of corporate social responsibility (CSR) engagement has swept the business world in recent decades. CSR refers to actions that further the needs or goals of stakeholder groups or the larger social collective beyond the immediate interests of firms and what they are compelled to do by law (McWilliams and Siegel, 2001). Evidence to date on the link between CSR engagement and firm value creation, although abundant, is not only mixed (e.g., Margolis and Walsh, 2003; Orlitzky, et al., 2003; Margolis, et al., 2009), but also mainly limited to certain countries or regions (Williams and Aguilera, 2008). It is unknown whether the relationship between CSR engagement and value creation varies across different countries or regions.

Institutional theory has long established that the institutional environment within which corporations are embedded exerts significant influence on the decision making of corporations and their stakeholders (Campbell, 2007). Extant research suggests that the variation in nation-level institutions results in divergent degrees of pressures and motivations for corporations to engage in CSR initiatives (Aguilera, et al., 2007; Jackson and Apostolakou, 2010; Jones, 1999; Liang and Renneboog, 2017; Maignan and Ralston, 2002), and leads to differential returns to CSR investment (Maignan, 2001; El Ghoul et al., 2017).

This study aims to provide further evidence on the role of national institutions in determining the relationship between CSR and firm value creation in the context of bank loan contracting. Specifically, we focus on national culture, a critical and long recognized informal institution that significantly impacts activities and interactions between corporations and their stakeholders (Hofstede, 2001; Schwartz, 2004). We choose to examine the loan contracting consequences of CSR for several reasons. First, bank loans are a critical source of corporate capital and are of high importance to firm value creation around the world (Qian and Strahan, 2007). Second, the

bank loan contracting terms, especially loan interest spreads, can be observed directly with few measurement errors. This allows to make a relatively clean inference about the economic consequences of CSR investment. Third, banks stand in a better position to assess the validity of their borrowers' CSR investment because of their better access to borrowers' private information. The absence of mandatory disclosure requirements on CSR issues and independent verification requirements on disclosed CSR information around the world makes it difficult for outside parties without access to private information, such as public shareholders and bondholders, to assess the consequences of CSR expenditures on firm prospects (Simnett et al., 2009).

Prior literature suggests that banks construct loan terms based on the assessment of borrowing firm's default risk and information risk (Duffie and Lando, 2001; Lambert et al., 2007; Bharath et al., 2008). Different theories about CSR predict different mechanisms through which CSR commitment could affect borrowing firm's default risk and/or information risk. On the one hand, better CSR performance could lower a firm's default risk by fostering superior stakeholder relations, which enable the firm not only to enhance performance advantages but also to recover from disadvantageous competitive positions more quickly (Choi and Wang, 2009; Hillman and Keim, 2001; Ruf et al., 2001; Russo and Fouts, 1997). The positive moral capital created by CSR engagement can also provide a form of insurance against fallout from negative events in the future (Godfrey, 2005; Peloza, 2006; Godfrey et al., 2009). The higher commitment to more ethical and transparent information disclosure practices associated with superior CSR performance further reduces information risk faced by the lenders (Gelb and Strawser, 2001; Dhalwal, Li, Tsang, and Yang, 2011; Kim, Park, and Wier, 2012).

On the other hand, the agency view of CSR engagement suggests that CSR is simply a manifestation of agency problems inside the firms where managers undertake CSR initiatives to

pursue their personal agendas with corporate resources (Cespa and Cestone, 2007; Cheng et al., 2013; Friedman 1970; Masulis and Reza, 2015). The diversion of firm scarce resources for non-value-increasing or even value-destroying CSR projects will undermine a firm's prospects and its ability to repay loan obligations. Although it is ex ante unknown whether CSR engagements lead to higher or lower loan costs due to the competing views discussed above, there is no doubt that both the benefits and costs associated with CSR investments are, to some extent, determined by the institutional environments in which a firm is located. In regions where stakeholders care little about CSR-related matters, the marginal costs are highly likely to outweigh the marginal benefits from CSR investments.

As a critical and long recognized informal institution, cultural values shape and justify individual and group beliefs, actions, and goals (Schwartz, 2004). With respect to CSR domains, national cultural values not only guide managerial decision-making related to CSR engagement (Egri et al., 2006; Ioannou and Serafeim, 2012), but also determine various stakeholders' expectations, attitudes, and reactions towards a firm's CSR practices (Gardberg and Fombrun, 2006). For instance, Maignan (2001) finds that consumers in communitarian countries are more likely to support socially responsible businesses than those in countries with more individualistic value orientations.

As a result, the risk-mitigation effect of CSR engagement could be accentuated while the agency-manifestation role might be mitigated in countries dominated by CSR-prone cultural values where CSR investments are highly valued by stakeholders. On the contrary, in countries where prevailing cultural values are indifferent to CSR, the agency-manifestation role could dominate since stakeholders pay little attention to a firm's CSR practices and are less likely to reward a firm's CSR endeavors. Furthermore, as one of important stakeholder groups, banks are

more likely to incorporate CSR concerns into their lending decisions in countries with CSR-prone cultural values where bank managers tend to attach higher values to CSR (Waldman et al., 2006a). We thus expect that borrowing firms with better CSR performance are more likely to be rewarded with lower loan costs in in countries with CSR-prone cultural values than in those with CSR-indifferent cultural values.

In this study, we employ cultural value measures derived from the Schwartz cultural theory (Schwartz, 1994, 2004) to test whether national cultural values affect the relation between CSR performance and bank loan costs. Schwartz's model has several advantages over other culture measures (e.g. Hofstede, 1980; Inglehart, 1997) used in literature. First, Schwartz's model is based on a careful theoretical elaboration and empirically validated, with central elements derived from earlier work in the social science. Second, Schwartz's model uses value measures shown to have cross-culturally equivalent meanings at the individual level to operationalize the cultural dimensions (Siegel et al., 2011). Last but not the least, the data used to construct Schwartz's value measures are more recent, and the resulted value dimensions are thus more relevant to the world nowadays (Chui et al., 2002; Chui et al., 2016).

Specifically, we capture national cultural value by relying on two of the three bipolar cultural dimensions, i.e., egalitarianism/hierarchy and harmony/mastery dimensions, developed by Schwartz's (2004) cultural theory because both dimensions are shown to have a clear connection to CSR issues in prior literature (Gardberg and Fombrun, 2006; Schuler and Cording, 2006).[1] Egalitarianism/hierarchy dimension addresses how to guarantee responsible behavior that preserves the social fabric, and harmony/mastery dimension addresses how to regulate people's interactions with natural and social environments. Each broad dimension encompasses two poles

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[1] Another bipolar cultural dimension is the autonomy/embeddedness dimension, which addresses the nature of the relationship between the individual and the group.

with the emphasis on one pole of a dimension typically accompanying a de-emphasis on the opposite pole.

Harmony/mastery value deals with the people's management of their relations to the natural and social world. Cultures with higher (lower) harmony (mastery) value emphasize fitting into the social and natural world and trying to appreciate rather than to exploit. Cultures stressing harmony value shape a higher expectation and greater rewards on a firm's CSR commitment (Gardberg and Fombrun, 2006). Egalitarianism/hierarchy value determines the extent to which the view of all people as moral equals is shared within a society. Cultures with higher (lower) egalitarianism (hierarchy) value are more accepting of others as equals and care for their well-being. A firm's CSR engagement, especially efforts to promote the welfare of employees and the society, is more likely to be valued in cultures higher in egalitarianism value (Schuler and Cording, 2006). In contrast, managers in cultures higher in hierarchy value might be inclined to care more about their own interests than about the interests of stakeholders, and thus are more likely to pursue private benefits via CSR engagement but not particularly build superior stakeholder relations or feel responsible for the broader social welfare (Waldman et al., 2006a; Waldman, Siegel, and Javidan, 2006b). Therefore, we predict the risk-mitigation (agency-manifestation) effect of CSR engagement on loan contracting to be enhanced (mitigated) in countries with cultural values higher (lower) on egalitarianism/harmony (hierarchy/mastery).

Using a sample of 8,067 loan facilities borrowed by 1,542 firms in 30 countries over the period from 2005 – 2014, we find that firms with better CSR performance, on average, can obtain bank loans at lower interest spreads. These results are consistent with the findings in prior studies that superior CSR performance is related to favorable credit ratings and better access to external finance (Cheng et al., 2014; Jiraporn et al., 2014; Lins et al., 2017). More importantly,

the favorable impact of superior CSR performance on bank loan costs is more significant in countries with cultural values higher on egalitarianism and harmony. These findings indicate that bank lenders value the borrowing firms' CSR engagement to a greater degree in countries with CSR-prone cultural values where stakeholders such as consumers exhibit higher expectations and more favorable attitudes to CSR commitments, and thus are more willing to reward a firm's CSR initiatives.

Prior literature documents that one of necessary conditions for CSR to affect firm value creation is customer awareness of firm CSR activities (Dhaliwal et al., 2011; Servaes and Tamayo, 2013). If firm CSR engagement is valued more in CSR-prone cultures, we predict that the moderating role of national culture in the relationship between CSR performance and loan costs will be more pronounced for borrowers with higher customer awareness. Our further analysis confirms that the moderating role of national culture is largely significant for firms with high customer awareness, as proxied by marketing intensity.

One channel through which CSR commitment reduces a firm's credit risk is that CSR commitment can play a kind of insurance role against negative events and reduce uncertainty of firm performance (Godfrey 2005; Peloza, 2006; Choi and Wang, 2009; Godfrey et al. 2009). If firm CSR engagement is more valued in CSR-prone cultures, we predict that the moderating role of national culture in the relationship between CSR performance and loan costs will be especially important for borrowers with high operating uncertainty. We conduct tests and find that the moderating role of national culture is far more pronounced for firms with higher uncertainty, as proxied by research and development (R&D) intensity. Our additional analysis also shows that the moderating role of national culture in the relationship between CSR performance and loan costs is especially pronounced for borrowers that are informationally opaque.

Finally, we examine whether the national culture of the bank itself matters for the relation between CSR performance and loan costs by restricting to a subsample of loans borrowed from foreign banks. We find that banks from countries with higher CSR-prone cultures relative to the borrower's country are more likely to offer lower loan spreads for their borrower's superior CSR performance. These findings provide additional evidence supporting that cultural values inherent in stakeholders (e.g., bank lenders) significantly affect the importance that they attach to a firm's CSR practices.

In sum, this study reveals that the prevailing cultural values in a country play a critical role in determining the relationship between CSR commitment and bank loan costs, especially for firms with high customer awareness, great performance uncertainty, and opaque information environment.

This study contributes to the literature in several ways. To the best of our knowledge, it is the first study to investigate the role of national cultures in determining the relationship between CSR performance and bank loan contracting. Based on U.S. observations, Goss and Roberts (2011) find little evidence that banks offer loans at lower interest spreads to borrowers with superior CSR performance, especially to those low-quality borrowers. Our study extends Goss and Roberts (2011) to cross-country contexts and reveals that the pricing of CSR investment by banks in loan contracting depends on a country's prevailing cultural values. Secondly, this study adds to the cross-country studies on CSR consequences in the context of capital markets (Dhaliwal, et al. 2014; Stellner et al., 2015; El Ghoul et al., 2017). This study provides further evidence that the net benefits from CSR investment are context-sensitive and dependent on external institutional environments. Finally, our study provides important managerial implications by identifying the profound impact of a country's cultural values on the benefits that

a firm can obtain from commitment to social good. If managers aim to maximize firm value for shareholders, they should take external institutional environments such as prevailing cultural values into account when deciding on CSR strategies.

The remainder of this paper proceeds as follows. In the next section, we review the related literature and develop hypotheses; Section 3 describes our sample and data sources. Section 4 specifies research design. Section 5 discusses our main empirical results, and Section 6 reports robustness analyses. The final section concludes the paper.

2. Literature review and hypothesis development

2.1. Impact of national culture on the relation between CSR performance and loan costs

This study expects that banks will take into consideration the borrowers' CSR practices when pricing loans. However, the weight placed by banks on their borrowers' CSR performance might vary across countries with different institutional environments. Corporations including lending banks are embedded within broad social structures that are comprised of different types of institutions, which exert significant influence on their behaviors (Campbell, 2007). Corporate CSR activities are also framed vis-à-vis the national social context and are thus affected by the prevailing institutions in different countries (Jones, 1999; Matten and Moon, 2008; Jackson and Apostolakou, 2010).

National culture has long been recognized as a critical informal institution that significantly determines major behaviors of corporations and their stakeholders (Hofstede, 2001; Schwartz, 2004; Leung et al., 2005). National culture affects a wide range of corporate and individual activities such as capital structure (Chui et al., 2002), individual preferences for redistribution (Guiso et al., 2006), life insurance consumption (Chui and Kwok, 2008), dividend policies (Shao

et al., 2010), earnings management practices (Han et al., 2010), corporate investment strategies (Shao et al., 2013), and corporate risk-taking (Li et al., 2013).

National culture is expected to shape CSR practices and the pros and cons of CSR. On the one hand, national cultural values guide managerial decision-making related to CSR choices and influence firms' inclination to undertake CSR investments (Egri et al., 2006; Ioannou and Serafeim, 2012). On the other hand, stakeholder groups have distinct expectations, attitudes, and reactions towards CSR practices contingent on the societal culture in which they are embedded (Gardberg and Fombrun, 2006).

The prevailing value emphases in a society are viewed as the most central feature of culture (Hofstede, 1980). Culture value emphases shape and justify individual and group beliefs, actions, and goals (Schwartz, 2004). Cultural values may affect both the manner that a firm's stakeholder groups perceive and react to its CSR practices and the ability of CSR to influence stakeholders in the firm, which in turn determines the marginal benefits and costs associated with CSR commitment (Barnett, 2007). Consequently, a particular type and level of CSR engagement is likely to pay off to a greater degree in countries with particular cultural values as opposed to in those with other opposite cultural values. For instance, Maignan (2001) finds that consumers in communitarian countries (i.e. France and Germany) are more willing to extend patronage to socially responsible firms than their counterparts in the pro-individualism countries (e.g., U.S.).

2.2. Hypothesis development

Following prior studies (e.g. Chui et al., 2002, 2016; Shao et al., 2010; Siegel et al., 2011), this study employs the cultural value dimensions based on the Schwartz cultural theory as the main measure of cultural values. The Schwartz (2004) cultural theory conceptually derives cultural value orientations by asking what problems every society confronts and what polar value

preferences might evolve to deal with these issues. Specifically, it identifies three key issues that all societies must address and develops three bipolar dimensions that represent alternative solutions to the three key issues. Each broad dimension encompasses two poles with the emphasis on one pole of a dimension typically accompanying a de-emphasis on the other pole. Those three bipolar dimensions include autonomy/embeddedness dimension, harmony/mastery dimension, and egalitarianism/hierarchy dimension, which capture differences in how populations of different countries prioritize a set of universally recognized values.[2] This study focuses on the latter two dimensions since both dimensions are shown to have a clear connection to the economic consequences associated with CSR practices in prior studies (e.g., Gardberg and Fombrun, 2006; Schuler and Cording, 2006).

The harmony/mastery dimension addresses the way to regulate how people manage their relations to the natural and social world. Cultures high on harmony emphasize fitting into the social and natural world, trying to appreciate and accept rather than to change or exploit. Countries with cultural emphasis on harmony values promote the maintenance of harmonious relationships not only within the group, but also with society. Important values in harmony cultures include world at peace, unity with nature, and protecting the environment. On the contrary, cultures with cultural emphasis on mastery encourage active self-assertion in order to master, direct, and change the natural and social environment to attain group or personal goals. Mastery values give legitimacy to and encourage assertive action to achieve goals, even at the expense of others, if necessary. Overemphasis on mastery promotes exploitation of people and nature.

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[2] The autonomy/embeddedness dimension addresses the nature of the relations and boundaries between the person and the group: to what extent are people autonomous vs. embedded in their groups? In autonomy cultures, people are viewed as autonomous entities and are encouraged to find meaning in their own uniqueness. In embeddedness cultures, people are viewed as entities embedded in the collectivity. Meaning in life is expected to come largely through social relationships, through identifying with the group, and striving toward the group shared goals.

We thus expect that harmony values are more conducive to CSR commitment than mastery values. In countries with cultural values higher (lower) on harmony (mastery), stakeholders tend to have higher expectations on and more active responses to a firm's CSR practices. For instance, it is believed that consumers embracing harmony values versus mastery values develop a greater purchase intention in response to a firm's enhanced CSR performance (Schuler and Cording, 2006). Stakeholders thus have greater influence on the viability and survival of firms in countries with cultural values higher (lower) on harmony (mastery).

In addition, cultural values higher (lower) on mastery (harmony) place greater emphasis on individual success and independence, which encourage managers to adopt aggressive strategies and take up high-risk investments (Li et al., 2013). As a result, agency costs in high-mastery countries are higher and debtholders are in turn more concerned with agency activities in those countries (Chui et al., 2016). Therefore, the agency-manifestation effect of CSR engagement is more likely to dominate in countries with cultural values higher (lower) on mastery (harmony).

To sum, we expect that bank lenders will value their borrower's CSR performance to a larger degree in countries with cultural values higher (lower) on harmony (mastery) where the risk-mitigation effect of CSR engagement is more likely to outweigh the agency-manifestation role. This thus leads to the following hypothesis:

H1. The favorable effect of superior CSR performance on a firm's loan interest spreads is strengthened in countries with cultural values higher (lower) on harmony (mastery).

The egalitarianism/hierarchy dimension addresses how to guarantee responsible behavior that preserves the social fabric. Egalitarian cultures seek to induce people to recognize one another as moral equals who share basic interests as human beings. The important values in egalitarian cultures include equality, social justice, responsibility, and mutual help. In egalitarian cultures, people are socialized to internalize a commitment to cooperate and to feel concern for

everyone's welfare. Egalitarianism is thus broadly associated with greater societal care for the weak through social safety nets that support the sick, elderly, and unemployed. Besides, egalitarianism is also linked to corporate governance mechanisms addressing the agency problem in public firms through greater transparency and more stringent monitoring on manager's power (Siegel et al., 2011), which discourages firm managers from engaging in self-benefited CSR agendas.

In contrast, hierarchy cultures rely on hierarchical systems of ascribed roles to insure productive behavior. They define the unequal distribution of power, roles, and resources as legitimate. People are socialized to take the hierarchical distribution of roles for granted and to show deference to superiors and expect deference from subordinates. Hierarchy cultures highly emphasize values such as social power, authority, and wealth. Overstress on hierarchy encourages large disparities in social power and consumption. Managers in countries with cultural values higher on hierarchy would be less concerned with the needs of shareholders and stakeholders than their own, and more likely to exploit power to pursue private benefits using corporate funds (Waldman et al., 2006a). In similar vein, those managers are more likely to undertake CSR projects that benefit themselves rather than firm value maximization.

Thus, in countries with a higher level of egalitarianism versus hierarchy, firms are expected to act for the benefit of all their stakeholders as a matter of choice, and various stakeholders are entitled with more legitimacy over firms' CSR engagement. For instance, countries higher in egalitarianism are much more likely to select policies enforcing labor rights and limiting employer operating freedom (Siegel and Larson, 2009). Stakeholders would respond more positively to firms' socially responsible behaviors and more heavily penalize firms for their socially irresponsible practices. Managers are also more likely to be motivated/disciplined to

implement CSR strategies with intention to maximize firm value rather than opportunistically extract private benefits in countries with cultural values higher (lower) on egalitarianism (hierarchy). Therefore, we expect that the strategic value of CSR initiatives is greater in countries with cultural values higher on egalitarianism versus hierarchy. Correspondingly, the favorable (adverse) impact of a firm's CSR investments on its bank loan contracting will be strengthened (mitigated) in those countries. This gives rise to the following hypothesis:

H2. The favorable effect of superior CSR performance on a firm's loan interest spreads is strengthened in countries with cultural values higher (lower) on egalitarianism (hierarchy).

3. Sample and data

We construct our sample from the intersection of several databases over the period 2005-2014. We obtain information on CSR performance from the Thomson Reuters ASSET4 database, which rates the environmental, social, and governance practices of a universe of over 4,600 companies worldwide. The ASSET4 database provides scores within four pillars: environmental, social, economic, and governance performance. For each firm, over 250 objective indicators are used to calculate the four pillar scores. Following prior studies (e.g., Ioannou and Serafeim, 2012; Luo et al., 2015; El Ghoul et al., 2017), we measure a firm's overall CSR performance based on only its environmental and social performance scores, which are closely connected with the traditional notion of CSR. Environmental scores capture a firm's performance on resources reduction, emission reduction, and product innovation benefiting the environment. Social scores capture a firm's performance in product responsibility, community, human rights, diversity, employee training and development, health and safety, and employment quality. In particular, we compute a firm's overall CSR performance (*CSP*) as the equally weighted average of its environmental and social performance scores.

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We collect bank loan information from the DealScan database complied by the Loan Pricing Corporation, which provides detailed information on loan transactions from around the world. The DealScan loan data have been widely used in cross-country studies on loan contracting (e.g., Qian and Strahan, 2007; Bae and Goyal, 2009; Kim, Tsui, and Yi, 2011; Florou and Kosi, 2015; Chui et al., 2016; among others).[3] The loan data in DealScan are compiled for each transaction or deal. Each deal can have only one facility or a package of several facilities with different price and non-price terms. We consider each facility as a basic unit of our empirical analysis because many loan characteristics and loan spreads vary across facilities. We require that all loan facilities in our sample be senior debt.

National cultural value measures are developed using Schwartz's (2004) framework and based on data gathered using the Schwartz value survey between 1988 and 2007.[4] We focus on the egalitarianism/hierarchy dimension and the harmony/mastery dimension, both of which exhibit clear influences on CSR practices.

The financial data used to measure borrower characteristics are retrieved from the Compustat North America and Global files. The country-level legal enforcement index comes from Djankov et al. (2008). The data on economic development of our sample countries are extracted from the World Development Indicators database. We require that each sample country have no less than 10 observations. The final sample includes 8067 loan facility observations with available data for all variables during the sample period 2005-2014. Those loan facilities were borrowed by 1542 firms from 30 countries around the world, as shown in Table 1.

<Insert Table 1 around here>

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[3] We acknowledge that the coverage of DealScan is biased toward countries with more stringent reporting requirements (e.g., the United States and the United Kingdom) as well as toward larger firms. Our findings may not be generalizable to smaller borrowing firms. We thank an anonymous referee for the comment on this issue.
[4] We thank Professor Schwartz for kindly providing the cultural data.

4. Empirical model

To evaluate the extent to which a country's cultural values determine the relation between a firm's CSR performance and its bank borrowing costs, we specify the following regression model:

$$LnAIS = f\,(SUP\_CSP, \text{National Culture Variable} \times SUP\_CSP, \text{National Culture Variable, Loan}$$
$$\text{Characteristics, Borrower-specific Controls, Country-level Controls,}$$
$$\text{Industry dummies, Year dummies)} \tag{1}$$

where the dependent variable, *LnAIS*, the measure of bank loan costs, is defined as the natural logarithm of the drawn all-in-spread (plus the upfront fee and annual fee, if any) in basis points over the benchmark rate (the London Interbank Offered Rate, hereafter LIBOR, or its equivalent). The proxy for CSR performance is calculated as the equally weighted average of environmental and social performance scores rated by ASSET4 for the year immediately prior to the initiation of the loan facility. The original ASSET4 scores lie between zero and 100. For the ease of interpretation, we define the variable, *SUP_CSR*, by transforming the CSR scores into a dummy variable, which takes the value of 1 if the CSR score is above the country-year median, and 0 otherwise. To the extent that superior CSR performance is associated with lower default risk and higher information transparency, we predict that firms with better CSR performance are more likely to obtain loans with lower interest spreads.

This study aims to examine how national cultural values affect the relationship between CSR commitment and bank loan costs. To proxy for a country's cultural values, we rely on four theoretically motivated cultural value measures developed in Schwartz (2004): harmony (*Harmony*), mastery (*Mastery*), egalitarianism (*Egalitarianism*), and hierarchy (*Hierarchy*). For

the ease of interpretation, we also define the four culture variables as a dummy. Specifically, the variable, *Harmony/Mastery/ Egalitarianism/Hierarchy*, takes the value of 1 if a country's score of Harmony/Mastery/Egalitarianism/Hierarchy orientation is above the median of sample countries, and 0 otherwise, respectively.[5] The above discussion suggests that cultural values higher on harmony and egalitarianism (lower on mastery and hierarchy) are more conducive to CSR commitment. In those cultures, firms are likely to obtain more benefits from their socially responsible endeavors and/or suffer greater damages for their irresponsible actions. Banks are thus expected to be concerned more about their borrowers' CSR practices and value their borrowers' CSR performance to a higher degree in lending decision-making process.

We control for several loan-specific characteristics that are found to influence the pricing of bank loans in the literature (e.g., Booth and Booth, 2006; Graham, Li, and Qiu, 2008; Bae and Goyal, 2009; Demiroglu and James, 2010; Goss and Roberts, 2011; Ge, Kim, and Song, 2012). Specifically, we include *lnLoanSize*, the natural logarithm of the amount of a loan facility, to capture the economies of scale in bank lending. We control for loan maturity, *lnMaturity*, because banks might face greater uncertainty and higher credit risk for loans carrying relatively long maturities. The indicator variable, *Secured*, takes a value of 1 if a bank loan is secured with collateral, and 0 otherwise. The variable *Covindex* is calculated as the natural logarithm of the number of financial and general covenants in a loan facility. Collateral requirements and the inclusion of covenants are associated with higher default risk. The variable, *TermLoan*, indicates whether the facility is a term loan. We also include a series of indicator variables to control for potential differences in loan pricing associated with different loan purposes, including working capital/corporate purposes, capital expenditure, refinancing, acquisitions, and others.

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[5] We also repeat the regressions using the standardized culture measure and obtain similar results. We thank the anonymous referee for the constructive comment.

We also include a set of borrower-specific variables to control for the effect of heterogeneity in borrower risk on loan spreads: *lnSize*, *Leverage*, *MB*, *Profitability*, *Tangibility,* and *NotRated* . Larger firms are likely to be viewed as less risky by banks. The variable *lnSize*, measured as the natural logarithm of total assets, is included to control for this size effect. The variable, *Leverage*, is the ratio of total long-term debt to total assets. Firms with higher leverage ratios, all else equal, have higher default risk, which can negatively affect loan pricing. The variable, *MB,* is calculated as the market value of equity plus the book value of debt divided by total assets and introduced to proxy for a firm's growth opportunities. The variable *Profitability*, the ratio of earnings before interest, taxes, depreciation, and amortization (EBITDA) to total assets, is included because profitable firms generally have low default risk and thus can borrow at a lower cost. The variable *Tangibility*, the ratio of tangible assets (i.e. net property, plant, and equipment) to total assets, is included as firms with more tangible assets tend to face lower borrowing costs. The variable, *NotRated*, is a dummy variable, which takes the value of 1 if the company is not rated by Fitch, and 0 otherwise.[6] We lag all borrower specific controls by one period.

Following prior studies (e.g., Qian and Strahan, 2007; Bae and Goyal, 2009), we further control for several country-level characteristics. We include the variable *Anti-director*, a revised anti-director index compiled by Djankov, *et al.* (2008) to control for the level of investor protection in a country. We include *lnGDP*, the natural logarithm of gross domestic product (GDP) per capita, to proxy for a country's economic development, and *Bankcredit*, the ratio of domestic credit to private sectors by banks to GDP, to proxy for the importance of the banking sector in a country. We further control for the country-level annual *short-term interest rate* as

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[6] We use the variable *Credit rating* instead of *NotRated* in the regression, the results remain. The variable *Credit Rating* is *Creditrating*, is the company's credit rating as provided by Fitch and included to control for creditworthiness. We convert the Fitch ratings into a numeric scale from 1 – 24: AAA=24, AA+=23, …, D=1. The value of *Credit Rating* is zero if the firm was not rated.

country-level short-term interest rate will affect the fundamental borrowing cost for a given country/region. . Detailed variable definitions are provided in Appendix A. Finally, for all regressions, if applicable, we include industry fixed effects to account for systematic differences across industries and year fixed effects to capture potential time trends in bank loan contracting. Standard errors are clustered at the country-level in all regressions.

5. Empirical results

5.1. Summary statistics

Panel A of Table 1 shows the sample distribution across countries and summarizes our national culture measures along with other country-specific characteristics. The United States contributes the largest number of loan facilities (4,448), while Denmark and Portugal contribute the fewest loan facilities (15).[7] All four polar cultural values vary markedly across our sample countries. The value of harmony ranges from 3.46 to 4.62, while the value of the opposite concept, mastery, ranges from 3.66 to 4.28. The value of egalitarianism ranges from 4.36 to 5.27, while its opposing term, hierarchy, ranges from 1.49 to 3.05. The United States, which contributes the largest number of observations, ranks first (ninth) lowest in terms of harmony (egalitarianism) values and fifth (ninth) highest in terms of mastery (hierarchy) values among our 30 sample countries, which suggests that the prevailing cultural values in the United States may not encourage CSR commitment. Panel B of Table 1 shows the sample distribution by year and suggests that the loan facility (borrowing firm) distribution is relatively even across the sample period, except for 2008, 2009, and 2011.

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[7] To avoid the possible over-/under-representation of a particular country, we examine the robustness of our results alternately excluding observations from each country one at a time.

Panel A of Table 2 presents summary statistics for CSR performance, loan-specific variables, and borrower specific characteristics. Both CSR performance measures and loan interest spreads display a high degree of variation across sample observations. The mean and median values of CSR performance (*CSP*) are 0.55 and 0.56, respectively, with a standard deviation of 0.29. The mean and median of the drawn all-in spread over the LIBOR or LIBOR equivalents (i.e., *AIS*) are 154.49 and 135 basis points, respectively, with a standard deviation of 113.9 basis points. The mean (median) loan maturity is about 52 (60) months, with a standard deviation of about 30 months. 24% of loan facilities are secured with collateral and 32% are term loans. An average loan contains 1.41 covenants. For an average sample borrower, tangible assets, EBITDA, and total long-term debts are 29%, 12%, and 24% of total assets, respectively. The average sample borrower has a market-to-book ratio (*MB*) of 3.63 and about 39% of the loans are borrowed by the firms without Fitch credit ratings.

<Insert Table 2 around here>

Panel B of Table 2 reports the correlation among the selected key variables used in our empirical analyses. It shows that CSR performance (*SUP_CSP*) is negatively correlated with the loan spreads (*lnAIS*) at significant level, providing the preliminary evidence that firms with better CSR performance generally obtain bank loans at lower costs. A firm's CSR performance is positively related to egalitarianism and harmony values whereas negatively associated with hierarchy and mastery values. These results indicate that firms are more likely to perform better in CSR domains in countries where the prevailing cultural values are higher on egalitarianism and harmony but lower on hierarchy and mastery, consistent with the findings in prior literature (e.g., Cai et al., 2016).

5.2. Regression results

In this section, we investigate the role of national culture on the relationship between a firm's CSR and its bank loan costs. Our hypotheses H1 and H2 conjecture that borrowing firms are more likely to be rewarded with lower interest spreads for their better CSR performance in countries with cultural values higher (lower) on harmony (mastery) and egalitarianism (hierarchy). Before conducting regression analyses, to show a visual sense about the effect of national culture on the relation between CSR and bank loan cost, we run the regression of loan spreads (*LnAIS*) on CSR performance (*SUP_CSP*) country by country to obtain the CSR-Spread coefficient for each country. Then we construct country-by-country scatter plots, with each culture value on the x-axis and the CSR-Spread coefficient on the y-axis, as shown in Figure 1. It shows a clearly negative coefficient between *CSP* and *LnAIS* in most countries. Such negative CSR-Spread coefficient generally decreases (increases) with the degree of harmony (mastery) and egalitarianism (hierarchy), as predicted in our hypothesis H1 (H2).

<Insert Figure 1 around here>

We then estimate the equation (1) using ordinary least squares (OLS) with the four dummy culture variables included alternately, and report the results in Table 3. All regressions account for industry and year fixed effects and the reported *t*-values are calculated using robust standard errors clustered at the country-level.

<Insert Table 3 around here>

For the sake of direct comparison, Column (1) reports the regression results without culture variables and their interactions with *SUP_CSP* included. Column (2) to (5) presents the regression results with harmony, mastery, egalitarianism, and hierarchy values as the proxy for national culture, respectively. The baseline regression result in Column (1) shows that the coefficient on *SUP_CSP* is negative and statistically significant, suggesting that banks tend to

offer lower interest spreads to borrowers with better CSR performance at large.

More importantly, the coefficients on the interactions between *SUP_CSP* and *Harmony/Egalitarianism* are significantly negative while those pertaining to the interactions between *SUP_CSP* and *Mastery/Hierarchy* are significantly positive. These estimates are economically significant as well. Holding all else equal, borrowers with better CSR performance can enjoy (suffer) additional 21.5%/15.4% (14.5%/18.7%) decrease (increase) in loan spreads in countries with higher harmony/egalitarianism (mastery/hierarchy) values relative to their counterparts in countries with lower harmony/egalitarianism (mastery/hierarchy) values. These results indicate that the favorable impact of superior CSR performance on loan pricing is more pronounced in countries with cultural values higher on harmony/egalitarianism, but less pronounced in countries with cultural values higher on mastery/hierarchy, supportive of hypotheses H1 and H2.

The coefficients on control variables are generally consistent with those in earlier studies. Specifically, larger loans are associated with lower interest spreads, while loans with longer maturity, collateral requirements, and more covenants are associated with higher interest spreads. Firms with larger size, and higher profitability obtain bank loans at lower costs, while firms with higher leverage are charged higher interest spreads.

5.3. Endogeneity issues

The results in Table 3 suggest that the negative relation between CSR performance and loan interest spreads is strengthened in countries with cultural values higher (lower) on harmony/egalitarianism (mastery/hierarchy). However, our inferences may suffer endogeneity issues. First, it is possible that the negative relation between CSR performance and bank loan costs is driven by certain unobservable firm-specific factors, which happen to be influenced by

national cultures in a same way as observed above. Second, national cultures may impact not only the loan pricing effect of CSR performance, but also a firm's level of CSR investment (e.g., Ioannou and Serafeim, 2012; Cai et al., 2016), which further affects the loan pricing effect of CSR performance, although our inclusion of both the interaction effect and the main effect of national cultures could mitigate such concern.

To further address endogeneity issues, we use the instrumental variables approach to re-estimate the regressions in Table 3. Following prior studies (e.g., El Ghoul et al., 2011; El Ghoul et al., 2017), we use the country-industry-year average CSR performance scores of other firms excluding the focal firm as the instrument.[8] In the first-stage regression (untabulated), we regress *SUP_CSR* on the country-industry-year average CSR performance score (the instrument), other determinants of CSR performance (*lnSize, Tangibility, Profitability, MB, Leverage, Creditrating, Anti-director, LnGDP,* and *Bankcredit*), the national culture variable, and year fixed effects. Gormley and Matsa (2014) document that the industry-year adjusting produces inconsistent estimates and can distort inference. We thus follow their suggestions using the Hausman–Taylor estimator for the error-components models. Specifically, we implement the estimation in Stata using XTHTAYLOR command to solve the issue of no within-group variation in the variable of interest.

<Insert Table 4 around here>

We find that the coefficients on the interaction between the value of *SUP_CSP* and national culture variables remain statistically significant with the expected signs in all regressions. These results lend support to our inferences that the favorable impact of superior CSR performance on loan interest spreads is enhanced in countries with cultural values higher (lower) on

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[8] We conduct Anderson-Rubin Wald test and Kleibergen-Paap Wald F-statistic to check the validity of our instrument. We find that both tests reject the null hypotheses of under/weak identification.

harmony/egalitarianism (mastery/hierarchy).[9]

5.4. *Impact of customer awareness*

Superior CSR performance appealing to stakeholders like consumers who support the corresponding social causes can result in better firm value creation (Dhaliwal et al., 2014). Customer awareness of CSR activities is a critical condition for a firm to benefit from its CSR engagement since the lack of customer awareness about the firm's CSR initiatives limits their ability to respond to these initiatives (Bhattacharya and Sen, 2004; Schuler and Cording, 2006). For instance, Lev et al. (2010) find that charitable contributions can help boost the future revenue growth of firms in industries that are highly sensitive to consumer perception. Servaes and Tamayo (2013) show that CSR activities are more value enhancing if they are conducted by firms with more customer awareness.

In CSR-prone cultures like those high on harmony and egalitarianism values, stakeholders are more willing to appreciate and reward a firm's CSR efforts. Firms with more customer awareness could benefit to an even greater extent for their CSR involvement in countries with higher harmony and egalitarianism values. We thus conjecture that the enhancing role of national culture in the relationship between CSR performance and loan costs is more significant for firms with more customer awareness.

Following prior studies, we capture a firm's customer awareness in terms of its marketing intensity and specifically define marketing intensity as the ratio of the selling, general and administration (SG&A) expenditures to total revenues (e.g., Dutta et al., 2005; Krishnan et al., 2009; Servaes and Tamayo, 2013; Sarkees et al., 2014). Marketing enhances a firm's information environment and increases a firm's (potential) customers' awareness about the firm as well as its

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[9] We acknowledge that our instrumental variables analysis may not fully address the endogeneity concerns because some industry-level demand shocks could simultaneously affect a firm's investment in CSR and the bank's lending to the focal sector.

CSR performance, thereby increasing the returns to the firm's CSR efforts (McWilliams and Siegel, 2001; Servaes and Tamayo, 2013). We split our sample into two groups based on whether a borrowing firm's marketing intensity is higher than its country-year median, and re-estimate model (1) separately for the two groups.

<Insert Table 5 around here>

Table 5 reports the regressions results and shows that the interaction between cultural value variables (except *Hierarchy*) and SUP_CSP is of predicted signs and statistically significant only for firms with higher marketing intensity. These results suggest that the moderating role of national culture in the relationship between CSR performance and loan costs is especially important for firms with greater customer awareness.

5.5. *Impact of firm operating uncertainty*

The literature well documented that superior CSR performance can provide a form of insurance against adverse shocks and downside risk in the future (Godfrey, 2005; Peloza, 2006; Godfrey et al., 2009). Superior CSR performance enables firms to sustain competitive advantage for a longer period and to recover from disadvantageous competitive positions more quickly (Choi and Wang, 2009). Lins et al. (2017) find that firms with superior CSR performance were less adversely affected by the 2008-2009 financial crisis. Such insurance role provided by CSR commitment is especially important for firms with higher operating uncertainty. Given that stakeholders are more willing to reward firms' CSR initiatives and firm managers are more likely to refrain from opportunistic CSR engagement for pursuing private benefits in countries with cultural values higher on harmony (egalitarianism) versus mastery (hierarchy), we posit that the insurance role of CSR against operating uncertainty will be more pronounced for firms in those CSR-prone countries.

Specifically, we capture a firm's operating uncertainty in terms of research and development (R&D) intensity and specifically define R&D intensity as the ratio of R&D expenses to total sales. R&D investments involve a long process that is full of uncertainty and has a high probability of failure (Holmstrom, 1989). Firms with heavy R&D investments tend to have high information asymmetry (Bhattacharya and Ritter, 1983), increased stock price volatility (Chan, Lakonishok, and Sougiannis, 2001), and suffer undervaluation (Eberhart, Maxwell, and Siddique, 2004). The insurance role and social capital generated by CSR engagement are expected to be more valuable for firms with heavy R&D investments. For instance, superior CSR engagement helps a firm retain talented employees and reduces the risk of knowledge leakage to its rival firms (Flammer and Kacperczyk, 2019). We therefore split our sample into two groups based on whether a borrowing firm's R&D intensity is higher than its country-year median, and re-estimate model (1) separately for the two groups.

<Insert Table 6 around here>

Table 6 reports the regressions results and shows that the interaction between cultural value variables (except *Hierarchy*) and SUP_CSP is of predicted signs and statistically significant only for firms with higher R&D intensity. These results suggest that the moderating role of national culture in the relationship between CSR performance and loan costs is more pronounced for firms with higher operating uncertainty.

5.6. *Impact of information opacity*

Prior literature shows that information asymmetry between lenders and borrowers plays a pivotal role in loan contracting. It is easier for lending banks not only to ex ante accurately assess the creditworthiness of informationally transparent borrowers but also to monitor informationally transparent borrowers more efficiently and less costly after granting loans. A firm's CSR

engagement can signal a firm's management integrity and commitment to more ethical information disclosure practices (Gelb and Strawser, 2001; Dhalwal, et al., 2011; Kim, Park, and Wier, 2012; Hoi, Wu, and Zhang, 2013; Gao, Lisic, and Zhang 2014). Since CSR-prone cultures can enhance the credibility of CSR's signaling role and increase the reactions of stakeholders like financial analysts to a firm's CSR practices (Dhaliwal et al., 2012), we expect that the effect of national culture on the relation between CSR performance and loan costs would be more significant when lending to informationally opaque borrowers.

To examine whether the impact of national cultures on the relation between CSR performance and loan interest spreads varies between informationally transparent borrowers and informationally opaque borrowers, we divide our sample into two categories: loans to informationally transparent borrowers and loans to informationally opaque borrowers based on two alternative measures of borrower information opacity, and then re-estimate model (1) separately for the two groups.

Our first measure of borrower information opacity is past lending relationship. The lending banks acquire proprietary information of borrowers in both originating loans and subsequently monitoring borrowers. The produce of borrower-specific durable and reusable information in past lending process effectively lowers the information asymmetry between lenders and borrowers in subsequent loan contracting (Petersen and Rajan 1994; Boot, 2000; Bharath et al., 2011). Following prior studies (e.g., Dahiya et al., 2003; Bharath et al., 2011), we classify a particular loan *i* as a relationship loan if at least one of the lead banks for loan *i* had been a lead lender in prior loans to the same borrower over the previous five-year period.

Panel A of Table 7 reports the results for relationship loans and non-relationship loans separately. We find that the coefficient on the interaction between CSR performance and cultural

value variables is statistically significant with predicted signs for only non-relationship loans, suggesting that the enhancing role of national cultures in the relation between CSR performance and loan costs is extremely important for informationally opaque borrowers.

<Insert Table 7 around here>

The other measure of borrower information opacity is the existence of credit rating. Borrowers without a credit rating by external rating agencies are believed to face higher information asymmetries since they are not monitored by credit rating agencies (Bharath et al., 2011). Specifically, we classify sample firms with a credit rating by Fitch as informationally transparent borrowers and other firms as informationally opaque borrowers.[10] Panel B of Table 7 reports the results for loans to informationally transparent borrowers and informationally opaque borrowers separately.

Similarly, we find that the coefficient on the interaction between CSR performance and cultural value variables is statistically significant with predicted signs only for loans to informationally opaque borrowers, confirming that the favorable effect of superior CSR performance on loan interest spreads is especially important for informationally opaque borrowers in countries with cultural values higher (lower) on harmony (mastery) and egalitarianism (hierarchy).

5.7. Impact of bank's national culture

If national culture shapes stakeholder expectations, attitudes, and reactions toward a firm's CSR practices, one may expect that bank lenders, as an important group of stakeholders, will be influenced by their own national culture when incorporating their borrowers' CSR practices into loan contracting. To isolate the effect of the bank's own national culture on the relationship between CSR performance and loan pricing, we restrict to a subsample of loan contracts between

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[10] We use credit rating as produced by Fitch to differentiate informationally transparent borrowers and informationally opaque borrowers because only credit ratings by Fitch are available in ASSET4.

the banks and borrowing firms of different countries. We then construct the variable, *Culture_distance*, measured as the difference in the four national cultural proxies between the bank's country and the borrower's country, respectively, to capture the discrepancy in national culture between the bank's and the borrower's country.

<Insert Table 8 around here>

We repeat the regressions in Table 3 with the variable, *Culture_distance*, and its interaction with *SUP_CSP* included instead, and report the results in Table 8. It shows that the interaction variable is significantly negative for harmony in Column (1) and egalitarianism in Column (3) but significantly positive for mastery in Column (2). These results suggest that banks from the countries with more CSR-prone cultures in terms of higher harmony/egalitarianism and lower mastery tend to value the CSR performance of their borrowers with lower CSR-prone cultures to a greater extent. These findings provide further evidence confirming the important role played by national culture in determining the reactions of stakeholders (e.g., bank lenders) to a firm's CSR practices.

6. Robustness tests

6.1. Alternative measures of national culture

In the above analyses, we use four polar values of the Schwartz's cultural dimensions to proxy for a country's national culture. Despite the advantages of using Schwartz (2004) cultural framework (e.g., Chui et al., 2002; Cai et al., 2016; Chui et al., 2016; among others), it is important to ensure that our main findings are not driven by the choice of national culture proxies. To address this concern, we employ as alternative national culture measures Hofstede (1980, 2001) cultural dimensions that are theoretically similar to the Schwartz (2004) dimensions used in this study.

Schwartz (2004) points out that harmony value might overlap conceptually with Hofstede's uncertainty avoidance since both idealize a harmonious order; mastery value has some conceptual overlap with Hofstede's masculinity given both emphasize assertiveness and ambition; and hierarchy value overlap conceptually with Hofstede's power distance to some degree because both concern legitimizing social inequality. However, none of Hofstede's dimensions is conceptually corresponding to Schwartz's egalitarianism value. Therefore, we use Hofstede's uncertainty avoidance, power distance, and masculinity in place of harmony, hierarchy, and mastery, respectively.

<Insert Table 9 around here>

Table 9 reports the results using the three alternative culture measures. We find that the coefficient on the interaction between *SUP_CSP* and the indicator of uncertainty avoidance is negative and statistically significant, in line with the results for harmony in Table 3. In contrast, the coefficients on the interaction between *SUP_CSP* and culture variable are significantly positive when power distance and masculinity are used, consistent with the results with mastery and hierarchy in Table 3, respectively. Those results suggest that banks are more likely to offer lower (higher) interest spreads to borrowers with better CSR performance in countries where uncertainty avoidance (power distance/masculinity) is higher. Therefore, our main results are robust to alternative culture measures.

6.2. Alternative sample composition

As shown in Panel A of Table 1, each sample country contributes a different number of observations, with the United States accounting for the largest number of observations. To alleviate the concern that our results could be driven by a given country, we first re-estimate the equation (1) after excluding the United States. The results presented in Panel A of Table 10 are

qualitatively similar to those in Table 3. We further re-run our regressions by excluding other sample countries one at a time alternately and find that our results are not driven by any one of sample countries. We run weighted regressions where weights are given by the inverse of the number of observations per country. Untabulated results remain qualitatively the same as those in Table 3. In sum, our results are not driven by any one particular country.

<Insert Table 10 around here>

6.3. Comparability of benchmark used for pricing loans

Some of our sample loan facilities are priced in excess of non-LIBOR benchmark rates, such as the Euro Interbank Offered Rate and the Tokyo Interbank Offered Rate. To ensure the comparability of loan spreads across loan facilities, we restrict the sample to only facilities that are priced in excess of the LIBOR and re-run the regressions in Table 3. The results presented in Panel B of Table 10 remain qualitatively unchanged though the coefficient on the interaction between *CSP* and hierarchy is barely significant. Thus, the benchmark rates used for pricing loans do not drive our main results.

6.4. Results for environmental and social components

In previous tests, we capture a firm's CSR performance by combining the firm's scores in the environmental and social dimensions. In this section, we examine each individual CSR dimension, separately. As discussed previously, the harmony/mastery dimension of national culture regulates how people manage their relations to the natural and social world. This cultural dimension has more of an environmental flavor. Meanwhile, the egalitarianism/hierarchy dimension addresses how to guarantee that people behave in a responsible manner that preserves the social fabric and is more related to social causes. Therefore, the relationship between the environmental performance and loan costs could be affected more by the harmony/mastery

dimension, while the relationship between the social performance and loan costs could be affected more by egalitarianism/hierarchy dimension.

<Insert Table 11 around here>

Column (1) – (5) in Table 11 report the results for the environmental component which are consistent with the results in Table 3. Column (6) – (10) present the results for the social component. It shows that the interaction between *SUP_CSR* and egalitarianism/hierarchy variables is statistically significant with predicted signs but the interaction between *SUP_CSR* and harmony/mastery variables loses significance though retains the predicted signs, consistent with the conjecture that egalitarianism/hierarchy is more related to social causes.

7. Conclusions

Firms implicitly or explicitly contract with stakeholders whose expectations, perceptions, and responses towards CSR practices are determined by the cultural values prevailing in their domiciled countries. The economic consequences associated with CSR engagement are thus affected by a country's dominant cultural values. Focusing on bank debt financing, an important determinant of firm value creation, this study provides evidence that the impact of a firm's CSR performance on bank loan costs varies across countries with different cultural values.

Specifically, firms with better CSR performance are more likely to enjoy lower bank loan costs in countries with cultures higher on egalitarianism/harmony values. Cultures emphasizing on egalitarianism and harmony values promote social equality, care for others, harmonious relationship with social and natural environments, and are thus conducive to CSR commitment. In contrast, the favorable impact of superior CSR performance on bank loan costs is less evident in countries with cultures higher on hierarchy/mastery values, the conceptual opposites of

egalitarianism/harmony values. The hierarchy and mastery values legitimize the social inequality and encourage self-assertive pursuits of group or personal goals even at the expense of other parties, which highly contradicts the spirits of CSR paradigm. Moreover, the moderating role of national culture on the relationship between CSR performance and loan costs is especially significant for firms with higher customer awareness, heavier R&D intensity, and more opaque information environment. National culture of the bank lender itself play an important role in shaping the relevance of the borrower's CSR performance with loan contracting as well.

Our work contributes to the extant literature that examines the impact of CSR practices on the cost of capital financing (e.g. Sharfman and Fernando, 2008; El Ghoul et al., 2011; Goss and Roberts, 2011; Dhaliwal et al., 2011, 2014). Prior literature in this area typically focuses either on the cost of equity capital or on the cost of debt only in the United States. This study is the first to provide evidence on the impact of CSR performance on bank borrowing costs across a wide range of countries, which enables us to identify national-level factors (e.g. national cultures) that might affect the pay-off of CSR investments.

We also contribute to an emerging literature on CSR that highlights the important role of national institutional environments where firms are embedded in determining CSR practices (Gardberg and Fombrun, 2006; Campbell, 2007; Matten and Moon, 2008; Williams and Aguilera, 2008; Ioannou and Serafeim, 2012). Culture, as a system of values and beliefs, stands for the foundational institutions of society and underlies more specific formal and informal institutions (Williamson, 2000). Our study shows that the economic consequences associated with CSR engagement vary across countries with different prevailing cultural values by illuminating the impact of CSR performance on bank loan costs. Our results have implications for the current debate on whether CSR initiatives lead to value creation (Margolis et al., 2009). Future studies

should pay more attention to the role of national cultures in the relationship between CSR commitment and firm value creation.

In addition, this study provides important implications for corporate management. They should take national institutional environments like cultural values into consideration when they decide on CSR strategies with intention to maximize firm value. CSR investments fitting in a country's institutional environments are more likely to get paid off.

APPENDIX A: Variable definitions

Variables	Definition
Country-level variables	
Harmony	Dummy variable, takes the value of 1 if the country's harmony score is above median among the 30 countries, and 0 otherwise. Harmony score is from Schwartz (2004) based on Schwartz value survey between 1988 and 2007.
Mastery	Dummy variable, takes the value of 1 if the country's mastery score is above median among the 30 countries, and 0 otherwise. Mastery score is from Schwartz (2004) based on Schwartz value survey between 1988 and 2007.
Egalitarianism	Dummy variable, takes the value of 1 if the country's egalitarianism score is above median among the 30 countries, and 0 otherwise. Egalitarianism score is from Schwartz (2004) based on Schwartz value survey between 1988 and 2007.
Hierarchy	Dummy variable, takes the value of 1 if the country's hierarchy score is above median among the 30 countries, and 0 otherwise. Hierarchy score is from Schwartz (2004) based on Schwartz value survey between 1988 and 2007.
Uncertainty avoidance	Dummy variable, takes the value of 1 if the country's uncertainty avoidance score is above median among the 30 countries, and 0 otherwise. Uncertainty avoidance score is from Hofstede (2001).
Power distance	Dummy variable, takes the value of 1 if the country's power distance score is above median among the 30 countries, and 0 otherwise. Power distance score is from Hofstede (2001).
Masculinity	Dummy variable, takes the value of 1 if the country's masculinity score is above median among the 30 countries, and 0 otherwise. Masculinity score is from Hofstede (2001).
Anti_director	Revised anti-director index (Djankov *et al.*, 2008) to capture the level of investor protection.
Bankcredit	Credit provided to the private sector (percentage of GDP) by banks according to the World Development Indicators Database.
GDP	National GDP per capita according to the World Development Indicators Database.
Short-term interest rate	Country/regional level 1 year interest rate in a given year.
Loan-specific variables	
AIS	Drawn all-in spread charged by the bank over the LIBOR for the drawn portion of the loan facility, obtained from the DealScan database.
lnAIS	Natural logarithm of AIS.
Maturity	Maturity of loans in months.
lnMaturity	Natural logarithm of Maturity
Loansize	Amount of loan facility in millions of U.S dollars.
lnLoanSize	Natural logarithm of Loansize.
Termloan	Indicator variable that equals one if the loan facility is a term loan, and zero otherwise.
Secured	Indicator variable that equals one if the loan facility is secured with collateral, and zero otherwise.
Covindex	Natural logarithm of the number of financial and general covenants included in a loan.
LoanPurpose indicators	Series of indicator variables covering purposes of loan facilities (from DealScan) including corporate purposes, debt repayment, working capital, CP backup,

takeover, and acquisition lines.

Borrower-specific variables

SUP_CSP	Dummy variable, takes the value of 1 if the corporate social responsibility score is above median, and 0 otherwise. The social responsibility score is the average of environmental and social performance scores in ASSET4.
CSP_ENV	Dummy variable, takes the value of 1 if the Environmental performance score is above median, and 0 otherwise. Environmental performance score is from ASSET4.
CSP_SOC	Dummy variable, takes the value of 1 if the social performance score is above median, and 0 otherwise. Social performance score is from ASSET4.
Size	Total assets in millions of U.S dollars.
lnSize	Natural logarithm of total assets in millions U.S dollars.
Leverage	Leverage ratio: long-term debt divided by total assets.
MB	Market-to-book ratio: market value of equity plus the book value of debt divided by total assets.
Profitability	Earnings before interest, taxes, depreciation, and amortization divided by total assets.
Tangibility	Net value of property, plant, and equipment divided by total assets.
Creditrating	The company's credit rating as provided by Fitch. We convert the Fitch ratings into a numeric scale from 1 – 24: AAA=24, AA+=23… D=1. The variable takes the valur of 0 if the company is not rated by Fitch. Appendix B provides the information on the linear transformations of Fitch rating.
Notrated	Dummy variable, takes the value of 1 if the company is not rated by Fitch, and 0 otherwise.

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Table 1 Sample distribution

Distribution of sample by country with summary statistics of country-level variables (Panel A) and year (Panel B). The sample comprises 8,067 loan facility observations and represents 1,542 unique firms from 30 countries during 2005–2014.

Panel A Sample distribution by country

Country/region	Number of facilities	Number of firms	Harmony	Mastery	Egalitarianism	Hierarchy	Revised anti-director index	Mean GDP per capita (US $S)	Mean bank credit (%)
Australia	418	65	3.99	3.97	4.79	2.29	4	48279.46	118.83
Austria	17	4	4.31	3.92	4.89	1.75	2.5	45752.21	94.37
Belgium	27	8	4.35	3.84	5.2	1.69	3	43821.51	59.46
Brazil	28	7	4.03	3.93	4.89	2.37	5	10583.92	54.90
Canada	356	88	3.99	4.04	4.89	1.98	4	44418.38	124.80
Denmark	15	6	4.16	3.91	5.03	1.86	4	56512.10	181.60
Finland	20	11	4.34	3.66	4.9	1.8	3.5	46407.85	80.66
France	314	60	4.21	3.72	5.05	2.21	3.5	40193.50	90.11
Germany	191	34	4.54	3.93	5.01	1.82	3.5	41201.97	94.33
Greece	28	5	4.4	4.25	4.84	1.83	2	25239.36	90.68
Hong Kong	270	56	3.5	4.08	4.5	2.91	5	31537.34	166.16
India	89	23	3.92	4.28	4.45	3.05	5	1280.20	49.21
Ireland	21	6	3.77	4.04	4.9	2.09	5	51575.39	130.53
Italy	114	17	4.62	3.81	5.27	1.6	2	35653.46	83.97
Japan	199	37	4.21	4.06	4.36	2.65	4.5	39194.65	103.00
Malaysia	17	4	3.65	3.91	4.41	2.25	5	9710.23	111.99
Mexico	18	3	4.5	3.9	4.73	2.13	3	8974.62	18.52
Netherlands	74	20	4.05	3.97	5.03	1.91	2.5	48808.84	116.28
Norway	51	11	4.4	3.85	5.12	1.49	3.5	85310.47	83.42
Portugal	15	3	4.27	4.11	5.21	1.89	2.5	21898.43	146.62
Russia	69	8	3.9	3.96	4.38	2.72	4	9821.04	39.44
Singapore	88	16	3.76	3.88	4.6	2.82	5	41862.56	99.66
South Africa	30	6	3.86	3.89	4.52	2.59	5	6945.51	70.84
South Korea	96	24	3.57	4.21	4.42	2.9	4.5	21417.05	132.52
Spain	198	16	4.47	3.8	5.23	1.84	5	30211.05	155.08
Sweden	50	18	4.46	3.81	4.9	1.83	3.5	50418.81	114.51

Panel A Sample distribution by country (Con't)

Country/region	Number of facilities	Number of firms	Harmony	Mastery	Egalitarianism	Hierarchy	Revised anti-director index	Mean GDP per capita (US $S)	Mean bank credit (%)
Switzerland	62	20	4.17	3.86	4.99	2.24	3	70072.54	157.40
Turkey	128	6	4.23	3.98	4.77	2.97	3	10220.51	47.27
United Kingdom	616	142	3.91	4.01	4.92	2.33	5	41341.88	171.97
United States	4448	818	3.46	4.09	4.68	2.37	3	47872.34	53.81

Panel B Sample distribution by year

Year	Facility			Firm	
	No.	Percent		No.	Percent
2005	869	10.77		470	10.18
2006	804	9.97		453	9.81
2007	890	11.03		444	9.61
2008	578	7.16		312	6.76
2009	447	5.54		271	5.87
2010	737	9.14		441	9.55
2011	1077	13.35		665	14.4
2012	853	10.57		504	10.91
2013	956	11.85		547	11.84
2014	856	10.61		511	11.07
Total	8,067	100		4,618	100

Table 2 Descriptive Statistics
Panel A presents the characteristics of loan-specific characteristics and borrower-specific control variables. Panel B presents correlation matrix of key variables. Appendix A provides detailed variable definitions and data sources.

Panel A: Loan facility and borrowing firm characteristics

Variables	N	Mean	1st Quartile	Median	3rd Quartile	Std. Dev
CSP	8067	0.55	0.27	0.56	0.85	0.29
Harmony	8067	0.18	0	0	0	0.38
Mastery	8067	0.85	1	1	1	0.36
Egalitarianism	8067	0.22	0	0	0	0.41
Hierarchy	8067	0.85	1	1	1	0.36
AIS(basis points)	8067	154.49	62.50	135	225	113.90
LoanSize($million)	8067	976.83	220.17	500	1100	1652.34
Maturity(months)	8067	52.42	36	60	60	29.90
Secured	8067	0.24	0	0	0	0.42
Covindex	8067	1.41	0	0	3	2.17
Termloan	8067	0.32	0	0	1	0.47
lnSize	8067	9.73	8.36	9.34	10.71	2
Tangibility	8067	0.29	0.08	0.22	0.47	0.25
Profitability	8067	0.12	0.07	0.11	0.16	0.08
MB	8067	3.63	1.09	1.35	1.86	34.13
Leverage	8067	0.24	0.12	0.21	0.33	0.18
NotRated	8067	0.39	0	0	1	0.49

Panel B: Correlation matrix between key variables
The table reports the correlation between the variables of key interest. ∗, ∗∗, and ∗∗∗ indicate significance at the 10%, 5%, and 1% levels, respectively.

	lnAIS	SUP_CSP	Harmony	Mastery	Egalitarianism	Hierarchy
lnAIS	1.000					
SUP_CSP	−0.149***	1.000				
Harmony	−0.184***	0.248***	1.000			
Mastery	0.119***	−0.228***	−0.769***	1.000		
Egalitarianism	−0.058***	0.286***	0.571***	−0.651***	1.000	
Hierarchy	0.045***	−0.147***	−0.472***	0.509***	−0.434***	1.000

Table 3 Effect of national culture on bank loan cost

This table reports the results from regressing loan interest spreads on CSR performance (*SUP_CSP*) and interactions between CSR performance and the four proxies for national cultures, namely, harmony in column (2), mastery in column (3), egalitarianism in column (4), and hierarchy in column (5). Column (1) reports the baseline results for comparison without culture variables and their interactions with CSR performance included. *t*-statistics based on robust standard errors adjusted for clustering by country are in parentheses. *, **, and *** indicate significance at the 10%, 5%, and 1% levels, respectively.

	(1) Baseline	(2) Harmony	(3) Mastery	(4) Egalitarianism	(5) Hierarchy
SUP_CSP	-0.088***	-0.053**	-0.220***	-0.078***	-0.262***
	(-5.99)	(-2.23)	(-4.07)	(-2.88)	(-4.58)
Culture × SUP_CSP		-0.215***	0.145**	-0.154**	0.187***
		(-3.28)	(2.38)	(-2.44)	(2.84)
Culture		-0.082	0.026	0.112	-0.076
		(-1.09)	(0.47)	(1.47)	(-1.10)
Facility size	0.044*	-0.084***	-0.085***	-0.088***	-0.087***
	(1.76)	(-6.52)	(-6.09)	(-5.98)	(-6.01)
LnMaturity	0.266***	0.047*	0.049*	0.045*	0.043*
	(10.27)	(1.74)	(1.97)	(1.79)	(1.73)
Secured	0.036***	0.283***	0.274***	0.269***	0.264***
	(3.17)	(10.83)	(10.85)	(10.24)	(9.72)
Covindex	0.237***	0.029***	0.033***	0.037***	0.036***
	(7.79)	(3.39)	(3.18)	(2.86)	(3.12)
Term loan	-0.080***	0.246***	0.239***	0.237***	0.238***
	(-5.10)	(8.68)	(7.87)	(7.73)	(7.80)
Firm size	-0.041	-0.075***	-0.080***	-0.079***	-0.080***
	(-0.46)	(-7.19)	(-5.31)	(-5.13)	(-5.21)
Tangibility	-1.234***	-0.068	-0.061	-0.044	-0.040
	(-14.37)	(-0.88)	(-0.73)	(-0.54)	(-0.50)
Profitability	-0.001	-1.237***	-1.237***	-1.237***	-1.232***
	(-1.52)	(-16.30)	(-15.20)	(-14.88)	(-14.21)
Market-to-book ratio	0.646***	-0.001	-0.001	-0.001	-0.001
	(10.28)	(-1.57)	(-1.50)	(-1.49)	(-1.49)
Leverage	-0.018	0.654***	0.648***	0.649***	0.660***
	(-0.49)	(10.18)	(10.47)	(10.52)	(10.33)
NotRated	0.002	-0.022	-0.019	-0.020	-0.023
	(0.02)	(-0.58)	(-0.52)	(-0.53)	(-0.61)
Revised anti-director index	-0.044	-0.056	-0.018	-0.001	-0.015
	(-0.89)	(-0.88)	(-0.29)	(-0.01)	(-0.21)
Ln GDP	0.000	-0.069	-0.055	-0.042	-0.054
	(0.05)	(-1.69)	(-1.19)	(-0.82)	(-1.10)
Bank credit	-0.011***	0.001	0.000	0.000	0.000
	(-3.02)	(1.10)	(0.47)	(0.07)	(0.29)
Short-term interest rate	-0.088***	-0.010**	-0.010***	-0.011***	-0.010**
	(-5.99)	(-2.71)	(-2.94)	(-2.82)	(-2.65)
Constant	6.674***	6.978***	6.757***	6.615***	6.859***
	(10.30)	(12.91)	(10.54)	(9.84)	(10.75)
Loan purpose indicators	Yes	Yes	Yes	Yes	Yes
Industry indicators	Yes	Yes	Yes	Yes	Yes
Year indicators	Yes	Yes	Yes	Yes	Yes

Observations	8067	8067	8067	8067	8067
Adjusted R-squared	0.624	0.631	0.626	0.624	0.625

Table 4 Endogeneity issue

This table reports the results using the Hausman–Taylor estimator for the error-components models. The results are presented in column (1) for harmony, column (2) for mastery, column (3) for egalitarianism, and column (4) for hierarchy. All models include firm- and year-fixed effects. *t*-statistics are in parentheses. *, **, and *** indicate significance at the 10%, 5%, and 1% levels, respectively.

	(1) Harmony	(2) Mastery	(3) Egalitarianism	(4) Hierarchy
SUP_CSP	0.033	−0.305***	0.033	−0.252***
	(1.02)	(−3.14)	(1.01)	(−3.03)
Culture × SUP_CSP	−0.245***	0.336***	−0.249***	0.278***
	(−2.61)	(3.32)	(−3.04)	(3.14)
Culture	−0.539***	0.352**	−0.189	0.244
	(−3.67)	(2.15)	(−1.56)	(1.51)
Constant	9.618***	9.273***	8.975***	8.837***
	(11.37)	(10.92)	(10.75)	(10.50)
Control variables	Yes	Yes	Yes	Yes
Loan purpose indicators	Yes	Yes	Yes	Yes
Industry indicators	Yes	Yes	Yes	Yes
Year indicators	Yes	Yes	Yes	Yes
Observations	4618	4618	4618	4618

Table 5 Impact of customer awareness

This table reports the results after examining whether the impact of national cultures on the relation between CSR performance and loan interest spreads varies with the level of customer awareness proxy by SG&A expenses. On the basis of the SG&A expenses, we separate the full sample into two sub−groups: high (above median) vs. low (below median) customer awareness. For the sake of brevity, we omit the results for control variables. *t*-statistics based on robust standard errors adjusted for clustering by country are in parentheses. ∗, ∗∗, and ∗∗∗ indicate significance at the 10%, 5%, and 1% levels, respectively.

Customer awareness level	Harmony		Mastery		Egalitarianism		Hierarchy	
	Below median	Above median	Below median	Above median	Below median	Above median	Below median	Above median
SUP_CSP	-0.049	-0.045*	-0.091	-0.290***	-0.103**	-0.045	-0.244**	-0.264***
	(-0.94)	(-1.78)	(-0.74)	(-3.57)	(-2.56)	(-1.62)	(-2.30)	(-4.19)
Culture × SUP_CSP	-0.111	-0.316***	0.010	0.229***	-0.008	-0.227***	0.174	0.196**
	(-0.93)	(-3.66)	(0.08)	(2.86)	(-0.08)	(-3.19)	(1.69)	(2.60)
Culture	-0.228	0.029	0.116	0.003	0.067	0.063	-0.039	-0.060
	(-1.67)	(0.37)	(1.03)	(0.04)	(0.49)	(0.97)	(-0.37)	(-0.70)
Constant	6.263***	8.729***	5.851***	8.765***	5.899***	8.421***	6.093***	8.649***
	(7.17)	(12.39)	(5.64)	(11.98)	(5.67)	(11.71)	(6.06)	(11.07)
Control variables	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Loan purpose indicators	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry indicators	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year indicators	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N	4023	4044	4023	4044	4023	4044	4023	4044
Adjusted R-squared	0.623	0.664	0.615	0.661	0.614	0.660	0.615	0.659

Table 6 Impact of firm operating uncertainty
This table reports the results after examining whether the impact of national cultures on the relation between CSR performance and loan interest spreads varies with the level of firm operating uncertainty proxy by R&D expenditure. On the basis of the R&D expenditure, we separate the full sample into two sub-groups: high (above median) vs. low (below median) firm operating uncertainty. For the sake of brevity, we omit the results for control variables. *t*-statistics based on robust standard errors adjusted for clustering by country are in parentheses. *, **, and *** indicate significance at the 10%, 5%, and 1% levels, respectively.

Firm operating uncertainty	Harmony		Mastery		Egalitarianism		Hierarchy	
	Below median	Above median	Below median	Above median	Below median	Above median	Below median	Above median
SUP_CSP	-0.028	-0.077**	-0.116	-0.429***	-0.067*	-0.092**	-0.237**	-0.343***
	(-0.73)	(-2.57)	(-0.87)	(-3.58)	(-1.91)	(-2.34)	(-2.31)	(-4.53)
Culture × SUP_CSP	-0.140	-0.435***	0.072	0.325**	-0.017	-0.319***	0.206*	0.221**
	(-1.02)	(-4.06)	(0.51)	(2.57)	(-0.17)	(-3.79)	(1.94)	(2.10)
Culture	-0.175	0.153	0.114	-0.140	0.064	0.152*	-0.042	-0.112
	(-1.52)	(1.68)	(1.23)	(-1.30)	(0.68)	(1.96)	(-0.47)	(-1.24)
Constant	5.630***	9.386***	5.120***	9.566***	5.001***	9.315***	5.230***	9.545***
	(7.30)	(12.57)	(6.36)	(12.11)	(5.83)	(11.99)	(6.31)	(12.54)
Control variables	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Loan purpose indicators	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry indicators	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year indicators	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N	4825	3242	4825	3242	4825	3242	4825	3242
Adjusted R-squared	0.631	0.664	0.626	0.659	0.624	0.659	0.625	0.657

Table 7 Effect of information opacity

This table reports the results after examining whether the impact of national cultures on the relation between CSR performance and loan interest spreads varies with the level of a borrower's information asymmetry. Panel A reports the results that classify loan observations into two groups, namely, informationally transparent (1) and informationally opaque (0) based on relationship loans. Group (1) includes relationship loans and Group (0) includes non-relationship loans. We define a particular loan *i* as a relationship loan if at least one of the lead banks for loan *i* had been a lead lender in prior loans to the same borrower over the previous five-year period. Panel B reports the results that classify loan observations into two groups, namely, informationally transparent (1) and informationally opaque (0) based on the existence of credit rating. Group (1) includes loans borrowed by firms with a credit rating as produced by Fitch, and Group (0) includes loans borrowed by firms without a credit rating as produced by Fitch. For the sake of brevity, we omit the results for control variables. *t*-statistics based on robust standard errors adjusted for clustering by country are in parentheses. *, **, and *** indicate significance at the 10%, 5%, and 1% levels, respectively.

Panel A Relationship lending

Culture variables	Harmony		Mastery		Egalitarianism		Hierarchy	
	(1)	(0)	(1)	(0)	(1)	(0)	(1)	(0)
SUP_CSP	-0.084***	-0.031	-0.059	-0.258***	-0.104***	-0.045	-0.212***	-0.309***
	(-3.21)	(-0.95)	(-0.41)	(-3.82)	(-5.56)	(-0.88)	(-2.79)	(-4.32)
Culture × SUP_CSP	-0.098	-0.257***	-0.035	0.192**	0.139	-0.227***	0.127*	0.236**
	(-0.69)	(-3.96)	(-0.24)	(2.49)	(1.34)	(-2.87)	(1.85)	(2.67)
Culture	-0.213**	-0.091	0.153	0.016	-0.100	0.121	-0.113	-0.058
	(-2.13)	(-0.98)	(1.29)	(0.21)	(-0.74)	(1.68)	(-0.94)	(-0.77)
Constant	6.090***	7.273***	5.612***	7.102***	5.585***	6.998***	5.651***	7.347***
	(9.46)	(12.45)	(6.49)	(10.06)	(6.36)	(9.85)	(6.19)	(11.19)
Control variables	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Loan purpose indicators	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry indicators	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year indicators	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N	4143	3924	4143	3924	4143	3924	4143	3924
Adjusted R-squared	0.685	0.588	0.682	0.579	0.681	0.576	0.682	0.577

Panel B Existence of credit rating

Culture variables	Harmony		Mastery		Egalitarianism		Hierarchy	
	(1)	(0)	(1)	(0)	(1)	(0)	(1)	(0)
SUP_CSP	0.031	-0.077***	-0.150*	-0.278***	-0.028	-0.060***	-0.172*	-0.275***
	(1.04)	(-4.12)	(-1.75)	(-5.97)	(-0.93)	(-3.00)	(-1.83)	(-7.07)
Culture × SUP_CSP	-0.125	-0.184***	0.156*	0.198***	0.110	-0.237***	0.176*	0.188***
	(-1.55)	(-3.92)	(1.76)	(4.05)	(1.32)	(-5.91)	(1.81)	(4.46)
Culture	-0.252***	-0.069*	-0.029	0.033	-0.045	0.071**	-0.069	-0.051
	(-3.21)	(-1.76)	(-0.35)	(0.81)	(-0.54)	(1.98)	(-0.75)	(-1.50)
Credit grade	-0.076***		-0.076***		-0.077***		-0.076***	
	(-13.70)		(-13.43)		(-13.66)		(-13.44)	
Constant	7.558***	6.363***	6.800***	6.213***	6.691***	6.048***	6.953***	6.249***
	(13.82)	(20.40)	(12.45)	(19.87)	(12.16)	(19.43)	(12.54)	(19.93)
Control variables	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Loan purpose indicators	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry indicators	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year indicators	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N	3119	4948	3119	4948	3119	4948	3119	4948
Adjusted R-squared	0.665	0.635	0.656	0.634	0.655	0.633	0.655	0.632

Table 8 Culture distance between the bank and the borrower

This table presents the results from regressing loan interest spreads on CSR performance (*SUP_CSP*) and interactions between CSR performance and the four proxies for the distance in national cultures between the foreign bank and the borrower in terms of harmony in column (1), mastery in column (2), egalitarianism in column (3), and hierarchy in column (4), respectively. *t*-statistics based on robust standard errors adjusted for clustering by country are in parentheses. ∗, ∗∗, and ∗∗∗ indicate significance at the 10%, 5%, and 1% levels, respectively.

	(1) Harmony	(2) Mastery	(3) Egalitarianism	(4) Hierarchy
SUP_CSP	-0.040	-0.605***	-0.073	-0.307*
	(-0.29)	(-3.58)	(-0.41)	(-1.95)
Culture distance × SUP_CSP	-0.594***	0.489**	-0.510***	0.019
	(-3.17)	(2.43)	(-2.62)	(0.10)
Culture distance	0.308**	-0.157	0.132	-0.026
	(2.23)	(-1.05)	(0.89)	(-0.19)
Facility size	-0.009	-0.006	0.001	-0.015
	(-0.48)	(-0.33)	(0.07)	(-0.72)
LnMaturity	0.143***	0.147***	0.145***	0.140***
	(3.27)	(3.36)	(3.34)	(3.17)
Secured	0.333***	0.334***	0.325***	0.344***
	(5.05)	(5.09)	(4.96)	(5.21)
Covindex	0.063***	0.059***	0.060***	0.061***
	(3.65)	(3.48)	(3.49)	(3.49)
Term loan	0.226***	0.225***	0.207***	0.226***
	(4.02)	(4.01)	(3.68)	(3.98)
Firm size	0.000	0.005	0.010	0.000
	(0.00)	(0.30)	(0.54)	(0.00)
Tangibility	-0.234	-0.232	-0.165	-0.183
	(-1.25)	(-1.24)	(-0.88)	(-0.95)
Profitability	-0.029	0.064	0.055	-0.029
	(-0.06)	(0.13)	(0.11)	(-0.06)
Market-to-book ratio	-0.021**	-0.018*	-0.020*	-0.018*
	(-2.07)	(-1.78)	(-1.93)	(-1.73)
Leverage	0.288	0.279	0.271	0.283
	(1.38)	(1.34)	(1.30)	(1.34)
NotRated	-0.119*	-0.132**	-0.139**	-0.126**
	(-1.94)	(-2.15)	(-2.24)	(-2.05)
Revised anti-director index	0.017	0.001	0.009	0.022
	(0.35)	(0.02)	(0.18)	(0.44)
Ln GDP	0.019	0.001	-0.042	0.021
	(0.26)	(0.01)	(-0.56)	(0.28)
Bank credit	0.002	0.002*	0.002	0.002*
	(1.57)	(1.65)	(1.52)	(1.76)
Short-term interest rate	-0.015	-0.012	-0.014	-0.013
	(-0.98)	(-0.82)	(-0.89)	(-0.83)
Constant	2.483***	2.927***	2.964***	2.632***
	(2.61)	(3.05)	(3.11)	(2.74)

Loan purpose indicators	Yes	Yes	Yes	Yes
Industry indicators	Yes	Yes	Yes	Yes
Year indicators	Yes	Yes	Yes	Yes
Observations	1006	1006	1006	1006
Adjusted R-squared	0.645	0.646	0.647	0.640

Table 9 Alternative measure of national culture

This table reports results from regressing loan interest spreads on CSR performance (*SUP_CSP*) and interactions between CSR performance and the three alternative proxies for national cultures, namely, uncertainty avoidance in column (1), power distance in column (2), and masculinity in column (3). *t*-statistics based on robust standard errors adjusted for clustering by country are in parentheses. $*$, $**$, and $***$ indicate significance at the 10%, 5%, and 1% levels, respectively.

	(1) Uncertainty avoidance	(2) Power distance	(3) Masculinity
SUP_CSP	-0.077***	-0.113***	-0.245***
	(-4.70)	(-6.66)	(-7.23)
Culture × SUP_CSP	-0.109***	0.028	0.172***
	(-2.69)	(0.77)	(4.75)
Culture	-0.054	-0.261***	-0.087***
	(-1.46)	(-7.40)	(-2.89)
Facility size	-0.088***	-0.089***	-0.088***
	(-15.27)	(-15.46)	(-15.16)
Ln Maturity	0.043***	0.040***	0.043***
	(3.47)	(3.23)	(3.51)
Secured	0.272***	0.270***	0.264***
	(14.70)	(14.62)	(14.24)
Covindex	0.033***	0.033***	0.036***
	(8.81)	(9.14)	(9.80)
Term loan	0.245***	0.254***	0.238***
	(15.38)	(15.94)	(14.98)
Firm size	-0.074***	-0.067***	-0.079***
	(-14.41)	(-12.95)	(-15.70)
Tangibility	-0.061	-0.046	-0.046
	(-1.43)	(-1.08)	(-1.08)
Profitability	-1.235***	-1.235***	-1.234***
	(-13.72)	(-13.76)	(-13.69)
Market-to-book ratio	-0.001***	-0.001**	-0.001***
	(-3.03)	(-2.57)	(-3.32)
Leverage	0.653***	0.625***	0.657***
	(15.18)	(14.56)	(15.26)
NotRated	-0.021	-0.022	-0.021
	(-1.31)	(-1.42)	(-1.29)
Revised anti-director index	-0.017	0.028	0.001
	(-0.99)	(1.63)	(0.04)
Ln GDP	-0.066***	-0.105***	-0.043**
	(-3.44)	(-5.30)	(-2.25)
Bank credit	0.000	0.000	0.000
	(1.10)	(0.08)	(0.30)
Short-term interest rate	-0.011**	-0.008	-0.013**
	(-1.99)	(-1.48)	(-2.41)
Constant	6.927***	7.204***	6.728***
	(25.22)	(26.11)	(24.69)
Loan purpose indicators	Yes	Yes	Yes
Industry indicators	Yes	Yes	Yes
Year indicators	Yes	Yes	Yes
Observations	8067	8067	8067
Adjusted R-squared	0.626	0.628	0.625

Table 10 Other robustness tests

This table reports the results from other robustness tests that regress loan interest spreads on CSR performance (*SUP_CSP*) and interactions between CSR performance and the four proxies for national cultures, namely, harmony in column (1), mastery in column (2), egalitarianism in column (3), and hierarchy in column (4). Panel A reports the results using a sample excluding loan the U.S.. Panel B reports the results using only loan facilities that were priced over LIBOR. For the sake of brevity, we omit the results for control variables. *t*-statistics based on robust standard errors adjusted for clustering by country are in parentheses. *, **, and *** indicate significance at the 10%, 5%, and 1% levels, respectively.

Panel A Excluding the United States

	(1)	(2)	(3)	(4)	(5)
	Baseline	*Harmony*	*Mastery*	*Egalitarianism*	*Hierarchy*
SUP_CSP	-0.112**	-0.014	-0.231***	-0.103***	-0.209***
	(-2.11)	(-0.43)	(-4.58)	(-3.01)	(-4.67)
Culture × SUP_CSP		-0.265***	0.157***	-0.100**	0.143***
		(-4.94)	(2.79)	(-1.97)	(2.72)
Culture		0.051	-0.114**	0.218***	-0.131***
		(1.02)	(-2.30)	(4.74)	(-2.70)
Constant	6.909***	6.864***	7.014***	6.893***	7.062***
	(9.34)	(18.17)	(18.24)	(18.23)	(18.48)
Control variables	Yes	Yes	Yes	Yes	Yes
Loan purpose indicators	Yes	Yes	Yes	Yes	Yes
Industry indicators	Yes	Yes	Yes	Yes	Yes
Year indicators	Yes	Yes	Yes	Yes	Yes
Observations	3619	3619	3619	3619	3619
Adjusted R-squared	0.614	0.618	0.615	0.617	0.615

Panel B Including only loans priced over LIBOR

	(1)	(2)	(3)	(4)	(5)
	Baseline	*Harmony*	*Mastery*	*Egalitarianism*	*Hierarchy*
SUP_CSP	-0.100***	-0.074***	-0.259***	-0.085***	-0.210***
	(-4.35)	(-4.69)	(-4.42)	(-5.14)	(-4.92)
Culture × SUP_CSP		-0.217***	0.171***	-0.152***	0.123***
		(-3.82)	(2.83)	(-3.68)	(2.76)
Culture		-0.076	-0.077	0.137***	-0.085**
		(-1.47)	(-1.52)	(3.36)	(-2.40)
Constant	6.111***	6.309***	6.210***	6.048***	6.154***
	(8.75)	(20.69)	(20.10)	(19.85)	(20.10)
Control variables	Yes	Yes	Yes	Yes	Yes
Loan purpose indicators	Yes	Yes	Yes	Yes	Yes
Industry indicators	Yes	Yes	Yes	Yes	Yes
Year indicators	Yes	Yes	Yes	Yes	Yes
Observations	6206	6206	6206	6206	6206
Adjusted R-squared	0.642	0.647	0.642	0.643	0.642

Table 11 Further tests on the CSR sub-index

This table reports results from regressing loan interest spreads on CSR sub-index and interactions between CSR performance and the four proxies for national cultures, namely, harmony in column (2), mastery in column (3), egalitarianism in column (4), and hierarchy in column (5). Column (1) reports the baseline results for comparison without culture variables and includes their interactions with CSR performance. *t*-statistics based on robust standard errors adjusted for clustering by country are in parentheses. *, **, and *** indicate significance at the 10%, 5%, and 1% levels, respectively.

| CSR sub-index =	Environmental index					Social index				
	(1)	(2)	(3)	(4) Egalitarianism	(5)	(6)	(7)	(8)	(9) Egalitarianism	(10)
	Baseline	Harmony	Mastery	m	Hierarchy	Baseline	Harmony	Mastery	m	Hierarchy
CSR sub-index	-0.109***	-0.050**	-0.264***	-0.085***	-0.215***	-0.116***	-0.082***	-0.197**	-0.095***	-0.288***
	(-3.96)	(-2.26)	(-4.64)	(-3.63)	(-4.25)	(-5.45)	(-3.63)	(-2.73)	(-4.15)	(-4.18)
Culture × CSR sub-index		-0.258***	0.189***	-0.133**	0.125*		-0.113	0.103	-0.139**	0.200***
		(-4.64)	(3.14)	(-2.08)	(1.97)		(-1.50)	(1.36)	(-2.34)	(2.94)
Culture		-0.047	-0.006	0.093	-0.033		-0.157	0.056	0.105	-0.089
		(-0.58)	(-0.09)	(1.23)	(-0.44)		(-1.61)	(0.84)	(1.20)	(-1.32)
Constant	6.662***	6.980***	6.796***	6.641***	6.809***	6.694***	6.989***	6.741***	6.647***	6.910***
	(10.38)	(13.09)	(10.81)	(10.06)	(10.71)	(10.27)	(13.29)	(10.22)	(9.88)	(10.69)
Control variables	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Loan purpose indicators	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry indicators	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year indicators	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	8067	8067	8067	8067	8067	8067	8067	8067	8067	8067
Adjusted R-squared	0.624	0.632	0.627	0.624	0.625	0.624	0.631	0.626	0.625	0.626
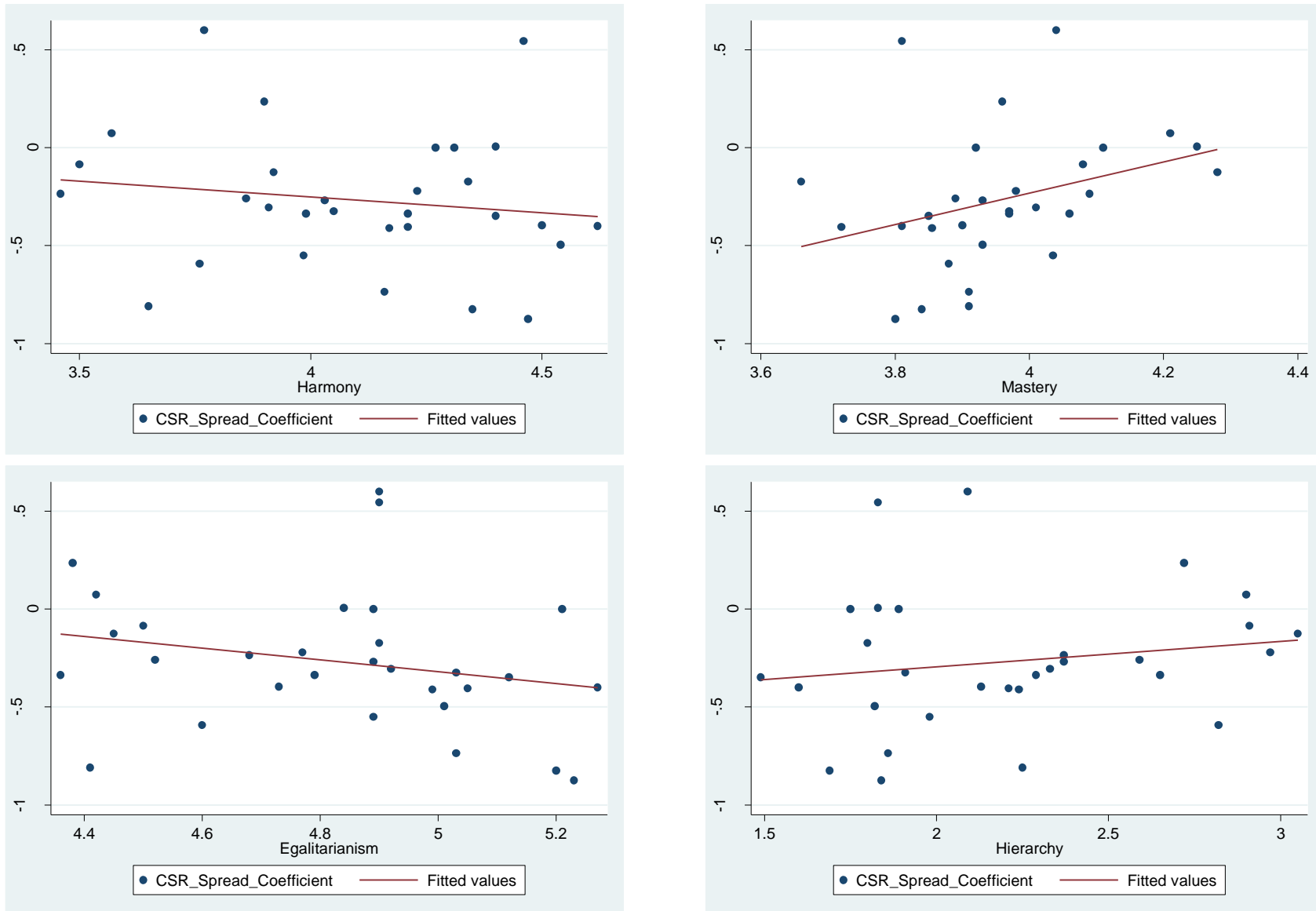
Figure 1 The relation between culture and the CSR-Spread coefficient across countries

This figure plots the national culture on the *x*-axis and the CSR-Spread coefficient on the *y*-axis. The sample consists of 30 countries.