

Corporate Social Responsibility and Earnings Management in U.S.

Banks

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Abstract

Business decision making depends on financial reporting quality. In identifying the drivers of financial reporting quality, proxied by earnings management (EM), prior literature has drawn attention to the association between corporate EM practices and commitment to corporate social responsibility (CSR). Empirical evidence, however, provides inconclusive results regarding the direction of this association. Using simultaneous equations, we examine the bi-directional CSR-EM relationship in U.S. commercial banks. We demonstrate that, although banks that engage in EM practices are also actively involved in CSR, the reverse relationship is not significant. We provide implications for investors, analysts, business participants and regulators.

Keywords: Ethics, corporate social responsibility, earnings management, banking institutions.

1. Introduction

A few years ago, Lehman Brothers and Bear, Stearns & Co. Inc. were characterized as the most “prestigious”, “respected” and “durable” banks on Wall Street (Norton, 2011, p. 440, 448). They were also considered to be among America’s most admired investment banks since they occupied the top two positions within this industry sector in Fortune magazine’s 2007 Most Admired survey (Fortune, 2007)¹. A few months later, both banks were on the verge of collapse having been accused of poor-quality financial reporting which misled users of their financial information regarding their financial health (Jones, 2011a). These two episodes raise serious research questions about whether CSR and the quality of financial reporting are somehow associated and whether this association facilitates the decision-making processes of business organizations.

While previous studies have substantiated that CSR is associated with the quality of financial reporting, as proxied by the intensity of earnings management (EM) practices² (see, e.g. Chih, Shen, and Kang, 2008; Prior, Surroca, and Tribo, 2008), empirical findings remain inconclusive with regard to whether commitment to CSR has a positive or negative impact on the quality of financial reporting (see, e.g. Chih et al., 2008) and vice versa. Given the diversity of findings and the importance of this relationship for academics and market participants, more research is needed (Kim, Park, and Wier, 2012).

In this vein, we explore the bi-directional CSR-EM relationship by focusing on the U.S. commercial banking industry. Banks constitute pivotal and indispensable institutions for the

¹ A number of studies have, however, underscored that the Fortune magazine’s Most Admired survey and other CSR ranking lists, such as the Newsweek environmental reputation list, may suffer from a financial halo effect which posits that broader CSR perceptions are possibly influenced by corporate financial performance (Brown and Perry, 1994; Fryxell and Wang, 1994; Guidry and Patten, 2010; Rozenzweig, 2009).

² Healy and Wahlen (1999, p. 368) define earnings management (EM) as occurring “when managers use judgment in financial reporting and in structuring transactions to alter financial reports either to mislead some stakeholders about the underlying economic performance of the company or to influence contractual outcomes that depend on reported accounting numbers.”

operation of businesses and the broader economy as a whole (Scholtens, 2006; 2009). The intermediating, financing and pricing activities of banks play a fundamental role in the allocation of capital and in what is broadly perceived as development and prosperity (Levine, 2004). Most banks appear to be committed to CSR activities, are included in the Dow Jones Sustainability Index (DJSI)³ and participate in groups that have established strict principles to ensure their involvement in socially-responsible investment activities (such as the Equator Principles group⁴). Interestingly though, a considerable number of them have been sanctioned for being involved in socially-irresponsible practices (Heal, 2008). Some high-profile banks have been publicly denounced for gender discrimination, insider trading, fake bids, rigged auctions, money laundering, illegal use of confidential information, conflicts of interest and for financing companies involved in “sinful” activities (ibid.). Moreover, in the financial reporting realm, banks have been more prone to EM practices than non-financial organizations (Greenawalt and Sinkey, 1988). Their diversified financial operations and products, such as derivative financial instruments (Heilpern, Haslam, and Andersson, 2009; Lewis, 2009), are characterized by great opacity and information asymmetry (Furfine, 2001; Levine, 2004; Mulbert, 2009), which essentially complicates their financial reporting processes (Hatherly and Kretzschmar, 2011) and makes EM practices less discernible to vigilant stakeholders and analysts (Morgan, 2002).

Against this background, we employ a sample of 116 listed commercial banks in the U.S. during a five-year period (2003-2007) to examine whether commitment to CSR activities has any relationship to the quality of financial reporting. We estimate a simultaneous equations system

³ Membership of the DJSI is acclaimed as an indication of leadership in terms of corporate sustainability. The DJSI uses the “best-in-class” approach by selecting the top 30 percent of companies in a specific industry based on sustainability criteria.

⁴ Launched in 2003, the Equator Principles constitute a credit risk management framework for determining, assessing and managing environmental and social risk in project finance transactions (<http://www.equator-principles.com/index.php/about>; accessed on November 16, 2012).

by employing a two-stage least squares (2SLS) regression method to control for any endogeneity problems. We measure a bank's CSR commitment by externally-determined ratings provided by the Kinder, Lydenberg, Domini (KLD) database which has been extensively used in CSR research (see, e.g. Ghoul, Guedhami, Kwok, and Mishra, 2011). By using KLD ratings we avoid any possible self-imposed bias in defining and measuring a bank's CSR commitment. Following prior research, we measure EM by using both loan loss provisions (LLPs) and realized securities gains and losses (RSGLs) as a proxy for capturing bank managers' discretionary decisions to manipulate earnings. We choose these measures over the alternative, the accruals choices approach, since it is apparently more difficult to determine discretionary choices if the latter is used (Beatty, Keand, and Petroni, 2002).

Our findings suggest that banks engaged in EM practices also tend to be deeply involved in CSR activities. Moreover, we show that the reverse relationship is not significant, i.e. that the degree of a bank's commitment to CSR is not associated with the quality of financial reporting. We demonstrate that, in the case of the U.S. banking sector, a one-directional association emerges, as we find that EM is a significant determinant of CSR. In light of these findings, we contribute to the extant literature by providing insights into the workings of an indispensable component of the operation of the U.S. economy – the commercial banking sector – which is characterized by a distinctive tendency to engage in EM practices and by a high level of participation in CSR. By deciphering the intertwining nature of EM and CSR in the case of the banking industry, we fill an important gap in the literature and contribute to the framework for decoding aspects of complex decision-making processes.

Our work is also distinct in that, while previous studies use cross-industry and cross-country datasets (e.g. Chih et al., 2008 studied 46 countries, and Prior et al., 2008 studied 26

countries), our study focuses on the (highly influential at an international level) U.S. banking sector. In this way, we aim to reduce the interference of any potential “noise” due to diverse environments and the operationalization of both CSR and EM proxies. Additionally, whilst previous studies have examined either the impact of EM on CSR (Prior et al., 2008) or the impact of CSR on EM (Chih et al., 2008), we provide a more comprehensive understanding of the CSR-EM relationship by bringing to the fore the element of reverse causality.

Our findings have important implications for shareholders, investors and analysts who may consider CSR as an expression of “ethical” investing and a possible reflection of the quality of financial reporting. These groups should be very cautious in relying on CSR information for a banking industry analysis, since CSR is found to be driven by EM and, at the same time, banks’ CSR engagement is found to have no significant impact on EM. Additionally, through EM practices, managers may succeed in achieving both optimal levels of profitability and a high CSR record. In this manner, they may improve their personal reputation capital which enables them to claim increased benefits and rewards, better contracts, and board interlocks – often to the detriment of their organization’s interests. Lastly, regulators should take into account the positive impact of EM on CSR and should consider the reformulation of existing CSR incentive plans, connecting them to frameworks for bank manager benefits and rewards.

The rest of the paper is organized as follows: We review the relevant literature and explore the relationship between EM and CSR in the section captioned “Understanding the theoretical underpinnings of the EM-CSR relationship”. In the next section, “Research design”, we describe the sample selection procedure and our research design. In the “Empirical findings” section, we report the empirical findings and detail our robustness checks. Finally, in the last section, we present the conclusions drawn from our analysis.

2. Theoretical underpinnings of the EM-CSR relationship

This section reviews the theoretical frameworks that can be drawn upon to understand the interdependencies between EM and CSR. Divergent yet valuable insights into aspects of this complex relationship are provided by various perspectives including legitimacy, social norm, stakeholder and signaling theories. For instance, according to the legitimacy approach, EM has a positive impact on CSR. Based on social norm theory, EM is negatively associated with CSR and vice versa. According to the stakeholder perspective, CSR has a positive impact on EM and, finally, in light of the signaling framework, CSR is seen as dissociated from EM. These perspectives are analyzed in the following paragraphs.

The legitimacy approach brings to the fore the concept of organizational legitimacy, which is understood as a generalized perception that the actions of an entity should be desirable within the prevailing system of norms, values, beliefs and definitions (Suchman, 1995, p. 574). Entities enjoy legitimacy insofar as they demonstrate that their activities are congruent with broad societal acceptations (Castello and Lozano, 2011; Dawkins and Fraas, 2011; Patten, 2002; Woodward, Edwards, and Birkin, 1996). Organizational legitimacy can effectively be managed through management strategies (Reverte, 2009). In fact, the successful operation of economic entities is, to a significant extent, dependent on managers' ability to respond to various legitimation threats and challenges (Suchman, 1995).

Engagement in CSR activities, which represent a well-established system of socially-endorsed behavior (Jahdi and Acikdilli, 2009; Jones, 2011b; Vanhamme and Grobben, 2009), constitute effective tactics deployed by managers to confer legitimacy upon their organizations (Hahn and Kuhnen, 2013; Mahjoub and Khamoussi, 2013; Pellegrino and Lodhia, 2012). Firms use CSR practices to manage or manipulate the informational needs of the various powerful

stakeholder groups in society (such as employees, stockholders, nongovernmental agencies and the general public) so as to gain their support, which is required for survival (Gray, Kouhy, and Lavers, 1995).

Organizational legitimacy is, however, undermined when managers deviate from accepted financial reporting practices in pursuit of their own interests (Jones, 2011a). Previous research draws attention to managers' efforts to demonstrate improved measurements of profitability through EM practices, in order to secure their personal economic incentives (Healy and Wahlen, 1999; Jones, 2011a; Rahmawati and Dianita, 2011; Walker, 2013). Scholtens and Kang (2013), for instance, argue that managers pursue their own interests by reporting profits in financial statements that do not exhibit an accurate picture of the true economic situation of the firm. In the same vein, Sun, Salama, Hussainey, and Habbash (2010) argue that some managers are susceptible to taking discretionary actions regarding reported income in order to maximize their own benefit. Hence, EM activities are conceptualized as opportunistic practices through which managers inflate earnings to meet budget goals in order to increase their own compensation (Hong and Andersen, 2011). Interestingly, managers are also motivated to present decreased profits, for instance through deferring income or presenting "big bath" restructuring charges, when it is not possible to meet the earnings target for a particular year (Guidry, Leone, and Rock, 1999) or when caps on bonus awards have been established (Holthausen, Larcker, and Sloan, 1995).

EM is broadly interpreted as a latent threat and an undesired practice, which could potentially result in devastating effects in the long-run if relevant suspicions, signaled and inflamed by various sources and events, go public (Dechow and Skinner, 2000). The dissemination of relevant information often triggers extensive scrutiny by stakeholders, the

media, academics and politicians⁵, which paves the way for litigation proceedings against deviant firms (Dechow, Ge, and Schrand, 2010) and generates negative press coverage (Chen, Patten, and Roberts, 2008; Dedoulis, 2006; Moerman and Van Der Laan, 2005).

Previous research demonstrates that managers who act in pursuit of private benefits by distorting earnings information are more motivated to engage in CSR activities to protect their positions (Prior et al., 2008). In a similar vein, Barnea and Rubin (2010) maintain that corporate insiders often seek to over-invest in CSR in pursuit of personal benefits. Thus, legitimacy theory sheds light upon managerial behaviors and motives by suggesting that bank managers who are energetically involved in EM activities, with a view to demonstrate improved representations of their organization's profitability, pre-emptively resort to CSR activities (Hahn and Kuhnen, 2013; Mahjoub and Khamoussi, 2013; Pellegrino and Lodhia, 2012) to divert attention from questionable financial reporting processes.

Insights into the CSR-EM relationship are also provided by social norm theory (Akerlof, 1980; Romer, 1984). This perspective draws attention to how endorsed patterns of behavior affect economic attitudes. Economic behavior is dependent on the beliefs of the community (Romer, 1984), which constitute the main motivational mechanisms for market participants (Hong and Kacperczyk, 2009; Kim and Venkatachalam, 2011). Accordingly, CSR is conceptualized as the prevailing code of endorsed corporate attitudes (Chen et al., 2008; Moerman and Van Der Laan, 2005) which can be so internalized by business participants that conformity is seen as a moral or ethical obligation that may override the profit motive (Suder, 2005).

⁵ These groups may not be directly affected but are nevertheless able to advance arguments that could weaken the firm's social legitimacy.

Economic attitudes adhering to accepted codes of corporate behavior are also characterized by a significant reduction in the acceptance of questionable financial reporting practices (Leventis, Hasan, and Dedoulis, 2013). Hence, with regard to managers' motives and purposes, social norm theory suggests that CSR and EM are antithetical practices that are negatively associated, i.e. the more a bank is engaged in CSR practices, the less it will be involved in questionable accounting practices. The conceptualization provided by social norm theory assists us in understanding the managerial purposes and behaviors underlying the reverse relationship. In this sense, bank managers actively involved in EM practices have not internalized the endorsed norms associated with corporate social responsibility, and, therefore, they neglect CSR or develop indifferent attitudes towards such practices.

The stakeholder framework also sheds light on the CSR-EM connection. Stakeholder theory is concerned with how an organization manages its stakeholders (i.e. all groups or parties who are influenced by and/or who influence the organization) (Freeman, 1984; Mitchell, Agle, and Wood, 1997). Managers make decisions taking into account the interests of all the firm's stakeholders (Jensen, 2010) and identify the priorities of the stakeholders and the information that should be disclosed to each one (Gray, Dey, Owen, Evans, and Zadek, 1997). Within the context of stakeholder theory, CSR practices are seen as part of the "dialogue between the company and its stakeholders" and a very "successful means of negotiating these relationships" (Gray et al., 1995, p. 53).

However, diverse and often competing stakeholder interests do create tensions which are inevitably reflected in corporate financial reporting (Bowen, Johnson, Shevlin, and Shores, 1992; Freeman, Harrison, Wicks, Parmar, and De Colle, 2010). Operating within a context of diverse stakeholder pressures, managers are also incentivized to employ questionable accounting

methods to influence stakeholder perceptions regarding firm performance (Bowen et al., 1992). Alternatively, when managers attempt to serve multiple stakeholder objectives, the information asymmetry is high and, therefore, stakeholders do not have sufficient resources, incentives or access to information to monitor managers' actions (Richardson, 2000). In turn, this information asymmetry gives rise to the practice of EM (Jensen, 2010). Hence, stakeholder theory provides insights into managerial purposes and behaviors by suggesting that bank managers who engage in CSR activities to negotiate diverse stakeholder interests are also involved in EM practices.

Finally, an alternative view of the CSR-EM relationship is provided by a synthesis of elements of legitimacy and signaling theories (Connelly, Certo, Ireland, and Reutzel, 2011). One of the ways through which organizational legitimacy could be attained is by signaling firms' unobserved qualities to third parties. Due to imperfect information, market participants (receivers) are not always aware of crucial internal information (signals) about corporate practices, and, therefore, the former's decision-making ability is essentially inhibited. Thus, managers (signalers) are incentivized to communicate signals which relate to adherence to CSR norms, in order to confer legitimacy upon their organization.

According to this perspective, certain banks actively invest in CSR to project their superior type (Clarkson, Li, Richardson, and Vasvari, 2008) in terms of social responsiveness criteria. By pointing out their distinctive CSR accomplishments, these banks achieve an advantageous position which is difficult for the rest of the industry to imitate. Hence, by bringing to the fore the signaling of unobserved CSR qualities as a central managerial motive, this framework suggests that a bank's engagement in CSR activities is unrelated to the advancement or degradation of the organization's financial reporting quality and, therefore, the intensity of CSR engagement has no impact on involvement in EM practices.

3. Research design

3.1 Data collection procedure

Our sample consists of 116 commercial banks listed in the U.S. during the five-year period 2003-2007.⁶ Following prior studies (e.g., Anandarajan, Hasan, and McCarthy, 2007; Leventis, Dimitropoulos, and Anandarajan, 2011), we exclude development banks, cooperative banks, import-export banks, investment banks and commercial banks with incomplete data from the sampling frame. Our sample comprises 580 firm-year observations.

We collect accounting data for each sample bank from the Datastream database. We also obtain data on each bank's CSR activities from an annual statistical database of companies' environmental, social and governance performance, rated by Kinder, Lydenberg, Domini (KLD) Research & Analytics, Inc.⁷

3.2 Measuring earnings management

Prior research has measured EM in several ways (see Dechow et al., 2010, for details). In this study, however, we measure EM using both the LLPs and RSGLs recorded by the banks in our sample for several reasons. First, the U.S. GAAP⁸ for accounting for both LLPs and RSGLs during the financial crisis give banks considerable discretion to manage their earnings. Second, prior research suggests that both LLPs and RSGLs are used by commercial banks to manage

⁶ We collect data up until 2007 for three reasons. First, the KLD database only has rich data on ratings of corporate social responsibility for the period 2003-2007. Second, the KLD database has few banks after 2007 so to include observations for the years subsequent to 2007 would drastically reduce the sample size. Third, to include observations for the years subsequent to 2007 may contaminate our results because of potential effects from the financial crisis which started in the U.S. in December 2007 (see Cornett, McNutt, and Tehranian, 2009, p. 413).

⁷ KLD Research & Analysis, Inc. was taken over by the RiskMetrics Group (RMG) in 2010.

⁸ For example, during the financial crisis, accounting for LLPs under U.S. GAAP was based on an incurred loss model (Barth and Landsman, 2010), whereby a bank provides for loan loss *only* if there is objective evidence to suggest that a loan has been impaired. As a consequence, a bank would not necessarily provide for loan loss based on external factors such as the bursting of the real estate bubble. Though such an event suggests that many homeowners might default on their loans (indicating a loss in the value of the loans), a bank would still not make any loan loss provisioning.

earnings (Anandarajan et al., 2007; Beatty et al., 2002; Cornett et al., 2009). Third, they are the most commonly used means of estimating EM in banking-specific studies (Kanagaretnam, Krishnan, and Lobo, 2010; Leventis et al., 2011).

According to Cornett et al. (2009), LLPs are the main tool used by banks to manage their earnings. LLPs are an expense item reported on the income statement reflecting bank managers' current period assessment of the level of future loan losses. As managers increase LLPs, the net income decreases and vice versa. LLPs capture expected future losses that will occur if a borrower does not repay the bank in accordance with a loan contract. Regulators of the banking industry view accumulated LLPs, the loan loss allowance (LLA) account on the balance sheet, as a type of capital that can be used to absorb losses during bad times. If the LLA balance of a bank exceeds its expected loan losses, the bank can absorb more unexpected losses without failing and imposing losses on the U.S. Federal Deposit Insurance Corporation. Conversely, if the LLA of a bank is less than expected losses, the bank's equity capital will be reduced if and when the expected loan losses materialize. This implies that the bank's capital ratio can overstate its ability to absorb unexpected losses. According to Cornett et al. (2009), LLPs consist of two components: the first component is a non-discretionary that brings LLA to an acceptable level; the second component is discretionary in nature and it is closely regulated (*ibid.*).

A realized gain or loss on available-for-sale securities (RSGLs) is the difference between the most recent mark-to-market price and the proceeds from the sale or redemption of the security. A gain occurs when the proceeds from the security sold are greater than the most recent mark-to-market price. In contrast, a loss occurs when the proceeds are less than the most recent mark-to-market price. U.S. GAAP require the recognition of certain assets and liabilities, particularly financial instruments, at fair value, with some changes in fair values recognized in

income. The fair values are estimates made by management, which affords managers the opportunity to manipulate these values to meet their own objectives (Barth and Landsman, 2010).⁹ In addition, RSGL is an outcome of a managerial discretionary decision to sell an investment security to increase or decrease earnings, which cannot be subsequently challenged by auditors, regulators, or shareholders (Cornett et al., 2009). Because RSGL is an unregulated and unaudited discretionary management action, it serves as another avenue for management to smooth or manage earnings (ibid., p. 414).

In measuring EM, we follow both Beatty et al. (2002) and Cornett et al. (2009) by estimating the discretionary LLP. Specifically, we estimate fixed-effects ordinary least-squares (OLS) regression and remove any influential observation by employing Cook's (1977) distance criterion. Thus, we estimate the following model¹⁰:

$$LLP/TL_{it} = a_t + b_1SIZE_{it} + b_2NPL_{it} + b_3LLR_{it} + b_4REAL_{it} + b_5COM_{it} + b_6CON_{it} + \varepsilon_{it} \quad (1)$$

where:

LLP/TL	=	Loan loss provisions deflated by total loans,
SIZE	=	Natural logarithm of total assets,
NPL	=	Ratio of non-performing loans to total loans,
LLR	=	Ratio of loan loss reserves to total loans,
REAL	=	Ratio of real-estate loans to total loans,
COM	=	Ratio of commercial and industrial loans to total loans, and
CON	=	Ratio of consumer and installment loans to total loans.

⁹ Banks use available-for-sale investment securities to make net income less volatile or to affect regulatory capital through the timing of the realization of fair value gains or losses. This is more often true for the common stock component of those securities classified as available-for-sale securities, and not so often for the held-to-maturity component.

¹⁰ Our categorization of the loans differs from Beatty et al. (2002) and Cornett et al. (2009) since these studies employ data derived from the Chicago Federal Reserve Bank and Sheshenoff databases. We rely on Datastream where loans are categorized into real estate, commercial and industrial, and consumer and instalment loans.

According to Cornett et al. (2009), the error term of Equation (1), whose estimates are reported in Appendix A, is the discretionary component of LLP, DLLP. Since our measure of EM (defined below) is standardized by total assets, we transform the error term and define DLLP as:

$$DLLP_{it} = (\varepsilon_{it} * LOANS_{it}) / ASSETS_{it} \quad (2)$$

where:

LOANS = Total loans, and
ASSETS = Total assets

To determine discretionary RSGL (DRSGL), we again follow both Beatty et al. (2002) and Cornett et al. (2009). Thus, we run a fixed-effects OLS regression and remove influential observations by employing Cook's (1977) distance criterion in the model below:

$$RSGL_{it} = a_t + b_1 SIZE_{it} + b_2 URSGL_{it} + \varepsilon_{it} \quad (3)$$

where:

RSGL = Realized security gains and losses deflated by total assets,
SIZE = Natural logarithm of total assets, and
URSGL = Unrealized security gains and losses deflated by total assets.

The regression estimates of Equation 3 are also reported in Appendix A. The discretionary part of RSGL (DRSGL) is the error term of Equation (3). Finally, again following both Beatty et al. (2002) and Cornett et al. (2009), we define EM in such a manner that higher (lower) levels of EM increase (decrease) earnings. Consequently, higher levels of LLPs decrease earnings, whereas higher levels of RSGLs increase earnings. In other words, the residuals of Equations (1) and (3) capture the relevant discretionary decisions with regard to possible over-estimations of earnings through: i) underestimation of LLPs (Beatty et al., 2002, p. 553); or ii)

overestimation of security gains and/or underestimation of security losses (ibid.). In this manner, the residuals of these equations constitute metrics of what is referred to by prior literature on non-financial firms as “abnormal accruals” (ibid.). Accordingly, we define EM for each sample bank as the difference between its discretionary RSGLs and discretionary LLPs (Cornett et al., 2009). Thus:

$$EM_{it} = DRSGL_{it} - DLLP_{it} \quad (4)$$

3.3 *Measuring corporate social responsibility*

We use the externally-determined ratings for CSR activities provided by KLD Research & Analytics, Inc. The KLD ratings for CSR-related items are derived from various sources such as government agencies, nongovernmental organizations, global media publications, annual reports, regulatory filings, proxy statements and company disclosures. As in prior studies (see, e.g., Benson and Davidson, 2010; Berman, Wicks, Kotha, and Jones, 1999; Ghoul et al., 2011; Hillman and Keim, 2001), we use the KLD ratings to avoid any self-imposed bias regarding the definition and measurement of CSR.

To construct an overall measure of a bank’s commitment to CSR, we use the KLD ratings for six of the seven major categories of qualitative issue areas, namely: community, diversity, employee, environment, human rights, and product (service) quality. We consider these qualitative issue areas to be more relevant to banks.¹¹ For each category, KLD assigns a binary (0/1) rating to a set of concerns and strengths (see Appendix B for details). Thus, for each category, KLD assigns a rating of “1” indicating either a strength or a cause for concern for each

¹¹ As in prior studies (e.g., Benson and Davidson, 2010; Ghoul et al., 2011), we exclude KLD’s category of corporate governance since this aspect of banks is highly regulated, especially following the passage of the Sarbanes-Oxley Act of 2002 and, as such, there might not be any systematic difference among the sample banks.

organization for each category. On the other hand, if it assigns a rating of “0”, this indicates that an organization does not meet the required criteria to merit either a strength or a concern. Following Garcia-Castro, Arino, and Canela (2010) and Hillman and Keim (2001), we compute a score for each bank by totaling its positive ratings for strengths and negative ratings for concerns in a given year. We then add together the scores for each bank in each category to obtain an overall CSR score. We interpret a higher CSR score as an indication of a bank’s greater commitment to CSR.

3.4 Empirical model

To test the relationship between CSR and EM, we estimate a linear simultaneous equations system of two cross-sectional models since prior studies (Labelle, Gargouri, and Francoeur, 2010; Prior et al., 2008) suggest that CSR and EM might be endogenously determined. Hence, to put both EM and the other determinants of CSR on the right-hand side of an equation having CSR as its dependent variable would lead to biased and inconsistent OLS estimates (Gujarati, 1995; Koutsoyiannis, 1977). Indeed, recent CSR studies emphasize the importance of controlling for endogeneity problems (Garcia-Castro et al., 2010; Hillman and Keim, 2001). Gujarati (1995) and Koutsoyiannis (1977) recommend addressing a possible endogeneity problem by estimating a 2SLS regression and this method has been used in several studies (see, e.g., Owusu-Ansah, Leventis, and Caramanis, 2010).

In the first stage, the endogenous variable EM is regressed against exogenous variables, whose selection is dictated by prior studies. Thus, we include in Equation (5): corporate social responsibility (CSR), profitability (EBIT) and growth opportunities (MB) (Labelle et al., 2010); bank size (SIZE), leverage (LEV) and capital risk (CAP) (Cornett et al., 2009); audit firm (AUD)

(Gul, Sun, and Tsui, 2003); auditor change (AUDC) (DeFond and Subramanyam, 1996); and credit risk (LCO) and loss (LOSS) (Kanagaretnam et al., 2010). Thus, we specify the functional form of the first-stage regression as:

$$EM_{ij} = \alpha_0 + \alpha_1 CSR_{ij} + \alpha_2 EBIT_{ij} + \alpha_3 SIZE_{ij} + \alpha_4 AUD_{ij} + \alpha_5 LEV_{ij} + \alpha_6 MB_{ij} + \alpha_7 AUDC_{ij} + \alpha_8 CAP_{ij} + \alpha_9 LCO_{ij} + \alpha_{10} LOSS_{ij} + \sum_{j=11}^{15} \alpha_j YEARS_{ij} + u_{ij} \quad (5)$$

where:

- EM = Earnings management measure,
- CSR = Corporate social responsibility measure,
- EBIT = Earnings before extraordinary items and taxes deflated by lagged total assets,
- SIZE = Natural logarithm of total assets,
- AUD = Dummy coded 1 if a bank is a client of a Big-4 audit firm or 0 otherwise,
- LEV = Total debt to common equity,
- MB = Market-to-book value of equity,
- AUDC = Dummy coded 1 if a bank changed its external auditor or 0 otherwise,
- CAP = Ratio of actual regulatory capital (Tier 1 capital) to the minimum required regulatory capital,
- LCO = Net loan charge offs over lagged total loans, and
- LOSS = Dummy coded 1 if a bank's net income is positive or 0 otherwise.

In the second stage, CSR is regressed on the fitted values of EM (FT_EM), which is derived from the first-stage regression and the actual values of the exogenous variables, whose selection is based on prior studies while taking into consideration the particularities of banks. Specifically, we include in Equation (6): EBIT (Orlitzky, Schmidt, and Rynes, 2003); SIZE (Amato and Amato, 2007; Scholtens, 2009); MB (Benson and Davidson, 2010); LEV (Gainet, 2010); and INTA (Surroca, Tribo, and Waddock, 2010). Prior et al. (2008) suggest that risk should be controlled for in any model that tests the CSR-EM relationship. Therefore, we control for capital risk by including CAP in Equation (6) (see also Scholtens, 2009). Following Kanagaretnam et al. (2010), we also control for credit risk by including different types of loans (usually offered by commercial banks) deflated by total loans. The loans include consumer and

installment loans (CONS), real estate mortgage loans (REAL), and commercial and industrial loans (COM). Thus, we estimate the following structural equation:

$$\begin{aligned}
 CSR_{ij} = & \beta_0 + \beta_1 FT_EM_{ij} + \beta_2 EBIT_{ij} + \beta_3 SIZE_{ij} + \beta_4 MB_{ij} + \beta_5 LEV_{ij} + \beta_6 CAP_{ij} \\
 & + \beta_7 INTA_{ij} + \beta_8 CONS_{ij} + \beta_9 REAL_{ij} + \beta_{10} COM_{ij} + u_{ij}
 \end{aligned} \tag{6}$$

where all variables are defined as per Equation (5) except for those first introduced in Equation (6), which are defined as:

- FT_EM = Fitted values of the earnings management measure derived from Equation (5),
- INTA = Intangible assets deflated by total assets,
- CONS = Consumer and installment loans deflated by total loans,
- REAL = Real estate mortgage loans deflated by total loans, and
- COM = Commercial and industrial loans deflated by total loans.

Table 1 presents the summary statistics of the variables used in our tests.

[Insert Table 1 about here]

Table 2 reports the correlation coefficients between the dependent and independent variables. It shows that the correlation coefficient between COM and REAL is very high. Consequently, we include only one of these independent variables at a time in Equation (6).¹² The correlation coefficients for all other variables are lower than conventional thresholds (Gujarati, 1995).

[Insert Table 2 about here]

4. Empirical findings

4.1 Results of the 2SLS analysis

¹² The inclusion of either variable in Equation (6) yields qualitatively similar findings. Hence, for brevity purposes, we report only the findings based on the model in which we include the COM variable.

The estimates of Equations (5) and (6) using OLS would be inconsistent if CSR and EM are endogenously determined, since at least some of the independent variables would be correlated with the error terms of the equations (Gujarati, 1995; Koutsoyiannis, 1977). To address any potential endogeneity problems, we estimate a 2SLS regression. Under the null hypothesis that CSR and EM are not endogenously determined, OLS estimates would be consistent and efficient, while 2SLS estimates would be consistent but inefficient. According to the alternative hypothesis that CSR and EM are endogenously determined, only 2SLS estimates would be consistent. The finding of the Hausman's (1978) simultaneity specification test (two-sided p-value = 0.293) suggests that the null hypothesis can be rejected.

For Equation (5), where EM is the dependent variable, the coefficient of CSR is negative and not statistically significant at any conventional level. This suggests that CSR activities do not explain why U.S. banks indulge in EM practices. This finding is inconsistent with those of prior research on non-financial companies (Chih et al., 2008; Labelle et al., 2010). For the control variables, only EBIT and SIZE are statistically significant. EBIT is significant at the 0.01 level with a positive coefficient, suggesting an interrelationship between EBIT and EM practices while SIZE is significant at the 0.10 level, albeit with an unexpected negative sign.

For Equation (6), where CSR serves as the dependent variable, the coefficient of EM (actually the fitted value of EM [FT_EM]) is statistically significant and positive. This suggests that banks that engage in EM practices are also actively involved in CSR activities.

For the control variables, only EBIT is statistically significant at the 0.01 level with a negative sign. While this finding is inconsistent with Prior et al. (2008), it is consistent with that reported by Simpson and Kohers (2002). We attribute this finding to "managerial opportunism" (Preston and O'Bannon, 1997). Thus, when a company's financial performance is poor, attempts

are made to divert attention by spending on conspicuous social programs. In light of legitimacy theory, we argue that low accounting earnings are probably understood by bank managers as a severe threat and CSR programs as a consequent defensive strategy. An alternative explanation suggests that when banks undertake CSR activities as a result of their engagement in EM practices, the expected positive effect of CSR on financial performance reverses. Prior et al. (2008) report a finding consistent with this alternative explanation.

The INTA variable is significantly associated with CSR at the 0.01 level, suggesting that banks that have a greater proportion of their total assets in intangible assets tend to engage in more CSR activities. We interpret this positive relationship by synthesizing elements of legitimacy and signaling theories. Intangibles are considered very important resources which enhance organizational reputation (Lange, Lee, and Dai, 2011). However, the volume of an organization's investment in intangible assets is also associated with greater risk for two reasons (Di Biase and D'Apolito, 2012; Durst, 2011). Firstly, intangibles increase banks' perceived opacity due to the complexity associated with their valuation. Secondly, intangibles have a relatively low loss-absorbing capacity as their book values can hardly be monetized in the event of lack of liquidity and financial distress. Hence, a high investment in intangibles may incentivize banks to resort to CSR to strengthen their image and protect corporate intangible resources.

Unsurprisingly, banks that are financially sound (CAP) by regulatory capital standards do engage in a considerable amount of CSR activities. Considering that CSR activities entail high costs, banks with available capital are in a more advantageous position to be able to implement CSR policies and signal their superiority. This is consistent with a finding reported by Labelle et al. (2010). Finally, SIZE is significant at the 0.05 level, suggesting that large banks, i.e.

organizations characterized by greater capacities, are more likely to engage in CSR activities. This finding is also consistent with those reported by prior research (Amato and Amato, 2007; Prior et al., 2008).

[Insert Table 3 about here]

4.2 Sensitivity analysis

We check the robustness of our findings by performing several sensitivity tests. First, prior research suggests the existence of a potential endogeneity problem between EM and financial performance (measured here by EBIT [Cornett et al., 2009]), and also between CSR and financial performance (Garcia-Castro et al., 2010). This would require us to run a third equation where EBIT would be treated as an endogenous variable. Therefore, to address the potential endogeneity problem, we follow two approaches: (i) we exclude the EBIT variable from our system of equations and re-estimate the 2SLS system; and (ii) as in Labelle et al. (2010), we include a lagged version of the EBIT variable ($EBIT_{t-1}$). The findings are qualitatively similar to those reported earlier.

Second, following Davidson and MacKinnon (2004, p. 336-338), we jointly test the hypothesis that the instruments used are valid and that the structural equation (Equation 6) is correctly specified (i.e., none of the excluded exogenous variables should, in fact, be included in the structural equation). A significant test statistic suggests either an invalid instrument(s) or an incorrectly specified structural equation (Davidson and MacKinnon, 2004). The test statistics for both Sargan's ($\chi^2 = 1.152$, p-value = 0.5632), and Basman's ($\chi^2 = 1.112$, p-value = 0.5747) tests indicate that our instruments are valid and that Equation (6) is correctly specified.

Third, prior research shows that EM (Kanagaretnam et al., 2010) and CSR (Prior et al., 2008) models are sensitive to organizational size, so we assess the influence of size on our

findings. We perform an F -test, as suggested by Chow (1960), to determine whether the estimates of the full sample model are consistent across the lower and upper halves of our sample. We divide the full sample of banks into lower and upper halves by the median of their total assets. The untabulated findings of the Chow test indicate that there is no statistical difference in the regression estimates for SIZE between the lower (small bank) and upper (large bank) segments of our sample (χ^2 -statistic = 0.05, two-sided p-value = 0.9169). Thus, SIZE has no disproportionate effect on our findings.

Fourth, although the pairwise correlation coefficients reported in Table 2 do not indicate any multicollinearity problems in our data, the existence of a certain degree of collinearity is still possible. This is because one independent variable may be an approximate linear function of a set of several other independent variables and, also, simultaneous estimators break down in the face of multicollinearity (Farley and Leavitt, 1968, p. 366). Consequently, we compute a post-estimation variance-covariance of the estimators (VCE) of the variables in Equation (6). Similar to the findings of the Pearson product-moment correlation procedure reported in Table 2, the VCE (the correlation matrix of which is not reported here) suggests that the degree of multicollinearity is not severe.

Fifth, although we have selected the control variables in Equation (6) on the basis of findings from prior literature, we further test whether the model suffers from omitted variable problems. To this end, we perform a Ramsey's (1969) Specification Error Test (RESET). The F -test has a significance level lower than 5% (F-statistic = 1.71, p-value = 0.1932) which, according to Goldstein (1991), indicates no omission of any significant variable. Sixth, we test the impact of interest cover ratio and dividend pay-out (Beatty and Weber, 2003). The findings are not significant and the explanatory power of the equation is not improved. Finally, in

Equation (1) we follow Cornett et al. (2009) by including the NPL variable. We further test, similar to Beatty et al. (2002), whether NPL change (Δ NPL) makes any difference. Our inferences do not change.

5. Conclusions

A comparatively recent stream of the literature has shown considerable interest in understanding whether corporate commitment to CSR activities plays a role in the quality of financial reporting and vice versa (Chih et al., 2008; Heltzer, 2011; Hong and Andersen, 2011; Kim et al., 2012; Labelle et al., 2010; Prior et al., 2008; Scholtens and Kang, 2013). However, little emphasis has been placed upon investigating this bi-directional relationship in the case of the influential U.S. banking sector. In an attempt to fill this gap in the literature, we investigate the relationship between CSR and EM using a sample of 116 listed U.S. commercial banks during the five-year period 2003-2007.

Our analysis suggests that there is a positive association between EM and CSR, i.e. that bank managers who manipulate earnings tend to intensify their involvement in CSR activities. We interpret questionable financial reporting methods as practices instigated by managers to affect profitability given that their personal economic interests are often tied to corporate annual earnings. In line with legitimacy theory, such practices constitute latent threats to a bank's credibility – with devastating effects if they go public. CSR is seen as a pre-emptive strategy employed by bank managers to divert attention from undesired accounting methods and to build a protective shield by creating a socially-responsible profile.

The view that CSR engagement constitutes a central pre-emptive strategy for banks is further strengthened by our findings. Our findings demonstrate that low accounting earnings,

which are inevitably perceived by bank managers as a potential threat to their interests, are associated with intensive investment in CSR activities. Moreover, a high investment in intangibles, which is also characterized by great complexity in terms of valuation and low-loss absorbing capacity, is accompanied by a high involvement in CSR practices.

Furthermore, our findings suggest that the extent of a bank's engagement in CSR activities is not influential in determining a bank's indulgence in EM practices. By synthesizing elements of legitimacy and signaling theories, we argue that, operating within markets characterized by imperfect information, certain banks resort to CSR practices in order to signal internal qualities and to build a distinct socially-responsible organizational profile. Incentivized by building a superior image and attaining prominence, banks deploy CSR strategies to differentiate themselves from other institutions in the industry, without such tactics having any impact on EM. Moreover, our analysis shows that banks with greater capacities in terms of size and available capital (CAP) are in a more privileged position to attain, maintain and reestablish superiority.

Overall, our study indicates that the CSR-EM relationship is not bi-directional. This is demonstrated by our results which show that, while a high engagement in EM increases engagement in CSR, involvement in CSR does not determine EM practices. Moreover, our findings suggest that CSR is a pre-emptive legitimation tool deployed by bank managers, either to deflect attention from questionable accounting practices or to signal out unobserved qualities which may assist them in building a superior profile within the very competitive banking industry.

The implications of our findings are particularly important for market participants and regulators. Shareholders, investors and analysts who tend to consider an organization's

engagement in CSR activities in their financial and credit analyses should exercise extreme caution for a number of reasons. Firstly, bank managers may have strong incentives to exercise discretion with regard to accounting methods to achieve optimal levels of profitability, since their personal benefits may be tied to their organization's financial performance. Such action is highly likely to be related to an active involvement in CSR activities, which enable managers to build a socially-responsive corporate profile and, in this manner, to deflect attention from questionable financial reporting practices. Moreover, bank managers may also be incentivized to employ CSR to cushion the consequences of low earnings and high investment in intangible assets. Secondly, CSR is found to be unrelated to EM and, therefore, CSR should not be perceived as an indication of a bank's ethical disposition, which, in turn, manifests itself in the quality of financial reporting.

Thirdly, market participants should take into consideration that a bank's active involvement in CSR may be driven by EM practices employed to achieve optimal levels of profitability. Against this background, they should be aware that bank managers are highly likely to prioritize the CSR agenda and to potentially allocate significant resources to CSR practices, since accomplishing desired levels of profitability could also affect the perceptions of stakeholders who may accept higher investments in CSR. Fourthly, through EM practices bank managers might succeed in achieving both optimal levels of profitability and, at the same time, involvement in CSR activities which is considered desirable. By doing this, they improve their personal reputation capital which enables them to claim increased benefits and rewards, better contracts, and board interlocks (which, however, may be to the detriment of the organization's stakeholders). Finally, in light of our findings, regulators should take into account the positive

impact of EM on CSR. They could therefore consider the reformulation of existing CSR incentive plans and connect them to frameworks for bank manager benefits and rewards.

Our study has a number of limitations which, however, may inspire future research. Firstly, our findings cannot be generalized since the sample is both industry- and country-specific. For this reason, future research could explore the bi-directional CSR-EM relationship using cross-country data provided that the potential effects of different cultural, legal, institutional and accounting traditions could be adequately controlled (Kim et al., 2012). Secondly, due to data and specification reasons, we do not treat the EBIT variable as endogenous and therefore do not include a third equation in the model. Thirdly, our sample period is limited to the five years between 2003 and 2007. Future research may advance current understandings by extending the sample period chronologically. For example, panel data analysis would allow for an examination of the long-term connection between CSR and EM in the U.S. banking sector. Additionally, while we assume, in line with prior literature (Chih et al., 2008; Kim et al., 2012), that CSR and EM decisions are taken in a contemporaneous manner (i.e. within the same fiscal year) the strategic timing of relevant decisions deserves full investigation (see Petrovits, 2006).

Given that we focus on the relationship between CSR and EM, it would also be important for future researchers to expand our study's scope and explore how CSR disclosures, as part of a broader impression management strategy, fit into the relationship between EM and CSR ratings. Finally, since this type of research provides inferences of managerial motives, purposes and behaviors based on the statistical analysis undertaken and the theoretical perspectives adopted, future research could employ behavioral and organizational frameworks in order to shed further light on the motives and purposes with regard to managerial strategies involving CSR and EM.

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Table 1
Summary Statistics of Main Continuous Variables Used in Regressions

Variable	Mean	Median	Std. Dev.	Minimum	Maximum
EM	0.000	0.0001	0.0021	-0.020	0.007
CSR	0.166	0.000	1.666	-4.000	8.000
EBIT	0.010	0.0104	0.005	-0.020	0.024
SIZE	81.950	80.000	14.740	51.000	132.000
AUD	0.653	1.000	0.477	0.000	1.000
LEV	0.678	0.663	0.105	0.389	0.911
MB	194.290	190.000	81.470	0.000	514.000
AUDC	0.084	0.000	0.277	0.000	1.000
CAP	12.630	11.000	4.410	6.000	39.000
LCO	0.206	0.160	0.186	-0.015	0.021
LOSS	0.017	0.000	0.131	0.000	1.000
INTA	0.022	0.018	0.022	0.000	0.205
CONS	0.131	0.113	0.104	0.000	0.625
REAL	0.621	0.635	0.213	0.041	1.000
COM	0.249	0.215	0.181	0.000	0.908

Variable definition:

- EM = Earnings management measure,
- CSR = Corporate social responsibility measure,
- EBIT = Earnings before extraordinary items and taxes deflated by lagged total assets,
- SIZE = Natural logarithm of total assets,
- AUD = Dummy coded 1 if a bank is a client of a Big-4 audit firm or 0 otherwise,
- LEV = Total debt to common equity,
- MB = Market-to-book value of equity,
- AUDC = Dummy coded 1 if a bank changed its external auditor or 0 otherwise,
- CAP = Ratio of actual regulatory capital (Tier 1 capital) to the minimum required regulatory capital,
- LCO = Net loan charge offs over lagged total loans,
- LOSS = Dummy coded 1 if a bank's net income is positive or 0 otherwise,
- INTA = Intangible assets over total assets,
- CONS = Consumer and installment loans over total loans,
- REAL = Real estate mortgage loans over total loans, and
- COM = Commercial and industrial loans over total loans.

Table 2
Correlation Matrix (p-values in parentheses)

Variable	EM	CSR	EBIT	SIZE	AUD	LEV	MB	AUDC	CAP	LCO	LOSS	INTA	CONS	REAL	COM
EM	1.000														
CSR	0.285 (0.000)	1.000													
EBIT	0.317 (0.000)	-0.135 (0.001)	1.000												
SIZE	0.056 (0.193)	0.296 (0.000)	0.322 (0.000)	1.000											
AUD	0.085 (0.058)	0.068 (0.144)	0.087 (0.051)	0.176 (0.000)	1.000										
LEV	-0.000 (0.999)	-0.039 (0.402)	-0.095 (0.022)	0.228 (0.000)	-0.015 (0.738)	1.000									
MB	0.143 (0.001)	-0.029 (0.534)	0.554 (0.000)	0.148 (0.001)	0.143 (0.001)	-0.095 (0.027)	1.000								
AUDC	-0.047 (0.272)	-0.031 (0.505)	0.032 (0.456)	-0.021 (0.631)	-0.064 (0.156)	-0.016 (0.705)	0.012 (0.789)	1.000							
CAP	0.017 (0.696)	0.255 (0.000)	-0.014 (0.736)	-0.009 (0.835)	-0.106 (0.019)	0.014 (0.744)	-0.083 (0.056)	-0.015 (0.728)	1.000						
LCO	-0.026 (0.538)	0.040 (0.389)	0.052 (0.214)	0.075 (0.082)	0.008 (0.852)	-0.1392 (0.009)	-0.023 (0.597)	-0.044 (0.302)	-0.099 (0.020)	1.000					
LOSS	0.075 (0.073)	0.164 (0.000)	0.036 (0.385)	0.034 (0.431)	-0.046 (0.306)	.0361 (0.3867)	0.050 (0.242)	0.008 (0.857)	-0.010 (0.812)	0.023 (0.579)	1.000				
INTA	-0.018 (0.672)	0.1580 (0.001)	0.019 (0.652)	-0.026 (0.552)	0.057 (0.202)	-0.159 (0.000)	-0.249 (0.000)	-0.032 (0.457)	-0.022 (0.606)	0.035 (0.407)	-0.013 (0.759)	1.000			
CONS	-0.131 (0.002)	-0.015 (0.755)	0.006 (0.882)	-0.127 (0.003)	0.125 (0.005)	-0.050 (0.239)	0.051 (0.237)	0.012 (0.789)	-0.105 (0.014)	0.029 (0.489)	0.026 (0.545)	-0.049 (0.249)	1.000		
REAL	0.091 (0.028)	-0.027 (0.556)	-0.042 (0.310)	-0.012 (0.776)	-0.089 (0.046)	0.143 (0.001)	-0.008 (0.847)	0.032 (0.451)	0.143 (0.001)	0.274 (0.000)	-0.033 (0.433)	-0.004 (0.927)	-0.517 (0.000)	1.000	
COM	-0.027 (0.519)	0.040 (0.389)	0.043 (0.301)	0.078 (0.069)	0.027 (0.547)	-0.143 (0.001)	-0.024 (0.535)	-0.045 (0.293)	-0.109 (0.010)	0.144 (0.001)	0.024 (0.568)	0.043 (0.308)	0.026 (0.534)	-0.870 (0.000)	1.000

Variable definition:

- EM = Earnings management measure,
- CSR = Corporate social responsibility measure,
- EBIT = Earnings before extraordinary items and taxes deflated by lagged total assets,

SIZE	=	Natural logarithm of total assets,
AUD	=	Dummy coded 1 if a bank is a client of a Big-4 audit firm or 0 otherwise,
LEV	=	Total debt to common equity,
MB	=	Market-to-book value of equity,
AUDC	=	Dummy coded 1 if a bank changed its external auditor or 0 otherwise,
CAP	=	Ratio of actual regulatory capital (Tier 1 capital) to the minimum required regulatory capital,
LCO	=	Net loan charge offs over lagged total loans,
LOSS	=	Dummy coded 1 if a bank's net income is positive or 0 otherwise,
INTA	=	Intangible assets over total assets,
CONS	=	Consumer and installment loans over total loans,
REAL	=	Real estate mortgage loans over total loans, and
COM	=	Commercial and industrial loans over total loans.

Table 3
Results for the 2SLS Estimation

Variable:	First-stage with EM dependent variable (Equation 5)		Second-stage with CSR dependent variable (Equation 6)		
	Coef.	t-Stat.		Coef.	t-Stat.
Constant	-0.0012	-0.75	Constant	-1.2902	-1.54
CSR	-0.0021	-1.15	FT_EM	683.1075	2.18**
EBIT	0.1792	6.53***	EBIT	-183.1661	-2.69***
SIZE	-0.0002	-1.75*	SIZE	0.0172	1.97**
AUD	0.0003	1.55	MB	0.0035	2.22**
LEV	0.0006	0.65	LEV	-1.2492	-1.30
MB	-0.0007	-0.92	CAP	0.1123	5.05***
AUDC	-0.0002	-0.54	INTA	16.649	3.46***
CAP	0.0008	1.01	CONS	1.0514	0.86
LCO	-0.0009	-0.95	REAL	-1.0314	-1.82*
LOSS	0.0015	1.61			

***, **, and * denote statistical significance at the 1%, 5%, and 10% level respectively.

Models:

$$EM_{ij} = \alpha_0 + \alpha_1 CSR_{ij} + \alpha_2 EBIT_{ij} + \alpha_3 SIZE_{ij} + \alpha_4 AUD_{ij} + \alpha_5 LEV_{ij} + \alpha_6 MB_{ij} + \alpha_7 AUDC_{ij} + \alpha_8 CAP_{ij} + \alpha_9 LCO_{ij} + \alpha_{10} LOSS_{ij} + \sum_{j=11}^{15} \alpha_j YEARS_{ij} + u_{ij} \quad (5)$$

$$CSR_{ij} = \beta_0 + \beta_1 FT_EM_{ij} + \beta_2 EBIT_{ij} + \beta_3 SIZE_{ij} + \beta_4 MB_{ij} + \beta_5 LEV_{ij} + \beta_6 CAP_{ij} + \beta_7 INTA_{ij} + \beta_8 CONS_{ij} + \beta_9 REAL_{ij} + \beta_{10} COM_{ij} + u_{ij} \quad (6)$$

Variable definition:

- EM = Earnings management measure,
- FT_EM = Fitted value of earnings management measure,
- CSR = Corporate social responsibility measure,
- EBIT = Earnings before extraordinary items and taxes deflated by lagged total assets,
- SIZE = Natural logarithm of total assets,
- AUD = Dummy coded 1 if a bank is a client of a Big-4 audit firm or 0 otherwise,
- LEV = Total debt to common equity,
- MB = Market-to-book value of equity,
- AUDC = Dummy coded 1 if a bank changed its external auditor or 0 otherwise,
- CAP = Ratio of actual regulatory capital (Tier 1 capital) to the minimum required regulatory capital,
- LCO = Net loan charge offs over lagged total loans,
- LOSS = Dummy coded 1 if a bank's net income is positive or 0 otherwise,
- INTA = Intangible assets over total assets,
- CONS = Consumer and installment loans over total loans,

REAL = Real estate mortgage loans over total loans, and
COM = Commercial and industrial loans over total loans.

Appendix A
Regression Results

Variables	LLP/TL		RSGL	
	Coef.	t-Stat.	Coef.	t-Stat.
Constant	-.168	-1.139	.264	7.771
SIZE	.001	2.712 ***	.095	8.656***
NPL	.147	13.178***		
LLR	.327	15.003***		
REAL	.001	1.113		
COM	-.001	-1.219		
CON	.002	1.612		
URSGL			.001	.511
Adj. R ²	28.5%		10.8%	

Appendix B
KLD Strength and Concern Ratings

No.	Qualitative Issue Area	Strength (Positive Indicator)	Concern (Negative Indicator)
1.	Community	Charitable Giving Innovative Giving Non-U.S. Charitable Giving Support for Housing Support for Education Volunteer Programs Other	Investment Controversies Negative Economic Impact Tax Disputes Other
2.	Diversity	CEO Promotion Board of Directors Work/Life Benefits Women & Minority Contracting Employment of the Disabled Gay and Lesbian Policies Other	Controversies Non-Representation Other
3.	Employee Relations	Union Relations Cash Profit Sharing Employee Involvement Health and Safety Other	Union Relations Health and Safety Workforce Reductions Retirement Benefit Other
4.	Environment	Beneficial Product and Services Pollution Prevention Recycling Clean Energy Management Systems Other	Hazardous Waste Regulatory Problems Ozone Depleting Chemicals Substantial Emissions Agricultural Chemicals Climate Change Other
5.	Human Rights	Indigenous Peoples Relations Labor Rights Other	Burma Labor Rights Indigenous Peoples Relations Other
6.	Product	Quality R&D/Innovation Benefits to Economically Disadvantaged Other	Safety Marketing/Contracting Concern Antitrust Other

Source: RiskMetrics Group, Inc. (2010). How to Use KLD STATS and ESG Ratings Definitions. Boston, MA: RiskMetrics Group, Inc.