

Corporate Social Responsibility and its Impact on Financial Performance: Investigation of U.S. Commercial Banks

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Abstract

This paper analyzes corporate social responsibility (CSR) for banks and its impact on bank financial performance in a context of the recent financial crisis. The largest banks consistently have higher CSR strengths and CSR concerns during the sample period. However, this group sees a steep increase in CSR strengths and a steep drop in CSR concerns after 2009. Banks that are profitable, have higher capital ratios, charge lower fees to deposits, and with more female and minority directors have significantly higher CSR strengths scores. For banks with low involvement in low income communities, it is the smallest banks that show many significant relations between corporate social responsibility and bank characteristics. Yet, for banks with high involvement in low income communities, it is the largest banks that show many significant relations. Finally, we find that the largest banks appear to be rewarded for their social responsibility, as both industry adjusted ROA and ROE are positively and significantly related to CSR scores.

JEL Classification: G21, L21, L25, M14

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1. Introduction

The global economy continues its recovery from the worst recession since the 1930s. While there are a number of positive signs that the economy is slowly improving, the role the financial industry played in this crisis is widely discussed and recognized. Banks' goal of obtaining large profits has been noted as the reason behind the advancement of financial innovations and risky speculations, the expansion of loans and, particularly, subprime mortgages, the increase in asset prices without economic basis, and eventually, the sudden and unexpected decrease in financial asset prices that lead to the financial crisis. As financial institutions work with policymakers and others in the private sector to restore growth and build public goodwill going forward, the issues of corporate social responsibility (CSR) and its impact on financial performance are more relevant than ever.

The aftereffects of the financial crisis and the slow economic recovery have resulted in increased skepticism and constant scrutiny of commercial banks' motives and actions. Consumers want tangible actions that demonstrate that banks have their interests at heart. The emergence of social media has empowered consumers: showcasing what they want and demanding immediate response from banks. Nationwide campaigns, such as Bank Transfer Day on November 5, 2011, encouraged consumers to leave their "big" banks for credit unions and community banks. Communities and local governments (e.g., New York City, Los Angeles, Boston, and San Diego) are also pressuring and requiring banks to offer better services in poor neighborhoods, and to submit community reinvestment plans regularly, in order to do business with them (The New York Times, May 14, 2012).

There is some anecdotal evidence that banks are taking social responsibility more seriously after the financial crisis. For example, in August 2012, Bank of America released its second annual CSR report. The report highlights a number of initiatives such as Bank of America's ten-year, \$1.5 trillion community development lending and investing goal; ten-year, \$2 billion philanthropic investment goal; and ten-year, \$50 billion environmental business goal. In September 2012, J.P. Morgan Chase released a full set of corporate responsibility reports, highlighting the firm's global efforts to help grow the economy, strengthen the communities in which it operates, expand educational opportunity, and promote environmental sustainability.

The empirical relation between corporate social responsibility and corporate financial performance is not well established in the literature. Despite more than 30 years of research and more than 100 empirical studies on the issue, the results are mixed (see, for example, Griffin and Mahon, 1997; Margolis and Walsh, 2003; Garcia-Castro et al., 2010; Dimson et al., 2013). While the relation between CSR and financial performance has not been extensively examined in the banking industry, the existing few studies offer conflicting evidence (e.g., Chih et al., 2010; Wu and Shen, 2013). Given the mixed results of previous studies and the incentive for banks to improve their reputations after the financial crisis, an examination of bank CSR activities surrounding the crisis would be of particular interest for assessing banks' efforts at being more socially responsible.

In this paper, we investigate whether commercial banks in aggregate are taking substantive steps at being socially responsible, if their socially responsible activities have changed since the financial crisis, and whether they are being rewarded for their actions. We use publicly available data on CSR to analyze CSR strengths and CSR concerns. We find that the largest banks consistently have higher CSR strengths and CSR concerns during the sample

period. Further, this group sees a steep increase in CSR strengths and a steep drop in CSR concerns after 2009, as the worst of the financial crisis passed. We also find that more profitable banks, banks with higher capital ratios, and banks that charge lower fees on deposits have significantly higher CSR strengths. We find that banks with more females and minorities on the board of directors have significantly higher CSR strengths. Finally, for banks that have low involvement in low income communities, it is the smallest banks that show many significant relations between corporate social responsibility and bank characteristics. Yet for banks that have high involvement in low income communities, it is the largest banks that show many significant relations. Examining the relation between CSR and bank performance, we find that the largest banks appear to be rewarded for being social responsibility, as both industry adjusted ROA and ROE are positively and significantly related to CSR scores. Thus, after the financial crisis, the biggest banks that have been accused of putting their own interests ahead of their customers and the financial system as a whole worked to repair their reputations by turning to more socially responsible activities. For these banks, engaging in socially responsible activities do appear to result in improved financial performance.

The remainder of the paper is organized as follows. Section 2 recaps the literature on the relation between corporate social responsibility and firm performance and presents our hypotheses. Section 3 describes the data and methodology used in the analysis. Section 4 discusses the results of the analysis. Finally, Section 5 concludes the paper.

2. Related Literature and Hypotheses Development

While many papers have examined the relation between firms' socially responsible behavior and their financial performance, the results of these studies are mixed. In a meta-study on the relation between CSR and firm performance, Margolis and Walsh (2003) review 109

studies where CSR is treated as the independent variable, predicting firm performance. They conclude that out of these 109 studies, 54 show a positive relationship, 20 show mixed results, 28 studies report nonsignificant relationships, and 7 studies report a negative relationship. The authors note that possible reasons for the lack of consensus include drawbacks related to measurement issues and model misspecifications. More recently, a growing literature contends that firms pursue profit maximizing CSR (e.g., Bénabou and Tirole, 2010; Gillan et al., 2010).

In addition to performance, studies have looked at how CSR impacts firm value. Here the results are more consistent, finding that CSR activities positively affect value. For example, Servaes and Tamayo (2013) show that CSR and firm value are positively related for firms with high customer awareness (as is the case for banks during the financial crisis). Dimson et al. (2012) find that firms are more likely to undertake CSR and CSR is more likely to be value enhancing if the firm is concerned about its reputation (also the case for banks during the financial crisis) and if it has higher capacity to implement changes.¹ El Ghouli et al. (2011) find that firms with better CSR scores exhibit cheaper equity financing, while Goss and Roberts (2011) find that more socially responsible firms pay between 7 and 18 basis points less than firms with social responsibility concerns.

Moreover, Boulash et al. (2013) find that firm risk for S&P500 companies increases with employee, diversity, and corporate governance concerns.² Albuquerque et al. (2011) show that

¹ Similarly, Hong and Kacperczyk (2009) find that stocks of companies involved in producing alcohol, tobacco, and gaming are less held by norm-constrained institutions such as pension plans as compared to mutual or hedge funds that are natural arbitrageurs, and they receive less coverage from analysts than do stocks of otherwise comparable characteristics. Heinkel et al. (2001) find that ethical investing leads to polluting firms being held by fewer investors, and as a result lower stock prices, since green investors avoid polluting firms' stock. Finally, Hong and Kostovetsky (2012) find that mutual fund managers who make campaign donations to Democrats hold less of their portfolios (relative to nondonors or Republican donors) in companies that are deemed socially irresponsible (e.g., tobacco, guns, or defense firms or companies with bad employee relations or diversity records).

² Further, Edmans (2011) finds that a firm's concern for other stakeholders, such as employees, may ultimately benefit shareholders. Bae et al. (2011) find that a firm's incentive or ability to offer fair employee treatment is an important determinant of its financing policy.

CSR reduces firm systematic risk and that profits are less correlated with the business cycle for CSR firms than for non-CSR firms. Galema et al. (2008) find that socially responsible investing (SRI) impacts stock returns by lowering the book-to-market ratio. Jiao (2010) constructs a stakeholder welfare score to measure the extent to which firms meet the expectation of their nonshareholder stakeholders (such as employees, customers, communities, and environment), and finds it to be associated with positive valuation effects. Finally, Aktas et al. (2011) document a positive relation between acquirer gains and the level of the target's social and environmental risk management practices. Their findings suggest that acquirers are rewarded for making socially and environmentally responsible investments.

As for the banking industry, the relation between corporate social responsibility and financial performance has not been examined extensively, and the few existing studies offer conflicting evidence. For example, Chih et al. (2010) investigate a total of 520 financial firms in 34 countries over 2003-2005, and conclude that CSR and financial performance are not related. In contrast, Wu and Shen (2013) analyze 162 banks in 22 countries over 2003-2009, and report that CSR is positively associated with financial performance in terms of return on assets, return on equity, net interest income, and noninterest income. Differences in the results could be related to measurement issues, differences in sample as well as sample period.

Therefore, to analyze banks' social performance and its' impact on their financial performance in a context of the recent financial crisis, we develop the following set of research questions and associated testable hypotheses.

Research question 1: What are the determinants of banks' social performance?

Larger banks tend to draw a higher level of attention from the public, and have greater social impact, suggesting that larger banks are more likely to have stronger CSR scores. On the

other hand, smaller banks may seek for differentiation and access to new markets, and therefore invest more in socially responsible activities. In addition, effectiveness of corporate governance may affect bank's social performance. Therefore, we examine the measures of board composition and their impact on CSR. Banks with a higher proportion of independent directors, and less powerful CEOs are expected to have stronger CSR scores. We also expect geographic area to play a role. Banks with geographic focus on low income communities and individuals are expected to have stronger CSR scores.

Research question 2: How did the social performance of banks change over time?

The aftereffects of the crisis and the slow economic recovery resulted in increased skepticism and constant scrutiny of commercial banks' motives and actions. Consumers, communities, and local governments lost faith in their banks and seek tangible actions to demonstrate that banks have their interests at heart. To address these concerns, banks are increasingly setting long-term goals for community development, philanthropy, environmental sustainability (e.g., Bank of America, Wells Fargo, and JP Morgan and Chase). Given these changes, social performance of banks is expected to improve in the post-crisis period, compared to precrisis period. Improvements in CSR for banks with better corporate governance and for banks with geographic focus on low income communities and individuals are expected to be greater.

Research question 3: How does banks' social performance impact their financial performance?

A number of theoretical perspectives have been examined in the literature on the relation between CSR and firm financial performance. Bénabou and Terole (2010) offer three visions of CSR. Vision 1: 'Win-win' ('doing well by doing good') posits that being a good corporate citizen can also make a firm more profitable. Vision 2: 'Delegated philanthropy' states that some

stakeholders (investors, customers, employees) are often willing to sacrifice money (yield, purchasing power and wage, respectively) so as to further social goals. That is, stakeholders have some demand for corporations to engage in philanthropy on their behalf. Under this vision, the corresponding CSR profit sacrifice is passed through to stakeholders at their demand. Vision 2 of CSR maximizes profit given the demand of stakeholders. As with the long-term perspective, profit maximization and CSR are consistent. Vision 3: ‘Insider-initiated corporate philanthropy’ theorizes that corporate social behavior reflects management’s desires to engage in philanthropy. In this vision, profit is not necessarily maximized. However, with effective corporate governance in place, this vision of CSR should not be predominant. Rather, effective stakeholder management can enhance a firm’s ability to achieve a competitive advantage and long-term value creation. Therefore, a positive relation is expected between banks’ social and financial performance.

Research question 4: How did the relation between banks’ social performance and their financial performance change over time?

In the aftermath of the 2008-2009 financial crisis, the interest in understanding social responsibility in the interplay of financial markets and the real economy has reached unprecedented momentum (Puaschunder, 2012). Financial market regulators and consumer protection agencies have set out to reestablish trust in the corporate and financial world. In July 2010, the U.S. Congress approved a sweeping expansion of federal financial regulation in response to the “the financial excesses” that caused the worst recession since the Great Depression (The New York Times, July 15, 2010). The new “Report on Sustainable and Responsible Investing Trends in the United States,” released in November 2012 by the U.S. SIF Foundation, finds that sustainable and responsible investing (SRI) increased by 22 percent since year end 2009. This trend reflects growing investor interest in considering environmental,

societal, or corporate governance (ESG) issues to refine how they make decisions as they select and manage their portfolios or raise their voices as shareholders. Additionally, the U.S. SIF Foundation identified many investors that are beginning to develop in-house capabilities to analyze ESG criteria. Therefore, the relation between banks' social performance and their financial performance is expected to be stronger in the post-crisis period compared to the precrisis period.

3. Research Methodology

3.1. Data

We first collect environmental, social, and governance (ESG) ratings of the largest 3,000 publicly traded companies from the MSCI ESG STATS³ database over 2003-2011 period. We choose 2003 as a starting point because that is when KLD coverage expands from 1,000 largest companies to 3,000 largest companies. We then merge the ESG ratings data for financial institutions with the Consolidated Report of Condition and Income (i.e., Call Reports) database from Federal Financial Institutions Examination Council (FFIEC). This combined dataset is the base for all our analyses. Eliminating banks with only one year of ESG rating observations results in 1,712 bank-year observations with an average of 190 banks per year.⁴

3.1.a. Measures of CSR

MSCI ESG STATS evaluates companies on 56 indicators to capture “strengths” and “concerns” attributes in seven categories that include community, diversity, employee relations, environment, human rights, products, and governance. The MSCI ESG STATS product utilizes a

³ MSGI ESG STATS database is formerly known as KLD database. KLD Research and Analytics was acquired by RiskMetrics Group in 2009, and RiskMetrics Group was later acquired by MSCI in 2010. MSCI ESG Research consolidated ESG ratings indicators substantially in the 2010 research cycle. This can be seen most prominently with the “concern” ESG indicators.

⁴ In contrast to our dataset, Wu and Shen (2013) examine 162 banks, of which 31 are U.S. banks. Further, their dataset ends in 2009, while ours runs through 2011, which allows us to look at CSR activities of banks before versus after the financial crisis.

binary representation of ESG ratings. If a company does meet the criteria established for a rating, this is indicated with a “1.” If a company does not meet the criteria established for a rating, this is indicated with a “0.” These values are then summed across each category on strength and concern attributes. We construct variables *All Strengths* as the sum of all ESG scores on attributes that are identified as strengths and *All Concerns* in an analogous manner. Following Hillman and Keim (2001) and Garcia-Castro et al. (2010) we assign equal importance to the ESG categories and construct the variable ESG Index (formerly known as KLD index), our measure of overall CSR, by subtracting *All Concerns* from *All Strengths*.

Despite its popularity, the ESG index suffers from an aggregation problem. For example, by netting the total score on concerns from the strengths’ score, a firm with ten strengths and ten concerns across all categories is deemed to have a same level of social responsibility as a firm with one strength and one concern. Erhemjamts et al. (2012) argue that this loss in heterogeneity can be mitigated by decomposing the ESG index into its strengths and concerns components. Therefore, following Erhemjamts et al. (2012), we use *All Strengths* and *All Concerns* as CSR measures in addition to the overall ESG index.

Figure 1 shows a time series (2003 through 2011) of the ESG *All Strengths* and *All Concerns* and Table 1 presents descriptive statistics of these scores for the sample banks. We examine the sample banks based on three size groups consistent with FDIC size groupings: total assets less than \$10 billion, total assets between \$10 billion and \$100 billion, and total assets greater than \$100 billion. From Figure 1 we see that the largest banks consistently have higher *All Strengths* and *All Concerns* scores during the sample period. However, this group sees a steep increase in *All Strengths* and a steep drop in *All Concerns* after 2009, as the worst of the financial crisis passed.

Table 1 confirms that the changes surrounding the financial crisis are significant. In addition to the overall *ESG Index*, we report the descriptive statistics for *All Strengths*, *All Concerns*, as well as strengths and concerns in all seven categories: community, environment, diversity, employee relations, human rights, product, and corporate governance. Consistent with Figure 1, we see in Table 1 that banks in the largest size group (total assets greater than or equal to \$100 billion) have the highest scores for both strength and concern dimensions. In addition, areas with the highest strength and concern scores seem to be quite different for banks in different size groups. For example, for the years 2003 through 2009, corporate governance strengths are the biggest contributor to the *All Strengths* score for the banks in the smallest size group. In contrast, diversity strengths are the biggest contributor to the *All Strengths* score for the banks in the largest size group. In sum, the differences that are seen in Table 1 highlight the importance of examining CSR by size group.

For the largest banks, *All Strengths* increases from an average 5.96 in 2003-2009 to 9.31 in 2010-2011 (significant at 1%). The increase in the overall score is driven by a significant increase in each of the 7 individual components. Further, for the largest banks, *All Concerns* decreases from an average 4.32 in 2003-2009 to 3.42 in 2010-2011. While the difference in the overall score is insignificant, we do see a significant drop in community concerns from 0.55 in 2003-2009 to 0.12 in 2010-2011. During the financial crisis, banks (particularly the largest banks) were criticized for a lack of concern of their customers. According to this measure, it appears that these large banks worked to reduce this criticism after the crisis. From Table 1, we also see that, for the smallest banks, *All Strengths* decreases from an average 1.19 in 2003-2009 to 0.14 in 2010-2011 (significant at 1%). The decrease in the overall score is driven by a significant decrease in 6 of the 7 individual components (only the human rights score does not

decrease). Further, for the smallest banks, *All Concerns* increase from an average 0.69 in 2003-2009 to 2.00 in 2010-2011, while for middle-sized banks *All Concerns* increase from an average 1.24 in 2003-2009 to 1.77 in 2010-2011 (both are significant at 1%). Thus, while the largest banks see improvements in their corporate social responsibility scores around the financial crisis, smaller banks seem to deteriorate.

3.1.b. Measures of bank performance

We use two measures of bank profitability, industry adjusted ROA and industry adjusted ROE. More specifically, we calculate the industry average ROA and ROE using all banks in the Call Reports. We then group banks by size of total assets (less \$10 billion, between \$10 billion and \$100 billion, and greater than \$100 billion) and subtract the size-adjusted industry average of the non-sample banks from the ROA and ROE of the bank in question to arrive at the industry adjusted financial performance measures.

Figure 2 shows a time series pattern in industry adjusted ROA (panel A) and ROE (panel B) for our sample banks from 2003 through 2011. As seen in Figure 2, all banks in the sample experienced a decline in financial performance during the financial crisis. However, performance recovers to the precrisis level in 2010-2011 period. The smallest banks (total assets less than \$10 billion) show the biggest decline in performance, while the biggest banks (total assets greater than or equal to \$100 billion) show the smallest decline and the most rapid recovery.

3.1.c. Fees to Deposits, Percentage of Low Income Counties Served

Due to the low interest rate environment and slow economic growth, banks are under enormous pressure to find new sources of income. As a result, banks are paying more attention to their revenue from bank service fees such as ATM fees, checking account fees, and maintenance fees. Many big banks, including Bank of America, J.P. Morgan Chase, and Wells Fargo, have

rolled out plans that aim to raise fee revenue or push customers to do more business with the bank. In response, customers are increasingly turning to social media to get their complaints heard. For example, in 2011 Bank of America had to retreat from a new \$5 debit card fee following a customer revolt and a wave of criticism. Therefore, we examine how bank fees, scaled by total deposits, affect banks' CSR.

In addition, in an effort to measure the effect of banks' presence in low income neighborhoods, and its impact on banks' CSR, we collect summary of deposits data from the FDIC. The Summary of Deposits (SOD) is the annual survey of branch office deposits for all FDIC-insured institutions. We aggregate this branch level deposits data at the county level, and merge it with county level poverty estimates from the Small Area Income & Poverty Estimates (SAIPE) data provided by the Census Bureau. If the percentage of all ages in poverty in a county is above the federal poverty rate, we define that county as a low income county. We then calculate the percentage of bank deposits that come from low income counties for each bank and year. Since percent of deposits is likely to be small for branches in low income communities, we also calculate percentage of low income communities served by dividing the number of low income counties served by total number of counties served for each bank and year.

3.1.d. Board Composition Variables

Effectiveness of corporate governance may impact firms' involvement in CSR programs. Wang and Coffey (1992) document a positive relationship between several measures of board composition (ratio of insiders to outsiders, percentage of stock ownership, and the proportion of female and minority board members) and firms' charitable contributions. Similarly, Fich et al. (2009) find that bigger firms with higher levels of free cash flow, larger boards, busy outside directors, and a higher governance index (higher level of the index indicates weaker governance)

are more likely to make charitable donations.⁵ Therefore, we use measures of board composition from RiskMetrics Directors database (percentage of independent directors, percentage of female and minority board members, CEO-chair duality, and median tenure of directors) as a proxy for the level of corporate governance in the firm. When RiskMetrics data are not available, we supplement the board composition data with hand-collected data from proxy statements. We hypothesize that better governed firms will have better social performance.

Table 2 presents descriptive statistics for all variables used in the analysis. Panel A reports descriptive statistics for the whole sample (277 unique banks in the combined MSCI ESG STATS and Call Reports database) for 2003-2011 period and panel B reports descriptive statistics for a subsample of 160 banks with governance variables available. Median values of *All Strengths* and *All Concerns* scores are both one, highlighting the importance of decomposing the overall ESG index into its strength and concern components. The sample banks range in size from \$120 million to \$1.93 trillion and have average total assets of \$38.89 billion. The average industry adjusted ROA for the sample over the entire period (2003-2011) is -0.16% (ranging from -36.11% to 5.50%). Tier 1 capital averages 11.51%, ranging from 3.51% to 61.58%. While on average the banks appear to be well capitalized, the financial crisis appears to have hurt some of the sample banks in terms of both ROA and capitalization. Fees charged as a percent of deposits averages 0.53%, ranging from 0% to 3.67%. Given that excessive fees charged on deposits have been a contentious issue at banks, and fees seem to be a small percentage of deposits, we create a dummy variable called *High Fees Dummy* to define banks that charge

⁵ Masulis and Reza (2013) find that corporate giving is positively (negatively) associated with CEO charity preferences (CEO shareholdings and corporate governance). The results indicate that firm donations advance CEO interests and suggest that misuse of corporate resources reduces firm value. Finally, Cheng et al. (2013) find that improvements in managerial incentives and governance lead to a reduction in firm “goodness spending,” implying that the marginal dollar spent on goodness is a result of agency problems.

excessive fees. This dummy variable takes a value of one if a bank's fees as a percentage of deposits are above the sample median (0.47%) and zero otherwise. Corporate social responsibility encompasses issues associated with how banks address issues pertaining to customers in their local community, include the charging of excessive fees on deposits. Corporate social responsibility also encompasses the extent to which banks do business in low income communities. On average, the percentage of low income counties to all counties served by banks in the sample is 41.93%.

For the subsample of banks with governance data, an average of 74.87% of the board directors are independent (ranging from 27.27% to 100.00%). On average, the boards of directors include 17.23% females and minorities (ranging from 0.00% to 122.22%).⁶ The CEO and Chairman of the Board are separated in 44.55% of the sample banks. Finally, the mean tenure of the board directors is 9.39 years (ranging from 2 years to 26 years). Higher levels of independent directors, females and minorities on the board, and CEO/chair separation have been found to be associated with better financial performance at firms. We will examine whether these characteristics also are associated with better corporate social performance.

3.2. Estimation methods

The dataset used to test all our hypotheses is longitudinal or a panel data set. Thus, we have more than one year of data for firms in our study. This presents a few econometric challenges. First, it is likely that residuals are serially correlated, especially for the same firm. We mitigate this concern by clustering all the standard errors at the firm level. Clustering effectively provides us with a "conservative" estimate of the standard error (Petersen, 2009). The second issue is the presence of arbitrary heteroskedasticity. We address this by ensuring that all our standard errors are White-Huber "robust" to the presence of arbitrary heteroskedasticity

⁶ If there is a director who is female, and of minority group, that particular director gets counted twice.

(White, 1980). The robust option relaxes the assumption that the errors are identically distributed, while cluster relaxes the assumption that the error terms are independent of each other. Thus, we have robust standard errors that are clustered at the firm level.

Finally, certain macroeconomic factors such as interest rates, unemployment, and GDP growth change over time. These variables could directly affect the dependent variables in our study resulting in a spurious relation between the explanatory and the dependent variables (such as firm performance or capital). We follow the standard practice of including year dummy variables in the estimation procedure to alleviate this possibility. These steps ensure that our results are based on tests that robustly address deviations from standard regression assumptions.

3.2.a. Determinants of CSR

We first examine the determinants of CSR by estimating the following OLS regressions where independent variables include firm characteristics. Our main measures of CSR are *ESG Index*, *All Strengths*, and *All Concerns*.

$$\begin{aligned} \text{CSR}_{it} = & \alpha + \beta_1 \times \text{Bank Perf}_{i,t-1} + \beta_2 \times \text{Size}_{it} + \beta_3 \times \text{Size Squared}_{it} + \beta_4 \times \text{Tier 1 Cap Ratio} + \\ & + \beta_5 \times \text{Fees to Deposits Ratio}_{it} + \beta_6 \times \text{Pct. Low Income Counties} + \\ & + \delta \times \text{Board Composition} + \eta \times \text{Year Dummies} + \varepsilon_{it}. \end{aligned}$$

Firm characteristics included above are largely based on the existing literature. For instance, larger firms tend to draw a higher level of attention from the public and have greater social impact (Cowen, et al., 1987), suggesting that larger firms are more likely to engage in CSR. Udayasankar (2008) argues that either very small or very large firms are equally motivated to participate in CSR, proposing a U-shaped relationship between firm size and CSR participation. To capture the presence of such nonlinearity, we include *Size* (log of total assets) and *Size Squared* in our analysis of the determinants of CSR participation.

A firm's propensity to engage in socially responsible activities also depends on its financial health. We measure firm's financial strength by *Tier 1 Capital Ratio*. The Tier 1 capital ratio is the ratio of a bank's core equity capital to its total risk-weighted assets. Risk-weighted assets are the total of all assets held by the bank weighted by credit risk according to a formula determined by the Board of Governors of the Federal Reserve System. The metric is primarily used to indicate the ability of the bank (or other institutions that hold reserves) to absorb unexpected losses. We hypothesize that firms' involvement in socially responsible programs is positively related to their financial strength.

3.2.b. Effects of CSR on Firm Performance

We examine the effects of CSR on firm performance using the following IV-GMM regressions:

$$Bank\ Perf_{it} = \alpha + \beta \times CSR_{it} + \delta \times Control\ Variables_{it} + \eta \times Year\ Dummies + \varepsilon_{it};$$

to address the endogeneity concerns discussed in Garcia-Castro et al. (2010). IV-GMM is an instrumental variables estimator implemented using the Generalized Method of Moments (GMM). Conventional IV estimators such as two-stage least squares (2SLS) are special cases of this IV-GMM estimator. For an exactly-identified model, the efficient GMM and traditional IV-2SLS estimators coincide, and under the assumptions of conditional homoskedasticity and independence, the efficient GMM estimator is the traditional IV-2SLS estimator (Hayashi, 2000).

The choice of instruments is drawn from the set of CSR determinants in the first stage regression that satisfy both the relevance (strength of instrument) and validity (exogeneity with bank performance) criteria. Since we have an over-identified model where number of excluded instruments is greater than the number of included endogenous variables, we use IV-GMM

estimator, because IV-GMM cluster-robust estimates will be different and more efficient than robust 2SLS estimates in an over-identified model. Control variables include lagged, industry adjusted ROA (or ROE), and the Crisis dummy, which takes value of one in years 2008 and 2009 and zero otherwise.

4. Results

4.1. CSR Regressions

4.1.a. Full Sample Results

Table 3 reports results of OLS regressions examining the determinants of CSR. Since all results with industry adjusted ROE are similar to those with industry adjusted ROA, we only report the CSR regressions with industry adjusted ROA as a bank performance measure. Panel A reports results for the full sample period (2003-2011), panel B looks at the period before and during the height of the financial crisis (2003-2009), and panel C reports results for 2010-2011 (after the worst of the financial crisis had passed). In all panels, regressions 1-3 use the full sample of banks, while regressions 4-6 use the sample of banks on which we have corporate governance data. Regressions 1 and 4 use the overall *ESG Index*, regressions 2 and 5 use *All Strengths* only, and regressions 3 and 6 use only *All Concerns*.

From panel A, it appears that regressions separating the *ESG index* by strengths and concerns produce varied results, i.e., results with the *ESG index* are much weaker than those with the *All Strengths* and *All Concerns* variables. As mentioned earlier, the *ESG index* suffers from an aggregation problem. Thus, this is not surprising and leads us to concentrate our discussion on regressions that isolate *All Strengths* versus *All Concerns*. From regression 2, we see that larger banks have lower *All Strengths* scores (the coefficient on log total assets is -7.568, significant at 1%). However, the relation is not linear. Rather, the relation is reversed for the biggest banks (the

coefficient on log total assets squared is 0.259, significant at 1%). This is consistent with the Udayasankar (2008)'s argument that CSR matters for either very small or very large firms. We also see that more profitable banks (coefficient on ROA industry adjusted is 7.005), banks with higher capital ratios (coefficient on Tier 1 capital ratio is 5.511), and banks that charge lower fees to deposits (coefficient on high fees dummy variable is -0.321) have significantly higher *All Strengths* scores. Finally, *All Strengths* scores decrease significantly for the full sample of banks in 2010-2011 (coefficient on post crisis dummy is -0.728). Except for the high fees dummy, these results hold up with the inclusion of corporate governance variables, in regression 5. Further, we find that banks with more female and minority directors have significantly higher *All Strengths* scores (coefficient on % females & minority directors is 3.178).

From regression 3, we see fewer of the firm characteristics explain *All Concerns* scores. Larger banks again have significantly lower *All Concerns* scores (the coefficient on log total assets is -5.371) and again, the relation is reversed for the biggest banks (the coefficient on log total assets squared is 0.178). For the full sample, banks with higher capital ratios have a higher *All Concerns* scores (coefficient on Tier 1 capital ratio is 3.008) and the *All Concerns* scores increase significantly in 2010-2011 (coefficient on post crisis dummy is 0.847). When corporate governance variables are added, regression 6, these relations continue to hold. Further, we find that banks with more female and minority directors have significantly lower *All Concerns* scores (coefficient on % females & minority directors is -0.591).

From panels B and C, we see that some variations exist across time periods. Concentrating on regressions 5 and 6, more profitable banks have significantly higher *All Strengths* scores after the crisis (coefficient on ROA industry adjusted is 40.359, significant at 1%, in panel C), but this is not the case before and during the crisis (coefficient on ROA industry

adjusted is 7.566, insignificant, in panel B). Also, banks with higher capital ratios have significantly higher *All Strengths* scores after the crisis (coefficient on Tier 1 capital ratio is 12.669, significant at 1%, in panel C), but not before and during (coefficient on Tier 1 capital ratio is 2.238, insignificant, in panel B). Moreover, banks that charge lower fees to deposits have significantly higher *All Strengths* scores after the crisis (the coefficient on the high fees dummy is -0.736, significant at 10%, in panel C), but not before and during (coefficient on high fees dummy is 0.119, insignificant, in panel B). Conversely, banks with more female and minority directors have significantly higher *All Strengths* scores before and during the crisis, but not after the crisis (coefficient on % female & minority directors is 3.920, significant at 1%, in panel B, and 1.658, insignificant, in panel C). Finally, banks with more independent directors and shorter tenured directors have significantly higher *All Strengths* scores after the crisis, but not before and during the crisis (coefficient on % independent director is 2.585 and on director tenure is -0.066, significant at 10%, in panel C, and are -0.264 and 0.003, respectively, insignificant, in panel B).

From regression 6, banks with fewer independent directors and shorter tenured directors have significantly higher *All Concerns* scores after the crisis, but not during and before (coefficient on % independent directors is -1.503, significant at 5%, while coefficient on director tenure is -0.060, significant at 1%, in panel C, and are 0.159 and 0.005, respectively, both insignificant, in panel B). Also, banks with fewer female and minority directors have significantly higher *All Concerns* scores after the crisis, but not during and before (coefficient on % female & minority directors is -1.285, significant at 5%, in panel C, and is -0.211, insignificant, in panel B).

4.1.b. Results Based on Bank Size

Table 4 reports CSR regression results, separating the sample banks by size (for each quarter): total assets less than \$10 billion, between \$10 billion and \$100 billion, and greater than \$100 billion. Given the aggregation issues with the overall ESG Index, we look only at regressions using *All Strengths* or *All Concerns* as the dependent variable. Panel A reports results for the full sample period (2003-2011), panel B looks at the period before and during the worst of the financial crisis (2003-2009), and panel C reports results for 2010-2011 (as the worst of the financial crisis was over). Panel A establishes that several significant variables exist for the full sample period and differences in significant variables exist across size groups. However, we concentrate our discussion on results in panels B (for the period 2003-2009) and C (for the period 2010-2011). Notice first, that the largest banks find more and significantly stronger relations than smaller banks. This makes sense remembering that the biggest banks were hit hardest in the press with real and perceived violations of corporate social responsibility. Thus, it is this group of banks that have a bigger incentive to perform better along these lines. For this group, banks with the lowest fees to deposit ratios receive the highest *All Strength* scores before, during, and after the crisis (coefficient on high fees dummy variable is -2.740, significant at 5% in panel B, and -1.444 and significant at 10% in panel C). Banks with the lowest concentration of business in low income areas receive the highest *All Concerns* scores after the crisis (coefficient on percentage of low income counties served is -2.308 and significant at 10%); the relation is insignificant before the crisis.

Table 5 reports results similar to those in Table 4, but uses only those banks for which we have corporate governance data. Results in Table 5 are generally consistent with those in Table 4. However, we now see that, regardless of bank size, before and during the financial crisis *All Strengths* scores are higher for banks with more female and minority directors (coefficient on %

female & minority is 3.107 for banks with total assets less than \$10 billion, 3.467 for banks with total assets between \$10 billion and \$100 billion, and 10.244 for banks with total assets greater than \$100 billion). Further, regardless of bank size, after the worst of the financial crisis had passed *All Concerns* scores are lower for banks with more female and minority directors (the coefficient on % female & minority is -1.634 for banks with total assets less than \$10 billion, it is -1.533 for banks with total assets between \$10 billion and \$100 billion, and -8.122 for banks with total assets greater than \$100 billion).

4.1.c. Results Based on Service to Low Income Communities

Table 6 reports regression results highlighting the involvement of the sample banks in low income communities. Panel A reports results for banks with low involvement in low income communities, while panel B reports results for banks with relatively high involvement in low income communities. Notice for banks that have low involvement in low income communities, it is the smallest banks that show many significant relations between corporate social responsibility and bank characteristics. Yet for banks that have high involvement in low income communities, it is the largest banks that show many significant relations. In panel A, for banks with total assets less than \$10 billion, *All Strengths* scores are significantly higher for the largest banks in this group (coefficient is 0.256), banks with higher Tier 1 capital ratios (coefficient is 3.849), and during 2003-2009 (coefficient on post crisis dummy is -1.198). Similar relations are seen for banks with total assets between \$10 billion and \$100 billion. However, for banks with total assets greater than \$100 billion, and relatively little involvement in low income communities, only size (coefficient is 5.601) and the post crisis dummy (coefficient is 5.348) are significantly related to *All Strength* scores.

For banks with total assets less than \$10 billion, *All Concerns* scores are significantly higher for the lowest performing banks (coefficient on ROA industry adjusted is -2.806), banks with higher Tier 1 capital ratios (coefficient is 2.173), and during 2010-2011 (coefficient on post crisis dummy is 1.325). In contrast, for banks with total assets greater than \$100 billion, only size (coefficient is 3.658) is associated with higher *All Concerns* scores.

In contrast, for small banks with high involvement in low income areas, only the post crisis variable is significant: *All Strengths* scores are higher and *All Concerns* scores are lower in 2003-2009. For the largest banks with high involvement in low income areas, *All Strengths* scores increase with bank size (coefficient is 3.703), industry adjusted ROA (coefficient is 49.875), capital (coefficient is 24.026), lower fees (coefficient is -2.890), and after the worst of the financial crisis (coefficient is 1.876). *All Concerns* scores increase with bank size (coefficient is 2.772), lower fees (coefficient is -1.075), and before and during the financial crisis (coefficient is -1.376).

Table 7 reports results similar to those in Table 6, but uses only those banks for which we have corporate governance data. Results in Table 7 are generally consistent with those in Table 6. For banks that have low involvement in low income communities, it is the smallest banks that show many significant relations between corporate social responsibility and bank characteristics. Yet for banks that have high involvement in low income communities, it is the largest banks that show many significant relations. We also see, however, that the percent of female and minority directors is positively related to *All Strengths* in banks that have relatively small concentration in low income communities (particularly for the smallest groups of banks (coefficients are 3.023 and 4.169, respectively)). Female and minority board members also have a positive effect on *All*

Strengths scores for banks with relatively high concentration in low income communities (particularly for smallest and biggest banks (coefficients are 1.953 and 6.399, respectively)).

4.2. Financial Performance Regressions

Table 8 reports results of IV-GMM regressions examining the determinants of bank financial performance. Since we find that board composition matters for CSR, we base these regressions on a sample with governance variables. The post crisis dummy, log total assets, Tier 1 capital ratio, high fees dummy, percentage of low income counties served, percentage of independent directors, CEO-Chair duality, median tenure of board members, as well as percentage of female and minority directors are used as instruments for the CSR variable in each of the IV-GMM regressions. Since OLS results were similar, we only report IV-GMM results for brevity.

Panel A reports results for banks with total assets less than \$10 billion, panel B looks at banks with total assets between \$10 billion and \$100 billion, and panel C reports results for banks with total assets greater than \$100 billion. In each panel, regressions 1 -3 (4-6) employ industry adjusted ROA (ROE) as the measure of performance. Regressions 1 and 4 employ the overall *ESG Index* as the measure of CSR, regressions 2 and 5 the *All Strengths* score, and regressions 3 and 6 the *All Concerns* score. We find that CSR scores do not appear to affect bank performance (measured by industry adjusted ROA and ROE) for all the smallest size groups (panels A and B). However, for the largest banks, panel C reports that high overall CSR scores and high *All Strengths* are positively and significantly related to bank financial performance (coefficient on ESG Index (*All Strengths*) is 0.0002 (0.0001) in regression 1 (regression 2) and 0.002 (0.001) in regression 4, both significant at 1% (5%)).

The Angrist-Pischke F-statistic from the first stage is always significant, indicating that our instruments are jointly significant, satisfying the relevancy criteria (which requires that the excluded instruments are sufficiently correlated with the included endogenous regressors). As for the Hansen-J test of overidentifying restrictions (which tests whether the excluded instruments are appropriately independent of the error process), we fail to reject the null hypothesis, indicating that our instruments satisfy the validity criteria, and that IV-GMM results are preferred to OLS results. Therefore, we can conclude that the overall *ESG Index*, as well as the *All Strengths* components, do affect bank performance (for the biggest banks). That is, banks that pursue CSR are, indeed, rewarded for these social activities with increased financial performance.

4.2. Robustness Tests

Servaes and Tamayo (2013) argue that corporate governance should not be considered as part of CSR, and therefore exclude the corporate governance scores from their construction of CSR strengths and concerns. As they state, “corporate governance is about the mechanisms that allow the principals (shareholders) to reward and exert control on the agents (the managers)...CSR, on the other hand, deals with social objectives and stakeholders other than shareholders. Hence, we leave corporate governance out of our CSR measure.” To ensure that our results are not being overly influenced by the inclusion of the corporate governance variables in our CSR scores, we rerun the performance regressions, excluding these variables from the *ESG Index*, *All Strengths*, and *All Concerns* scores. The results are reported in Table 9. Similar to Servaes and Tamayo (2013), we also scale the strengths and concerns for each firm-year by the maximum possible strengths and concerns in each category-year, since number of possible strengths and concerns varies from year to year. We again find that adjusted CSR scores (ones

that exclude corporate governance variables and scaled by the maximum possible score each year) do not appear to affect bank performance (measured by industry adjusted ROA and ROE) for all the smallest size groups (panels A and B). However, for the largest banks, panel C reports that high overall CSR scores and high *All Strengths* are positively and significantly related to bank financial performance (coefficient on ESG Index (*All Strengths*) is 0.008 (0.003) in regression 1 (regression 2) and 0.077 (0.035) in regression 4).

Finally, over the period of analysis, the composition of the ESG indicators has been changing constantly. While we have 56 indicators from MSCI ESG STATS database at the end of our 2003-2011 period, some ratings have been added and some ratings have been discontinued, which results in 45 indicators being used in all years. In particular, there have been one new rating initiation in 2003, five in 2005, one in 2006, two in 2007, and seven in 2010. In addition, there have been two rating discontinuations in 2004, one in 2007, and 28 in 2009. While scaling by the maximum possible strength and concern scores as in Servaes and Tamayo (2013) mitigates this concern somewhat, we can further check the robustness of our results using the ratings that have been used consistently in our sample period.

To confirm that our results are not affected by the changing nature of the rating indicators, we rerun the performance regressions, including only the 45 indicators that have been consistently used in the MSCI ESG STATS database for the 2003-2011 period. The results are reported in Table 10 and are very similar to those in Tables 8 and 9. We find that CSR scores are not related to bank performance (measured by industry adjusted ROA and ROE) for all the smallest size groups (panels A and B). Still, for the largest banks, panel C reports that high overall CSR scores and high *All Strengths* are positively and significantly related to bank

financial performance (coefficient on ESG Index (*All Strengths*) is 0.0002 (0.0001) in regression 1 (regression 2) and 0.002 (0.002) in regression 4).

5. Conclusions

This paper analyzes banks' social performance and its impact on bank financial performance in a context of the recent financial crisis. We use environmental, social, and governance scores from MSCI ESG STATS database over 2003-2011. MSCI ESG STATS evaluates companies on more than 50 indicators to capture "strengths" and "concerns" attributes in seven categories that include community, diversity, employee relations, environment, human rights, products and governance. We construct a variable *All Strengths* as the sum of all ESG scores on attributes that are identified as strengths and *All Concerns* in an analogous manner.

The largest banks consistently have higher *All Strengths* and *All Concerns* scores during the sample period. However, this group sees a steep increase in *All Strengths* and a steep drop in *All Concerns* after 2009, as the worst of the financial crisis passed. We also find that more profitable banks, banks with higher capital ratios, and banks that have charge lower fees to deposits have significantly higher *All Strengths* scores. Further, *All Strengths* scores decrease significantly for the full sample of banks in 2010-2011. We find that banks with more female and minority directors have significantly higher *All Strengths* scores. For banks that have low involvement in low income communities, it is the smallest banks that show many significant relations between corporate social responsibility and bank characteristics. Yet for banks that have high involvement in low income communities, it is the largest banks that show many significant relations. Finally, we find that the largest banks appear to be rewarded for being social responsibility, as both industry adjusted ROA and ROE are positively and significantly related to CSR scores.

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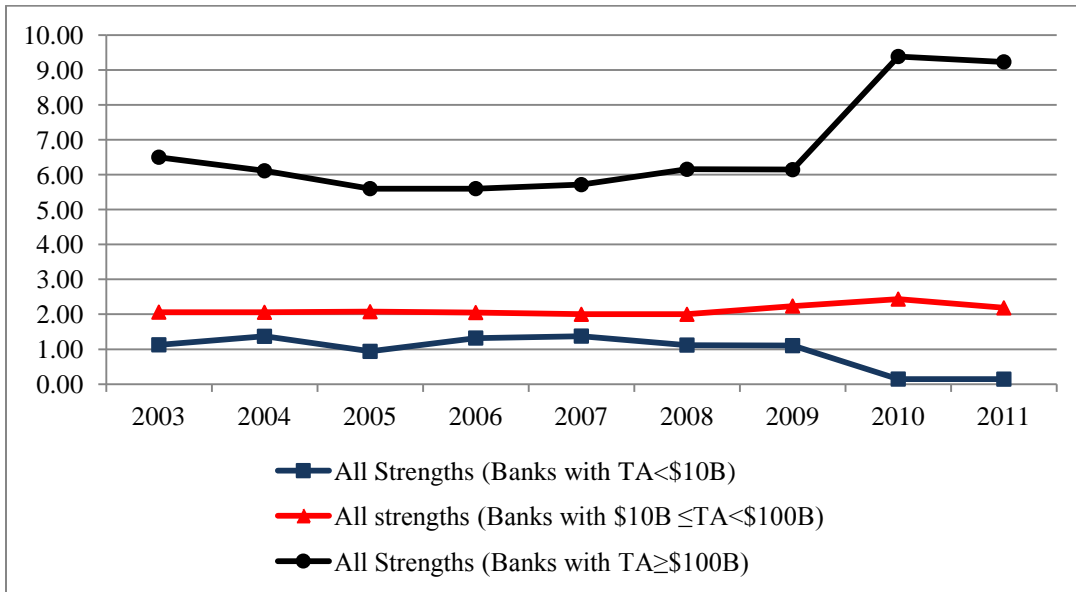
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Figure 1
ESG Strength and Concern Scores by Size Group

This figure shows a time series of ESG ratings for a sample of banks from 2003 through 2011. Panel A reports *All Strengths* measured as the sum of all ESG scores on attributes that are identified as strengths. Panel B reports *All Concerns* measured as the sum of all ESG scores on attributes that are identified as concerns. Ratings are reported by three size groups: banks with total assets less than \$10 billion, banks with total assets between \$10 billion and \$100 billion, and banks with total assets greater than \$100 billion.

Panel A: ESG All Strength Scores



Panel B: ESG All Concerns Scores

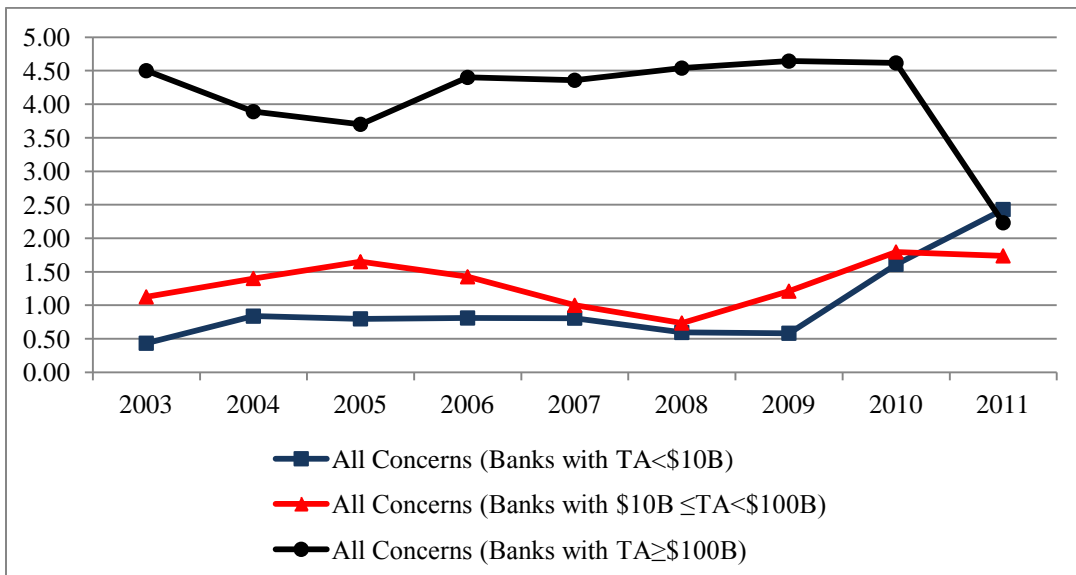
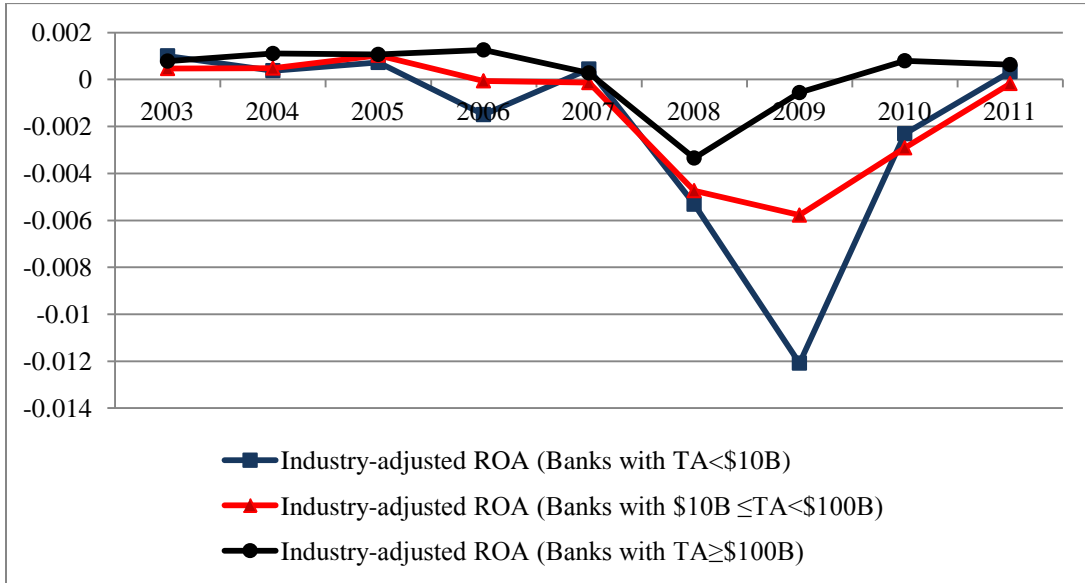


Figure 2
Financial Performance by Size Group

This figure shows a time series of industry adjusted ROA and ROE for a sample of banks from 2003 through 2011. Industry adjusted ROA and ROE is reported by three size groups: banks with total assets less than \$10 billion, banks with total assets between \$10 billion and \$100 billion, and banks with total assets greater than \$100 billion.

Panel A: Industry adjusted ROA



Panel B: Industry adjusted ROE

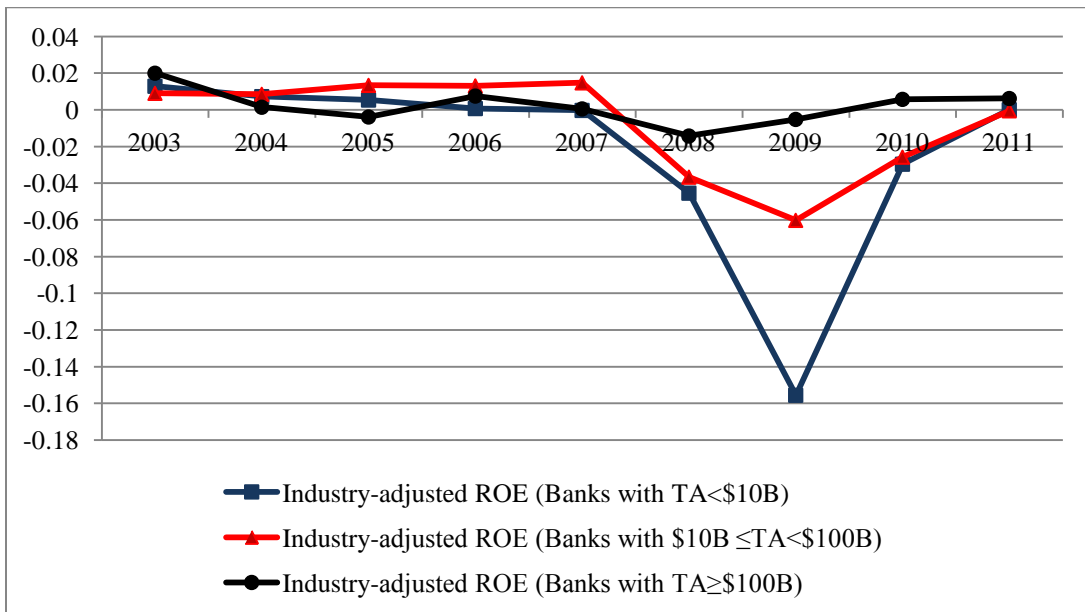


Table 1

Descriptive Statistics on ESG Ratings Data

This table reports components of MSCI ESG STATS All Strengths and All Concerns for a sample of banks from 2003 through 2011. If a company does meet the criteria established for a rating, this is indicated with a “1.” If a company does not meet the criteria established for a rating, this is indicated with a “0.” These values are then summed across each category on strength and concern attributes. We construct a variable *All Strengths* as the sum of all ESG scores on attributes that are identified as strengths, and construct *All Concerns* in an analogous manner. Ratings are reported by three size groups: banks with total assets less than \$10 billion, banks with total assets between \$10 billion and \$100 billion, and banks with total assets greater than \$100 billion.

ESG Variable	Banks with TA<\$10B			Banks with \$10B ≤TA<\$100B			Banks with TA≥\$100B		
	2003-2009	2010-2011	t-test	2003-2009	2010-2011	t-test	2003-2009	2010-2011	t-test
ESG Index	0.49	-1.86	***	0.83	0.55		1.64	5.88	***
All Strengths	1.19	0.14	***	2.07	2.31		5.96	9.31	***
Community Strengths	0.23	0.02	***	0.45	0.23	***	1.87	0.77	***
Environment Strengths	0.00	0.02	**	0.00	0.53	***	0.12	2.38	***
Diversity Strengths	0.35	0.09	***	1.00	0.92		2.76	4.23	***
Emp. Relations Strengths	0.07	0.00	***	0.38	0.26		0.77	0.46	*
Human Rights Strengths	0.00	0.00		0.00	0.01	*	0.09	0.23	*
Product Strengths	0.00	0.02	***	0.01	0.26	***	0.08	0.77	***
Corp. Gov. Strengths	0.53	0.00	***	0.23	0.09	***	0.28	0.46	*
All Concerns	0.69	2.00	***	1.24	1.77	***	4.32	3.42	
Community Concerns	0.14	0.00	***	0.20	0.00	***	0.55	0.12	***
Environment Concerns	0.00	0.00		0.00	0.05	**	0.00	0.31	***
Diversity Concerns	0.29	1.36	***	0.13	0.58	***	0.38	0.38	
Emp. Relations Concerns	0.15	0.00	***	0.26	0.08	***	0.44	0.35	
Human Rights Concerns	0.00	0.00		0.01	0.03		0.24	0.08	*
Product Concerns	0.05	0.04		0.24	0.30		1.55	1.35	
Corp. Gov. Concerns	0.06	0.59	***	0.40	0.73	***	1.15	0.85	
Firm-year Observations	1031	250		250	77		78	26	

Table 2**Descriptive Statistics on Bank Corporate Social Responsibility, Performance, and Governance**

This table reports descriptive statistics for variables used to analyze a sample of 190 banks from 2003 through 2011. We first collect environmental, social, and governance (ESG) ratings of largest 3,000 publicly traded companies from MSCI ESG STATS. We then merge the ESG ratings data for financial institutions with the Call Reports database from FFIEC. Eliminating banks with only one year of ESG rating observation results in 1,712 bank-year observations with an average of 190 banks per year. Measures of board composition are collected from RiskMetrics Directors database, supplemented with data collected from proxy statements when RiskMetrics data were not available.

Panel A: Whole Sample

Variable	N	Mean	Median	Minimum	Maximum	Std. Dev.
All Strengths	1,712	1.56	1.00	0.00	15.00	2.26
All Concerns	1,712	1.22	1.00	0.00	11.00	1.53
Total Assets (\$ billions)	1,712	38.89	3.53	0.12	1,930.83	177.35
ROA Industry Adjusted	1,712	-0.16%	0.07%	-36.11%	5.50%	1.54%
Tier 1 Capital Ratio	1,712	11.51%	10.71%	3.51%	61.58%	3.85%
Fees to Deposits	1,712	0.53%	0.47%	0.00%	3.67%	0.36%
% Low Income Counties	1,712	41.93%	40.00%	0.00%	100.00%	26.73%

Panel B: Subsample with Governance Variables

Variable	N	Mean	Median	Minimum	Maximum	Std. Dev.
All Strengths	918	2.08	1.00	0.00	15.00	2.80
All Concerns	918	1.47	1.00	0.00	11.00	1.83
Total Assets (\$ billions)	918	68.71	7.41	0.28	1930.83	237.84
ROA Industry Adjusted	918	-0.16%	0.07%	-36.11%	4.73%	1.74%
Tier 1 Capital Ratio	918	11.59%	10.69%	3.51%	61.58%	4.40%
Fees to Deposits	918	0.57%	0.54%	0.00%	3.67%	0.41%
% Low Income Counties	918	43.23%	43.48%	0.00%	100.00%	24.42%
% Indep. Directors	918	74.87%	77.35%	27.27%	100.00%	12.71%
CEO-Chair Duality	918	55.45%	100.00%	0.00%	100.00%	49.73%
% Fem & Minority Dir's	918	17.23%	14.29%	0.00%	122.22%	15.96%
Median Tenure Dir's	918	9.39	9.00	2.00	26.00	4.11

Table 3**Corporate Social Responsibility Regressions**

This table reports OLS regression results in which we examine determinants of Corporate Social Responsibility ESG ratings. Panel A includes the entire sample period (2003-2011), panel B examines years before and at the start of the financial crisis (2003-2009), and panel C includes the period 2010-2011. We collect environmental, social, and governance (ESG) ratings of largest 3,000 publicly traded companies from MSCI ESG STATS. We then merge the ESG ratings data for financial institutions with the Consolidated Report of Condition and Income (i.e., Call Reports) database from Federal Financial Institutions Examination Council (FFIEC). This combined dataset is the base for all our analyses. Eliminating banks with only one year of ESG rating observation results in 1,712 bank-year observations with an average of 190 banks per year. Measures of board composition are collected from RiskMetrics Directors database, supplemented with data collected from proxy statements when RiskMetrics data were not available. *** p<0.01, ** p<0.05, * p<0.10.

Panel A: All Years

	(1)	(2)	(3)	(4)	(5)	(6)
	ESG Index	All Strengths	All Concerns	ESG Index	All Strengths	All Concerns
Log Total Assets	-2.197*	-7.568***	-5.371***	-1.522	-8.158***	-6.636***
Log Total Assets Squared	0.081**	0.259***	0.178***	0.057	0.273***	0.215***
ROA Industry Adjusted	5.706*	7.005**	1.299	9.811**	12.935**	3.124
Tier 1 Capital Ratio	2.503*	5.511***	3.008***	3.490	6.417**	2.927*
High Fees Dummy	-0.149	-0.321**	-0.172*	0.056	-0.270	-0.325**
% Low Income Counties	-0.024	0.083	0.106	0.431	0.094	-0.337
Post Crisis Dummy	-1.575***	-0.728***	0.847***	-1.016***	-0.545***	0.471***
% Independent Directors				0.540	0.304	-0.236
% Female & Minority Directors				3.768***	3.178***	-0.591*
CEO-Chair Duality				-0.041	0.037	0.078
Director Tenure				-0.019	-0.025	-0.006
Constant	14.812	55.675***	40.863***	8.843	60.943***	52.100***
Adjusted R-Squared	0.22	0.58	0.48	0.25	0.64	0.53
N	1712	1712	1712	918	918	918

Panel B: 2003-2009

	(1) ESG Index	(2) All Strengths	(3) All Concerns	(4) ESG Index	(5) All Strengths	(6) All Concerns
Log Total Assets	-1.567	-7.091***	-5.524***	-0.765	-7.931***	-7.166***
Log Total Assets Squared	0.054	0.239***	0.186***	0.027	0.260***	0.233***
ROA Industry Adjusted	4.461	5.117*	0.656	4.923	7.566	2.643
Tier 1 Capital Ratio	-0.389	3.129	3.518**	-1.677	2.238	3.915**
High Fees Dummy	-0.128	-0.296*	-0.168	0.147	-0.206	-0.353**
% Low Income Counties	-0.144	0.055	0.198	0.502	0.119	-0.383
% Independent Directors				-0.424	-0.264	0.159
% Female & Minority Directors				4.131***	3.920***	-0.211
CEO-Chair Duality				-0.295	-0.150	0.145
Director Tenure				-0.002	0.003	0.005
Constant	12.099	53.453***	41.354***	5.886	61.291***	55.405***
Adjusted R-Squared	0.05	0.52	0.52	0.16	0.63	0.59
N	1359	1359	1359	707	707	707

Panel C: 2010-2011

	(1) ESG Index	(2) All Strengths	(3) All Concerns	(4) ESG Index	(5) All Strengths	(6) All Concerns
Log Total Assets	-2.178	-7.968***	-5.790***	-0.777	-7.013***	-6.236***
Log Total Assets Squared	0.108**	0.288***	0.180***	0.062	0.256***	0.195***
ROA Industry Adjusted	19.927	18.198	-1.729	29.416	40.359**	10.943*
Tier 1 Capital Ratio	6.747**	8.448***	1.701	11.992***	12.669***	0.677
High Fees Dummy	-0.528	-0.574*	-0.046	-0.654	-0.736*	-0.082
% Low Income Counties	0.115	0.004	-0.111	0.301	0.158	-0.143
% Independent Directors				4.088***	2.585*	-1.503**
% Female & Minority Directors				2.944**	1.658	-1.285**
CEO-Chair Duality				0.527	0.485	-0.042
Director Tenure				-0.007	-0.066*	-0.060***
Constant	5.402	53.636***	48.234***	-9.443	43.955***	53.398***
Adjusted R-Squared	0.60	0.77	0.30	0.60	0.77	0.39
N	353	353	353	211	211	211

Table 4**Corporate Social Responsibility Regressions by Size Group**

This table reports regression results in which we examine determinants of Corporate Social Responsibility ESG ratings by size of the sample banks. We examine the sample banks based on three size groups consistent with FDIC size groupings: total assets less than \$10 billion, total assets between \$10 billion and \$100 billion, and total assets greater than \$100 billion. Panel A includes the entire sample period (2003-2011), panel B examines years before and at the start of the financial crisis (2003-2009), and panel C includes the period 2010-2011. We collect environmental, social, and governance (ESG) ratings of largest 3,000 publicly traded companies from MSCI ESG STATS. We then merge the ESG ratings data for financial institutions with the Consolidated Report of Condition and Income (i.e., Call Reports) database from Federal Financial Institutions Examination Council (FFIEC). This combined dataset is the base for all our analyses. *** p<0.01, ** p<0.05, * p<0.10.

Panel A: All Years

	Banks with TA<\$10B		Banks with \$10B<=TA<\$100B		Banks with TA>=\$100B	
	All Strengths	All Concerns	All Strengths	All Concerns	All Strengths	All Concerns
Log Total Assets	0.173**	0.035	1.839***	0.889***	3.681***	2.777***
ROA Industry Adjusted	1.337	-0.896	33.275*	6.147	54.710**	14.037
Tier 1 Capital Ratio	3.329***	2.287***	23.927***	15.697**	21.065	-0.198
High Fees Dummy	-0.139	-0.068	-0.055	-0.226	-2.631***	-1.024***
% Low Income Counties	-0.051	0.220	-0.395	-0.677	0.278	-0.881
Post Crisis Dummy	-1.175***	1.235***	-0.328	0.090	2.003***	-1.271**
Constant	-1.652	-0.135	-31.231***	-14.981***	-65.908***	-48.702***
Adjusted R-Squared	0.17	0.25	0.31	0.27	0.82	0.78
N	1281	1281	327	327	104	104

Panel B: 2003-2009

	Banks with TA<\$10B		Banks with \$10B<=TA<\$100B		Banks with TA>=\$100B	
	All Strengths	All Concerns	All Strengths	All Concerns	All Strengths	All Concerns
Log Total Assets	0.172	0.168**	1.364***	0.794***	3.873***	2.940***
ROA Industry Adjusted	-0.036	-2.475*	36.092**	6.971	46.571**	24.751
Tier 1 Capital Ratio	1.122	2.249	15.488**	15.510***	18.163	-10.934
High Fees Dummy	-0.182	-0.042	0.176	-0.253	-2.740**	-1.603**
% Low Income Counties	-0.019	0.314	0.240	-0.892**	-0.799	-1.215
Constant	-1.504	-2.330*	-23.013***	-13.474***	-68.591***	-50.835***
Adjusted R-Squared	0.03	0.05	0.24	0.26	0.78	0.85
N	1031	1031	250	250	78	78

Panel C: 2010-2011

	Banks with TA<\$10B		Banks with \$10B<=TA<\$100B		Banks with TA>=\$100B	
	All Strengths	All Concerns	All Strengths	All Concerns	All Strengths	All Concerns
Log Total Assets	0.079	-0.530***	3.715***	1.205**	3.355***	2.385***
ROA Industry Adjusted	-4.750*	-6.073	25.809	-1.305	188.257***	-37.706
Tier 1 Capital Ratio	5.941***	1.082	43.905***	14.155	48.606**	21.125
High Fees Dummy	-0.004	0.008	-0.660	-0.118	-1.444*	0.153
% Low Income Counties	0.064	0.097	-2.325	-0.102	3.133	-2.308*
Constant	-1.926***	10.103***	-64.429***	-20.200**	-63.671***	-46.238***
Adjusted R-Squared	0.44	0.30	0.55	0.20	0.90	0.82
N	250	250	77	77	26	26

Table 5

Corporate Social Responsibility Regressions by Size Group – Subsample with Governance Variables

This table reports regression results in which we examine determinants of Corporate Social Responsibility ESG ratings by size of the sample banks. We examine the sample banks based on three size groups consistent with FDIC size groupings: total assets less than \$10 billion, total assets between \$10 billion and \$100 billion, and total assets greater than \$100 billion. Panel A includes the entire sample period (2003-2011), panel B examines years before and at the start of the financial crisis (2003-2009), and panel C includes the period 2010-2011. We collect environmental, social, and governance (ESG) ratings of largest 3,000 publicly traded companies from MSCI ESG STATS. We then merge the ESG ratings data for financial institutions with the Consolidated Report of Condition and Income (i.e., Call Reports) database from Federal Financial Institutions Examination Council (FFIEC). This combined dataset is the base for all our analyses. Measures of board composition are collected from RiskMetrics Directors database, supplemented with data collected from proxy statements when RiskMetrics data were not available. *** p<0.01, ** p<0.05, * p<0.10.

Panel A: All Years

	Banks with TA<\$10B		Banks with \$10B<=TA<\$100B		Banks with TA>=\$100B	
	All Strengths	All Concerns	All Strengths	All Concerns	All Strengths	All Concerns
Log Total Assets	0.212**	0.039	1.821***	0.893***	3.285***	2.836***
ROA Industry Adjusted	2.619	-2.229	41.471**	4.975	27.157*	22.181
Tier 1 Capital Ratio	3.720***	2.034**	22.683***	19.331***	20.394	-2.277
High Fees Dummy	-0.053	-0.103	0.153	-0.282	-2.243**	-1.336***
% Low Income Counties	-0.022	-0.265	-0.373	-0.907	0.688	-1.138
% Independent Directors	0.450	-0.225	-0.173	0.145	-2.119	-0.457
% Female & Minority Directors	2.469***	-0.903*	2.921***	-0.679	7.413**	-2.311
CEO-Chair Duality	0.105	0.164	0.216	0.202	-0.335	0.352
Director Tenure	0.002	0.006	-0.072	-0.037	0.068	-0.098
Post Crisis Dummy	-1.279***	0.887***	-0.390	0.040	1.942**	-1.183*
Constant	-2.964*	0.294	-30.827***	-15.060***	-59.270***	-47.719***
Adjusted R-Squared	0.29	0.13	0.37	0.28	0.85	0.79
N	528	528	291	291	99	99

Panel B: 2003-2009

	Banks with TA<\$10B		Banks with \$10B<=TA<\$100B		Banks with TA>=\$100B	
	All Strengths	All Concerns	All Strengths	All Concerns	All Strengths	All Concerns
Log Total Assets	0.211	0.179	1.360***	0.826***	3.223***	2.999***
ROA Industry Adjusted	-1.200	-3.563	40.316**	5.599	7.712	30.567
Tier 1 Capital Ratio	0.368	2.448	12.473*	19.829***	34.048	-15.720
High Fees Dummy	-0.113	-0.086	0.393	-0.278	-1.551	-2.123***
% Low Income Counties	0.154	-0.298	0.243	-1.253**	-2.405	-2.388
% Independent Directors	0.633	-0.015	-1.447	0.436	-3.089	-1.985
% Female & Minority Directors	3.107***	-0.748	3.467***	0.026	10.244**	-2.060
CEO-Chair Duality	0.095	0.185	-0.200	0.263	-0.100	0.805*
Director Tenure	0.002	0.017	-0.022	-0.021	0.005	-0.135**
Constant	-2.643	-2.387	-21.936***	-14.605***	-57.717***	-47.582***
Adjusted R-Squared	0.17	0.03	0.30	0.28	0.84	0.87
N	415	415	217	217	75	75

Panel C: 2010-2011

	Banks with TA<\$10B		Banks with \$10B<=TA<\$100B		Banks with TA>=\$100B	
	All Strengths	All Concerns	All Strengths	All Concerns	All Strengths	All Concerns
Log Total Assets	0.121	-0.751***	3.063***	1.271**	3.206***	2.502***
ROA Industry Adjusted	-2.538	-1.776	24.974	-0.561	227.716***	-17.181
Tier 1 Capital Ratio	7.541***	-1.487	44.258**	19.495	23.054	50.597**
High Fees Dummy	0.078	0.056	-0.502	0.019	-1.288***	0.995
% Low Income Counties	0.152	0.360	-1.665	-0.340	8.810***	-4.737**
% Independent Directors	-0.125	-1.688**	3.758	-2.593	7.330*	6.873
% Female & Minority Directors	0.651**	-1.634***	1.689	-1.533	4.226	-8.122**
CEO-Chair Duality	-0.157	-0.027	1.714	-0.305	0.438	0.415
Director Tenure	0.010	-0.050***	-0.198*	-0.061	-0.143	-0.147
Constant	-2.890*	15.593***	-57.063***	-18.947**	-67.867***	-53.960***
Adjusted R-Squared	0.59	0.44	0.61	0.24	0.96	0.85
N	113	113	74	74	24	24

Table 6

Corporate Social Responsibility Regressions by Size Group – Low Income Concentration

This table reports regression results in which we examine determinants of Corporate Social Responsibility ESG ratings by size of the sample banks. Low income dummy is equal to 1 if the percentage of low income counties served is above the sample median, and 0 otherwise. Panel A includes banks with low concentration in low income communities. Panel B includes banks with high concentration in low income communities. We collect environmental, social, and governance (ESG) ratings of largest 3,000 publicly traded companies from MSCI ESG STATS. We then merge the ESG ratings data for financial institutions with the Consolidated Report of Condition and Income (i.e., Call Reports) database from Federal Financial Institutions Examination Council (FFIEC). This combined dataset is the base for all our analyses. *** p<0.01, ** p<0.05, * p<0.10.

Panel A: Little Concentration in Low Income Communities

	Banks with TA<\$10B		Banks with \$10B<=TA<\$100B		Banks with TA>=\$100B	
	All Strengths	All Concerns	All Strengths	All Concerns	All Strengths	All Concerns
Log Total Assets	0.256**	0.039	1.463***	0.961**	5.601***	3.658***
ROA Industry Adjusted	1.663	-2.806**	71.378**	-8.576	-12.151	25.142
Tier 1 Capital Ratio	3.849***	2.173***	29.489**	21.109**	-51.985	-15.341
High Fees Dummy	-0.259	-0.207	-0.223	-0.375	0.617	0.194
Post Crisis Dummy	-1.198***	1.325***	-0.304	-0.152	5.348*	0.088
Constant	-2.931*	-0.138	-25.570***	-16.780***	-98.340**	-65.744**
Adjusted R-Squared	0.18	0.29	0.36	0.26	0.76	0.69
N	675	675	165	165	22	22

Panel B: High Concentration in Low Income Communities

	Banks with TA<\$10B		Banks with \$10B<=TA<\$100B		Banks with TA>=\$100B	
	All Strengths	All Concerns	All Strengths	All Concerns	All Strengths	All Concerns
Log Total Assets	0.075	0.059	2.252***	0.842***	3.703***	2.772***
ROA Industry Adjusted	2.433	4.668	8.517	14.088**	49.875**	9.781
Tier 1 Capital Ratio	0.831	0.604	19.443**	11.206*	24.026*	-3.639
High Fees Dummy	-0.107	0.086	0.485	-0.168	-2.890***	-1.075***
Post Crisis Dummy	-1.089***	1.167***	-0.289	0.321	1.876***	-1.376**
Constant	0.056	-0.239	-38.339***	-14.148***	-66.410***	-48.660***
Adjusted R-Squared	0.16	0.20	0.34	0.27	0.85	0.79
N	606	606	162	162	82	82

Table 7**Corporate Social Responsibility Regressions by Size Group – Low Income Concentration, Subsample with Governance Variables**

This table reports regression results in which we examine determinants of Corporate Social Responsibility ESG ratings by size of the sample banks. Low income dummy is equal to 1 if the percentage of low income counties served is above the sample median, and 0 otherwise. Panel A includes banks with low concentration in low income communities. Panel B includes banks with high concentration in low income communities. We collect environmental, social, and governance (ESG) ratings of largest 3,000 publicly traded companies from MSCI ESG STATS. We then merge the ESG ratings data for financial institutions with the Consolidated Report of Condition and Income (i.e., Call Reports) database from Federal Financial Institutions Examination Council (FFIEC). This combined dataset is the base for all our analyses. Measures of board composition are collected from RiskMetrics Directors database, supplemented with data collected from proxy statements when RiskMetrics data were not available. *** p<0.01, ** p<0.05, * p<0.10.

Panel A: Low Concentration in Low Income Communities

	Banks with TA<\$10B		Banks with \$10B<=TA<\$100B		Banks with TA>=\$100B	
	All Strengths	All Concerns	All Strengths	All Concerns	All Strengths	All Concerns
Log Total Assets	0.234	0.037	1.583***	0.966**	7.394***	5.431***
ROA Industry Adjusted	2.412	-3.023	66.647**	-20.036	144.362	194.879*
Tier 1 Capital Ratio	4.396***	2.188*	32.319**	31.964***	-117.800	-86.927
High Fees Dummy	-0.143	-0.336	-0.065	-0.497	3.401*	0.647
% Independent Directors	0.630	-0.485	-0.874	-0.311	12.651	6.806
% Female & Minority Directors	3.023***	-0.102	4.169***	-1.449***	-0.404	-9.440
CEO-Chair Duality	0.255	0.303	0.586	0.426*	-1.674	-1.343
Director Tenure	-0.008	0.004	-0.069	0.005	0.680	0.282
Post Crisis Dummy	-1.199***	0.826***	-0.584	-0.379	2.172	1.100
Constant	-3.639	0.353	-27.894***	-17.662***	-144.223***	-98.647***
Adjusted R-Squared	0.29	0.10	0.45	0.29	0.79	0.77
N	255	255	146	146	18	18

Panel B: High Concentration in Low Income Communities

	Banks with TA<\$10B		Banks with \$10B<=TA<\$100B		Banks with TA>=\$100B	
	All Strengths	All Concerns	All Strengths	All Concerns	All Strengths	All Concerns
Log Total Assets	0.087	0.049	2.329***	0.683***	3.406***	2.742***
ROA Industry Adjusted	7.071*	5.986	17.545	21.212**	24.434*	21.469
Tier 1 Capital Ratio	-1.124	-4.375	16.855**	13.085**	20.749	-6.920
High Fees Dummy	-0.144	0.126	0.531	-0.179	-2.963***	-1.124**
% Independent Directors	0.510	0.421	-0.459	1.121	-4.739*	0.123
% Female & Minority Directors	1.953***	-1.655***	1.435	-0.155	6.399*	-1.278
CEO-Chair Duality	-0.021	-0.051	-0.338	0.428	-0.323	0.368
Director Tenure	0.013	0.013	-0.050	-0.081***	0.068	-0.133**
Post Crisis Dummy	-1.241***	1.116***	-0.214	0.299	2.328***	-1.355**
Constant	-0.427	0.150	-38.637***	-11.942***	-58.646***	-46.596***
Adjusted R-Squared	0.31	0.23	0.37	0.33	0.89	0.80
N	273	273	145	145	81	81

Table 8

Financial Performance Regressions by Size Group

This table reports IV-GMM regression results in which we examine determinants of financial performance by size group. Sample is based on the subset of banks with governance variables. Panel A includes banks with total assets less than \$10 billion. Panel B includes banks with total assets \$10 billion and \$100 billion. Panel C includes banks with total assets greater than \$100 billion. As instruments, we use *Post Crisis Dummy*, *Log Total Assets*, *Tier 1 Capital Ratio*, *High Fees Dummy*, *Percentage of Low Income Counties*, *Percentage of Independent Directors*, *CEO-Chair Duality*, *Median Tenure of Directors*, and *Percentage of Female and Minority Directors*. We collect environmental, social, and governance (ESG) ratings of largest 3,000 publicly traded companies from MSCI ESG STATS. We then merge the ESG ratings data for financial institutions with the Consolidated Report of Condition and Income (i.e., Call Reports) database from Federal Financial Institutions Examination Council (FFIEC). This combined dataset is the base for all our analyses. *** p<0.01, ** p<0.05, * p<0.10.

Panel A: Banks with total assets less than \$10 billion

	(1)	(2)	(3)	(4)	(5)	(6)
	ROA Industry Adjusted	ROA Industry Adjusted	ROA Industry Adjusted	ROE Industry Adjusted	ROE Industry Adjusted	ROE Industry Adjusted
Lag ROA	0.287***	0.279***	0.286***			
Lag ROE				0.672***	0.660***	0.685***
Crisis Dummy	-0.005***	-0.005***	-0.005***	-0.051***	-0.051***	-0.049***
ESG Index	-0.001			-0.003		
All Strengths		-0.001			-0.006	
All Concerns			0.001			0.007
Constant	0.000	0.001	-0.001	-0.002	0.004	-0.009
Adjusted R-squared	0.05	0.05	0.05	0.18	0.17	0.18
N	521	521	521	521	521	521
Angrist-Pischke F-statistic	23.70***	21.09***	7.25***	22.61***	21.66***	7.90***
Hansen-J Chi-sq statistic	8.03	7.44	8.45	6.15	5.90	6.46

Panel B: Banks with total assets between \$10 billion and \$100 billion

	(1)	(2)	(3)	(4)	(5)	(6)
	ROA Industry Adjusted	ROA Industry Adjusted	ROA Industry Adjusted	ROE Industry Adjusted	ROE Industry Adjusted	ROE Industry Adjusted
Lag ROA	0.672***	0.661***	0.669***			
Lag ROE				0.505***	0.502***	0.530***
Crisis Dummy	-0.000	-0.000	-0.000	-0.006	-0.007	-0.008
ESG Index	-0.000			-0.003		
All Strengths		-0.000			-0.003	
All Concerns			-0.000			-0.008
Constant	-0.000	0.000	-0.000	0.003	0.008	0.012
Adjusted R-squared	0.35	0.35	0.35	0.17	0.17	0.14
N	283	283	283	283	283	283
Angrist-Pischke F-statistic	3.53***	7.69***	2.83***	3.69***	8.14***	2.70**
Hansen-J Chi-sq statistic	12.51	12.37	12.44	11.01	10.94	11.23

Panel C: Banks with total assets greater than \$100 billion

	(1)	(2)	(3)	(4)	(5)	(6)
	ROA Industry Adjusted	ROA Industry Adjusted	ROA Industry Adjusted	ROE Industry Adjusted	ROE Industry Adjusted	ROE Industry Adjusted
Lag ROA	0.388***	0.369***	0.377***			
Lag ROE				0.313***	0.369***	0.398***
Crisis Dummy	-0.002	-0.002**	-0.002**	-0.012	-0.009	-0.009
ESG Index	0.0002***			0.002***		
All Strengths		0.0001**			0.001**	
All Concerns			-0.000			0.000
Constant	-0.000	-0.000	0.000	-0.006	-0.006	0.001
Adjusted R-squared	0.13	0.13	0.11	0.14	0.13	0.12
N	98	98	98	98	98	98
Angrist-Pischke F-statistic	10.10***	43.23***	675.28***	10.08***	46.15***	1,164.58***
Hansen-J Chi-sq statistic	8.23	8.53	7.91	6.89	8.00	8.70

Table 9

Financial Performance Regressions by Size Group – No Governance Indicators Included in the CSR Scores

This table reports IV-GMM regression results in which we examine determinants of financial performance by size group. Sample is based on the subset of banks with governance variables. *ESG Index Adjusted*, *All Strengths Adjusted* and *All Concerns Adjusted* variables are adjusted following Servaes and Tamayo (2013) by removing the corporate governance indicators, and by scaling by maximum strength and concern scores for each category and year. Panel A includes banks with total assets less than \$10 billion. Panel B includes banks with total assets \$10 billion and \$100 billion. Panel C includes banks with total assets greater than \$100 billion. As instruments, we use *Post Crisis Dummy*, *Log Total Assets*, *Tier 1 Capital Ratio*, *High Fees Dummy*, *Percentage of Low Income Counties*, *Percentage of Independent Directors*, *CEO-Chair Duality*, *Median Tenure of Directors*, and *Percentage of Female and Minority Directors*. We collect environmental, social, and governance (ESG) ratings of largest 3,000 publicly traded companies from MSCI ESG STATS. We then merge the ESG ratings data for financial institutions with the Consolidated Report of Condition and Income (i.e., Call Reports) database from Federal Financial Institutions Examination Council (FFIEC). This combined dataset is the base for all our analyses. *** p<0.01, ** p<0.05, * p<0.10.

Panel A: Banks with total assets less than \$10 billion

	(1)	(2)	(3)	(4)	(5)	(6)
	ROA Industry Adjusted	ROA Industry Adjusted	ROA Industry Adjusted	ROE Industry Adjusted	ROE Industry Adjusted	ROE Industry Adjusted
Lag ROA	0.285***	0.272***	0.303***			
Lag ROE				0.669***	0.656***	0.694***
Crisis Dummy	-0.005***	-0.006***	-0.005***	-0.052***	-0.051***	-0.048***
ESG Index Adjusted	-0.012			-0.088		
All Strengths Adjusted		-0.022			-0.113	
All Concerns Adjusted			0.037			0.230
Constant	-0.000	0.001	-0.002	-0.003	0.003	-0.015
Adjusted R-squared	0.05	0.06	0.04	0.18	0.17	0.17
N	521	521	521	521	521	521
Angrist-Pischke F-statistic	12.67***	10.70***	3.89***	11.98***	11.53***	4.45***
Hansen-J Chi-sq statistic	7.32	8.33	6.22	5.75	5.87	5.79

Panel B: Banks with total assets between \$10 billion and \$100 billion

	(1)	(2)	(3)	(4)	(5)	(6)
	ROA Industry Adjusted	ROA Industry Adjusted	ROA Industry Adjusted	ROE Industry Adjusted	ROE Industry Adjusted	ROE Industry Adjusted
Lag ROA	0.682***	0.670***	0.667***			
Lag ROE				0.510***	0.504***	0.532***
Crisis Dummy	-0.000	-0.000	-0.001	-0.007	-0.009	-0.010
ESG Index Adjusted	-0.004			-0.039		
All Strengths Adjusted		-0.003			-0.047	
All Concerns Adjusted			-0.009			-0.188
Constant	-0.000	-0.000	0.000	0.002	0.006	0.013
Adjusted R-squared	0.35	0.35	0.35	0.17	0.17	0.14
N	283	283	283	283	283	283
Angrist-Pischke F-statistic	4.44***	9.81***	1.54	4.40***	9.61***	1.54
Hansen-J Chi-sq statistic	12.82	12.54	12.39	11.19	11.16	10.95

Panel C: Banks with total assets greater than \$100 billion

	(1)	(2)	(3)	(4)	(5)	(6)
	ROA Industry Adjusted	ROA Industry Adjusted	ROA Industry Adjusted	ROE Industry Adjusted	ROE Industry Adjusted	ROE Industry Adjusted
Lag ROA	0.400***	0.355***	0.378***			
Lag ROE				0.385***	0.363***	0.396***
Crisis Dummy	-0.000	-0.002**	-0.002**	-0.003	-0.010	-0.009
ESG Index Adjusted	0.008***			0.077***		
All Strengths Adjusted		0.003**			0.035***	
All Concerns Adjusted			-0.001			0.001
Constant	-0.001*	-0.001	0.000	-0.010**	-0.009*	0.002
Adjusted R-squared	0.11	0.13	0.11	0.12	0.13	0.12
N	98	98	98	98	98	98
Angrist-Pischke F-statistic	5.59***	30.08***	142.45***	5.56***	30.72***	162.63***
Hansen-J Chi-sq statistic	6.49	8.15	7.95	6.82	7.62	8.88

Table 10

Financial Performance Regressions by Size Group – Only 45 ESG Indicators Used in CSR Scores

This table reports IV-GMM regression results in which we examine determinants of financial performance by size group. Sample is based on the subset of banks with governance variables. *ESG Index Consistent*, *All Strengths Consistent* and *All Concerns Consistent* variables are constructed using 45 ESG indicators that have been consistently used for 2003-2011 period in the MSCI ESG STATS database. Panel A includes banks with total assets less than \$10 billion. Panel B includes banks with total assets \$10 billion and \$100 billion. Panel C includes banks with total assets greater than \$100 billion. As instruments, we use *Post Crisis Dummy*, *Log Total Assets*, *Tier 1 Capital Ratio*, *High Fees Dummy*, *Percentage of Low Income Counties*, *Percentage of Independent Directors*, *CEO-Chair Duality*, *Median Tenure of Directors*, and *Percentage of Female and Minority Directors*. We collect environmental, social, and governance (ESG) ratings of largest 3,000 publicly traded companies from MSCI ESG STATS. We then merge the ESG ratings data for financial institutions with the Consolidated Report of Condition and Income (i.e., Call Reports) database from Federal Financial Institutions Examination Council (FFIEC). This combined dataset is the base for all our analyses. *** p<0.01, ** p<0.05, * p<0.10.

Panel A: Banks with total assets less than \$10 billion

	(1)	(2)	(3)	(4)	(5)	(6)
	ROA Industry Adjusted	ROA Industry Adjusted	ROA Industry Adjusted	ROE Industry Adjusted	ROE Industry Adjusted	ROE Industry Adjusted
Lag ROA	0.292***	0.270***	0.291***			
Lag ROE				0.665***	0.630***	0.710***
Crisis Dummy	-0.005***	-0.005***	-0.006***	-0.051***	-0.050***	-0.048***
ESG Index Consistent	-0.002			-0.013		
All Strengths Consistent		-0.004			-0.017	
All Concerns Consistent			0.003			0.021
Constant	-0.000	0.001	-0.001	-0.003	0.004	-0.012
Adjusted R-squared	0.05	0.06	0.04	0.17	0.17	0.17
N	521	521	521	521	521	521
Angrist-Pischke F-statistic	11.76***	6.33***	5.97***	11.30***	9.69***	8.09***
Hansen-J Chi-sq statistic	5.34	5.85	5.93	5.17	5.26	5.55

Panel B: Banks with total assets between \$10 billion and \$100 billion

	(1)	(2)	(3)	(4)	(5)	(6)
	ROA Industry Adjusted	ROA Industry Adjusted	ROA Industry Adjusted	ROE Industry Adjusted	ROE Industry Adjusted	ROE Industry Adjusted
Lag ROA	0.669***	0.656***	0.683***			
Lag ROE				0.506***	0.502***	0.526***
Crisis Dummy	-0.000	-0.000	-0.000	-0.006	-0.006	-0.006
ESG Index Consistent	-0.000			-0.005		
All Strengths Consistent		-0.000			-0.005	
All Concerns Consistent			-0.000			-0.006
Constant	-0.000	-0.000	-0.000	0.005	0.007	0.004
Adjusted R-squared	0.35	0.35	0.36	0.17	0.16	0.16
N	283	283	283	283	283	283
Angrist-Pischke F-statistic	4.02***	6.06***	3.11***	3.95***	6.07***	3.06***
Hansen-J Chi-sq statistic	12.39	12.20	12.35	10.55	10.65	11.59

Panel C: Banks with total assets greater than \$100 billion

	(1)	(2)	(3)	(4)	(5)	(6)
	ROA Industry Adjusted	ROA Industry Adjusted	ROA Industry Adjusted	ROE Industry Adjusted	ROE Industry Adjusted	ROE Industry Adjusted
Lag ROA	0.368***	0.364***	0.388***			
Lag ROE				0.285***	0.350***	0.408***
Crisis Dummy	-0.002*	-0.002**	-0.002**	-0.012	-0.008	-0.008
ESG Index Consistent	0.0002***			0.002***		
All Strengths Consistent		0.0001**			0.002***	
All Concerns Consistent			-0.000			0.001
Constant	-0.000	-0.000	0.000	-0.005	-0.007	0.000
Adjusted R-squared	0.13	0.13	0.11	0.13	0.13	0.12
N	98	98	98	98	98	98
Angrist-Pischke F-statistic	27.05***	92.21***	554.34***	29.81***	91.80***	578.28***
Hansen-J Chi-sq statistic	8.27	8.48	8.28	6.19	7.28	9.09