PACFIN-00892; No of Pages 14

Pacific-Basin Finance Journal xxx (2016) xxx–xxx

Contents lists available at ScienceDirect

Pacific-Basin Finance Journal

journal homepage: www.elsevier.com/locate/pacfin

Does corporate social responsibility engagement benefit distressed firms? The role of moral and exchange capital

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ARTICLE INFO

Article history:
Received 9 July 2016
Received in revised form 2 October 2016
Accepted 25 October 2016
Available online xxxx

JEL classification:
G33
G34
M14

Keywords:
Corporate social responsibility
Bankruptcy
Moral capital
Exchange capital

ABSTRACT

Extant literature supports the view that Corporate Social Responsibility (CSR) engagement could potentially act as a risk mitigation device. We extend this literature to address the issue of whether CSR engagement could benefit firms which are already in bankruptcy. A unique feature of our empirical tests is the decomposition of CSR into two components – moral capital and exchange capital. We find that moral capital is associated with the likelihood of a distressed firm emerging from bankruptcy. Further, moral capital appears to reduce the number of days a distressed firm spends in bankruptcy. Our empirical evidence also suggests that moral capital increases the likelihood that a distressed firm successfully negotiates a pre-packaged agreement with its creditors. Finally, our empirical results indicate that the exchange capital component of CSR is positively related to the probability of procuring debtor-in-possession financing by a distressed firm whilst in bankruptcy. Overall, our results imply that both moral and exchange capital components of CSR play a role in facilitating a firm's emergence from bankruptcy.

1. Introduction

Increasingly, institutional investors are adopting environmental, social and governance standards, which are collectively referred to as Corporate Social Responsibility (CSR), in their investment decisions (Cheng et al., 2014). Researchers have examined CSR engagement in the corporate sector through different lenses. First, the duty-aligned perspective posited by Swanson (1995) suggests that corporate moral behavior may be expressed by obligations and duties derived on the basis of rights and justice without regard to a utilitarian assessment. Second, firms follow a utilitarian perspective and implement CSR initiatives to achieve performance objectives such as enhancing profitability, returns on investment or sales growth. Some scholars label this as the strategic view of CSR, which maintains that firms engage in profit maximizing CSR (Baron, 2001; McWilliams and Siegel, 2001) and that companies "do well by doing good." Finally, the stakeholder-driven view proposes that corporations adopt social responsibility activities in response to pressures from various stakeholders. In a meta-analysis, there is mixed evidence on whether or not CSR is value-enhancing (Freeman, 1984; Orlitzky et al., 2003; Margolis and Walsh, 2003).

More recently, a strand of research has emerged which suggests that a firm's CSR activities may be used to mitigate its risk. Attig et al. (2013) suggest three channels for the CSR-risk linkage. First, by improving a firm's relations with its stakeholders, a firm enhances the long-term sustainability of the firm. Second, by engaging in CSR activities, a firm signals efficient use of its

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http://dx.doi.org/10.1016/j.pacfin.2016.10.010
0927-538X/

internal resources. Finally, by positive CSR engagement, a firm reduces the likelihood of incurring costs associated with socially irresponsible behavior. In line with their postulations, Attig et al. (2013) show a positive linkage between CSR activities of a firm and its credit rating. Kim et al. (2014) find that CSR mitigates stock price crash risk. They attribute this finding to the greater level of financial reporting transparency of socially responsible firms and less bad news hoarding behavior. Sun and Cui (2014) find a negative relationship between the level of CSR engagement of a firm and its default risk. Their finding is consistent with the Resource Based Theory (RBT) since CSR stabilizes the financial performance of a firm by enhancing corporate image and reputation (Carter, 2005). Further, Godfrey et al. (2009) propose that when negative events occur, stakeholders will punish a firm with high CSR less than comparable low CSR firms, resulting in lower loss of revenues. Finally, Branco and Rodrigues (2006) claim that engaging in socially beneficial activities builds closer relationships with governments and communities resulting in more favorable contract terms when required. Goss and Roberts (2011) find that firms with below average CSR performance pay between 8 and 17 basis points more for their bank loans. Thus, banks respond to CSR concerns of firms by offering less favorable terms.

Although there are numerous studies that link CSR with financial performance, there is no research studying the impact of CSR engagement on firms in financial distress. What is the role of prior CSR engagement? Does a firm benefit by showing itself to be a good corporate citizen? Or do stakeholders ignore good corporate citizenship when it comes at the cost of basic survival? It is not clear *ex-ante* whether a firm's socially responsible behavior will facilitate its emergence from bankruptcy. Given the lack of prior work, we therefore examine this issue empirically. We investigate four non-mutually exclusive aspects of CSR effects. First, we examine whether CSR engagement explains a firm's emergence from bankruptcy. Second, we investigate whether CSR impacts the time spent by a distressed firm in bankruptcy. Third, we study whether CSR engagement explains the probability of a distressed firm in closing a prenegotiated settlement with its creditors. Finally, we consider the impact of CSR engagement on the probability of obtaining debtor-in-possession (DIP) financing by a distressed firm.

A unique feature of our paper is the segmentation of CSR engagement into two components – exchange capital and moral capital based on Godfrey (2005) and Mattingly and Berman (2006). CSR activities targeting primary stakeholders are labelled as exchange capital since it facilitates the potential to generate beneficial exchanges between the firm and its primary stakeholders. CSR activities directed at secondary stakeholders are labelled as moral capital. We argue that moral and exchange capital play complementary roles in the context of a bankrupt firm. Our work examines the relative efficacy of moral and exchange capital components of CSR in facilitating a distressed firm to successfully emerge from bankruptcy.

Although the theoretical underpinnings of our paper are based on the work of Godfrey (2005), our empirical tests are carried out under a different setting than Godfrey et al. (2009). Godfrey et al. (2009) examined negative events such as the initiation of a lawsuit by a customer, third party or competitor, or the announcement of regulatory action including investigations, fines and penalties by a government entity. Our negative event is the filing of corporate bankruptcy under Chapter 11. The dependent variable used by Godfrey et al. (2009) is the 2-day abnormal stock return following the public disclosure of the negative event. Our primary variable of interest is the emergence of a distressed firm from Chapter 11 proceedings. Thus the window over which we expect a firm's CSR engagement to work is over a longer-term. In the setting of Godfrey et al. (2009), shareholders are the primary stakeholders who are expected to respond to a firm's moral and exchange capital. In our setting, the relevant stakeholders include shareholders, creditors, employees, suppliers, and customers.

We conduct our empirical investigations by matching US firms with available CSR scores from the *MSCI* ESG database[1] with the UCLA-LoPucki Bankruptcy Research database over the 1992 to 2014 period. We find that CSR engagement is positively associated with the likelihood of a distressed firm successfully emerging from bankruptcy. On further examination, we observe that it is the moral capital component of CSR that explains a distressed firm's emergence from bankruptcy. Exchange capital is not associated with the probability of a distressed firm's emergence from bankruptcy. Further, we find that moral capital is also associated with a decrease in the number of days spent by a distressed firm in bankruptcy. We also find that CSR engagement is positively associated with the likelihood of a distressed firm concluding a prenegotiated settlement with its creditors and this association results mainly from the moral capital component of CSR. Finally, we find that CSR engagement has an impact on the prospect of a firm obtaining DIP. Since DIP financing is a major determinant of a firm's emergence from bankruptcy, this finding is of significant importance to several key stakeholders of distressed firms. The exchange capital component of CSR is associated with the probability of securing DIP financing while the moral capital is not significant.

In summary, our results suggest that CSR engagement has significant impact on distressed firms in bankruptcy. CSR engagement explains the probabilities of a firm emerging from bankruptcy, concluding a prenegotiated settlement with its creditors, securing DIP financing and reduces the time spent in bankruptcy. Both components of CSR – moral and exchange play a role in helping a distressed firm emerge from bankruptcy.

The rest of the article proceeds as follows. In Section 2, we discuss the Literature Review and develop the hypotheses used in our empirical tests based on the theoretical underpinnings suggesting a CSR-risk management link. We also develop our main hypotheses on the relation between CSR components and emergence from bankruptcy of distressed firms. In Section 3, we describe our data, the methodology employed and the measurement of key variables used in in this study. In Section 4, we report our empirical results. In the final section, we offer our concluding remarks.

[1] *MSCI* bought the Kinder Lydenberg Domini (KLD) database in 2010. Several published research papers use the KLD database.

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2. Literature review and hypothesis development

In this section, we argue that a firm's CSR engagement acts like an insurance policy in mitigating the adverse effects of destruction of relational wealth during bankruptcy enabling it to emerge successfully bankruptcy.

Mattingly and Berman (2006) performed exploratory factor analysis on KLD dataset (now *MS*CI ESG) on social ratings and uncovered two distinct components of CSR which they label as institutional CSR and technical CSR. Technical CSR is directed at the primary stakeholders of a firm and incorporates the governance, employee relations and product related issues. Institutional CSR (ICSR) encompasses the elements of community engagement and diversity and is directed at a firm's secondary stakeholders. ICSR is also alternately labelled as moral capital while technical CSR is alternately referred to as exchange capital.

According to Godfrey (2005), moral capital acts as an insurance policy protecting a firm's relational wealth especially when a firm faces adverse consequence of bad actions. In the context of corporate bankruptcy, the relation based intangible assets of a firm are likely to be destroyed. This is because a group of stakeholders, such as employees, communities, regulators, customers, suppliers and creditors have incentives to forsake the firm in order to protect their own interests (Brown and Matsa, 2012; Graham et al., 2013; Shleifer and Vishny, 1992; Titman, 1984).

Godfrey (2005) argues that moral capital may potentially mitigate negative stakeholder actions when bad acts occur. Godfrey (2005) invokes the common law tradition of criminal law using the concept of *mens rea* to explain the role of moral capital in protecting a firm's relational wealth. Under the common law tradition, a bad act and a bad mind (*mens rea*) must both be present for an offence to occur. Further, he argues that moral capital acts as a signal to indicate the absence of *mens rea*.

The filing for bankruptcy protection is an example of a negative event in which the firm including its managers caused potential negative outcomes for key stakeholder groups. This is because the filing of bankruptcy protection adversely affects the welfare of several stakeholders such as creditors, employees and shareholders. However, what remains contentious is the underlying motivations of the concerned managers. Did the bankruptcy filing result from the actions of malevolent, self-serving senior executives? Alternatively, was the bankruptcy filing an outcome of the maladroit handling of a business situation? Using the lens of *mens rea*, in the first instance, bad actors caused a bad act while in the second case, good actors got entangled in a bad situation. Enron's bankruptcy filing in 2001 is an example of the former. The filing of bankruptcy by Eastman Kodak in 2012 is an example of the latter. Kodak's failure has been attributed to their relatively slow shift to the digital age.

In the context of bankruptcy, drawing upon Godfrey's framework, we argue that positive moral capital signals the lack of a bad mind. Therefore, we posit that a firm with positive moral capital is likely to protect its relational wealth better resulting in continued stakeholder engagement with the firm, enabling it to emerge successfully from bankruptcy. This is because sustained engagement of stakeholders is valuable to a firm during bankruptcy and will therefore increase its chances of survival.

We therefore posit the following:

Hypothesis 1. In the context of a corporate bankruptcy filing, a firm with positive moral capital is more likely to emerge from bankruptcy, *ceteris paribus*.

Bankruptcy costs are generally categorized into direct and indirect costs (Kalay et al., 2007). Direct costs comprise of filing, legal, and professional fees and have been assessed to be about 3% of the market value of the pre-filing assets for large firms (Bris et al., 2006). Indirect bankruptcy costs generally include the lost profits of foregone sales, the costs of asset fire sales, and the costs of distortions to a firm's investment and financing policies during the period of distress (Kaplan, 1994; Pulvino, 1999; Bris et al., 2006). Researchers generally suggest that ex ante indirect bankruptcy costs are substantial while direct bankruptcy costs are small.

We expect that moral capital generated by CSR engagement will mitigate the adverse impact of bankruptcy filing. For instance, we expect the indirect costs of bankruptcy will be mitigated when a firm has accumulated moral capital. This is because of continued engagement of stakeholders who are assured by a lack of *mens rea*. We therefore posit that the cost of bankruptcy will be smaller for firms that engage in CSR activities that generate moral capital compared to firms that do not.

Extant evidence indicates that the time spent in bankruptcy (Chapter 11) is a proxy for direct and indirect costs. Lawless and Ferris (2000) find that each additional year in bankruptcy costs the firm 2.2% of the total distribution in the bankruptcy. Further, Bris et al. (2006) and Singhal and Zhu (2013) argue that indirect bankruptcy costs are proxied by the time spent in Chapter 11. This is because the negative effects of bankruptcy on a firm's position in the capital and product markets are expected to increase with the time spent in the bankruptcy process. For instance, a bankrupt firm may lose value due to difficulties in raising capital, retaining customers and employees, and investing in value-enhancing new projects the longer it remains under Chapter 11.

We therefore posit:

Hypothesis 2. In the context of a corporate bankruptcy filing, the time spent in bankruptcy will be shorter for firms that engage in CSR activities that generate moral capital compared to firms that do not, *ceteris paribus*.

In a traditional Chapter 11 bankruptcy filing, the firm first files for bankruptcy and then puts together a reorganization plan which must then be negotiated with concerned stakeholders. In a prepackaged bankruptcy, which grew in popularity during the 1990s, the firm simultaneously files both the bankruptcy petition and the reorganization plan. Prepackaged bankruptcies allow firms to file for bankruptcy with a reorganization plan previously negotiated with creditors. This arrangement decreases the time the firm spends in bankruptcy, a period during which the firm's operations are less efficient and a loss in firm value occurs (Betker, 1995; Carapeto, 2005).

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Prepackaged bankruptcy has emerged as an increasingly popular means of restructuring distressed firms (Tashjian et al., 1996). Further, prepacks reduce both the time and costs associated with staying in bankruptcy. Extant evidence shows that prepacks have lower direct costs than traditional Chapter 11 proceedings (Dahiya et al., 2003; Evans et al., 2014). Also, indirect costs of staying in bankruptcy, which include the costs of losing customers, employees and suppliers, are reduced in the case of a firm filing for prepackaged bankruptcy instead of a traditional Chapter 11.

The cost of negotiation may be exacerbated when certain creditors hold out in hopes of getting a better deal. This is described as the holdout problem in the bankruptcy literature. For successfully concluding a prepack, all creditors need to agree to the details of the proposed deal (Carapeto, 2005, 2007). In this context, we argue that a firm with accumulated moral capital is more likely to negotiate a prepack as its stakeholders are convinced that the firm's managers did not have bad intent in the events leading up to filing for bankruptcy. Therefore, they are more likely to conclude a prepack deal rather than hold out for a better deal. We therefore postulate the following:

Hypothesis 3. In the context of a corporate bankruptcy filing, firms that engage in CSR activities that generate moral capital are more likely to file a prepackaged plan at the time of filing for Chapter 11 compared to firms that do not, *ceteris paribus*.

A critical element that has a substantial bearing on the successful emergence of a firm from Chapter 11 is the ability to obtain additional financing during the period of restructuring. In US bankruptcy parlance this is known as DIP financing. DIP financing is pervasive and should be court approved. Extant evidence is consistent with the view that firms receiving DIP financing are able to resolve their Chapter 11 filing sooner than firms without access to DIP financing (Dahiya et al., 2003). In the US, DIP financing is governed by Section 364 of the bankruptcy code. The main objective of DIP financing is to facilitate funding to a financially distressed firm in order to enable it to emerge successfully from bankruptcy and survive as a going concern. The court may authorize DIP credit with a superpriority status. Filing for DIP financing activates the "automatic stay" provision that stays the pre-petition lenders' contractual and legal rights as long as DIP loan is outstanding. Although financing a distressed firm is risky, due to these special provisions, DIP financing is widely prevalent (Chatterjee et al., 2004).

Further, DIP lenders are able to monitor the firms better on account of covenants typically used in this form of lending. Affirmative covenants specify actions that the firm must comply and include financial reporting and associated activities. Negative covenants restrict specific operating decisions of the firm and may include investments in long-term projects, sale of assets *etc.* These covenants reduce the information asymmetry between the firm's managers and the lenders and preclude the overinvestment problem alluded to by Bebchuk and Fried (1996) and Warren (1996).

A crucial issue here is whether CSR engagement facilitates the procurement of DIP financing by financially distressed firms. Does CSR engagement provide insurance-like protection and expedite access to DIP financing? If so, which component(s) of CSR activities enable procurement of DIP funds? In the context of DIP financing, we argue that exchange capital is more important than moral capital in the successful procurement of funding arrangements. Since exchange capital focusses on primary stakeholders and includes activities such as employee relations, governance, and product relations and since they possess power, urgency, and legitimacy, following Godfrey et al. (2009), we argue that they generate the potential to create beneficial exchanges.[2] In other words, successful engagements with employees, good governance and sound relations with customers are essential for the firm to continue as a going concern. Therefore, firms with weak exchange capital are unlikely to obtain DIP financing. We also argue that moral capital is unimportant for DIP financing due to the extra protection given to the creditors in the form of superpriority status and other protective covenants. Further since stakeholders other than creditors do not play a role in DIP financing, moral capital which arises from community engagement and support for diversity is not a relevant factor.

We therefore postulate:

Hypothesis 4. In the context of a corporate bankruptcy filing, firms that engage in CSR activities that generate exchange capital are more likely to obtain DIP financing compared to firms that do not, *ceteris paribus*.

3. Data and methodology

3.1. Bankruptcy database

Our main source of bankruptcy cases are from UCLA-LoPucki Bankruptcy Research Database (BRD), provided by Professor Lynn LoPucki for the period 1979 to 2014. This database has been used extensively in other studies (see Jiang et al., 2012; Evans et al., 2014; Graham et al., 2011 among others) and has been closely scrutinized for data accuracy. The database contains more than one-thousand large US public companies that have filed for bankruptcy since October 1, 1979 with assets of at least $100 million (measured in 1980 dollars) in the last pre-bankruptcy 10-K filing. In Table 1, we provide sample description that includes both bankruptcy information and CSR score. We start with 1008 bankruptcy cases provided by BRD. We remove the bankruptcy cases that are still pending (12 cases) and dismissed by the court (20 cases) as of December 2014. We are also unable to find the CUSIP identifier of 14 bankruptcy cases. Finally, as the BRD database contains bankruptcy cases information from 1979 onwards and *MSCI* ESG coverage only begins in 1992, we exclude bankruptcy cases prior to 1991.

[2] The idea of stakeholder salience being related to power, urgency and legitimacy is attributable to Mitchell et al. (1997). We thank the referee for pointing this out to us.

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Table 1
Sample selection.

Bankruptcy cases recorded in UCLA database	1008
Less: Drop cases that are Chapter 7 at filing	20
Less: CUSIP Identifier not available	14
Less: Cases still pending	12
Less: Cases before 1991	159
	803
Matching LoPucki & *MSCI* ESG Score Last Year	101
Matching LoPucki & *MSCI* ESG Score Last Two Years	157
Matching LoPucki & *MSCI* ESG Score Last Three Years	183

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We find that 101 bankruptcy cases have CSR score available in the last year. This number increases to 183 if we include bankruptcy cases that have CSR score in any of the previous three years. To further verify the accuracy of the data, we cross-check the bankruptcy files with the list of firms in Bankruptcy Data Source database (www.bankruptcydata.com) maintained by New Generation Research (NGR). This database holds information on bankruptcy cases of publicly listed companies with total assets of over $100 million starting from 1988.

We rely on BRD and NGR to access the bankruptcy characteristics of firms, such as bankruptcy filing type, number of days from case filing to case disposition, whether the firm successfully emerged from the bankruptcy *etc.* In addition to the basic bankruptcy information, we also access information on the pre-packaged/pre-negotiated bankruptcy feature, whether the firm has access to DIP financing, reorganization and liquidation plans from the BRD database.

3.1.1. Sample selection

In the next step we match bankruptcy cases with the CSR dataset provided by *MSCI* ESG. After matching with *MSCI* ESG, we find 67 bankruptcy cases that have both bankruptcy related information, CSR score reported by *MSCI* ESG and control variables. We also note that closer to bankruptcy filing, *MSCI* ESG coverage of firms drops significantly. This is because *MSCI* stops covering these firms. Therefore, instead of using CSR score reported in the previous year of bankruptcy filing, we also consider the CSR score of the firm reported in the last three years of bankruptcy filing. Although our sample size increases from 67 to 182, we do not find significant change in our findings.

3.2. Measurement of CSR variable

We use *MSCI* ESG database to calculate the CSR score of a firm. *MSCI* ESG collects firm-level data through multiple channels, including public documents, annual reports, stock exchange filing, company website, media and other data sources. This database has been used in many other studies as a proxy for firm-level CSR performance (see Jiao, 2010; El Ghoul et al., 2011 among others) and considered as "the *de-facto* [CSP] research standard at the moment" (Waddock, 2003, p.369). The coverage of *MSCI* ESG database has improved significantly over time, increasing from around 650 firms in 1992 to over 3000 firms now.

MSCI ESG rating system evaluates strengths and weakness regarding seven major qualitative areas, including Community, Corporate Governance, Diversity, Employee Relations, Environment, Human Rights and Product using a proprietary rating system. Within each area, a binary rating system is used, where each strength or concern rating is coded with either "1" or "0". For example, *MSCI* ESG assigns a score of "1" in the strength area if a company has a cash profit-sharing program through which it has recently made distribution to a majority of its workforce. Similarly, *MSCI* ESG assigns a score of "1" in the weakness area if the firm has a history of notably poor union relations.

In order to improve the robustness of our empirical analysis, we use multiple approaches of calculating CSR score, as the extant literature is inconclusive on the best approach of calculating CSR score. For instance, Deng et al. (2013) note that one of the popular methods of calculating CSR score is summing all the stakeholder strength scores and deducting total stakeholder weakness scores from it. However, the indicators used in *MSCI* ESG system are not consistent as a number of variables are added and removed over the last two decades (Deng et al., 2013; Manescu, 2009). This may lead to a biased result as the CSR scores are not comparable over time. Therefore, following Deng et al. (2013), we construct the adjusted strength CSR score by dividing the strength scores of each dimension by the total number of strength scores for that dimension. We use the same approach to calculate the adjusted weakness score. The final CSR score is the difference between adjusted strength score and the adjusted weakness score. We label this as CSR_1 score. This approach takes into account inconsistent number of indicators across years and gives

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equal weight to all seven dimensions of CSR.

$$CSR_1 = \sum_{j=1}^{7}\left(\frac{\sum_{s=1}^{u_t^j} strength_s^j}{u_t^j} - \frac{\sum_{r=1}^{k_t^j} weakness_r^j}{k_t^j}\right)$$

where j is the CSR dimension, $u_t^j$is the number of strengths in CSR area j in year t, $strength_s^j$ is the binary strength indicator if the firm meets strength s, $k_t^j$is the number of weaknesses in CSR dimension k and $weakness_r^j$is the binary weakness indicator if the firm meets weakness r.

In the second alternative, we follow the approach of Manescu (2009) in which the CSR score is calculated as an average of adjusted strength score, less adjusted weakness score across seven dimensions. The difference between Manescu (2009) and Deng et al. (2013) is that in the latter paper, the adjusted strength score minus adjusted weakness score are added across seven areas instead of taking an average of seven dimensions. We label this as CSR_2.

$$CSR_2 = \sum_{j=1}^{7}\left(\frac{\sum_{s=1}^{u_t^j} strength_s^j}{u_t^j} - \frac{\sum_{r=1}^{k_t^j} weakness_r^j}{k_t^j}\right)/7$$

The third approach uses the most frequently used aggregation method (see Jiao, 2010; Verwijmeren and Derwall, 2010 among others) where the CSR score is the difference between stakeholder strength and weakness score. We label this as CSR_3.

$$CSR_3 = \sum_{j=1}^{7}\left(\sum_{s=1}^{u_t^j} strength_s^j - \sum_{r=1}^{k_t^j} weakness_r^j\right)$$

Finally, we calculate moral and exchange capital using a variation of the method employed by Godfrey et al. (2009).[3] Moral capital is measured by the sum of positive sores on community and diversity components. Exchange capital is computed by the sum of positive scores on employee, governance and product quality. In order to improve comparability across years, we define Standardized Moral Capital as the standardized sum of community and diversity dimensions of CSR. Likewise, we define Standardized Exchange Capital as the standardized sum of governance, employee relations and product quality dimensions of CSR.

We standardize CSR1, CSR2, CSR3, moral, and exchange capital score of each firm in a year to control for intra-industry CSR variation. This procedure addresses the concern that CSR scores across industries are not comparable. Without standardizing, the CSR measure will be benchmarked against *all* firms in the sample instead of *relative* to other firms in the same industry. For instance, CSR practices vary by industry and the importance of CSR is much more pronounced in certain industries, such as in mining and chemical industry. We subtract the average CSR score of the industry (classified using the methodology of Fama and French, 1997) from firm-level CSR and then divide by the standard deviation of the same industry.[4]

3.3. Measurement of other variables

Prepackage is a dummy variable taking the value of "1" if the firm has acceptance from creditors prior to filing for Chapter 11 in the court. DIP indicator is a dummy variable taking the value of "1" if the firm has secured additional financing during the period of restructuring. Creditor dummy takes the value of "1" if an official committee was appointed to represent the unsecured creditors prior to case disposition. Delaware represents a dummy variable taking the value of "1" if the case is filed in Delaware. Fraud is a dummy variable taking a value of "1" if management is suspected of committing fraud. The BRD database classifies bankruptcy driven by frauds on the following basis: "bankruptcies caused principally by fraud claims (include securities fraud claims) against the company. These cases often began with financial difficulties from other causes, which were concealed from the investors until they were severe enough to cause the bankruptcy" (see Glossary of UCLA LoPucki Bankruptcy Research Database). Log of asset is the reported total asset in the year prior to case filing. Profitability is net income for the year ending before the case filing. Filing rate captures the wave of bankruptcy over the sample period. It is calculated as the number of BRD filings in the year of filing. Our use of these variables follows the bankruptcy literature (Bris et al., 2006; Dahiya et al., 2003; Kalay et al., 2007).

[3] Godfrey et al. (2009) coded ICSR participation (a.k.a moral capital) one if the firm scored greater than zero on any of the positive items under the community or diversity dimensions, zero otherwise. We use standardized total scores.

[4] We designate the industry classification using the Fama and French methodology as FF48 industry.

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3.4. Descriptive statistics

The descriptive statistics of key variables used in the study are provided in Table 2. The three variants used in measuring CSR engagement scores (Standardized CSR1, Standardized CSR2, and Standardized CSR3) show substantial variation and are right skewed. The mean values are 0.009, 0.016 and 0.068 respectively. The Standardized Moral CSR has a mean of 0.185 while the Standardized Exchange CSR has a mean of −0.123. The firms in our sample spend on average 553 days in bankruptcy. The firms in our sample have a 46% chance of emerging from bankruptcy. About 13% of the sample firms file a prepackaged bankruptcy agreement during the Chapter 11 proceedings. Approximately 65% of our sample firms are able to access DIP financing. 88.4% of the firms have appointed a creditors committee to deal with the bankruptcy filing. Almost 45% of the sample firms file for bankruptcy in the state of Delaware.

In Table 3, we report the correlation matrix. As expected the three measures of CSR engagement scores are highly positively correlated with each other. Standardized Moral CSR scores are positively related with the three measures of overall CSR scores, with correlations ranging from 0.589 to 0.672. The correlation of Standardized Exchange CSR scores with overall CSR measures range from 0.400 to 0.531. Interestingly Moral CSR and Exchange CSR scores are negatively correlated but is not significant. The log of assets (size proxy) is positively correlated with Standardized CSR3 scores and Moral CSR but is negatively correlated with Exchange CSR. The prepacked dummy is negatively correlated with Creditor dummy and positively correlated with Delaware filing dummy (Delaware) and operating profitability. These results suggest that having a creditor committee reduces the chances of concluding a prenegotiated deal. The indicator for DIP financing is positively correlated with Creditor dummy and Delaware indicating that having a creditor committee or filing in Delaware positively influence the probability of obtaining DIP financing. Overall, the data do not suggest any serious problem of multicollinearity other than between the variants of the overall CSR scores.

4. Empirical results

4.1. Key empirical results

We conduct logistic regression using emergence from bankruptcy as the dependent variable. Our results are reported in Table 4. We find that the standardized overall CSR scores are not statistically significant. However, when we bifurcate CSR engagement scores into two components – Moral CSR and Exchange CSR – we find intuitive results. We find that Moral CSR, *i.e.*, Moral capital, is positive and statistically significant implying that firms with higher moral capital are more likely to emerge from bankruptcy, *ceteris paribus*. Creditor dummy is positive and significant indicating that the existence of a creditors committee increases the likelihood of a firm emerging from bankruptcy. The dummy for prepackaged bankruptcy is also positive and significant indicating that firms which are able to negotiate a deal with creditors prior to filing Chapter 11, are more likely to successfully come out of bankruptcy. Prior work suggests that the use of prepacks reduces both the time spent in bankruptcy and reorganization (Tashjian et al., 1996; Franks and Torous, 1994). The dummy for filing in Delaware is also positive and marginally statistically significant in some cases. The indicator variable for procuring DIP financing is positively associated with the probability of emerging from bankruptcy

Table 2
Descriptive statistics.

Variable	Mean	StDev	PC5	PC25	PC50	PC75	PC95
Standardized CSR1	0.009	0.856	−1.196	−0.588	−0.065	0.468	1.566
Standardized CSR2	0.016	0.857	−1.196	−0.580	−0.065	0.468	1.566
Standardized CSR3	0.068	0.946	−1.421	−0.511	−0.014	0.446	1.821
Standardized Moral	0.185	0.971	−1.177	−0.644	0.011	0.784	1.830
Standardized Exchange	−0.123	0.854	−1.618	−0.685	−0.091	0.556	1.043
Prepackaged	0.130	0.339	0	0	0	0	1
DIP Indicator	0.652	0.480	0	0	1	1	1
Creditor dummy	0.884	0.323	0	1	1	1	1
Delaware	0.449	0.501	0	0	0	1	1
Fraud	0.029	0.169	0	0	0	0	0
Log of Asset	7.761	1.665	5.880	6.439	7.622	8.347	10.610
Profitability	0.025	0.162	−0.170	−0.033	0.040	0.095	0.144
Filing Rate	47.275	30.743	13	24	35	91	97

In Table 2 we provide descriptive statistics of key variables. CSR1 score is the difference between adjusted strength score and the adjusted weakness score. CSR2 score is calculated as an average of adjusted strength score, less adjusted weakness score across seven dimensions. CSR3 score is the difference between stakeholder strength and weakness score. We calculate moral capital as sum of positive sores on community and diversity components. Exchange capital is captured by positive scores on employee, governance and product quality. We subtract the average CSR score of the industry (classified using Fama and French, 1997 48 industry classification) from firm-level CSR and then divide by the standard deviation of the same FF48 industry to standardize CSR1, CSR2, CSR3, moral, and exchange capital score of each firm. Prepackage is a dummy variable taking the value of "1" if the firm has acceptance from creditors previous to filing the case in the court. DIP indicator is a dummy variable taking the value of "1" if the firm has secured additional financing during the period of restructuring. Creditor dummy takes the value of "1" if an official committee was appointed to represent the unsecured creditors prior to case disposition. Delaware represents a dummy variable taking the value of "1" if the case is filed in Delaware. Fraud is a dummy variable taking a value of "1" if management is suspected of committing fraud. Log of asset is the reported total asset last year before case filing. Profitability is Net income for last year ending before case filing. Filing rate captures the wave of bankruptcy over the sample period. It is calculated as the number of BRD filings in the year of filing.

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Table 3
Correlation coefficient.

	Standardized CSR1	Standardized CSR2	Standardized CSR3	Standardized Moral	Standardized Exchange	Prepackaged	DIP Indicator	Creditor Dummy	Delaware	Fraud	Log of Asset	Profitability	Filing Rate
Standardized CSR1	1												
Standardized CSR2	0.987***	1											
Standardized CSR3	0.938***	0.939***	1										
Standardized Moral	0.589***	0.627***	0.672***	1									
Standardized Exchange	0.522***	0.531***	0.400***	−0.218	1								
Prepackaged	0.151	0.195	0.143	0.273*	0.0310	1							
DIP indicator	0.189	0.176	0.171	0.0246	0.187	0.0303	1						
Creditor dummy	−0.0559	−0.103	−0.0395	−0.187	0.0105	−0.447***	0.0919**	1					
Delaware	−0.123	−0.0976	−0.145	−0.0201	−0.0818	0.117***	0.223***	−0.0657*	1				
Fraud	0.149	0.148	0.141	0.0957	0.0652	−0.0376	0.0161	0.0366	−0.0113	1			
Log of Asset	0.154	0.156	0.333**	0.425***	−0.251*	−0.0377	0.0640*	0.0847**	−0.0183	0.0263	1		
Profitability	−0.137	−0.133	−0.121	0.128	−0.271*	0.0971**	0.0787*	−0.0250	0.0312	0.0387	0.0201	1	
Filing Rate	0.120	0.112	0.0948	0.0473	0.0745	0.0145	0.213***	0.0729*	0.136***	0.0195	0.150***	−0.0871*	1

In Table 3, we report the correlation matrix. CSR1 score is the difference between adjusted strength score and the adjusted weakness score. CSR2 score is calculated as an average of adjusted strength score, less adjusted weakness score across seven dimensions. CSR3 score is the difference between stakeholder strength and weakness score. We calculate moral capital as sum of positive sores on community and diversity components. Exchange capital is captured by positive scores on employee, governance and product quality. We subtract the average CSR score of the industry (classified using Fama and French, 1997 48 industry classification) from firm-level CSR and then divide by the standard deviation of the same FF48 industry to standardize CSR1, CSR2, CSR3, moral, and exchange capital score of each firm. Prepackage is a dummy variable taking the value of "1" if the firm has acceptance from creditors previous to filing the case in the court. DIP indicator is a dummy variable taking the value of "1" if the firm has secured additional financing during the period of restructuring. Creditor dummy takes the value of "1" if an official committee was appointed to represent the unsecured creditors prior to case disposition. Delaware represents a dummy variable taking the value of "1" if the case is filed in Delaware. Fraud is a dummy variable taking a value of "1" if management is suspected of committing fraud. Log of asset is the reported total asset last year before case filing. Profitability is Net income for last year ending before case filing. Filing rate captures the wave of bankruptcy over the sample period. It is calculated as the number of BRD filings in the year of filing.

Table 4
Emergence from Chapter 11.

	(1) Emerge	(2) Emerge	(3) Emerge	(4) Emerge	(5) Emerge
Standardized CSR1	0.0244				
	(0.08)				
Standardized CSR2		−0.0120			
		(−0.04)			
Standardized CSR3			0.0312		
			(0.09)		
Standardized Moral				0.646**	
				(1.99)	
Standardized Exchange					−0.379
					(−0.85)
Creditor dummy	14.23***	14.24***	14.20***	14.85***	14.29***
	(18.76)	(18.62)	(18.42)	(19.10)	(16.15)
Prepackaged	16.41***	16.42***	16.43***	16.27***	16.23***
	(22.29)	(22.24)	(21.27)	(19.22)	(21.12)
Delaware	1.028*	1.022*	1.140*	0.954	0.910
	(1.77)	(1.77)	(1.94)	(1.58)	(1.54)
Fraud	0.325	0.333	0.409	0.601	0.537
	(0.20)	(0.20)	(0.26)	(0.44)	(0.33)
DIP indicator	1.133*	1.153*	1.072	1.084	1.337*
	(1.64)	(1.71)	(1.53)	(1.57)	(1.86)
Log of Asset	−0.0397	−0.0363	−0.0432	−0.272	−0.114
	(−0.24)	(−0.23)	(−0.26)	(−1.40)	(−0.56)
Profitability	0.528	0.490	0.481	0.0868	−0.165
	(0.26)	(0.24)	(0.24)	(0.05)	(−0.09)
Filing Rate	0.00560	0.00573	0.00685	0.00450	0.00633
	(0.61)	(0.63)	(0.75)	(0.47)	(0.68)
Constant	−15.82***	−15.86***	−15.88***	−14.54***	−15.45***
	(−9.33)	(−9.47)	(−8.78)	(−8.05)	(−8.50)
N	67	67	66	67	66
pseudo R-sq	0.191	0.191	0.201	0.226	0.189

In Table 4 we report logistic regression using emergence from bankruptcy as the dependent variable. CSR1 score is the difference between adjusted strength score and the adjusted weakness score. CSR2 score is calculated as an average of adjusted strength score, less adjusted weakness score across seven dimensions. CSR3 score is the difference between stakeholder strength and weakness score. We calculate moral capital as sum of positive sores on community and diversity components. Exchange capital is captured by positive scores on employee, governance and product quality. We subtract the average CSR score of the industry (classified using Fama and French, 1997 48 industry classification) from firm-level CSR and then divide by the standard deviation of the same FF48 industry to standardize CSR1, CSR2, CSR3, moral, and exchange capital score of each firm. Prepackage is a dummy variable taking the value of "1" if the firm has acceptance from creditors previous to filing the case in the court. DIP indicator is a dummy variable taking the value of "1" if the firm has secured additional financing during the period of restructuring. Creditor dummy takes the value of "1" if an official committee was appointed to represent the unsecured creditors prior to case disposition. Delaware represents a dummy variable taking the value of "1" if the case is filed in Delaware. Fraud is a dummy variable taking a value of "1" if management is suspected of committing fraud. Log of asset is the reported total asset last year before case filing. Profitability is Net income for last year ending before case filing. Filing rate captures the wave of bankruptcy over the sample period. It is calculated as the number of BRD filings in the year of filing. * statistically significant at the 10%, ** statistically significant at the 5% and *** statistically significant at the 1% level. *t*-Stats are given in parenthesis and are based on robust standard errors.

and is marginally significant, consistent with prior work (Dahiya et al., 2003). Overall, our results support Hypothesis 1, which states that a firm with positive moral capital is more likely to emerge from bankruptcy, *ceteris paribus*.

In Table 5, we provide results of regressing the time spent in bankruptcy (number of days from case filing to disposition) on CSR engagement and a number of important control variables. The standardized CSR scores have no impact on the time spent in bankruptcy. However, the moral capital component of CSR has a significantly negative influence on days spent in bankruptcy even after accounting for several control variables. This result supports our Hypothesis 2, which posits that the time spent in bankruptcy will be shorter for firms that engage in CSR activities that generate moral capital compared to firms that do not. Firms, which successfully pre-negotiate a deal with creditors, spend lesser time in bankruptcy compared to other firms. Large firms typically spend more time in bankruptcy compared to smaller firms ostensibly due to the complexity of their operations arising out of their size. These results are consistent with prior work (Singhal and Zhu, 2013).

We examine the determinants of filing a prepackaged bankruptcy using a logistic regression framework. The results, reported in Table 6, indicate that some versions of standardized CSR scores have a positive impact on the likelihood of successfully negotiating a prepackaged deal. When we examine the two components of CSR engagement, we find that the moral capital component has a positive impact and is weakly statistically significant. The exchange capital component of CSR is not statistically significant. Overall, we find weak support for Hypothesis 3, which states that firms that engage in CSR activities that generate moral capital are more likely to file a prepackaged plan at the time of filing for Chapter 11 compared to firms that do not. Interestingly, having a credit committee is negatively associated with the likelihood of concluding a pre-negotiated agreement with creditors. Also, large firms have a lower chance of closing a pre-negotiated deal with creditors. These findings indicate the severity of holdout problems when credit committees exist and in large firms.

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Table 5
Days in bankruptcy.

	(1) DaysIn	(2) DaysIn	(3) DaysIn	(4) DaysIn	(5) DaysIn
Standardized CSR1	−129.5				
	(−1.13)				
Standardized CSR2		−129.6			
		(−1.12)			
Standardized CSR3			−130.9		
			(−1.10)		
Standardized Moral				−141.3**	
				(−1.99)	
Standardized Exchange					−71.76
					(−0.77)
Creditor dummy	158.7*	148.4	172.7*	160.0	151.3
	(1.90)	(1.64)	(1.94)	(0.59)	(1.46)
Prepackaged	−221.6***	−211.4**	−183.5*	−98.03	−291.1**
	(−2.75)	(−2.53)	(−1.97)	(−0.34)	(−2.43)
Delaware	10.02	17.15	18.13	56.98	14.95
	(0.08)	(0.14)	(0.15)	(0.45)	(0.12)
Fraud	288.2	291.6	250.2	218.6	299.1
	(0.80)	(0.81)	(0.70)	(0.56)	(0.77)
DIP Indicator	181.4	177.9	181.7	134.0	151.6
	(1.14)	(1.13)	(1.08)	(0.98)	(1.02)
Log of Asset	117.8***	119.0***	135.4***	154.1***	94.29***
	(3.72)	(3.67)	(3.05)	(3.20)	(4.46)
Profitability	−148.9	−139.9	−162.5	100.1	−130.0
	(−0.98)	(−0.93)	(−1.08)	(0.25)	(−0.78)
Filing Rate	3.097	3.084	3.160	2.931	2.774
	(0.86)	(0.85)	(0.88)	(1.42)	(0.79)
Constant	−740.6*	−741.2*	−895.9	−995.6*	−520.5*
	(−1.70)	(−1.69)	(−1.60)	(−1.99)	(−1.92)
N	67	67	66	67	66
adj. R-sq	0.190	0.190	0.194	0.197	0.148

In Table 5 we regress the time spent in bankruptcy (number of days from case filing to disposition) on CSR engagement. CSR1 score is the difference between adjusted strength score and the adjusted weakness score. CSR2 score is calculated as an average of adjusted strength score, less adjusted weakness score across seven dimensions. CSR3 score is the difference between stakeholder strength and weakness score. We calculate moral capital as sum of positive sores on community and diversity components. Exchange capital is captured by positive scores on employee, governance and product quality. We subtract the average CSR score of the industry (classified using Fama and French, 1997 48 industry classification) from firm-level CSR and then divide by the standard deviation of the same FF48 industry to standardize CSR1, CSR2, CSR3, moral, and exchange capital score of each firm. Prepackage is a dummy variable taking the value of "1" if the firm has acceptance from creditors previous to filing the case in the court. DIP indicator is a dummy variable taking the value of "1" if the firm has secured additional financing during the period of restructuring. Creditor dummy takes the value of "1" if an official committee was appointed to represent the unsecured creditors prior to case disposition. Delaware represents a dummy variable taking the value of "1" if the case is filed in Delaware. Fraud is a dummy variable taking a value of "1" if management is suspected of committing fraud. Log of asset is the reported total asset last year before case filing. Profitability is Net income for last year ending before case filing. Filing rate captures the wave of bankruptcy over the sample period. It is calculated as the number of BRD filings in the year of filing. * statistically significant at the 10%, ** statistically significant at the 5% and *** statistically significant at the 1% level. *t*-Stats are given in parenthesis and are based on robust standard errors.

Finally, we examine the determinants of DIP financing and provide the results in Table 7. Firms with higher CSR engagement scores are more likely to obtain DIP financing even after controlling for other key determinants. Interestingly, the moral capital component is not significant but the exchange capital component is positive and highly significant. This finding is interesting especially in the light of additional protection that DIP financing typically provides in the US setting. Our finding supports Hypothesis 4 which states that firms which engage in CSR activities that generate exchange capital are more likely to obtain DIP financing compared to firms that do not. The only control variable that is significant is the measure of operating income.

4.2. Robustness checks

We conduct additional robustness checks to alleviate potential concerns with our empirical results. The first concern is the sample selection bias. We examine whether the firms that are included in the sample are non-randomly selected and are therefore not representative of the full sample. We use Heckman (1979) two-step procedure to generate Inverse Mills ratio. More specifically, in the first step we generate a dummy taking the value equal to one if the firm has a CSR score and reported bankruptcy in the following year. Firms that have CSR score but not reported to be in bankruptcy are coded as zero. Next, we regress the dummy variable on the set of control variables and save the residual term. Subsequently we transform the residual term to Inverse Mills ratio and use as an additional control variable in the mainline regression. These results, which are tabulated in Table 8, suggest that our main findings remain qualitatively similar after controlling for potential sample selection-bias.

The second concern that requires attention is the small size of the sample. This is an inherent problem in our data sources. We approach this issue in three ways. First, we code CSR scores (Moral Capital and Exchange Capital) as zero if a firm is missing in the

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Table 6
Prepackaged or prenegotiated bankruptcy.

	(1) Prepackaged	(2) Prepackaged	(3) Prepackaged	(4) Prepackaged	(5) Prepackaged
Standardized CSR1	0.759				
	(1.59)				
Standardized CSR2		0.886**			
		(2.01)			
Standardized CSR3			0.877*		
			(1.83)		
Standardized Moral				3.159*	
				(1.92)	
Standardized Exchange					−0.186
					(−0.32)
Creditor dummy	−5.638***	−5.476***	−5.469***	−5.327***	−5.379***
	(−3.33)	(−3.32)	(−3.42)	(−3.60)	(−3.26)
Delaware	0.943	0.776	0.815	−0.614	0.564
	(0.91)	(0.80)	(0.85)	(−0.65)	(0.52)
DIP Indicator	−0.858	−0.780	−0.892	−1.085	−0.221
	(−0.84)	(−0.78)	(−0.71)	(−0.58)	(−0.27)
Log of Asset	−1.590**	−1.604**	−1.572**	−2.412***	−1.401**
	(−2.39)	(−2.27)	(−2.47)	(−3.46)	(−2.46)
Profitability	2.317	2.342	2.405	1.006	0.905
	(1.26)	(1.30)	(1.05)	(0.43)	(0.74)
Filing Rate	0.0113	0.0100	0.00962	0.00220	0.0150
	(0.74)	(0.62)	(0.64)	(0.12)	(1.57)
Constant	12.28***	12.30***	12.20***	17.78***	10.58***
	(2.82)	(2.67)	(3.07)	(3.76)	(2.67)
N	67	67	66	67	66
pseudo R-sq	0.607	0.613	0.611	0.708	0.559

In Table 6 we examine the determinants of filing a prepackaged bankruptcy using a logistic regression framework. CSR1 score is the difference between adjusted strength score and the adjusted weakness score. CSR2 score is calculated as an average of adjusted strength score, less adjusted weakness score across seven dimensions. CSR3 score is the difference between stakeholder strength and weakness score. We calculate moral capital as sum of positive sores on community and diversity components. Exchange capital is captured by positive scores on employee, governance and product quality. We subtract the average CSR score of the industry (classified using Fama and French, 1997 48 industry classification) from firm-level CSR and then divide by the standard deviation of the same FF48 industry to standardize CSR1, CSR2, CSR3, moral, and exchange capital score of each firm. Prepackage is a dummy variable taking the value of "1" if the firm has acceptance from creditors previous to filing the case in the court. DIP indicator is a dummy variable taking the value of "1" if the firm has secured additional financing during the period of restructuring. Creditor dummy takes the value of "1" if an official committee was appointed to represent the unsecured creditors prior to case disposition. Delaware represents a dummy variable taking the value of "1" if the case is filed in Delaware. Fraud is a dummy variable taking a value of "1" if management is suspected of committing fraud. Log of asset is the reported total asset last year before case filing. Profitability is Net income for last year ending before case filing. Filing rate captures the wave of bankruptcy over the sample period. It is calculated as the number of BRD filings in the year of filing. * statistically significant at the 10%, ** statistically significant at the 5% and *** statistically significant at the 1% level. *t*-Stats are given in parenthesis and are based on robust standard errors.

*MSC*I ESG database but has other data available before the bankruptcy filing. This increases the sample to 849. We run our baseline regressions (Table 4) using this expanded sample. We also address the sample selection problem by using the Inverse Mills Ratio. The results are reported in Table 8. Our key result, *viz.*,that moral capital increases the probability of a Chapter 11 firm emerging from bankruptcy is once again supported. As before, exchange capital continues to be insignificant.

In the second approach, we increase the sample size to 182 based on the CSR scores recorded in any of the last three years preceding bankruptcy. Our results are qualitatively similar. In the third approach, we use available CSR scores and the determinants of CSR to find the predicted CSR score. This procedure generates the predicted CSR score of firms that are initially covered by *MSC*I ESG but later discontinued. We find that the sample size increases when we substitute predicted CSR score in place of actual score but our baseline results (unreported) remain strong.[5]

Finally, we address the concern that our measures of moral and exchange capital differ from the measures used by Godfrey et al. (2009). We used standardized total scores of these CSR dimensions, whereas Godfrey et al. (2009) only required a positive score on one of the dimensions. Thus the Godfrey method would provide a maximum value of one for moral and exchange capital, whereas our measure could potentially increase over time. We replicate all our key tests using the approach followed by Godfrey et al. (2009). Our results remain qualitatively similar.[6]

5. Concluding remarks

The current study extends the CSR-risk linkage further by examining the effects of CSR engagement on distressed firms. When a firm is already in a state of financial distress, it is not clear *ex-ante* whether a firm's socially responsible behavior will facilitate its emergence from bankruptcy. One line of argument is that a firm in distress should not fritter away its precious resources by

[5] Both the results are available from the authors on request.
[6] These are untabulated, but are available from the authors on request.

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Table 7
DIP financing.

	(1) DIP indicator	(2) DIP indicator	(3) DIP indicator	(4) DIP indicator	(5) DIP indicator
Standardized CSR1	0.903**				
	(2.48)				
Standardized CSR2		0.851**			
		(2.34)			
Standardized CSR3			0.851***		
			(2.58)		
Standardized Moral				0.0946	
				(0.29)	
Standardized Exchange					0.948***
					(2.91)
Creditor dummy	1.068	1.144	0.904	0.961	1.256
	(0.80)	(0.88)	(0.70)	(0.81)	(0.99)
Prepackaged	−0.0952	−0.173	−0.306	0.182	0.512
	(−0.06)	(−0.10)	(−0.19)	(0.12)	(0.30)
Delaware	0.850	0.777	0.834	0.526	0.930
	(1.35)	(1.23)	(1.29)	(0.86)	(1.34)
Log of Asset	−0.213	−0.217	−0.318	−0.168	0.00736
	(−0.87)	(−0.90)	(−1.35)	(−0.79)	(0.04)
Profitability	7.191**	7.045**	6.809***	6.045**	7.824***
	(2.56)	(2.51)	(2.65)	(2.22)	(2.58)
Filing Rate	−0.00957	−0.00946	−0.00763	−0.00748	−0.00993
	(−0.95)	(−0.95)	(−0.76)	(−0.80)	(−1.00)
Constant	1.385	1.365	2.216	1.046	−0.474
	(0.55)	(0.56)	(0.91)	(0.45)	(−0.22)
N	67	67	66	67	66
pseudo R-sq	0.178	0.171	0.175	0.115	0.178

In Table 7 we examine the determinants of DIP financing using a logistic regression framework. CSR1 score is the difference between adjusted strength score and the adjusted weakness score. CSR2 score is calculated as an average of adjusted strength score, less adjusted weakness score across seven dimensions. CSR3 score is the difference between stakeholder strength and weakness score. We calculate moral capital as sum of positive sores on community and diversity components. Exchange capital is captured by positive scores on employee, governance and product quality. We subtract the average CSR score of the industry (classified using Fama and French, 1997 48 industry classification) from firm-level CSR and then divide by the standard deviation of the same FF48 industry to standardize CSR1, CSR2, CSR3, moral, and exchange capital score of each firm. Prepackage is a dummy variable taking the value of "1" if the firm has acceptance from creditors previous to filing the case in the court. DIP indicator is a dummy variable taking the value of "1" if the firm has secured additional financing during the period of restructuring. Creditor dummy takes the value of "1" if an official committee was appointed to represent the unsecured creditors prior to case disposition. Delaware represents a dummy variable taking the value of "1" if the case is filed in Delaware. Fraud is a dummy variable taking a value of "1" if management is suspected of committing fraud. Log of asset is the reported total asset last year before case filing. Profitability is Net income for last year ending before case filing. Filing rate captures the wave of bankruptcy over the sample period. It is calculated as the number of BRD filings in the year of filing. * statistically significant at the 10%, ** statistically significant at the 5% and *** statistically significant at the 1% level. *t*-Stats are given in parenthesis and are based on robust standard errors.

spending it on community, charitable activities, and the environment. It should rather focus its resources on activities that reward its primary stakeholders, such as creditors and shareholders. Alternately, one could argue that a firm's ability to survive a period of financial distress depends on a broad group of stakeholders and they would take cognizance of its prior commitment and willingness to engage in socially responsible activities, such as community engagement and diversity.

In our empirical tests, we use the framework outlined in Godfrey (2005) and Godfrey et al. (2009) and partition CSR engagement into two segments – moral capital and exchange capital. The moral capital component of a firm signals the willingness of a firm to act altruistically; while the exchange capital indicates a firm's ability to create more advantageous exchanges between the firm and its primary stakeholders. Our research, which is based on US firms that have filed for bankruptcy protection under Chapter 11, shows that a firm's prior CSR engagement helps it to emerge from bankruptcy. In particular, we find that the moral capital component of CSR is positively associated with the probability of a Chapter 11 firm emerging from bankruptcy and reduces the time spent in bankruptcy. Further, the moral capital component of CSR increases the likelihood of a distressed firm closing a prenegotiated settlement with its creditors prior to a formal Chapter 11 filing. Finally, our results indicate that CSR engagement increases the chance of a distressed firm obtaining DIP financing. Since prior literature on bankruptcy shows that concluding a prenegotiated settlement and procuring debtor-in-possession financing are key determinants of a Chapter 11 firm successfully emerging from bankruptcy, it appears that CSR engagement plays a crucial role in ensuring its survival. In the context of Chapter 11, it appears that both moral capital and exchange capital play vital roles in facilitating a firm's successful emergence from bankruptcy. While exchange capital is crucial as it is associated with a firm's ability to seek extra capital in the form of DIP financing, moral capital is shown to be associated with successful conclusion of a prepack, reduction in time spent in bankruptcy and the overall probability of emerging from bankruptcy.

Our work contributes to two distinct strands of literature. First, management scholars such as Godfrey (2005) and Fombrun et al. (2000) suggest that CSR provides an insurance like protection when a firm is subject to negative events. They posit that stakeholders mete out punishments based on the perceived state of mind and intention of the offender. The state of mind is assessed using the *mens rea* determination in law (LaFave, 2000). It is in this context that Godfrey et al. (2009) provides empirical evidence that the moral capital derived from CSR engagement provides a mitigating influence reducing the intensity of adverse stock price

Please cite this article as: Gupta, K., Krishnamurti, C., Does corporate social responsibility engagement benefit distressed firms? The role of moral and exchange capital, Pacific-Basin Finance Journal (2016), http://dx.doi.org/10.1016/j.pacfin.2016.10.010

Table 8
Robustness checks.

B20	(1) Emerge	(2) Emerge	(3) Emerge	(4) Emerge
Standardized Moral	1.005**			
	(2.30)			
Standardized Exchange		−0.537		
		(−1.16)		
Moral All Firms			1.169**	
			(2.15)	
Exchange All Firms				−0.267
				(−0.54)
Inverse Mills Ratio	−26.29**	−17.09**	−2.963*	−2.433
	(−2.17)	(−2.07)	(−1.71)	(−1.48)
Creditor dummy	19.10***	17.47***	0.381	0.317
	(8.71)	(10.88)	(0.98)	(0.83)
Prepackaged	15.73***	16.51***	1.441***	1.461***
	(14.77)	(18.91)	(5.63)	(5.69)
Delaware	−0.657	−0.153	−0.409*	−0.394*
	(−0.59)	(−0.18)	(−1.84)	(−1.82)
Fraud	8.317**	5.048*	0.676	0.521
	(2.12)	(1.70)	(0.96)	(0.76)
DIP indicator	−7.468**	−4.097	−0.573	−0.414
	(−2.05)	(−1.53)	(−0.92)	(−0.70)
Log of Asset	−7.713**	−4.766**	−0.867*	−0.704
	(−2.24)	(−2.06)	(−1.69)	(−1.46)
Profitability	9.997**	6.132*	2.225**	2.072*
	(2.37)	(1.85)	(1.96)	(1.80)
Filing Rate	0.0750**	0.0538**	−0.00248	−0.00324
	(2.47)	(2.24)	(−0.44)	(−0.60)
Constant	71.64*	38.64	10.85*	8.940
	(1.81)	(1.44)	(1.85)	(1.61)
N	67	66	849	849
pseudo R-sq	0.310	0.251	0.097	0.092

In Table 8 we undertake robustness checks. In Model 1 and 2 we examine whether the firms that are included in the sample are non-randomly selected and are therefore not representative of the full sample. We use Heckman (1979) two-step procedure to generate Inverse Mills ratio. In Model 3 and Model 4, we address small sample size concern. We code CSR scores (Moral Capital and Exchange Capital) as zero if a firm is missing in the *MSCI* ESG database but has other data available before the bankruptcy filing. We also address the sample selection problem by using the Inverse Mills Ratio in Model 3 and Model 4. Prepackage is a dummy variable taking the value of "1" if the firm has acceptance from creditors previous to filing the case in the court. DIP indicator is a dummy variable taking the value of "1" if the firm has secured additional financing during the period of restructuring. Creditor dummy takes the value of "1" if an official committee was appointed to represent the unsecured creditors prior to case disposition. Delaware represents a dummy variable taking the value of "1" if the case is filed in Delaware. Fraud is a dummy variable taking a value of "1" if management is suspected of committing fraud. Log of asset is the reported total asset last year before case filing. Profitability is Net income for last year ending before case filing. Filing rate captures the wave of bankruptcy over the sample period. It is calculated as the number of BRD filings in the year of filing. * statistically significant at the 10%, ** statistically significant at the 5% and *** statistically significant at the 1% level. *t*-Stats are given in parenthesis and are based on robust standard errors.

reactions after public disclosure of negative events. Our empirical work is a test of the moral capital as insurance proposition in the context of a firm under bankruptcy filing. No prior works have examined the role of CSR, specifically moral capital of a firm whilst in Chapter 11 filing. While the mitigating effect of moral capital reported in Godfrey et al. (2009) is short-term in nature, in our setting, we show the long-term effects associated with a firm's emergence from bankruptcy. Further, our setting involves multiple stakeholders – both primary and secondary while the empirical setting of Godfrey et al. (2009) only includes primary stakeholders (shareholders).

Our second contribution is to the bankruptcy literature. While several economic and financial variables have been identified in the prior literature, none have used CSR engagement. By showing the link between CSR engagement and emergence from bankruptcy, our results shows the relevance of non-financial factors that facilitate a firm's successful exit from bankruptcy proceedings. A primary insight from our paper is the finding that CSR engagement targeting primary and secondary stakeholders are both relevant and crucial factors that help explain why some firms emerge from Chapter 11 proceedings while others do not.

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