

**Corporate Social Responsibility and the Cost of Bank Debt in
Canada**

by
Brock Pehar

Submitted in Partial fulfillment of the requirements for the degree of
Master of Finance

Saint Mary's University

September 12, 2013

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Written under the direction on Dr. Najah Attig for MFIN 6692

Approved: _____
Faculty Advisor

Approved: _____
MFIN Director

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Approved: **Dr. Najah Attig**
Faculty Advisor

Approved: **Dr. Francis Boabang**
Faculty Advisor

Date: **September 12, 2013**

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Abstract

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This study examines the direct impact of corporate social responsibility (CSR) on the cost of bank debt in a strictly Canadian context. Bank loan information for large, publicly owed, Canadian firms is combined with CSR ratings to form a dataset with 64 observations covering 2004-2005. After controlling for specific firm and loan characteristics with known effects on cost of bank debt, the results show CSR scores to have no significant impact on the cost of bank loans (as measured by the spread over LIBOR). The results also suggest that the dataset was of insufficient quantity to confidently establish relationships. Data covering a larger range of years yielding many more usable observations should be used for future testing of this very important, largely unexplored relationship.

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1. Chapter 1: Introduction

Corporate Social Responsibility (hereafter CSR) has drawn continuously increasing attention in recent years. The general population has shown increasing interest in a number of environmental and social issues over the past decade. As a result, many firms now include reports on their social, ethical and environmental conduct in their annual reporting. Furthermore, marketing departments commonly display being 'green' and/or 'social' as a relevant characteristic of a product or firm. A rapidly growing body of research focused on CSR and any potentially related business characteristics has accompanied this increased attention.

Research into CSR expenditure remains controversial. Classical finance theory supports the notion that any expenditure that does not strive to maximize firm value is a deviation from managerial responsibilities. Therefore any CSR initiatives, unless they also serve to maximize firm value, are a misuse of scarce resources. This has become known as the shareholder view. The shareholder view believes governing bodies should control any negative externalities that can result from shareholder wealth maximization.

There is an alternative view known as the stakeholder view, which supports the notion that a firm has a responsibility to all its stakeholders. Examples of such stakeholders include employees, business partners, consumers, and the community as well as shareholders. Proponents of the

stakeholder view even argue that it does not contradict the shareholder view. That is, they argue that pleasing all stakeholders creates a more productive and efficient firm and may actually increase financial performance. For example: happier employees will reciprocate with more loyalty and productivity, better relationships with business partners can decrease costs, and being viewed as an 'ethical' company will be rewarded by consumers.

The major roadblock in consolidating the two views is that many of these benefits are troublesome to measure and have a delayed onset. It is difficult to confidently attribute CSR directly as the cause of increased sales, productivity or cost savings. The debate continues as to whether CSR investments are value enhancing or offer any positive return on investment.

Relationships have been established between CSR and financial performance (Scholtens, 2008), CSR and firm value (Jo & Harjoto, 2011) and between CSR and financial risk (Boutin-Dufresne & Savaria, 2004). While these are important characteristics that have an indirect effect on the cost of debt, this paper will focus specifically on the relationship between CSR and the cost of bank loans in Canada.

This relationship was explored in the paper "The cost of virtue: corporate social responsibility and the cost of debt financing" by Goss and Roberts in 2007. Goss & Roberts (2007) reported a relationship between CSR and the cost of bank debt showing significance only at low levels of CSR, resulting in higher loan

spreads for such firms. Insignificant relationships were found at medium and high levels of CSR. Goss & Roberts (2007) examined this relationship in an American context; this paper will include only Canadian firms in its sample. The results will serve two purposes: a comparison showing whether or not Canadian firms and banks place an increased or decreased premium on CSR, and an indication to Canadian firms of this premium for use in corporate financial decisions.

Equity financing can be a much more complex issue, as investors can have agency costs or multiple agendas. Investors can be easily swayed by trends, emotions, and personal agendas. The effect of CSR on the cost of equity, while it may yield meaningful results, is likely to include a large behavioral component and is well beyond the scope of this paper. Examining the cost of bank financing, however, should provide a much more clear-cut indication of the rightful effect CSR has on financing costs by “exploiting the unique role of banks as ‘quasi-insiders’ of the firm” (Goss & Roberts, 2007, p. 3). Banks have access to firm information that may not be available to other shareholders, and they have the level of expertise required to use all such information in order to establish appropriate loan terms. The particular loan term of interest here will be the loan spread over the London InterBank Offer Rate (hereafter LIBOR).

Perhaps an even more important characteristic of banks than their enhanced ability to establish appropriate loan terms is their assumed lack of a

social agenda. It can be assumed that banks will not favour CSR levels on any basis other than how they impact a firm's ability to repay their loan. It is this key assumption that will give meaning to the discovered results. If increased levels of CSR truly improve a firm's expected financial ability to meet its loan obligations then such firms should have smaller loan spreads. If classical finance theory is correct in its assertion that CSR investing is a misuse of scarce resources, such firms should have greater spreads.

CSR can be evaluated using a number of methods. The Kinder, Lydenberg and Domini & Co. (KLD) ratings are widely used for U.S. firms. For Canadian firms, the Jantzi Research Group provides ratings that are widely recognized and respected. This paper will control for other factors effecting loan spreads and attempt to determine the effect of CSR on loan spreads. Goss & Roberts (2007) are believed to be the first to examine this particular relationship, so this appears to be a first look at this issue in Canada.

2. Chapter 2: Literature Review

CSR has been linked to numerous firm characteristics and performance measures over the last two decades. Firm performance has been reported to be positively, negatively, and neutrally affected by CSR in various studies. McWilliams & Siegel (2000) reported CSR as having a neutral impact on financial performance and went on to state that model misspecification was responsible for inflated estimates of the financial impact of CSR. Such models failed to include a control variable for research and development expenditure, which has been shown to have a significant influence on firm performance (Hall, 1999).

The link between financial performance and CSR is a multidimensional issue; at first glance there appears to be a highly justified, strong correlation. Improved relationships with all stakeholders should naturally lead to stronger financial performance through several channels. Firstly, better relationships with employees should result in more driven, loyal workers. This leads to greater levels of productivity. Secondly, a better public image and higher level of customer satisfaction leads to sustainable revenue growth. However, as McWilliams & Siegel (2001) outline, CSR can be thought of as an unnecessary expenditure, not a necessary factor of production. Such an expenditure can be increased and decreased as capital is available. When approached in this

capacity, the link between financial performance and CSR should seemingly travel in the opposite direction: stronger financial performance *allows* for greater CSR expenditure.

McGuire, Sundgren & Schneeweis (1988), using long-term firm performance as measured by accounting and financial information, found that CSR has a closer relationship to past performance than to future performance. Scholtens (2008) also found evidence of the causal direction to be from financial performance to social performance. In a Canadian context, Mahoney & Roberts (2007) found no significant relationship between overall CSP and financial performance. Once again using Canadian firm data, Mahoney & Thorne (2005) did however report a link between long-term compensation of corporate executives and CSR levels, suggesting that such compensated top executives believe it to be in the best long-term interest of the firm to maintain higher levels of CSR.

Financial risk is the firm characteristic of greatest importance in this paper. More specifically, does CSR *on its own* make a firm less risky? The cost of bank debt depends solely on a firm's perceived ability to repay the debt. This ability is broken down into many factors including financial performance, default probability, and credit rating, among others. Since banks have both the expertise and the resources required to properly assess this ability, their results

can be very meaningful in both corporate finance and capital structure decisions.

Attig, El Ghouli, Guedhami & Suh (2013) reported a significant positive impact of CSR on credit ratings of a firm. They reported this positive impact using overall CSR scores as well as using certain individual components of CSR. Higher credit ratings for any firm decrease the firm's cost of debt without question. According to Attig et al. (2013), CSR expenditures can act as a signal of a firm's efficiency, reduce the likelihood of incurring unexpected costs due to irresponsible actions, and legitimately increase performance as per the stakeholder view. Any of these three results of CSR will, *certeris paribus*, increase a firm's credit rating.

Boutin-Dufresne & Savaria (2004) also discovered a significant, negative relationship between CSR and financial risk, albeit through the much different process of evaluating stock returns: "Judged by two different methodologies, socially responsible companies tend to show less diversifiable risk in their stock behavior than non-socially responsible companies." (Boutin-Dufresne & Savaria, 2004, p. 57).

The aforementioned studies, however, do not provide the direct link being pursued in this paper. CSR levels demonstrating an impact on certain characteristics (profitability, stability, credit rating) that, in turn, have an impact on the cost of bank debt will not be exposed in this paper. Such characteristics

will be controlled for in the model(s) and a potential link directly from CSR to cost of debt will be investigated. Since the impact of CSR on several risk factors will be controlled for, it is hypothesized that CSR alone will not impact loan spreads because of the controls in place and the impartial nature of banks.

3. Chapter 3: Methodology

A clear definition of the terms “CSR” and “cost of bank debt”, in the context of this paper, must be established before the model can be properly defined. Cost of bank debt will refer to the interest rate charged on a bank loan, and since interest rates vary over time, the spread over the London InterBank Offer Rate (LIBOR) is the key loan characteristic here. The spread is expressed in basis points and will be the dependent variable in the model. Information is collected from the Dealscan database, which provides all loan characteristics.

Quantifying CSR is an extremely challenging process and could not be done independently. A number of rating systems exist; and although the major rating agencies base their evaluations on in-depth research and material information, all evaluations contain some elements of subjectivity that naturally leave the ratings exposed to criticism. A database from KLD Research & Analytics Inc. is generally accepted as the industry standard for CSR ratings in the United States, however the Jantzi Canadian Social Investment Database (CSID) provides a multidimensional measure of CSR for all large, publicly held, Canadian firms. The CSID database with full CSR ratings of Canadian firms was provided for this paper, containing a 2-year sample range (2004-2005). CSR will hereafter refer to the Jantzi ratings given in the CSID.

Jantzi Research Inc. has been a leader in the field of providing objective assessments of CSR for Canadian firms for over 20 years. The Jantzi ratings are very similar to the KLD ratings of American firms in that they both provide a comprehensive set of ratings for various dimensions of CSR (Mahoney & Thorne, 2005). While it is beyond the scope of this paper to dissect CSR ratings and examine evaluation methods, this section will provide an overview of the methodology employed by Jantzi Research Inc.

Jantzi Research Inc. publishes the CSID containing comprehensive ratings of over 300 publicly traded firms and income trusts. The Jantzi research process includes a thorough examination of all available information on the social and environmental performance of each firm. Firms also receive a questionnaire regarding their practices, results of which are verified by methods such as: direct contact with key stakeholders, public filings, media and government sources, and on-line databases. Firms are given scores in six areas: employees, the environment, human rights, customers, corporate governance, and community & society. Each area contains many indicators relating to programs, performance, etc. Each indicator is scored, and weighted tallies are used to arrive at a total within each of the six broad areas. Finally, a single overall score is calculated.

Jantzi's researchers carry a high level of expertise and are independent of the companies being rated, and their criteria are mainly objective and are consistently applied to all rated companies.

Firm characteristics and performance measures have been gathered and compiled from the Compustat Database. Compustat is a database maintained by Standard & Poor; it contains fundamental financial and market data on all large publicly owed firms. A wide range of companies and individuals in the financial industry use the Compustat Database for the purposes of investment, research, and statistical analysis among many others.

Dataset construction began with the Dealscan database, which contained 105,345 observations spanning from 1982-2012. Dropping all non-Canadian companies brought it down to 2,147 observations. Focusing only on loans from 2005-2006 (in order to suit CSR ratings from 2004-2005), the dataset was further trimmed to 418 observations. The Jantzi CSID provided contained 443 observations representing Canadian companies for 2004-2005. Merger of these 2 datasets resulted in 171 observations, representing Canadian companies that appeared in both the Dealscan database and the CSID. However, of these 171 observations, loan spread information was missing from 107, this left a final dataset containing 64 usable observations containing all loan and CSR information. Firm characteristics were then gathered from Compustat and

merged with the existing dataset, and any missing firm information was individually recovered through further research of financial statements.

Univariate analysis of spread and CSR values will provide valuable insights into any necessary adjustments to the model. For example, Goss & Roberts (2007) used the spread in log form in their regression analysis due to skewness discovered through univariate analysis.

Ideally this type of information would suit a fixed effects (FE) model to control for company differences. This could be done with panel data where each observation has a specific company and year. However this is not a true panel dataset: each loan is, in effect, its own observation, and there is an insufficient span of time for a FE model. A simple OLS regression is most appropriate to begin with. A generalized method of moments (GMM) model was used by Goss & Roberts (2007) “because we do not know the form of any potential heteroskedasticity *ex ante*” (p. 16). Caution will be exercised with OLS and if data suggests GMM is necessary, it will be used. Equations will take the general form of:

$$\ln(\text{spread}) = f(\text{firm characteristics, loan characteristics, CSR})$$

There is a very mature body of research on the determinants of loan spreads; this has been a topic of many studies. There are known characteristics, both firm-specific and loan-specific, that have a documented deterministic effect

on loan spreads. These characteristics will be controlled for in an attempt to isolate the effects of CSR on spreads. CSR scores will be lagged 1-year in all regressions. Scores for the same year that a loan was granted would not have been available at the time of the loan since scores are given at the end of a time period (year) to reflect actions up to and including said time period. Firm specific information used in regressions is, similarly, the information from the most recent *completed* fiscal year.

Firm-specific controls:

- Size: Firm size has been shown to effect loan spreads, with larger firms being viewed as less risky and benefitting from lower spreads. The size control variable in the model will be in the form of $\ln(\text{total assets})$.
- Leverage: Firms pay higher spreads as they become increasingly leveraged. Leverage will be measured as long term Debt/Equity.
- Secured Status: Dummy variable showing if the loan is secured. Secured loan spreads are expected to be lower than otherwise identical, unsecured loans.
- EBIT: Earnings are a definite indicator of a firm's ability to repay its loan(s). Earnings are scaled by size (total assets) to avoid multicollinearity.

- Z-score: The Altman's Z-score is a commonly used metric for credit risk. Higher scores indicate lower default probabilities and therefore should also indicate lower spreads.
- Industry Dummies: Control for any industry effects. A series of dummy variables are created based on 2-digit SIC codes.

Loan-specific controls:

- Maturity: Although the effect of maturity on spreads is not certain, it will be controlled for.
- Loan type: A series of dummy variables indicating the type of loan (revolvers, bridge loans, term loans, and others).
- Loan Purpose: Another series of dummies indicating what the loan will be used for, as this can have an effect on the spread.
- Syndicated: Dummy variable indicating if the loan is syndicated, syndicated loans are expected to have higher spreads.
- LIBOR: 1-month U.S. dollar LIBOR at the time of the loan is used as an indicator of the economic conditions present at that time.

Regression results and univariate analysis will dictate the need for further testing, and further test models.

4. Chapter 4: Results

4.1 Univariate Analysis

CSR data were only available for this study covering 2004-2005, and as discussed, combining with the Dealscan database loans during 2005-2006 left only 64 observations. This creates difficulty in univariate analysis as a larger sample is often required before trends and patterns can present themselves. Jantzi ratings in this sample range numerically from 3.6 to 6.8.

Caution must be exercised since these scores are not continuous, meaning the magnitude of the scores should not be interpreted as specifically meaningful beyond providing an order, or relative performance. Further explained, one can interpret a score of 6.0 to be “better” than a score of 3.0 because 6.0 is larger. However, it should not be inferred that such a score is “twice as good” as 3.0. Similarly, an increase from 3.9 to 4.0 should not be seen as equivalent to an increase from 5.9 to 6.0. This issue will not restrict the regressions since it is the directional impact that is of interest in this study. Actual, numerical value is not being sought here, but rather if there exists a statistically significant impact of CSR scores on bank loan spreads.

Insert Figure 1

The distribution of Jantzi ratings is given in Figure 1. As depicted, sample scores do not follow a normal distribution, the highest concentration of scores are found in the top 10% and bottom 30% of the range. There are no outliers, so there is no need to winsorize the CSR data. The distribution of the CSR scores allows for further analysis into the lower and upper quartiles in order to investigate any significant relationships between these outer quartiles and loan spreads. Goss & Roberts (2007) reported a discovery that firms with the lowest scores did tend to pay higher spreads than the rest of the firms, however the cost of debt of higher rated firms was indistinguishable from the group. This discovery suggested that firms should have incentive to avoid very low CSR scores, but that they should be indifferent between medium and very high scores. Firms did not seem to have any incentive, from a cost of debt perspective at least, to achieve very high CSR scores. Further analysis on these quartiles will be discussed later in the paper.

Insert Table 1

Summary statistics for all variables used in the analysis are given in Table 1. Average loan spread is 197.2188 basis points and the distribution is positively skewed, which is expected because spread is highly unlikely to be below zero. As a result of this skewness, following Goss & Roberts (2007), the logarithmic

form of spread will be used as the dependent variable in the regressions that follow.

Insert Table 2

Table 2 displays summary statistics of the same variables, now showing the variables grouped by CSR ratings into the upper and lower quartiles. It should be noted that based on the sample size, these quartiles only have 16 and 15 observations respectively. As shown, the sample mean loan spread is actually higher for the group with high CSR scores. This is counterintuitive since one would hypothesize that if any difference existed at all, it would be that lower spreads would be awarded to firms with high CSR ratings. After all, higher CSR ratings are certainly seen as “better”. Perhaps this is a signal that banks are, as hypothesized, indifferent to CSR ratings on their own. Even if a significant difference in spread were identified at this stage, it would be incorrect to blindly attribute the difference to the CSR scores. The two groups also differ heavily in company size, earnings, Z-score, and leverage.

The sample CSR scores are strongly correlated with company size and earnings, which is expected since size and earnings are strongly correlated with each other. This strong correlation with CSR follows the assertion that CSR attributes are normal goods (McWilliams & Siegel, 2001). As companies grow in

size and gain greater earnings and resources, their demand for CSR attributes increases and this should result in higher CSR ratings. The Z-score characteristics are interesting in this sample. Higher Z-scores are desirable, as they indicate a lower default probability, and the upper quartile has a mean Z-score of 0.9133 while the low quartile has a mean Z-score of 3.6626. This suggests that firms with the highest CSR ratings in our sample have a greater default probability than the firms with the lowest CSR ratings. This does not suggest CSR ratings as the cause of the Z-score values, however it is counterintuitive and is opposite of the findings of Goss & Roberts (2007).

4.2 Regression Analysis

The first regression is run as the method in Chapter 3 specifies. With the dependent variable being log transformed, the coefficient of independent variables represent the percentage change in the dependent variable for each unit change in the corresponding independent variable.

Insert Table 3

Regression results are displayed in Table 3, however there is very little definitive information within the results. Industry Dummies do not appear to be serving their intended purpose, 2 of the 7 have been omitted due to collinearity and the rest show insignificant coefficients. Type and Purpose Dummies also show insignificant coefficients. Coefficients on several variables with previously demonstrated impacts on loan spreads are not statistically significant in this regression; variables such as firm size, earnings, leverage, and Z-score. This is a clear indication that this sample does not behave as expected, or it is simply not large enough.

Industry Dummies were removed from the regression in model 2 for several reasons: Their impact could be distorting the reported impact of the remaining variables in the model, they all show as insignificant or collinear, and several other variables already control for relevant firm characteristics that would otherwise be partially captured in the industry dummies (which may explain the collinearity). This brings the variable coefficients to a higher level of significance in general, however the only coefficients that are statistically significant at the 5% level remain to be market-to-book, LIBOR, and secured status. Again, useful information cannot be obtained from a model that has been manipulated.

Looking at the Variance Inflation Factor (VIF) provides great insight into multicollinearity. The variance of an estimated regression coefficient is a major

factor in determining statistical significance of said coefficient. VIF measures how much this variance is increased due to collinearity. VIF information is provided in Table 4.

Insert Table 4

VIF on the size measure (8.51) in particular is a serious problem, compounded by even higher VIFs on many of the dummy variables. In model 2, with the industry dummies removed, VIF analysis shows highly reduced inflationary results, however the remaining dummy variables along with size (5.81) remain higher than acceptable. It is generally accepted that acceptable VIFs are close to 1, even 2, 3, or 4 could be seen as acceptable, but above 5 is problematic. Interestingly, O'Brien (2007) argued against the commonly accepted rule of 10 in the paper "A Caution Regarding Rules of Thumb for Variance Inflation Factors", stating that higher values do not necessarily discredit regression results. Furthermore, O'Brien (2007) stated that making changes because of high VIFs (dropping and/or combining certain independent variables) often creates more problems than they cure.

Insert Table 5

Table 5 shows the results of regressions identical to Table 3 except instead of CSR rating, there are 2 dummy variables representing the lower and upper quartiles of the firms in terms of CSR ratings. This is done to investigate the possibility that the extreme levels of CSR scores have some effect on loan spreads even though the general CSR scores do not have a statistically significant impact across the sample. Again the results show several dummies omitted for collinearity and essentially no significant estimators. Similarly, VIF analysis still shows a strong presence of collinearity.

5. Chapter 5: Conclusions and Recommendations

Although CSR interest has taken a firm grasp on the corporate world, there remains little agreement on its direct financial effects. Education on the subject continues to expand and firms spend their scarce resources on CSR activities, and CSR reporting and advertising. This paper examined the potential direct link between CSR and the cost of bank debt. Cost of bank debt is a critical component of firm operations and capital structure; hence any known direct link to CSR will be extremely valuable.

Based on the regression analysis and the dataset available, there is no indication that CSR scores have a significant, measurable impact on the cost of bank loans. These results follow the assumption that banks, when evaluating a firm's borrowing capabilities, do not have interest in CSR levels alone. CSR has proven effects on other firm characteristics influencing financial risk, but they are controlled for in the models used in this paper. However, the data used in this study proves to be of very low quality, such that even significant results would not be able to be reported with confidence.

There are several variables in the models that represent characteristics with known, significant impacts on loan spreads (Z-score, earnings, size, leverage, loan purpose). Even these relationships could not be identified in the sample. Any small number of such characteristics displaying unexpected

results would be of interest, however when essentially all estimators are shown to be insignificant, it becomes obvious that the data is insufficient. Attempts can be made to contort the data to alleviate certain problems, but the model cannot be changed in order to show significant results. In terms of the relationships being investigated, the only possible discovery is a weakly significant indication that higher CSR values actually lead to higher loan spreads. Sample size would need to be much larger in order to be confident in this paper's results.

I believe the process is sound, as indicated by Goss & Roberts (2007), I simply believe the data available to be of a quality far too low to obtain meaningful results. My recommendation would be to obtain a higher quality dataset for a future test. Many observations from the Dealscan database contained loans with missing spread information, and CSR ratings data from Jantzi was only available for a 2-year period for this study. When these datasets were combined, the limitations of each were compounded by one another, resulting in only 64 observations and an unknown reasoning for certain dropped observations. With a larger, more complete dataset I believe this study could be greatly improved and the impact of CSR ratings on loan spreads, whether present or not, could be reported with confidence.

References

- Attig, N., El Ghouli, S., Guedhami, O., & Suh, J. (2013). Corporate social responsibility and credit ratings. *Journal of Business Ethics* , 1-16.
- Bauer, R., Derwall, J., & Otten, R. (2007). The ethical mutual fund performance debate: New evidence from Canada. *Journal of Business Ethics* , 70 (2), 111-124.
- Boutin-Dufresne, F., & Savaria, P. (2004). Corporate social responsibility and financial risk. *The Journal of Investing* , 13 (1), 57-66.
- Deng, X., Kang, J. K., & Sin Low, B. (2013). Corporate social responsibility and stakeholder value maximization: Evidence from mergers. *Journal of Financial Economics* .
- Goss, A., & Roberts, G. S. (2007). *The cost of virtue: corporate social responsibility and the cost of debt financing*. Orlando: Financial Management Association.
- Hall, B. H. (1999). *Innovation and market value*. National Bureau of Economic Research. Cambridge: Cambridge University Press.
- Jiang, G.-L. F. (2007). *The Multiple Dimensions of Corporate Social Performance: An Exploratory Study Using Canada-Based Data*. The University of Western Ontario, Richard Ivey School of Business. Ottawa: ASAC.
- Jo, H., & Harjoto, M. A. (2011). Corporate governance and firm value: The impact of corporate social responsibility. *Journal of Business Ethics* , 103 (3), 351-383.
- Mahoney, L. S., & Thorne, L. (2005). Corporate social responsibility and long-term compensation: Evidence from Canada. *Journal of Business Ethics* , 57 (3), 241-253.
- Mahoney, L., & Roberts, R. W. (2007). Corporate social performance, financial performance and institutional ownership in Canadian firms. *Accounting Forum* , 31 (3), 233-253.
- McGuire, J. B., Sundgren, A., & Schneeweis, T. (1988). Corporate social responsibility and firm financial performance. *Academy of management Journal* , 31 (4), 854-872.

McWilliams, A. &.-1. (2001). Corporate social responsibility: A theory of the firm perspective. *Academy of management review* , 26 (1), 117-127.

McWilliams, A., & Siegel, D. (2000). Corporate social responsibility and financial performance: correlation or misspecification? *Strategic management journal* , 21 (5), 603-609.

O'Brien, R. M. (2007). A caution regarding rules of thumb for variance inflation factors. *Quality & Quantity* , 41 (5), 673-690.

Peloza, J., & Shang, J. (2011). How can corporate social responsibility activities create value for stakeholders? A systematic review. *Journal of the Academy of Marketing Science* , 39 (1), 117-135.

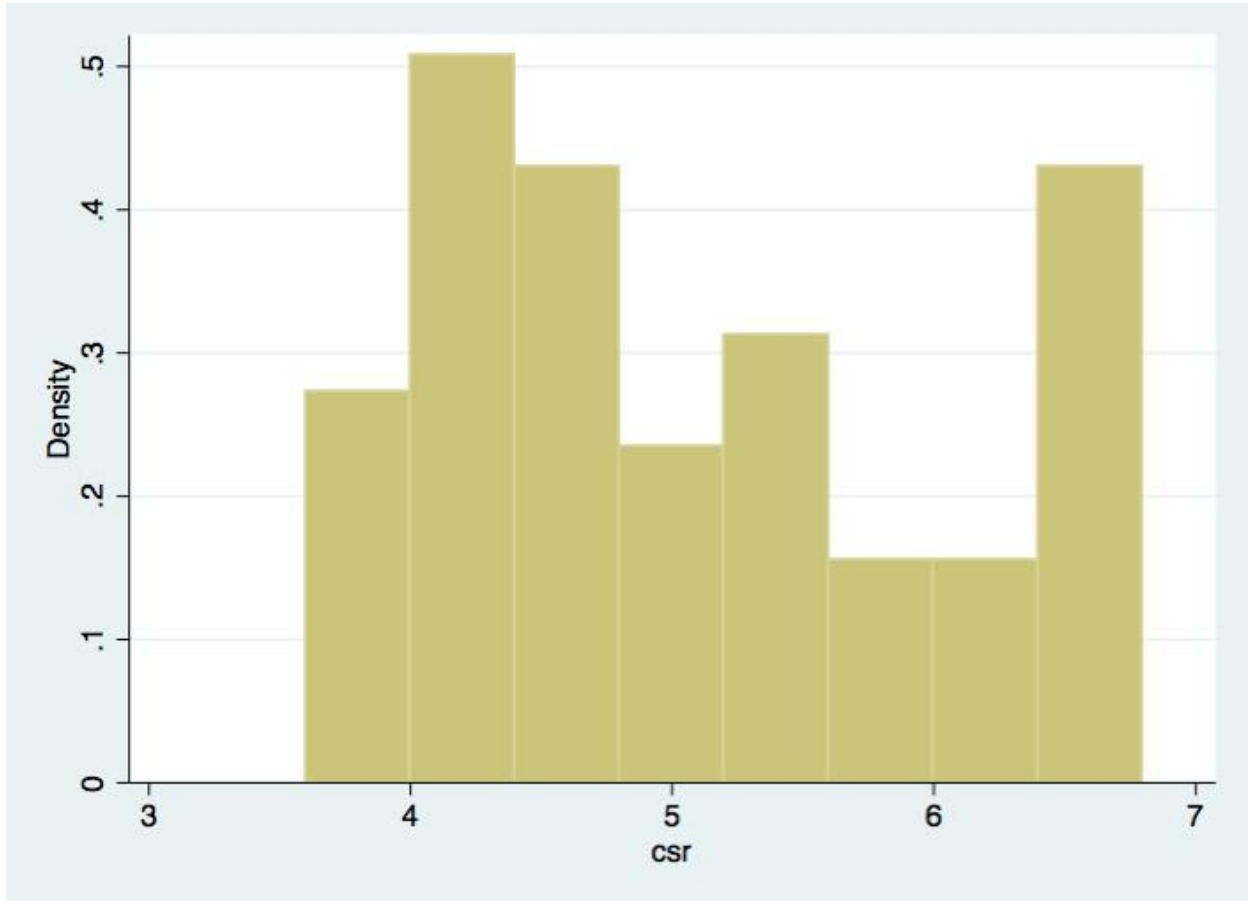
Scholtens, B. (2008). A note on the interaction between corporate social responsibility and financial performance. *Ecological economics* , 68 (1), 46-55.

Wright, P., & Ferris, S. P. (1997). Agency conflict and corporate strategy: The effect of divestment on corporate value. *Strategic management journal* , 18 (1), 77-83.

Appendix A: Variable Definitions

Variable	Definition	Source
Dependent Variable		
logspread	Natural logarithm of the initial all-in-drawn spread over LIBOR	Dealscan
Firm Related Independent Variables		
logsize	Natural logarithm of total assets	Compustat
relebit	EBIT scaled by total assets	Compustat
markettobook	Market value of equity divided by book value of equity, commonly used as a proxy for growth opportunities	Compustat
Zscore	$(\text{EBIT}/\text{total assets}) \times 3.3 + (\text{Net Sales}/\text{total assets}) \times 0.99 + (\text{market value of equity}/\text{total liabilities}) \times 0.6 + (\text{working capital}/\text{total assets}) \times 1.2 + (\text{retained earnings}/\text{total assets}) \times 1.4$	Compustat
lev	Book value of long term debt divided by market value of equity	Compustat
industrydummies	There are 7 industry dummies representing 8 categories based on 2-digit SIC codes: Mining (SIC 10-14), Manufacturing (SIC 20-39), Transportation, communications, electric and gas (SIC 40-49), Wholesale (SIC 50-51), Retail (SIC 52-59), Finance, insurance and real estate (SIC 60-67), Services (SIC 70-89), and non-classifiable as the omitted category. All data observations fit into one of these categories.	Dealscan
csr	Overall csr score from Jantzi Research Co.	CSID
lowCSR	Lower quartile of csr	CSID
highCSR	Upper quartile of csr	CSID
Loan Related Independent Variables		
maturity	Loan maturity in months	Dealscan
libor	One month US London InterBank Offer Rate at the time of loan activation	British Banker's Association
secured	Equal to 1 if the loan is secured and 0 otherwise	Dealscan
syndicated	Equal to 1 if the loan is syndicated and 0 otherwise	Dealscan
typedummies	Dummy variable series with 3 categories describing the loan type: term loans, lines of credit, and all other loans as the omitted category.	Dealscan
purposedummies	Dummy variable series with 3 categories describing loan purpose: takeovers & recapitalizations, project finance, and general corporate purposes as the omitted category.	Dealscan

Figure 1: Sample Distribution of CSR Scores



N	64
Minimum	3.6
1 st Quartile	4.3
Median	5.0
3 rd Quartile	5.8
Maximum	6.8
Mean	5.125
Standard Deviation	1.026011

Table 1: Summary Statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
spread	64	197.2188	123.599	14	465
csr	64	5.125	1.0260	3.6	6.8
maturity	64	52.4375	21.0305	12	84
libor	64	4.3757	0.8335	2.6859	5.4045
at	64	69248.72	145061.8	220.409	469521
ebit	64	1387.405	2495.453	-91.074	8814
markettobook	64	2.7002	2.0518	0.5223	12.1039
lev	64	0.3369	0.4038	0	1.5446
Zscore	64	3.3326	4.0654	0.2018	22.1657
logsize	64	8.5587	2.3887	5.3955	13.0595
relebit	64	0.0553	0.0713	-0.1030	0.2098
logspread	64	4.9982	0.9004	2.6391	6.1420
Indicator Variable	Obs	Obs = 0	Obs = 1		
secured	64	35	29		
syndicated	64	12	52		

Table 2: Summary Statistics for Upper and Lower CSR Quartiles

Variable	CSR Quartile	Mean	Std. Dev.	Min	Max
spread	Low	225.6667	85.0602	100	450
	High	315.25	135.0647	65	465
csr	Low	3.96	0.2223	3.6	4.2
	High	6.5938	0.2792	5.9	6.8
maturity	Low	48.6	23.9010	12	84
	High	36.75	20.7702	12	72
libor	Low	4.8052	0.6838	3.5107	5.3479
	High	4.1411	0.8760	2.6859	5.3198
at	Low	2442.513	5045.275	220.409	14845
	High	260291.6	190698	638.022	469521
ebit	Low	76.2358	139.3123	-91.074	391
	High	4608.229	3291.534	4.706	8814
markettobook	Low	2.8115	1.5533	1.0196	5.0235
	High	2.2446	0.6383	0.5223	2.7994
lev	Low	0.2967	0.5204	0.0520	1.5446
	High	0.1817	0.0945	0.0655	0.3188
Zscore	Low	3.6626	1.8634	1.5782	6.1080
	High	0.9133	1.0560	0.2018	2.9791
logsize	Low	6.5610	1.3690	5.3955	9.6054
	High	11.0340	2.7832	6.4584	13.0595
relebit	Low	0.0678	0.1215	-0.1030	0.2098
	High	0.0286	0.0232	0.0012	0.0888
logspread	Low	5.3568	0.3658	4.6052	6.1092
	High	5.6323	0.5624	4.1744	6.1420
Indicator Variable		Obs = 0	Obs = 1		
secured	Low	4	11		
	High	12	4		
syndicated	Low	0	15		
	High	11	5		

Note: Low quartile has 15 observations. High quartile has 16 observations.

Table 3: Regression of Spread against CSR

	Model 1	Model 2
	logspread	logspread
csr	0.330*	0.258
	(2.23)	(1.94)
logsize	-0.130	-0.113
	(-1.47)	(-1.48)
relebit	-2.252	-2.356
	(-1.35)	(-1.60)
markettobook	0.0280	0.0982*
	(0.45)	(2.04)
Zscore	-0.0131	0.00496
	(-0.40)	(0.17)
lev	-0.183	0.186
	(-0.59)	(0.68)
maturity	-0.00703	-0.00666
	(-0.96)	(-1.02)
libor	0.241*	0.341**
	(2.09)	(2.97)
syndicated	0.145	-0.615
	(0.24)	(-1.23)
secured	0.614*	0.530*
	(2.68)	(2.32)
typedummy1	0.155	-0.142
	(0.30)	(-0.33)
typedummy2	-0.541	-0.828*
	(-1.19)	(-2.29)
purposedummy1	-0.0318	-0.0844
	(-0.06)	(-0.20)
purposedummy2	-0.542	-0.379
	(-0.83)	(-0.57)

industrydummy1	0.220 (0.34)	
industrydummy2	-0.0233 (-0.05)	
industrydummy3	-0.367 (-0.67)	
industrydummy4	0 (.)	
industrydummy5	0 (.)	
industrydummy6	0.911 (1.40)	
industrydummy7	-0.266 (-0.43)	
_cons	3.482* (2.29)	3.964*** (3.54)
N	64	64

t statistics in parentheses

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table 4: Variance Inflation Factors

	Model 1	Model 2	Model 3	Model 4
	VIF	VIF	VIF	VIF
csr	4.42	3.24		
logsize	8.51	5.81	8.46	5.55
relebit	2.72	1.92	3.27	1.91
markettobook	3.13	1.71	4.32	1.74
Zscore	3.32	2.47	4.71	2.87
lev	2.99	2.14	3.76	2.26
maturity	4.53	3.25	5.08	3.67
libor	1.77	1.60	1.83	1.67
syndicated	10.77	6.78	9.84	7.34
secured	2.55	2.29	3.51	2.30
typedummy1	12.14	7.52	12.98	7.63
typedummy2	9.91	5.62	9.86	5.71
purposedummy1	5.77	3.79	6.23	3.83
purposedummy2	1.27	1.20	1.43	1.21
industrydummy1	9.70		11.01	
industrydummy2	10.55		10.42	
industrydummy3	5.01		5.16	
industrydummy4				
industrydummy5				
industrydummy6	15.52		17.52	
industrydummy7	4.42		4.84	
lowCSR			4.42	2.53
highCSR			4.53	3.24
Mean VIF	6.26	3.52	6.66	3.57

Table 5: Regression of Spread against CSR Quartiles

	Model 3	Model 4
	logspread	logspread
lowCSR	0.0111 (0.03)	0.167 (0.61)
highCSR	0.512 (1.40)	0.814* (2.66)
logsize	-0.107 (-1.17)	-0.0637 (-0.87)
relebit	-1.911 (-1.00)	-2.315 (-1.61)
markettobook	0.0619 (0.81)	0.105* (2.19)
Zscore	0.0173 (0.43)	0.0290 (0.94)
lev	0.000248 (0.00)	0.321 (1.16)
maturity	-0.00437 (-0.54)	-0.00405 (-0.60)
libor	0.233 (1.92)	0.297* (2.59)
syndicated	-0.155 (-0.26)	-0.364 (-0.71)
secured	0.584* (2.08)	0.470* (2.09)
typedummy1	-0.0207 (-0.04)	-0.197 (-0.46)

typedummy2	-0.693 (-1.46)	-0.777* (-2.18)
purposedummy1	-0.298 (-0.56)	-0.108 (-0.26)
purposedummy2	-0.496 (-0.69)	-0.341 (-0.52)
industrydummy1	-0.270 (-0.38)	
industrydummy2	-0.276 (-0.56)	
industrydummy3	-0.361 (-0.62)	
industrydummy4	0 (.)	
industrydummy5	0 (.)	
industrydummy6	0.467 (0.65)	
industrydummy7	-0.455 (-0.67)	
_cons	5.180*** (4.14)	4.352*** (4.31)
N	64	64

t statistics in parentheses

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$