Corporate Social Responsibility in the Financial Industry

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June 2020

Abstract

Companies across industries became more engaged in corporate social responsibility (CSR) after the 2008 financial crisis. However, the postcrisis growth of CSR engagement is slower in the financial industry relative to other industries. Financial constraints and marketing considerations do not explain this trend. We conjecture that tightened government regulations on the financial industry contribute to slower CSR growth. Accordingly, we find that slower CSR growth occurs mostly after the introduction of the 2010 Dodd Frank Act. It is more pronounced in depository institutions, which are more heavily regulated after the crisis, and in financial firms facing more regulatory pressure.

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1. Introduction

Corporate social responsibility (CSR) is a concept in which every business focuses on not only shareholder value, but also the welfare of other stakeholders. This concept contradicts traditional economic theories, which suggest that firms should maximize shareholder value rather than internalize any externalities on nonshareholding stakeholders. However, investors have gradually become more socially conscious and pressure firms to emphasize CSR.[1] This pressure is especially strong in financial firms. During the 2008 financial crisis, the public perceived financial firms as greedy and irresponsible. Since then, financial firms have tried hard to restore public trust. However, the question remains whether financial firms truly accelerated their commitments to CSR or just walked the CSR talk for the sake of greenwashing. Our paper addresses this question by studying CSR trends in the financial industry relative to other industries.

Financial firms play two roles in the evolving trend of social responsibility. First, they serve as an intermediary to consolidate the social agendas of dispersed investors and pressure portfolio firms on behalf of these socially responsible but dispersed investors. This intermediary role is well studied in the literature. Many studies find that institutional investors and financial institutions leverage their investing and lending choices to pressure portfolio firms to commit to CSR. Anecdotal evidence also supports this intermediary role.[2]

Second, financial firms commit their own resources to certain social agendas. In contrast to the intermediary role, this direct CSR engagement is not well studied. On one hand, anecdotal

[1] For example, in August 2019, the Business Roundtable, an association of leading U.S. CEOs, redefined the definition of the purpose of a corporation to be more stakeholder focused. Jamie Dimon, chairman and CEO of JPMorgan Chase & Co. and chairman of Business Roundtable, specifically suggested firms invest in their workers and communities.

[2] For example, in a 2018 annual letter to CEOs, Larry Fink, chairman and CEO of Blackrock, Inc., made it clear that Blackrock has increasingly integrated environment, society, and governance (ESG) issues into their investment process and urged portfolio firms to focus more on ESG matters. In February 2020, JP Morgan restricted financing to new coal-fired power plants, phased out the industry, and stopped funding new oil and gas drilling projects in the Arctic. The Loan Market Association also published Sustainability Linked Loan Principles in 2019 to guide the use of loan instrument terms that promote borrowers' sustainability goals.

evidence suggests that some financial firms excel in CSR. For example, the *Chronicle of Philanthropy's* 2018 report examined 19 years of data on philanthropic contributions from the country's largest public companies. It found that financial firms are one of the two biggest givers of cash (together with drug companies). Financial firms are also well represented in various *Fortune* lists of most generous companies, best companies to work for, etc. On the other hand, anecdotal evidence shows slow growth of CSR engagement in some financial institutions. For example, a report by McKinsey in 2020 shows that charitable giving by insurance companies has not grown much since 2015.[3] Thus, it is still an empirical question whether direct CSR engagement among financial firms follows the same standards they pressure their portfolio firms to follow. Do financial firms use their intermediary role to discipline portfolio firms and satisfy the public's CSR demand while relaxing their own commitment to CSR? Or does the social consciousness of financial firms drive them to discipline their portfolio firms and themselves to commit to CSR? Also, if there are different CSR commitments between financial firms and their portfolio firms, do intrinsic double standards or certain external and exogenous factors drive the differences? Our paper sheds some light on these and related questions. In particular, we study whether growth in CSR engagement in the financial industry is similar to other industries. We also study the factors that contribute to different trends in CSR engagement between the financial industry and other industries.

We study the CSR trend over two periods: 2003-2007, which is prior to the financial crisis, and the postcrisis period after 2008. The financial crisis caused public outrage toward the financial industry and severely damaged reputations and trustworthiness in the financial industry. The

[3] "Charitable giving in the insurance industry: Stakeholder roles evolve," by Riya Chhabra and Ido Segev, McKinsey & Company. It finds that insurance companies have gradually valued more balance between business needs and stakeholder interests for charitable programs.

damaged public image could induce financial firms to change their CSR strategies (see Lins, Servaes, and Tamayo, 2017). Considering this possibility, we use the financial crisis to disaggregate our sample period. We also compare the financial industry to other industries. In other words, we use CSR trends in nonfinancial industries as a benchmark and study CSR trends in the financial industry relative to this benchmark.

We find that CSR engagement experiences significant growth after the financial crisis in all industries. The financial industry's CSR growth is substantially slower after the financial crisis compared to other industries. The slower postcrisis CSR growth in the financial industry is puzzling, considering that the financial industry sought to regain trust from the public after the crisis. To understand this trend, we study several possibilities. The first possibility is that financial firms were more financially constrained after the crisis, and the financial constraint limited their capability to commit to CSR (Hong, Kubik, and Scheinkman, 2012). To test this possibility, we disaggregate our sample based on firm size, profitability, and financial leverage. We find that slow CSR growth after the financial crisis exists in financial firms of smaller size, lower profitability, and higher financial leverage, which are presumably more financially constrained. Thus, financial constraint does not seem to explain the slower postcrisis CSR growth in the financial industry.

Another possibility is that financial firms face less pressure to signal trustworthiness through CSR in the years further away from the crisis years. To test this possibility, we study advertising expenditures in the financial industry after the financial crisis. To signal their trustworthiness, financial firms need to advertise their CSR engagement to the public. Thus, if CSR marketing needs are lower, advertising expenditures should decrease. However, we find no supporting evidence. The pattern of advertising in the financial industry after the financial crisis does not differ from that in other industries.

It is also possible that institutional investors play a role in this trend. To study this possibility, we focus on how institutional investor holdings affect CSR. We find that institutional investor holdings grow faster after the financial crisis in the financial industry compared to other industries. We also find that CSR engagement grows faster for those with higher institutional investor holdings. These two findings do not reconcile with our finding of slower CSR growth in the financial industry.

We conjecture that more stringent government regulations after the financial crisis could drive the slower CSR growth in the financial industry. Financial regulations could limit the resources available for a firm to commit to CSR. The resources could be capital, labor, time commitment, leadership attention, etc. Regulations could also change a firm's strategic focus from nongovernment stakeholders to government regulators. Consequently, firm management could back off from some of their social agenda and devote more effort and resources to satisfy regulators.

We run three tests on this regulation argument. First, the Dodd–Frank Wall Street Reform and Consumer Protection Act (hereafter Dodd–Frank Act) was enacted on July 21, 2010, as a response to the 2008 financial crisis. It established several new government agencies to oversee various aspects of the financial industry. Thus, if financial regulation is indeed the reason for slower CSR growth in the financial industry, we expect the slower growth to occur mostly after the Dodd-Frank Act of 2010. As expected, we find that the CSR growth does not differ between financial and nonfinancial industries in the first two postcrisis years of 2008-2009. However, after 2010, the financial industry falls substantially behind on its CSR engagement compared to other industries.[4]

[4] We also find that financial constraint plays a partial role in the reduced CSR engagement in the financial industry after the Dodd-Frank Act. However, it does not fully explain the pattern because the pattern exists in financial firms

In the second test, we compare depository and nondepository institutions. The Dodd-Frank Act of 2010 targets sectors of the financial system believed to cause the 2008 financial crisis, such as depository institutions. Accordingly, depository institutions faced more government scrutiny and more stringent regulation after the financial crisis, compared to nondepository institutions. If so, according to our regulation argument, we expect slower CSR growth to be more pronounced in depository institutions than in nondepository institutions. Indeed, we find that the slower CSR growth after the Dodd-Frank Act occurs primarily in depository institutions but is less significant in nondepository institutions.

In the third test, we study how bank stress tests affect CSR engagement. During the financial crisis, the Federal Reserve's Supervisory Capital Assessment Program (SCAP) was created to conduct stress tests on the 19 systemically important U.S. bank-holding companies (BHCs) with at least $100 billion of consolidated assets. The Comprehensive Capital Analysis and Review (CCAR) was subsequently created to extend the stress test program to all U.S. BHCs with assets over $50 billion, plus Financial Stability Oversight Council (FSOC) designees. The test results were disclosed publicly starting in 2012. If financial regulations drive the change in CSR, we expect the impact to be more pronounced in the years when banks are subject to stress tests. As expected, we find that in bank-years when banks undergo stress tests, their CSR engagement declines substantially. In contrast, in the years when they were not in the stress test program, their CSR engagement outgrew both other financial institutions and other industrial firms.[5] These

with high financial constraints. Thus, it is possible that financial regulation restricts financial firms from engaging in CSR, including restricting their financial capacity to spend and restricting other nonfinancial capacities, such as time and strategic focus that companies can devote to CSR.

[5] This result is not surprising considering that the stress-test banks are those with largest capitalizations and thus have more resources to spend on CSR.

results confirm that intensified pressure from government regulation could reduce CSR engagement.

Next, we study whether shareholders can mitigate the adverse effect of financial regulations on CSR growth. In the face of stringent financial regulations, a financial firm could be more hesitant to shift its focus away from investors' CSR demand when investors more actively push their social agenda. Institutional shareholders have a stronger incentive and are more able to push for social agendas. For example, Chen, Dong, and Lin (2018) show that firms with higher institutional investor ownership face more pressures to engage in CSR. Accordingly, we expect slower CSR growth after the Dodd-Frank Act to be less pronounced in the financial firms with higher institutional investor holdings. Our findings support this expectation.

Finally, we study the trend of CSR growth separately in five CSR dimensions: diversity, community, human rights, employee rights, and environment.[6] We find that increased concerns, rather than reduced social initiatives (i.e., strengths), drive the decrease in CSR growth after the crisis. This result is consistent with our argument that financial regulations induce financial firms to shift from CSR concerns to regulatory concerns. We also find that the trend on average mostly affects environment, human rights, and employee rights. In comparison, financial firms on average do not lag nonfinancial companies in their community contributions after the financial crisis. Thus, it seems that financial firms shift their focus and resources away from the noncommunity social agenda in the face of intensified financial regulations after the financial crisis. At the same time,

[6] The ESG Stats database classifies environmental, social, and governance performance into seven major categories: community, corporate governance, diversity, employee relations, environment, human rights, and product issues. We follow Chen, Dong, and Lin (2018) and focus on the five dimensions other than governance and product issues. The ESG Stats database summarizes the information on concerns and strengths for each of the seven categories. We describe the database in detail in section 2.

they still commit to a community-related social agenda, presumably to improve their reputations and regain trust from communities.

Our paper is organized as follows. In section 2, we discuss the literature and the contribution of our paper to the literature. In section 3, we discuss sample and variable constructions. In section 4, we study the trend of CSR engagement in the financial industry. In section 5, we study the role of financial regulation in the CSR trend in the financial industry. In section 6, we study trends in different CSR dimensions. We conclude in section 7.

2. Literature Review

Our paper contributes to the understanding of CSR engagement in the financial industry. As discussed, most research focuses on the intermediary role of financial firms, particularly institutional investors, in contributions to social agendas. For example, Chen, Dong, and Lin (2018) find that high institutional investor holdings increase firm investment in CSR activities. They also find that an increased level of CSR-related shareholder proposals drives the effect. Dimson, Karakas, and Li (2015) focus on the types of firms that institutional investors are more likely to target for CSR changes, as well as the consequences of successful engagements. See also Grewal, Serafeim, and Yoon (2016) and Dyck, Lins, Roth, and Wagner (2015).

On the lending side, Chava (2014) finds that firms with environmental problems have fewer banks in their loan syndicates and pay higher interest rates on their loans. Painter (2019), Amiraslani et al. (2017), and Jiraporn et al. (2014) document that ESG affects bond risk and pricing. See also Seltzer, Starks, and Zhu (2020); Goss and Roberts (2011); Capelle-Blancard et al. (2019), etc.[7]

[7] Our paper is also broadly related to the large amount of literature on whether firm CSR enhances or destroys shareholder value. The negative view argues that CSR earns managers a good reputation at the expense of

Our paper complements this literature by focusing on how financial firms contribute to social agendas through direct CSR engagement. We show that nondepository financial firms follow a similar pattern of CSR engagement compared to those in other industries. The relative decline in CSR engagement among depository institutions after the financial crisis is driven by the stringent financial regulations during the period, rather than by any double standards the financial industry adopts on CSR engagement. Overall, it seems that most financial firms impose similar CSR standards upon themselves compared to what they demand from the firms in which they invest or with whom they transact.

Second, our paper contributes to the CSR literature by identifying a key factor that could affect firm CSR. Hong, Kubik, and Scheinkman (2012) show that financial constrain affects firm CSR. Liang and Renneboog (2017) show that firm CSR is correlated with a country's legal origin. Ferrell, Liang, and Renneboog (2016) show that corporate governance affects firm CSR. Other studies also document factors such as foreign competitive threats (Flammer, 2015), institutional ownership (Dyck et al., 2019), stock liquidity (Chang et al., 2018), etc. Our paper studies government regulation as a salient factor affecting CSR engagement.

It is also worth mentioning that most previous studies consider nonshareholding stakeholders for a group as a whole. However, heterogeneity could exist among different nonshareholding stakeholders. Different nonshareholding stakeholders could have conflicting

shareholders. The studies supporting this agency-cost view include Tirole (2001); Benabou and Tirole (2010); Cheng, Hong, and Shue (2013), etc. The positive view argues that CSR can enhance invest trust, reduce information risk, or increase the willingness of stakeholders to support firm operations. The studies supporting this positive view include Edmans (2011); Dimson, Karakas, and Li (2013); Derwall, Guenster, Bauer, and Koedijk (2005); Flammer (2013); Servaes and Tamayo (2013); and Dowell, Hart, and Yeung (2000), etc. However, due to endogeneity, there is mixed empirical evidence on value creation of CSR. See McWilliams, Siegel, Teoh (1999): Teoh, Welch, and Wazzan (1999); McWilliams and Siegel (2000); Margolis and Walsh (2003); Lev, Petrovits, and Radhakrishnan (2010); Jiao (2010), etc. Recently, various studies address the endogeneity problem (e.g., by using CSR events) (Kruger, 2015), regression discontinuity on CSR shareholder proposals (Flammer, 2015), and mergers and acquisitions (Deng, Kang, and Sin Low, 2013).

interests and firms could prioritize these stakeholders differently. Our paper considers this possibility. In particular, our findings imply that government regulation could induce a firm to prioritize regulators over other nongovernment stakeholders, thus deemphasizing CSR. They also show that the regulation-induced decrease in CSR could be mitigated if investors have more influence.

Finally, our paper helps understand how to assess better the effectiveness of government regulation. Government regulation in the U.S. economy has expanded over the past century. Many businesses complain that interventions induced by regulation could impede growth and efficiency.[8] In our paper, we show that government regulation could affect not only shareholder value, but also the welfare of other stakeholders. Thus, the effectiveness of government regulation should be assessed from the perspective not only of shareholders, but also of nonshareholding and nongovernment stakeholders.

3. Sample Construction and Variable Definition

3.1 Data and sample construction

We obtain information on firms' CSR ratings from the MSCI ESG Stats database, previously known as the Kinder, Lyndenberg, and Domini (KLD) STATS database. This database provides annual environmental, social, and governance ratings on a sample of U.S. publicly traded companies from 1991 to 2018. The database covers around 650 firms before 2003 and increases its coverage to roughly the largest 3,000 firms after 2003. To ensure the consistency of our sample, we restrict our sample to 2003-2018.

[8] For example, Congress passed the Sarbanes-Oxley Act in the wake of major corporate fraud at Enron, Tyco, and WorldCom, among others. However, some in the business world oppose the Act. They claim that compliance is time-consuming and costly and that it would not effectively protect shareholders from corporate fraud.

In the later studies, we disaggregate our sample to the precrisis period of 2003-2007 and the postcrisis period of 2008-2018. The financial crisis hit the financial industry hard. Bear Stearns was dumped in a fire sale to JPMorgan Chase; Lehman Brothers went bust; AIG was bailed out by the government; etc. The financial crisis also led to the worst recession since the Great Depression. Because of the profound impact from the failure of Wall Street, the general public lost confidence and trust in the financial industry. Thus, we study CSR engagement around the financial crisis to understand better the trend of CSR over time. We also study the different trends in the financial and nonfinancial industries. We define industries by standard industry codes (SIC). Firms with SIC codes starting with 6 are in the financial industry.

Next, we match the CSR sample to Standard & Poor's Compustat files to extract financial statement information and to the Center for Research in Security Prices (CRSP) database to extract information on stock prices and trading volume. We also gather information on institutional investor holdings from CDA/Spectrum. Our final sample consists of 6,184 publicly traded stocks and 41,261 firm-years. The sample size could vary in the empirical studies due to missing values of certain lagged variables. We provide the annual sample distribution in table 1.

3.2. Construction of variables

The ESG Stats database classifies environmental, social, and governance performance into seven major dimensions: community, corporate governance, diversity, employee relations, environment, human rights, and product issues. It summarizes and calculates the total numbers of concerns and strengths for each of the seven dimensions before 2013 but not after 2013. In our paper, for the total numbers of concerns and strengths in 2013-2018, we manually aggregate the individual concerns/strengths in each dimension. Our empirical tests are mostly based on both the reported

total numbers before 2013 and those manually calculated after 2013. In unreported tests, we also run tests based on only the data in 2003-2013. Our results remain qualitatively unchanged.

We construct our main CSR measure following Lins, Servaes, and Tamayo (2017). In particular, we exclude corporate governance and product issues from the major dimensions. We first scale the strengths (concerns) of each of the five remaining dimensions in each year by the maximum number of strengths (concerns) possible for the dimension in the year. By design, the scaled strengths (concerns) range from 0 to 1 for each dimension in each year. We then compute the difference between total scaled strengths and total scaled concerns in each dimension. Firm-scaled CSR is the sum of the differences across the five dimensions.

We also construct an alternative CSR measure that is unscaled and considers all seven dimensions. Specifically, we calculate for each dimension the unscaled difference between total unscaled strengths and total unscaled concerns. Our alternative measure of raw CSR is the sum of the unscaled differences across all seven dimensions. In unreported tests, we log measures of CSR, such as the difference between log(1 + the number of strengths) and log(1 + the number of concerns). Our results remain qualitatively similar based on the log measures.

We construct the following control variables. Market-to-book ratio (*MBE*) is the market value of equity divided by the book value of equity. Book value of equity is the book value of stockholders' equity plus deferred taxes and investment tax credit (if available), minus the book value of preferred stock at the end of the latest fiscal year. Depending on availability, we use the redemption, liquidation, or par value (in that order) to estimate the book value of preferred stock. We calculate the market value of equity at the end of each year. Market capitalization (*Mktcap*) is the logarithm of the market value of equity at the end of each year. Long-term debt ratio (*LDR*) is the ratio of the book value of long-term debt to the book value of assets. Return on assets (*ROA*)

is the ratio of net income to the book value of assets. *LogSale* is the logarithm of sales revenue. Institutional investor holding (*Holding*) is the fraction of total shares outstanding owned by institutional investors at year end. Number of institutional investors (*Nfund*) is the number of institutional investors in the firm. Advertising intensity (*ADV*) is advertising expenditures scaled by lagged sales revenue.

We present in table 1 average firm CSR across years. According to table 1, average firm CSR, based on either scaled CSR or raw CSR, increases. The increase is especially substantial starting in 2012. Considering this market wide trend, we study in the following the CSR trend in the financial industry relative to other industries. This way, we can purge the market trend from our studies. We also report in table 2 the summary statistics for the other variables.

4. Trend in CSR Engagement

4.1. CSR trend over time

We study the trend in CSR engagement for all public firms in our sample. We create a dummy variable, *Crisis*, equal to 1 for years after the 2008 financial crisis and zero otherwise. We run OLS regressions of ΔCSR, the change in CSR from year *t-1* to *t*, against *Crisis*. The control variables consist of CSR_{t-1}, $Mktcap_{t-1}$, MBE_{t-1}, LDR_{t-1}, and ROA_{t-1}, all of which we calculate in the prior fiscal year. In this and all the following regressions, we allow correlated residuals within each firm. We conduct significance tests on the basis of heteroskedasticity-consistent standard errors.

We present the results from these regressions in the first two columns of panel A in table 3, with different controls in these two columns. In both columns, the coefficients of *Crisis* are positive and highly significant. Thus, CSR engagement among all public firms on average experiences significant growth after the financial crisis relative to the precrisis period.

Next, we study CSR engagement in the financial industry relative to other industries. We first plot firm CSR in the financial and nonfinancial industries in figure 1. To better compare, we use in the plot scaled CSR adjusted by the market average of firm CSR in the relevant year. This way, we can purge the change in firm CSR over time at the market level and instead focus on the difference in CSR over time across industries.[9] As can be seen, before 2008, firm CSR in the financial industry on average is higher and increases faster than do the nonfinancial industries. However, the pattern disappears in 2008-2009 as firm CSR grows in a similar pattern between the financial and nonfinancial industries in these two years. In 2010, the average firm CSR in the financial industry plunges; after 2010 it stays at a level similar to that in the nonfinancial industries, though with seemingly a more volatile trend. Overall, it appears that CSR growth in the financial industry after the 2008 financial crisis is slower than for in the nonfinancial industries.

To further study CSR engagement in the financial industry relative to other industries, we also run the following OLS regression:

$$\Delta CSR = \alpha_0 + \alpha_1 Financial + \alpha_2 Crisis + \alpha_3 Financial \times Crisis + \alpha_4 Control + \varepsilon. \quad (1)$$

Here, the control variables are CSR_{t-1}, $Mktcap_{t-1}$, MBE_{t-1}, LDR_{t-1}, and ROA_{t-1}, all lagged values. The coefficient α_3 measures the difference-in-difference effect between the financial industry and other industries and between the postcrisis and precrisis periods. In other words, α_3 captures the change in CSR growth from the precrisis to the postcrisis period in the financial industry relative to the corresponding change in the other industries.

We report the results from regression (1) in columns 3-6 in panel A of table 3. The results in columns 3 and 4 are based on scaled CSR as the CSR variable, and the results in columns 5 and

[9] The scale of the market-level time-series changes could be more substantial than the scale of the industry differences. If so, the industry differences could be shadowed in the figure by the market-level time-series changes.

6 are based on raw CSR. In all four columns, the coefficients of the financial industry dummy are positive and highly significant. They suggest that the financial industry on average committed more in CSR than the nonfinancial industries in our sample period. Similarly, the coefficients of *Crisis* are significantly positive, suggesting that firm CSR grew at the market level after the financial crisis. More important, the coefficients of *Financial* × *Crisis* are negative and statistically significant at the 1% level. These results are consistent with the CSR pattern depicted in figure 1. They show that financial firms decrease their CSR engagement relative to firms in the other industries after the financial crisis.

In panel B, we check the robustness of the results. As discussed in section 3, we calculate firm CSR based on the aggregate levels of CSR strengths and concerns in each CSR dimension. The aggregate levels are in the KLD database prior to 2013 and the authors calculate them manually after 2013. It is worth noting that our manual calculations follow the same methodology in the KLD database. However, to mitigate the concern about the different calculations, we also run regression (1) based on only the sample prior to 2013. We present the results in columns 1 and 2 in panel B of table 3. Similarly, the coefficients of the financial industry dummy and the crisis dummy remain positive. The coefficients of *Financial* × *Crisis* remain negative and highly significant. In columns 3-4, we re-run regressions based on the whole sample while introducing a new dummy variable for the years after 2013 (*Post-2013*). Again, the coefficients of *Financial* × *Crisis* remain negative and highly significant.

4.2. Financial constraint and marketing considerations

It is puzzling why financial firms do not engage in CSR with the same intensity as firms in other industries after the financial crisis. One possibility is that financial firms were more financially

constrained coming out of the financial crisis than other industries were. Hong, Kubik, and Scheinkman (2012) suggest that firms with more financial constraints commit less to CSR. So it is possible that the financial firms had to cut their investment in CSR after the financial crisis because of increased financial constraint. To test this possibility, we disaggregate our sample to subsamples of firms with large and small market capitalizations, high and low returns on assets (ROA), or high and low debt ratios based on the sample average of the corresponding variable. Presumably, firms with smaller capitalizations, smaller ROAs, or larger debt ratios are more financially constrained.

We report the regressions based on the subsamples in panel A of table 4. Our results show that the coefficients of *Financial* × *Crisis* remain negative and significant in all subsamples. However, there is weak evidence that the coefficients in the subsamples of high market capitalization, high ROA, and high debt ratio are economically more significant than the coefficients in the corresponding subsamples. These results are contradictory from the perspective of financial constraint. If high financial constraint drives slower CSR growth in the financial industry, we expect the results to be more significant in the subsamples of low market capitalization and low ROA rather than in the subsamples of high market capitalization and high ROA as shown in panel A.[10] Thus, financial constraint does not seem to explain the different trends in CSR growth between the financial and other industries.

Another possibility is that financial firms may not need as much CSR to market to customers and investors in the years further from the financial crisis. During the financial crisis, financial firms could feel urgency to rely on CSR to restore public trust by conveying a positive

[10] Our results in panel A also show that the coefficients of the financial industry dummy and the crisis dummy remain positive and significant in all subsamples. Thus, the market trend of higher CSR growth in the postcrisis years and in the financial industry holds for firms with different market capitalizations, ROAs, and debt ratios.

social image to the public. After the crisis, the pressure for financial firms to signal trustworthiness could gradually diminish. If so, the role of CSR in their marketing strategy could lessen after the financial crisis. To test this possibility, we study advertising trends after the financial crisis. For a financial firm to signal trustworthiness successfully, it needs to advertise more to convey its increased CSR engagement to the public. If so, when a financial firm reduces CSR engagement in the years after the financial crisis because of the reduced marketing need, its advertising decreases as well.

We run regressions similar to equation (1) but with advertising intensity as the dependent variable. The control variables are mostly the same as those in equation (1), with additional control variables in $LogSale_{t-1}$ and $\Delta LogSale$ to purge any sales-related effect on advertising. We present the results from the tests in panel B of table 4. In columns 1 and 2, we run regressions without the financial industry dummy. There is weak evidence that advertising expenditures on average decrease at the market level after the financial crisis. In columns 3 and 4, we include the financial industry dummy. There is weak evidence as well that advertising expenditures in the financial industry are on average lower than those in other industries. More important, we find that the coefficients of *Financial* × *Crisis* are insignificant.

The latter results contradict the prediction from the marketing argument. Thus, marketing consideration is unlikely to drive the relative postcrisis decline of CSR engagement in the financial industry.

4.3. *Institutional investor holdings*

Many studies show that institutional investors are effective in pressuring firms to commit to CSR. It is also possible that such a pressure wears off after the financial crisis, which contributes to slow

CSR growth in the financial industry in the postcrisis period. To study this possibility, we first run regressions with a specification similar to regression (1) but with the CSR variable replaced by institutional investor holding (*Holding*) or number of institutional investors holding the stock (*Nfund*). To control for the size effect, we also run separate regressions for large cap and small cap stocks. We present the results in panel A of table 5, with columns 1-2 based on the whole sample, columns 3-4 based on large-cap stocks, and columns 5-6 based on small-cap stocks. The results in all six columns are similar. The coefficients of *Crisis* are all negative and mostly significant. The coefficients of *Financial* × *Crisis* are positive and mostly significant, except for column 6. Thus, before the financial crisis, both institutional investor holdings and the number of institutional investors holding the stock are smaller in the financial industry compared to nonfinancial industries. However, after the financial crisis, both increase in the financial industry relative to other industries.

Next, we study how the change in CSR is related to institutional investor holdings and number of institutional investors. We run regressions on the change in CSR against both institutional investor variables, as well as their interactions with the financial crisis dummy. We present the results in panel B of table 5. The first two columns are based on the whole sample with the CSR variable as scaled CSR. The coefficient of $Holding_{t-1} \times Crisis$ is positive but insignificant, and the coefficient of $Nfund_{t-1} \times Crisis$ is significantly positive. We also run robustness checks in columns 3-4 based on the sample of only financial firms and in columns 5-6 based on raw CSR as the CSR variable. The results are similar. Thus, higher institutional investor holding seems related to higher or similar CSR growth from the pre- to post-crisis periods.

Our results in panels A and B do not seem consistent with the argument that institutional investors drive CSR change in financial firms after the financial crisis. In particular, our results in

panel A show that institutional investor ownership relatively increases in the financial industry after the financial crisis, and our results in panel B show that the increase in institutional investor ownership should lead to an increase in CSR. However, we find the opposite results in section 4.1 (that CSR engagement is relatively less in the financial industry after the financial crisis). Thus, institutional investor ownership is unlikely to drive the CSR pattern in the financial industry after the crisis.

5. Regulation and CSR Engagement

We conjecture that tightened regulation in the financial industry after the financial crisis could contribute to the relative decline in CSR engagement in the industry. The 2008 financial crisis triggered extensive regulatory reforms to enhance the capital strength of financial institutions and to reduce their vulnerability to liquidity shocks. In particular, the U.S. government instituted a Supervisory Capital Assessment Program in 2009, followed by financial reforms such as the Dodd-Frank Wall Street Reform and Consumer Protection Act. Most banks also adopted Basel III, which is a set of voluntary banking regulations on capital requirements. These and other regulations could induce financial institutions to reallocate their focus and resources away from nongovernment stakeholders and instead focus on complying with financial regulators. To test this financial regulation explanation, we run three tests.

5.1. The Dodd-Frank Act of 2010

The Dodd-Frank Act was introduced in 2010 as a response to the 2008 financial crisis. It reorganized the financial regulatory system and initiated changes affecting almost everything in the financial industry. For example, it created the Financial Stability Oversight Council and the

Office of Financial Research to identify threats to financial stability; it also empowered the Federal Reserve to regulate systemically important financial institutions. The intensified financial regulations the Act introduced could induce financial firms to reduce their CSR engagement as we conjectured.

To test this, we create a dummy variable *Dodd*, which equals 1 for years after the Dodd-Frank Act of 2010 and zero otherwise. We then interact *Dodd* with the financial industry dummy and run the following OLS regressions:

$$\Delta CSR = \alpha_0 + \alpha_1 Financial + \alpha_2 Crisis + \alpha_3 Dodd + \alpha_4 Financial \times Crisis + \alpha_5 Financial \times Dodd + \alpha_6 Control + \varepsilon. \quad (2)$$

Here, α_5 captures the relative change in CSR engagement from the pre-Act to the post-Act period in the financial industry (relative to the nonfinancial industries). If financial regulation does reduce CSR engagement, we expect α_5, the coefficient of *Financial* × *Dodd*, to be negative.

We present the results in table 6, with the CSR variables based on either scaled CSR or raw CSR. The sample of the regressions in columns 1-2 consists of all firms. As expected, the coefficients of *Financial* × *Dodd* in both columns are negative. Both are highly significant at the 1% level. On the other hand, the coefficients of *Financial* × *Crisis* become insignificant. Thus, the slower CSR growth in the financial industry occurs only after the Dodd-Frank Act is enacted in 2010. In comparison, CSR growth does not differ significantly between the financial and nonfinancial industries during 2008-2009, the two years right after the financial crisis. These results are consistent with our conjecture that financial regulation causes lower CSR growth in the financial industry relative to other nonfinancial industries.

Next, we study whether financial constraints drive the effect of the Dodd-Frank Act on firm CSR. To study, we disaggregate the whole sample into subsamples of firms with large and

small market capitalizations or firms with high and low debt ratios.[11] Firms with smaller market capitalizations or higher debt ratios presumably are more financially constrained. We run regressions as in equation (2) based on these subsamples. We present the results in columns 3-6. In all four columns, the coefficients of *Financial* × *Dodd* remain negative and highly significant, though the coefficient is economically more significant in the subsample of small companies than in the subsample of large companies. Thus, although financial constraint is related to the effect of the Dodd-Frank Act on firm CSR, it does not completely drive the effect. Evidently, the relatively small CSR growth in the financial industry after the Dodd-Frank Act occurs in both financially constrained and unconstrained firms.

5.2. Depository versus nondepository institutions

Financial regulations after the financial crisis are more targeted at depository institutions than nondepository institutions. If so, the impact of financial regulations on CSR would be greater in depository than in nondepository institutions. To study this possibility, we create two dummy variables. *Bank* is the dummy variable for depository institutions; it equals 1 if the first two digits in the SIC codes are 61. *Nonbank* is the dummy variable of nondepository institutions; it equals 1 for all other financial firms with the first two digits in the SIC codes are 61. We then run the following regression:

$$\Delta CSR = \beta_0 + \beta_1 Bank + \beta_2 Nonbank + \beta_3 Crisis + \beta_4 Dodd + \beta_5 Bank \times Crisis + \beta_6 Nonbank \times Crisis + \beta_7 Bank \times Dodd + \beta_8 Nonbank \times Dodd + \beta_9 Control + \varepsilon. \quad (3)$$

In regression (2), β_7 measures the change in CSR in depository institutions relative to nonfinancial firms from the period before the Dodd-Frank Act to the period after the Act. β_8

[11] Our results based on ROA as the financial constraint variable are qualitatively similar.

measures the relative change in nondepository institutions. According to our discussions, if financial regulation drives CSR change in the financial industry, we expect β_7 to be negative and economically more significant than β_8.

We report the results from regression (3) in the first four columns in panel A of table 7. The sample consists of both financial and nonfinancial companies, and the CSR variable is either scaled CSR or raw CSR. In all four columns, the coefficients of *Bank* × *Dodd*, β_7, are negative and highly significant. The coefficients of *Nonbank* × *Dodd*, β_8, are also negative. However, β_8 *is* significant only in columns 1 and 3 when the control variables are not in the regressions. β_8 becomes insignificant in columns 2 and 4 when we control for the control variables. For example, in column 2, β_7 is -0.111 and it is highly significant. In comparison, β_8 is -0.017 and it is insignificant. These results suggest that the CSR growth in depository institutions after the Dodd-Frank Act decrease significantly relative to nonfinancial companies. On the other hand, the post-Act CSR growth in nondepository financial institutions either decreases marginally or does not change relative to nonfinancial firms. In unreported tests, we also find that β_7- β_8 is positive and statistically significant in all four columns.

To test the difference between depository and nondepository financial institutions directly, we also run regressions based on the sample of only depository and nondepository institutions while excluding nonfinancial firms. The specification of the regressions is similar to regression (3) but without the dummy for nondepository institutions, *Nonbank*, and any interaction variables with *Nonbank*. In these new regressions, β_7, the coefficient of *Bank* × *Dodd*, measures the post-Act change in CSR in depository institutions relative to nondepository institutions. We present the results from these new regressions in the last two columns of panel A in table 7. As they show, β_7 is negative and significant in both columns. These results suggest that the CSR growth in

depository institutions after the Dodd-Frank Act is slower than in nondepository institutions.

It is possible that depository and nondepository financial institutions face different financial constraints after the Dodd-Frank Act. If so, different financial constraints, rather than financial regulation, could drive the different CSR growth in depository and nondepository institutions. To study this possibility, we group our sample into firms with high debt ratios and firms with low debt ratios.[12] We run regression (3) based on these two subsamples. We present the results in the first four columns of panel B in table 7. Similarly, in all four columns, the coefficients of *Bank* × *Dodd* remain negative and highly significant. In comparison, the coefficients of *Nonbank* × *Dodd* are mostly insignificant. These results suggest that the different CSR growth between depository and nondepository financial institutions after the Dodd-Frank Act exist in both financially constrained and unconstrained firms. Thus, financial constraint cannot explain our results for depository and nondepository institutions.

Our results in the first four columns of panel B also show some weak evidence that the difference between the coefficients of *Bank* × *Dodd* and *Nonbank* × *Dodd* is greater for firms with high debt ratios (as in columns 1 and 2) than for firms with low debt ratios (as in columns 3 and 4). To study these differences directly, we run regressions similar to regression (3) but based on only depository and nondepository financial institutions. In these new regressions, we exclude all variables related to *Nonbank.* The coefficients of *Bank* × *Dodd* in these regressions measure the different post-Act CSR growth between depository institutions (*Bank* = 1) and nondepository institutions (*Bank* = 0). Again, we run regressions based on subsamples of high and low debt ratios. We present the results in columns 5-6 of panel B in table 7. The coefficients of *Bank* × *Dodd* in both columns are negative and significant, demonstrating significant difference in post-Act CSR

[12] Our results based on market capitalization and ROA are qualitatively similar to those based on debt ratio.

growth between depository and nondepository institutions. In unreported results, we also find the coefficients of *Bank* × *Dodd* are not significantly different between columns 5 and 6. These results confirm that financial constraint does not explain the difference in CSR growth after the Dodd-Frank Act between depository and nondepository financial institutions.

Overall, our results in this subsection show that the relatively slow CSR growth after the Dodd-Frank Act is more pronounced in depository institutions than in nondepository institutions. Financial regulation hits depository institution harder than it hits nondepository institutions. Thus, our results are consistent with the notion that financial regulation affects the incentive of financial firms to commit to CSR.

5.3. Banks participating in stress tests

Next, we run tests on the banks enrolled in the stress test program. The Supervisory Capital Assessment Program in 2009 required largest banks to estimate their capital adequacy under adverse macroeconomic shocks. If any participating bank failed to meet capital adequacy requirements, it needed to obtain enough capital from the Troubled Asset Relief Program (TARP) to meet all safety and soundness requirements. The U.S. regulator started disclosing the results of stress tests in 2012 to increase transparency and public confidence in the process and results.[13] From 2014, stress tests started to include all U.S. BHCs with assets over $50 billion plus FSOC (Financial Stability Oversight Council) designees. Presumably banks enrolled in the

[13] The 19 banks in the 2012 stress test are Ally Financial Inc.; American Express Company; Bank of America Corporation; The Bank of New York Mellon Corporation; BB&T Corporation; Capital One Financial Corporation; Citigroup, Inc.; Fifth Third Bancorp; The Goldman Sachs Group, Inc.; JPMorgan Chase & Co.; KeyCorp; Morgan Stanley; The PNC Financial Services Group, Inc.; Regions Financial Corporation; State Street Corporation; SunTrust Banks, Inc.; U.S. Bancorp; Wells Fargo & Company, and MetLife. MetLife was not part of the tests in 2013 because it sold off its banking operations. Four of the 19 participating banks in 2012 failed: Citigroup, Ally Financial, MetLife, and SunTrust. Two of the 18 participating banks in 2013 failed: BB&T and Ally Financial. Two other banks received conditional approvals: JPMorgan and Goldman Sachs.

stress test program face greater regulatory pressure compared to those not in the program. Accordingly, if financial regulation drives reduced CSR engagement, we expect more reduction in the bank-years when banks enrolled in the stress test program than in the non-stress-test bank-years.

To test this hypothesis, we create several dummy variables. The dummy variable *Testbank* equals 1 if a financial institution has ever been included in the stress test program. *Testbank-year* equals 1 for the years and the stress-test banks after the banks were enrolled in the stress test program. We then run the following regression:

$$\Delta CSR = \gamma_0 + \gamma_1 Testbank + \gamma_2 Crisis + \gamma_3 Dodd + \gamma_4 Testbank \times Crisis + \gamma_5 Testbank \times Dodd + \gamma_6 Testbank\text{-}year + \gamma_7 Control + \varepsilon. \quad (4)$$

In this regression, γ_6 measures the CSR growth for the stress-test banks in the stress-test years compared to the benchmark companies (defined later) and to the non-stress-test years. If stress tests create more regulation pressure, and financial regulation affects CSR engagement, then we expect γ_6 to be negative.

We present the results from regression (4) in table 8. One difficulty is finding appropriate benchmark firms to compare with stress-test banks. We need to ensure that fundamental differences between firm types do not drive any difference in CSR growth between the stress-test banks and benchmark firms. Thus, we run several tests with different benchmarks. In the first column, we start with all public firms not in the stress-test program as the benchmarks. These public firms consist of both financial institutions and nonfinancial firms. As expected, the coefficient of *Testbank-year* is negative and significant at the 5% level. Interestingly, the coefficient of *Testbank* × *Dodd* is positively significant. These results suggest that banks in the stress test program experience a relative increase in CSR growth in the immediate years after the

Dodd-Frank Act is implemented. The decrease in their CSR growth only occurs after they enroll in the stress test program.

We also run several similar regressions with different benchmark firms. In column 2, we focus on a sample of financial and nonfinancial firms with large market capitalizations (i.e., those with market capitalizations above the sample average). Banks were added to the stress test program based on their asset values. Thus, large-cap firms could be more appropriate benchmark firms. In column 3, we focus on large-cap firms in the financial industry and study the CSR growth of stress-test banks relative to large financial institutions not enrolled in the stress test program. In column 4, we further narrow the benchmark firms to large-cap depository institutions. This way, we compare stress-test banks with depository institutions never enrolled in the stress-test program. In general, our results in columns 2-4 are consistent with column 1. The coefficients of *Testbank-year* remain negative and significant.

In column 5, we also run a regression based on only the sample of stress-test banks. In this regression, we exclude all interaction terms with the dummy of stress-test banks (*Testbank*). The coefficient of *Testbank-year* in this regression measures the change in CSR growth from the pre-stress-test period to the post-stress-test period for the same banks eventually enrolled in the stress test program. The coefficient of *Testbank-year* is negative and significant. On the other hand, the coefficient of *Dodd* is positive and significant. Thus, banks eventually enrolled in the stress test program increase CSR engagements after the introduction of the Dodd-Frank Act. However, they decrease CSR engagements after entering the stress test program. These results are consistent with our findings in the other four columns, supporting our regulation argument.

5.3. Robustness checks on stress tests

In the previous subsection, we use different benchmark firms to make sure they are comparable to stress test banks. One concern is that stress-test banks are the largest banks among depository institutions. In particular, stress-test banks are roughly among the top 20% of the largest firms listed on U.S. stock markets or the top 10% of the largest U.S. banks. Thus, the large-cap firms in the previous subsection may not be truly comparable even if their market capitalizations are above the sample median. To address this concern, we run two more robustness checks.

In the first robustness check, we select firms with asset values above $50 billion as benchmarks to compare with stress test banks. We choose $50 billion as the cutoff because under CCAR, the stress test program enrolled all U.S. banks with consolidated assets above $50 billion. To ensure the robustness of our results, we try different benchmarks in our test. We start from all firms, including U.S. and international firms (listed on the U.S. exchanges), financial and nonfinancial firms, and depository and nondepository institutions. We the gradually narrow our selection of benchmark firms to only depository institutions.

We run similar regressions to those in table 8. We present the results from these new regressions in panel A of table 9. In column 1, we compare stress-test financial institutions (29 in our sample) with all firms with asset values above $50 billion (207 companies). Because these firms consist not only of U.S. firms but also foreign firms listed on the U.S. stock exchanges, we further narrow the selection of benchmarks in column 2 to only U.S. firms (129 companies). In column 3, we exclude nonfinancial firms and choose as benchmarks only financial firms with asset values above $50 billion (63 companies). This group of benchmarks consists of both U.S. and international financial firms listed on the U.S. stock exchanges. In column 4, we further narrow the selection of benchmarks to U.S. financial services firms (38 companies). Finally, in column 5, we choose as benchmarks only depository institutions with asset values above $50 billion (19

companies). Note that we do not narrow our selection to U.S. depository institutions, because U.S. depository institutions with asset values above $50 billion are all in the stress test program. In general, our results in columns 2-5 show that the coefficients of *Testbank-year* are negative and significant. These results are consistent with table 8, implying that intensified financial regulation decreases CSR engagement.

In the second robustness check, we choose as benchmarks those U.S. depository institutions with asset values close to $50 billion but not in the stress test program.[14] The $50 billion threshold by U.S. regulators is uncorrelated with any nonvalue firm characteristics. Thus, it is plausible that the depository institutions in the stress test program are not systematically different from non-stress-test depository institutions with similar but slightly lower asset values. If so, we can use the non-stress-test depository institutions with slightly lower asset values as the benchmarks for the stress-test depository institutions so that we can study how the enrollment in the stress test program affects CSR engagements.

We present the results from this approach in panel B of table 9. In column 1, we select as the benchmarks those nontest banks with asset values between $45 billion and $50 billion. We then compare these nontest banks (four banks) with all test banks. In column 2, we maintain our choice of nontest banks while requiring the selected test banks to have asset values below $100 billion. This way, we reduce the size difference between the test banks (four banks) and nontest banks (six banks with asset values between $50 billion and $100 billion) in our test. Next, to increase the sample size, we relax the constraint on nontest banks. In particular, in columns 3-4, we require the benchmarks of nontest banks to have asset values between $40 billion and $50 billion, rather than between $45 billion and $50 billion (as in columns 1-2). This requirement leads

[14] The approach here is similar to a regression discontinuity design (RDD) approach.

to eight nontest banks in our test. We then study these nontest banks together with either all test banks (in column 3) or test banks with asset values between $50 billion and $100 billion (in column 4). Finally, in columns 5-6, we further relax our requirement to require nontest banks to have asset values between $30 billion and $50 billion. This requirement increases the sample size of nontest banks to 20. We then compare these 20 nontest banks with either all test banks (in column 5) or the test banks with asset values between $50 billion and $100 billion (in column 6). Our results in all columns are similar. The coefficients of *Testbank-year* are negative and highly significant. They again support our argument that intensified financial regulation such as stress test programs could induce firms to reduce their CSR commitments.

Although we intend to choose test and nontest banks with asset values close to $50 billion, the variation in asset values for these selected banks could still be large in some tests. This is especially the case if we want to increase our sample size by relaxing our selection requirement to have more statistical power in our tests. Nevertheless, we intend to use these tests to demonstrate further the robustness of our earlier results on regulation and CSR.

5.4. Role of institutional investors

In the previous subsections, we find evidence that a financial firm's CSR decreases to a larger degree when the firm faces greater regulatory pressure. We conjecture that regulation could induce firms to reprioritize their focus from shareholders and nongovernement stakeholders to regulators. This reprioritization would be more pronounced if regulations tighten. On the other hand, it is possible that the reprioritization and thus the regulation effect could be less pronounced if shareholders are more powerful and more active in pressuring firms not to deviate from CSR commitments. We test this possibility by studying whether shareholders can mitigate the regulation

effect.

In the study, we focus on institutional investor holdings. Compared to retail investors, institutional investors could put more pressure on firms to commit to their CSR agendas. Thus, when institutional investors hold a larger fraction of a firm's equity, the firm could be pressured to minimize the re-prioritization toward regulators and stay committed to CSR (see Chen, Dong, and Lin, 2018). Following this logic, we expect that higher institutional investor holdings could mitigate the adverse effect of financial regulations on CSR engagement in the financial industry.

To test this, we interact *Dodd* × *Financial* with either *Holding* (institutional investor holding) or *Nfund* (number of institutional investors owning the stock). We then run regressions on *ΔCSR* against one of the three-way interactions. The control variables are similar to those in the previous regressions but with the controls for the two-way interaction variables involving *Holding* or *Nfund*. In these regressions, the coefficients of *Dodd* × *Financial* measure the effect of the Dodd-Frank Act on CSR growth in the financial industry, and the coefficients of the three-way interactions measure how institutional investor holding affects the Dodd-Frank effect. We expect the coefficients of the three-way interactions to be positive if institutional investors mitigate the adverse effect of regulation on firm CSR.

We present the results in table 10. Columns 1-2 are based on scaled CSR, as the CSR variable and columns 3-4 are based on raw CSR. In all columns, the coefficients of *Financial* × *Dodd* remain negative and mostly significant. Both the coefficient of $Holding_{t-1}$ × *Dodd* × *Financial* and the coefficient of $Nfund_{t-1}$ × *Dodd* × *Financial* are positive. They are mostly significant, except for in column 2. These results suggest that the slower CSR growth in financial firms after the Dodd-Frank Act is less pronounced when the firm has higher institutional investor holdings. For example, in column 1, the coefficient of *Financial* × *Dodd* is -0.119 and is significant

at the 1% level. The coefficient of $Holding_{t-1} \times Dodd \times Financial$ is 0.106 and is significant at the 5% level. Note that the value of $Holding_{t-1}$ is between 0 and 1, with an average of 0.68. Thus, when $Holding_{t-1}$ is low, CSR growth at an average financial firm (relatively) decreases after the Dodd-Frank Act. However, when $Holding_{t-1}$ is high, the effect of the Dodd-Frank Act on CSR growth becomes insignificant. Thus, our results suggest that institutional investors mitigate the adverse effect of financial regulation on CSR growth in the financial industry.

6. CSR Dimensions

A firm could engage in CSR by either addressing CSR concerns (such as hazardous waste, environmental regulatory problems, etc.) or by initiating new social agendas (such as charitable giving, community services, etc.). It is interesting to know how financial regulation decreases firm CSR. To study this, we run similar regressions as in equation (1) but with the CSR variables replaced by either CSR strengths (*Strength*) or CSR concerns (*Concern*). We present the results from these new regressions in table 11. The strength and the concern variables are either raw or scaled variables.

Table 11 shows that the coefficients of *Financial* × *Dodd* are either insignificant or positive in the strength regressions as in columns 1-2. On the other hand, the coefficients are positive and significant in the concern regressions as in columns 3-4. These results suggest that financial firms either increase or stay unchanged in CSR strengths after the Dodd-Frank Act. At the same time, they significantly reduce their efforts in addressing CSR concerns so that the magnitude of their CSR concerns increases significantly. These results, together with our earlier results on CSR, suggest that the increase in CSR concerns in the financial industry outweighs the increase in CSR strengths, so that the overall CSR scores after the Dodd-Frank Act decrease. Consistent with what

we discussed, one explanation for the increase in CSR concerns is that financial regulation induces financial firms to refocus and reallocate resources to address regulator concerns rather than CSR concerns.

Next, we disaggregate CSR scores into five dimensions: environment, diversity, human rights, community, and employee. After the financial crisis, when financial regulation intensified, financial firms could face two competing challenges: shift away from CSR to comply with regulations or increase CSR to improve public trust. Our results suggest that financial firms overall place more emphasis on satisfying regulators. However, it is also interesting to know whether financial firms manage different CSR dimensions differently in face of these two competing objectives.

To study this, we run similar regressions as in equation (2), but with CSR variables replaced by the variables measuring the score of each CSR dimension. We present the results in table 12. The coefficients of *Financial* × *Crisis* are negative and significant for the environment and human rights dimensions, insignificant in the employee dimension, and positive and significant in the diversity and community dimensions. One explanation is that financial firms after the financial crisis focus on community and diversity to regain public trust from the public. On the other hand, given the pressing demands from financial regulators, they devote their efforts and resources to comply with regulations by shifting focus away from dimensions such as the environment and human rights. We also find that the coefficients of *Financial* × *Dodd* are negative and significant for all dimensions except diversity. Thus, when financial regulations intensify, such as when the Dodd-Frank Act was implemented, financial firms decrease their commitment on most CSR dimensions presumably to focus on complying with financial regulations.

7. Conclusion

We study CSR engagement in the financial industry. We find that the publicly traded firms on average increase their CSR engagement over time. As to the financial industry, the growth in its CSR engagement after the 2008 financial crisis is substantially slower than in other industries. Financial constraints and marketing considerations do not seem to drive this relatively slow CSR growth after the crisis.

We conjecture that tightened financial regulations after the financial crisis contribute to slower CSR growth. Financial firms, in the face of more stringent regulations after the financial crisis, could reprioritize and reallocate effort sand resources from shareholders and nongovernment stakeholders to regulators. Our findings support this conjecture. We find that the postcrisis slower CSR growth in the financial industry occurs mostly after the Dodd-Frank Act, which tightened financial regulations in the financial industry. It also occurred in depository institutions, which were more heavily regulated compared to nondepository institutions. Slower CSR growth in the financial industry also becomes more pronounced after a bank is enrolled in the stress test program (and thus faces more regulatory scrutiny).

We further find that shareholder pressure mitigates the adverse effect of financial regulation on CSR engagement. The relatively slow CSR growth is less pronounced in financial firms when institutional investors own more equity. Finally, we find some evidence that financial firms manage different CSR dimensions differently in the face of financial crisis and financial regulation.

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Figure 1: Average Annual Firm CSR between Financial and Nonfinancial Firms

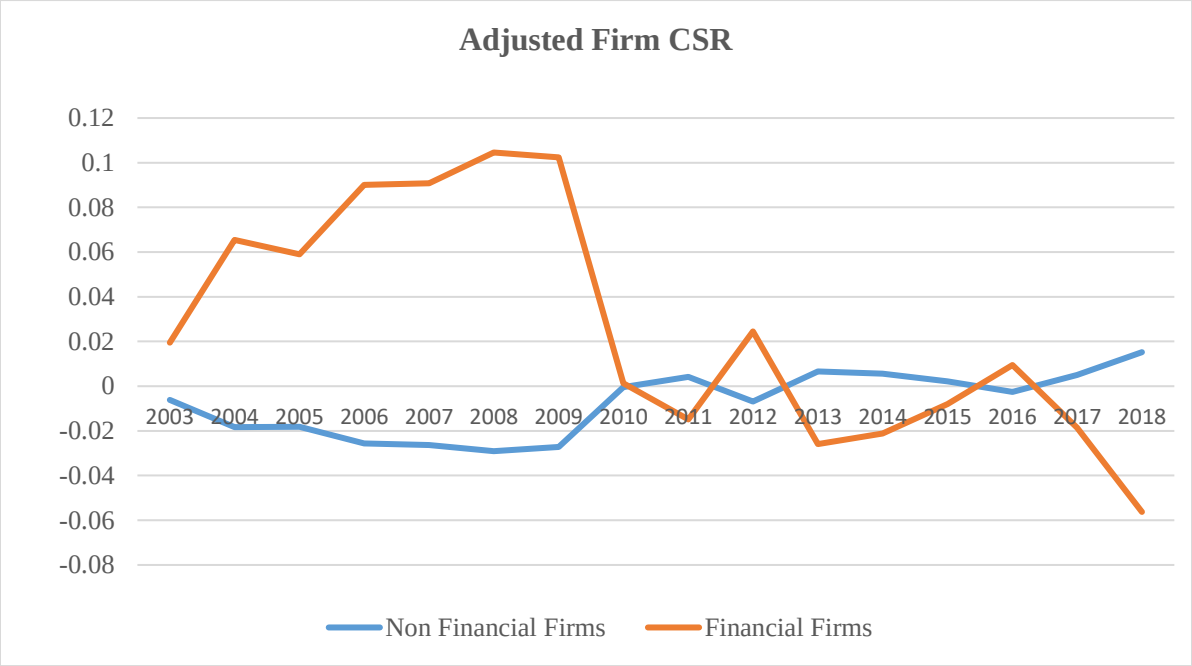

Table 1: Sample Distribution

This table presents the sample size, average firm CSR for all firms, average CSR in the financial industry, and average CSR in the nonfinancial industry each year from 2003 to 2013. Financial industry consists of firms with SIC codes beginning with 6. Firm CSR is the sum of the scaled differences between strengths (positives) and concerns (negatives) along five dimensions in the KLD Research & Analytics, Inc. STATS database at each year.

Year	Number of Obs.	Avg. Scaled CSR	Avg. Raw CSR
2003	2,954	-0.128	-0.141
2004	3,022	-0.244	-0.246
2005	2,727	-0.239	-0.271
2006	2,695	-0.222	-0.301
2007	2,671	-0.235	-0.298
2008	2,666	-0.231	-0.285
2009	2,652	-0.225	-0.277
2010	2,742	-0.326	-0.094
2011	2,608	-0.273	-0.470
2012	2,491	0.020	0.260
2013	2,280	0.071	0.439
2014	2,383	0.087	0.253
2015	2,373	0.109	0.374
2016	2,265	0.051	0.428
2017	2,295	0.141	0.386
2018	2,437	0.474	0.453

Table 2: Sample Statistics

This table presents the sample statistics for key variables in our tests. The sample consists of all firms in the KLD Research & Analytics, Inc. STATS database from 2003 to 2013. *Scaled CSR* is the sum of the scaled differences between strengths (positives) and concerns (negatives) along five dimensions in KLD database at each year. *Raw CSR* is the sum of raw differences along seven dimensions. The change variables are the changes from year *t-1* to year *t*. Market-to-book ratio (*MBE*) is the market value of equity divided by the book value of equity. Market capitalization (*Mktcap*) is the logarithm of the market value of equity at the end of each year. Long-term debt ratio (*LDR*) is the ratio of the book value of long-term debt to the book value of assets in the prior fiscal year. Return on assets (*ROA*) is the ratio of net income to the book value of assets in the prior fiscal year. *LogSale* is the log of sales revenue.

Variable	Number of Obs.	Mean	Median	Standard Deviation
Scaled CSR_t	38,878	-0.095	0	0.597
ΔScaled CSR_t	32,042	0.040	0	0.397
Log (Raw $CSR)_t$	38,878	-0.024	0	0.652
ΔLog (Raw $CSR)_t$	34,166	0.039	0	0.510
$MktCap_{t-1}$	33,702	7.320	7.172	1.591
MBE_{t-1}	33,692	3.028	2.120	4.385
LDR_{t-1}	33,692	0.569	0.560	0.296
$LogSale_{t-1}$	33,782	6.773	6.768	1.918
ROA_{t-1}	32,377	0.091	0.105	0.197

Table 3: CSR around 2008 Financial Crisis

This table presents the results from OLS regressions on the change in CSR from year *t-1* to *t* against the dummy of the postcrisis period after 2008 (*Crisis*). The sample consists of all firms in the KLD Research & Analytics, Inc. STATS database from 2003 to 2018. The dependent variable is either *ΔScaled CSR* or *ΔRaw CSR*. *Scaled CSR* is the sum of the scaled differences between strengths (positives) and concerns (negatives) along five dimensions in the KLD database at each year. *Raw CSR* is the sum of the raw differences along seven dimensions. Market-to-book ratio (*MBE*) is the market value of equity divided by the book value of equity. Market capitalization (*Mktcap*) is the logarithm of the market value of equity. Long-term debt ratio (*LDR*) is the ratio of the book value of long-term debt to the book value of assets. Return on assets (*ROA*) is the ratio of net income to the book value of assets. *t*-statistics are based on the standard errors adjusted for heteroskedasticity and firm clustering. *, **, and *** denote significance at the 10%, 5%, and 1% level, respectively.

Panel A: Regressions using the whole sample. The dependent variable is either scaled or raw CSR.

	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**
Constant	-0.063***	-0.441***	-0.072***	-0.447***	-0.149***	-0.366***
	[19.53]	*[31.87]*	*[19.50]*	*[32.32]*	*[30.90]*	*[29.66]*
CSR_{t-1}	-0.204***	-0.251***	-0.204***	-0.251***	-0.317***	-0.328***
	[34.45]	*[40.09]*	*[34.42]*	*[40.08]*	*[68.02]*	*[68.76]*
Crisis	0.117***	0.114***	0.128***	0.121***	0.225***	0.222***
	[34.58]	*[31.61]*	*[32.93]*	*[30.13]*	*[42.77]*	*[41.64]*
$Mktcap_{t-1}$		0.053***		0.053***		0.043***
		[23.30]		*[22.76]*		*[18.50]*
MBE_{t-1}		0.000		0.000		-0.001**
		[0.92]		*[1.13]*		*[2.25]*
LDR_{t-1}		0.025***		0.019***		0.006
		[3.97]		*[2.75]*		*[0.56]*
ROA_{t-1}		-0.029**		-0.031**		0.001
		[2.49]		*[2.57]*		*[0.06]*
Financial			0.039***	0.037***	0.103***	0.092***
			[6.01]	*[4.90]*	*[10.14]*	*[7.61]*
Financial× Crisis			-0.050***	-0.038***	-0.075***	-0.063***
			[6.55]	*[4.33]*	*[6.38]*	*[4.85]*
CSR Variable	Scaled CSR	Scaled CSR	Scaled CSR	Scaled CSR	Raw CSR	Raw CSR
R^2	0.10	0.13	0.10	0.13	0.17	0.18
N	36,257	33,981	36,257	33,981	36,264	33,981

Panel B: Regressions based on the pre-2013 sample or the whole sample. The dependent variable is scaled CSR.

	(1)	(2)	(3)	(4)
Constant	-0.389***	-0.393***	-0.413***	-0.418***
	[29.76]	*[30.17]*	*[28.95]*	*[29.42]*
CSR_{t-1}	-0.196***	-0.197***	-0.261***	-0.262***
	[30.06]	*[30.09]*	*[39.38]*	*[39.35]*
Financial	0.080***	0.085***	0.079***	0.086***
	[19.98]	*[19.34]*	*[19.04]*	*[19.27]*
Crisis		0.042***		0.041***
		[5.95]		*[5.30]*
Financial × Crisis		-0.031***		-0.040***
		[3.22]		*[4.50]*
Post 2013			0.086***	0.086***
			[15.14]	*[15.21]*
Financial × Post 2013				
Sample	Pre-2013	Pre-2013	Whole sample	Whole sample
Controls	Yes	Yes	Yes	Yes
R^2	0.11	0.11	0.14	0.14
N	23,935	23,935	33,981	33,981

Table 4: Financial Constraint and Marketing Considerations

This table presents the results from OLS regressions on the change in advertising intensity from year *t-1* to *t* against the dummies of postcrisis period after 2008 (*Crisis*), as well as their interactions with the dummy of financial firms (*Financial*). The sample consists of all firms in the KLD Research & Analytics, Inc. STATS database from 2003 to 2018. Advertising intensity is advertising scaled by the lagged sales revenue. *Scaled CSR* is the sum of the scaled differences between strengths (positives) and concerns (negatives) along five dimensions in KLD database at each year. Market-to-book ratio (*MBE*) is the market value of equity divided by the book value of equity. Market capitalization (*Mktcap*) is the logarithm of the market value of equity. Long-term debt ratio (*LDR*) is the ratio of the book value of long-term debt to the book value of assets. *ROA* is the ratio of net income to the book value of assets. *LogSale* is the log of sales revenue. *t*-statistics are based on the standard errors adjusted for heteroskedasticity and firm clustering. *, **, and *** denote significance at the 10%, 5%, and 1% level, respectively.

Panel A: Regressions based on the subsamples. The dependent variable is change in scaled CSR.

	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**
Constant	-0.551***	-0.318***	-0.419***	-0.478***	-0.460***	-0.418***
	[16.22]	*[15.21]*	*[18.79]*	*[27.35]*	*[21.45]*	*[21.26]*
CSR_{t-1}	-0.242***	-0.292***	-0.228***	-0.279***	-0.246***	-0.263***
	[29.76]	*[34.51]*	*[27.61]*	*[32.33]*	*[30.17]*	*[30.90]*
Financial	0.048***	0.027***	0.035***	0.034***	0.051***	0.026**
	[4.08]	*[2.65]*	*[3.42]*	*[2.67]*	*[4.89]*	*[2.33]*
Crisis	0.151***	0.089***	0.112***	0.130***	0.144***	0.099***
	[23.01]	*[17.11]*	*[20.10]*	*[21.54]*	*[23.29]*	*[18.13]*
Financial× Crisis	-0.048***	-0.028**	-0.041***	-0.032**	-0.052***	-0.026**
	[3.66]	*[2.32]*	*[3.55]*	*[2.18]*	*[3.89]*	*[2.22]*
Sample	Large Caps	Small Caps	Large ROA	Small ROA	Large LDR	Small LDR
Controls	Yes	Yes	Yes	Yes	Yes	Yes
R^2	0.13	0.14	0.12	0.15	0.13	0.14
N	16,627	17,354	16,903	17,078	16,829	17,152

Panel B: The dependent variable is change in advertising intensity

	(1)	**(2)**	**(3)**	**(4)**
Constant	0.020	0.008	0.037	0.013
	[0.90]	*[0.11]*	*[1.34]*	*[0.16]*
CSR_{t-1}	-0.010**	-0.007*	-0.010**	-0.007*
	[2.48]	*[1.95]*	*[2.48]*	*[1.94]*
Crisis	-0.030	-0.048*	-0.046	-0.061*
	[1.21]	*[1.88]*	*[1.48]*	*[1.92]*
$Mktcap_{t-1}$		0.010		0.008
		[0.57]		*[0.37]*
MBE_{t-1}		-0.004		-0.004

		[0.92]		*[0.84]*
LDR_{t-1}		0.063		0.054
		[1.21]		*[0.74]*
$LogSale_{t-1}$		-0.024		-0.021
		[1.28]		*[0.84]*
ROA_{t-1}		0.995***		1.000***
		[3.94]		*[3.74]*
$\Delta LogSale_t$		-0.345*		-0.342*
		[1.92]		*[1.90]*
Financial			-0.069*	-0.020
			[1.85]	*[0.27]*
Financial× Crisis			0.063	0.054
			[1.39]	*[1.16]*
R^2	0.01	0.02	0.01	0.02
N	14,724	14,478	14,724	14,478

Table 5: Fund Holding around Financial Crisis

This table presents the results from OLS regressions. The sample consists of all firms in the KLD Research & Analytics, Inc. STATS database from 2003 to 2018. The dependent variable in panel A is either *ΔHolding* or *ΔNfund*. *Holding* is the fraction of shares outstanding held by institutional investors. *Nfund* is the number of institutional investors investing in the firm. All changes are from year *t-1* to *t*. The dependent variable in panel B is either *ΔScaled CSR* or *ΔRaw CSR*. *Scaled CSR* is the sum of the scaled differences between strengths (positives) and concerns (negatives) along five dimensions at each year. *Raw CSR* is the sum of the raw differences along seven dimensions. CSR is the year dummy after 2008. *Financial* is the dummy of financial firms. Market-to-book ratio (*MBE*) is the market value of equity divided by the book value of equity. Market capitalization (*Mktcap*) is the logarithm of the market value of equity. Long-term debt ratio (*LDR*) is the ratio of the book value of long-term debt to the book value of assets. *ROA* is the ratio of net income to the book value of assets. The coefficients of MBE_{t-1}, $Mktcap_{t-1}$, LDR_{t-1}, and ROA_{t-1} are not reported. *t*-statistics are based on the standard errors adjusted for heteroskedasticity and firm clustering. *, **, and *** denote significance at the 10%, 5%, and 1% level, respectively.

Panel A: The dependent variable is change in institutional investor holding or number of institutional investors

Dep. Variable	**$\Delta Holding_t$**	**$\Delta Nfund_t$**	**$\Delta Holding_t$**	**$\Delta Nfund_t$**	**$\Delta Holding_t$**	**$\Delta Nfund_t$**
	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**
Constant	0.165***	0.555***	0.268***	0.515***	0.119***	0.700***
	[35.31]	*[22.04]*	*[23.89]*	*[13.85]*	*[13.45]*	*[14.14]*
$Holding_{t-1}$	-0.186***		-0.223***		-0.177***	
	[35.91]		*[25.19]*		*[26.57]*	
$Nfund_{t-1}$		-0.251***		-0.280***		-0.231***
		[20.27]		*[13.78]*		*[15.13]*
Financial	-0.038***	-0.056***	-0.035***	-0.048***	-0.042***	-0.061***
	[12.42]	*[7.76]*	*[7.74]*	*[5.26]*	*[9.54]*	*[5.93]*
Crisis	-0.034***	-0.023***	-0.015***	-0.004	-0.047***	-0.047***
	[22.93]	*[5.11]*	*[6.93]*	*[0.71]*	*[20.67]*	*[6.71]*
Financial × Crisis	0.026***	0.019**	0.023***	0.023**	0.027***	0.014
	[7.79]	*[1.99]*	*[4.81]*	*[1.99]*	*[5.75]*	*[0.92]*
Sample	Whole Sample		Large Cap		Small Cap	
R^2	0.11	0.11	0.13	0.14	0.11	0.09
N	33,702	33,702	16,433	16,433	17,269	17,269

Panel B: The dependent variable is change in CSR

	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**
Constant	-0.452***	-0.294***	-0.499***	-0.426***	-0.225***	0.142***
	[29.47]	*[11.71]*	*[14.38]*	*[8.57]*	*[13.25]*	*[4.72]*
CSR_{t-1}	-0.267***	-0.273***	-0.302***	-0.307***	-0.332***	-0.340***
	[47.41]	*[46.94]*	*[22.10]*	*[22.14]*	*[69.63]*	*[69.80]*
Crisis	0.110***	-0.141***	0.070***	-0.071	0.062***	-0.408***
	[9.96]	*[5.17]*	*[3.66]*	*[1.28]*	*[4.10]*	*[12.10]*

Holding$_{t-1}$	0.002		-0.017		-0.215***	
	[0.13]		*[0.61]*		*[11.34]*	
Holding$_{t-1}$ × Crisis	0.005		0.030		0.232***	
	[0.31]		*[0.94]*		*[10.80]*	
Nfund$_{t-1}$		-0.026***		-0.012		-0.119***
		[4.03]		*[0.84]*		*[15.50]*
Nfund$_{t-1}$ × Crisis		0.051***		0.033***		0.125***
		[9.09]		*[2.70]*		*[18.53]*
CSR Variable	Scaled CSR		Scaled CSR		Raw CSR	
Sample	Whole Sample		Financial Firms		Whole Sample	
R^2	0.14	0.14	0.15	0.15	0.18	0.19
N	33,567	33,567	6,360	6,360	33,567	33,567

Table 6: CSR of Financial Firms around Financial Crisis and Dodd-Frank Act of 2010

This table presents the results from OLS regressions. The sample consists of all firms covered in the KLD Research & Analytics, Inc. STATS database from 2003 to 2018. The dependent variable is either *ΔScaled CSR* or *ΔRaw CSR*, reflecting changes from year *t-1* to year *t*. *Scaled CSR* is the sum of the scaled differences between strengths (positives) and concerns (negatives) along five dimensions in the KLD database at each year. *Raw CSR* is the sum of the raw differences along seven dimensions. *Crisis* is the dummy of the postcrisis period after 2008; *Dodd* the dummy of the Dodd-Frank Act of 2010; and *Financial* is the dummy of financial firms. Market-to-book ratio (*MBE*) is the market value of equity divided by the book value of equity. Market capitalization (*Mktcap*) is the logarithm of the market value of equity. Long-term debt ratio (*LDR*) is the ratio of the book value of long-term debt to the book value of assets. Return on assets (*ROA*) is the ratio of net income to the book value of assets. The coefficients of MBE_{t-1}, $Mktcap_{t-1}$, LDR_{t-1}, and ROA_{t-1} are not reported. *t*-statistics are based on the standard errors adjusted for heteroskedasticity and firm clustering. *, **, and *** denote significance at the 10%, 5%, and 1% level, respectively.

	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**
Constant	-0.433***	-0.342***	-0.546***	-0.309***	-0.448***	-0.404***
	[31.10]	*[26.26]*	*[15.82]*	*[15.07]*	*[21.36]*	*[20.47]*
CSR_{t-1}	-0.257***	-0.358***	-0.251***	-0.295***	-0.252***	-0.268***
	[40.31]	*[72.00]*	*[29.80]*	*[34.82]*	*[30.18]*	*[31.35]*
Financial	0.040***	0.111***	0.055***	0.030***	0.054***	0.031***
	[5.27]	*[8.70]*	*[4.57]*	*[2.98]*	*[5.22]*	*[2.79]*
Crisis	0.032***	0.039***	0.013*	0.032***	0.045***	0.020***
	[7.89]	*[7.07]*	*[1.81]*	*[6.17]*	*[7.02]*	*[3.38]*
Financial×Crisis	0.011	-0.009	-0.003	0.022*	0.017	0.001
	[1.16]	*[0.61]*	*[0.23]*	*[1.80]*	*[1.28]*	*[0.10]*
Dodd	0.113***	0.242***	0.166***	0.075***	0.126***	0.100***
	[21.30]	*[32.03]*	*[18.17]*	*[12.21]*	*[16.04]*	*[13.96]*
Financial×Dodd	-0.062***	-0.077***	-0.056***	-0.068***	-0.087***	-0.036***
	[5.73]	*[4.43]*	*[3.01]*	*[5.06]*	*[5.07]*	*[2.58]*
Sample	All Firms	All Firms	Large Caps	Small Caps	Large LDR	Small LDR
CSR variable	Scaled CSR	Raw CSR	Scaled CSR	Scaled CSR	Scaled CSR	Scaled CSR
R^2	0.14	0.20	0.14	0.14	0.14	0.14
N	33,981	33,981	16,627	17,354	16,829	17,152

Table 7: CSR in Banks and Nonbanks around Financial Crisis

This table presents the results from OLS regressions. The sample consists of all firms in the KLD Research & Analytics, Inc. STATS database from 2003 to 2018. The dependent variable is either *ΔScaled CSR* or *ΔRaw CSR*, reflecting changes from year *t-1* to year *t*. *Scaled CSR* is the sum of the scaled differences between strengths (positives) and concerns (negatives) along five dimensions in the KLD database at each year. *Raw CSR* is the sum of the raw differences along seven dimensions. *Crisis* is the dummy of the postcrisis period after 2008; *Dodd* the dummy of the Dodd-Frank Act of 2010; *Financial* is the dummy of financial firms; and *Bank* and *Nonbank* are dummies of depository and nondepository institutions. Market-to-book ratio (*MBE*) is the market value of equity divided by the book value of equity. Market capitalization (*Mktcap*) is the logarithm of the market value of equity. Long-term debt ratio (*LDR*) is the ratio of the book value of long-term debt to the book value of assets. Return on assets (*ROA*) is the ratio of net income to the book value of assets. The coefficients of MBE_{t-1}, $Mktcap_{t-1}$, LDR_{t-1}, and ROA_{t-1} are not reported in some regressions. *t*-statistics are based on the standard errors adjusted for heteroskedasticity and firm clustering. *, **, and *** denote significance at the 10%, 5%, and 1% level, respectively.

Panel A: All firms or the firms in the financial industry. The dependent variable is the change in either scaled or raw CSR.

	(1)	(2)	(3)	(4)	(5)	(6)
Constant	-0.074***	-0.434***	-0.161***	-0.348***	-0.529***	-0.385***
	[19.36]	*[31.03]*	*[30.37]*	*[26.20]*	*[15.78]*	*[10.72]*
CSR_{t-1}	-0.213***	-0.257***	-0.356***	-0.363***	-0.300***	-0.407***
	[34.70]	*[40.31]*	*[73.22]*	*[72.77]*	*[20.90]*	*[32.85]*
Crisis	0.021***	0.032***	0.033***	0.040***	0.019*	0.018
	[5.51]	*[7.94]*	*[6.22]*	*[7.16]*	*[1.66]*	*[1.09]*
Dodd	0.135***	0.113***	0.256***	0.243***	0.098***	0.260***
	[27.38]	*[21.26]*	*[34.86]*	*[32.07]*	*[6.80]*	*[12.08]*
Bank	0.051***	0.063***	0.182***	0.203***	0.050***	0.177***
	[5.37]	*[6.36]*	*[11.78]*	*[11.83]*	*[3.17]*	*[7.21]*
Bank × Crisis	0.020	0.039***	0.001	0.011	0.062***	0.036
	[1.61]	*[3.03]*	*[0.05]*	*[0.48]*	*[3.61]*	*[1.30]*
Bank × Dodd	-0.101***	-0.111***	-0.153***	-0.159***	-0.104***	-0.174***
	[7.43]	*[7.84]*	*[6.40]*	*[6.56]*	*[5.17]*	*[5.30]*
Nonbank	0.031***	0.020*	0.062***	0.029*		
	[3.90]	*[1.92]*	*[4.89]*	*[1.84]*		
Nonbank × Crisis	-0.017**	-0.015	-0.025*	-0.020		
	[2.03]	*[1.27]*	*[1.93]*	*[1.21]*		
Nonbank × Dodd	-0.032***	-0.017	-0.031*	0.000		
	[3.00]	*[1.17]*	*[1.71]*	*[0.01]*		
Sample	All firms	All firms	All firms	All firms	Financial firms	
CSR Variable	Scaled CSR	Scaled CSR	Raw CSR	Raw CSR	Scaled CSR	Raw CSR
Control Var.	No	Yes	No	Yes	Yes	Yes
R^2	0.11	0.14	0.20	0.20	0.15	0.21
N	36,257	33,981	36,264	33,981	6,448	6,448

Panel B: Firms with leverage either above or below industry average. The dependent variable is the change in scaled CSR.

	(1)	(2)	(3)	(4)	(5)	(6)
Constant	-0.072***	-0.451***	-0.077***	-0.402***	-0.533***	-0.519***
	[12.99]	*[21.17]*	*[15.19]*	*[20.33]*	*[10.44]*	*[10.83]*
CSR_{t-1}	-0.206***	-0.253***	-0.231***	-0.269***	-0.265***	-0.349***
	[25.28]	*[30.14]*	*[28.40]*	*[31.38]*	*[13.31]*	*[19.83]*
Crisis	0.030***	0.045***	0.012**	0.020***	0.040**	-0.001
	[4.97]	*[7.04]*	*[2.09]*	*[3.40]*	*[2.44]*	*[0.06]*
Dodd	0.148***	0.126***	0.118***	0.100***	0.088***	0.103***
	[19.91]	*[15.98]*	*[17.12]*	*[13.98]*	*[3.90]*	*[5.59]*
Bank	0.046***	0.074***	0.062***	0.068***	0.058***	0.051**
	[3.92]	*[6.02]*	*[4.02]*	*[3.84]*	*[2.96]*	*[2.02]*
Bank × Crisis	0.023	0.045**	0.012	0.024	0.058**	0.058**
	[1.41]	*[2.55]*	*[0.59]*	*[1.23]*	*[2.45]*	*[2.25]*
Bank × Dodd	-0.135***	-0.137***	-0.068***	-0.081***	-0.107***	-0.091***
	[5.95]	*[6.14]*	*[3.78]*	*[4.50]*	*[3.42]*	*[3.49]*
Nonbank	0.037***	0.027*	0.024**	0.017		
	[3.34]	*[1.79]*	*[2.20]*	*[1.32]*		
Nonbank × Crisis	-0.018	-0.011	-0.016	-0.018		
	[1.54]	*[0.67]*	*[1.21]*	*[1.11]*		
Nonbank × Dodd	-0.047***	-0.029	-0.011	-0.005		
	[2.90]	*[1.31]*	*[0.71]*	*[0.27]*		
Sample	High LDR		Low LDR		High LDR Financial firms	Low LDR Financial firms
Control Variables	No	Yes	No	Yes	Yes	Yes
R^2	0.11	0.14	0.12	0.14	0.14	0.18
N	17,708	16,829	17,865	17,152	3,149	3,299

Table 8: CSR in Stress-Test Banks around Financial Crisis

This table presents the results from OLS regressions. The sample consists of all firms in the KLD Research & Analytics, Inc. STATS database from 2003 to 2018. The dependent variable is *ΔScaled CSR*, reflecting changes from year *t-1* to year *t*. *Scaled CSR* is the sum of the scaled differences between strengths (positives) and concerns (negatives) along five dimensions in the KLD database at each year. *Crisis* is the dummy of the postcrisis period after 2008; *Dodd* is the dummy of the Dodd-Frank Act of 2010; *Testbank* is the dummy of banks in the stress test program; *Testbank-year* is dummy of the bank-years when stress test results were disclosed. The coefficients of market-to book ratio (MBE_{t-1}), market capitalization ($Mktcap_{t-1}$), long-term debt ratio (LDR_{t-1}), and return on assets (ROA_{t-1}). Large cap firms are those with market values of equity above the sample average. *t*-statistics are based on the standard errors adjusted for heteroskedasticity and firm clustering. *, **, and *** denote significance at the 10%, 5%, and 1% level, respectively.

	(1)	(2)	(3)	(4)	(5)
Constant	-0.427***	-0.571***	-0.714***	-0.803***	-0.805**
	[32.02]	*[15.74]*	*[10.83]*	*[4.76]*	*[2.25]*
CSR_{t-1}	-0.277***	-0.279***	-0.337***	-0.428***	-0.434***
	[49.35]	*[36.36]*	*[17.54]*	*[12.42]*	*[7.52]*
Testbank	0.050	0.057	-0.006	-0.002	
	[1.35]	*[1.50]*	*[0.14]*	*[0.03]*	
Crisis	0.032***	0.008	-0.005	0.088***	0.068
	[8.96]	*[1.25]*	*[0.43]*	*[2.69]*	*[1.22]*
Testbank × Crisis	0.014	0.040	0.069	-0.019	
	[0.35]	*[0.93]*	*[1.46]*	*[0.32]*	
Dodd	0.101***	0.167***	0.120***	0.023	0.419***
	[21.77]	*[20.39]*	*[7.70]*	*[0.59]*	*[3.42]*
Testbank × Dodd	0.257**	0.210*	0.269**	0.398***	
	[2.40]	*[1.87]*	*[2.42]*	*[3.26]*	
Testbank-year	-0.190**	-0.226***	-0.209**	-0.185**	-0.179*
	[2.30]	*[2.68]*	*[2.56]*	*[2.17]*	*[2.03]*
Sample	All firms	Large Caps	Large Cap Financial firms	Large Cap Depository Inst.	Test Banks
R^2	0.14	0.15	0.17	0.21	0.22
N	35,475	17,311	3,784	1,193	359

Table 9: CSR in Stress-Test Banks around Financial Crisis

This table presents the results from OLS regressions. The sample consists of both financial institutions in the stress test programs and covered in the KLD Research & Analytics, Inc. STATS database from 2003 to 2018 and benchmark firms. The dependent variable is *ΔScaled CSR*, reflecting the change from year *t-1* to year *t*. *Scaled CSR* is the sum of the scaled differences between strengths (positives) and concerns (negatives) along five dimensions in the KLD database at each year. *Crisis* is the dummy of the postcrisis period after 2008; *Dodd* is the dummy of the Dodd-Frank Act of 2010. The coefficients of market-to book ratio (MBE_{t-1}), market capitalization ($Mktcap_{t-1}$), long-term debt ratio (LDR_{t-1}), and return on assets (ROA_{t-1}) are not reported. *t*-statistics are based on the standard errors adjusted for heteroskedasticity and firm clustering. *, **, and *** denote significance at the 10%, 5%, and 1% level, respectively.

Panel A: Firms with asset values above $50B

	(1)	(2)	(3)	(4)	(5)
Constant	-0.420***	-0.321**	-1.117***	-1.050***	-1.709***
	[2.88]	*[2.12]*	*[5.92]*	*[5.34]*	*[3.60]*
CSR_{t-1}	-0.314***	-0.308***	-0.410***	-0.408***	-0.445***
	[12.87]	*[11.88]*	*[10.31]*	*[9.99]*	*[7.73]*
Financial	0.113**	0.106**			
	[2.50]	*[2.32]*			
Crisis	0.023	0.023	0.043	0.038	0.077
	[0.86]	*[0.83]*	*[1.24]*	*[1.09]*	*[1.03]*
Financial × Crisis	-0.005	-0.004			
	[0.13]	*[0.11]*			
Dodd	0.286***	0.261***	0.155***	0.152***	-0.058
	[6.66]	*[5.96]*	*[3.62]*	*[3.39]*	*[0.60]*
Financial × Dodd	-0.105**	-0.092*			
	[1.97]	*[1.70]*			
Testbank	0.070	0.079	-0.004	-0.000	-0.141
	[1.30]	*[1.46]*	*[0.07]*	*[0.01]*	*[1.25]*
Testbank × Crisis	0.022	0.020	0.022	0.025	0.012
	[0.41]	*[0.37]*	*[0.36]*	*[0.39]*	*[0.13]*
Testbank × Dodd	0.202*	0.212*	0.267**	0.269**	0.496***
	[1.67]	*[1.75]*	*[2.12]*	*[2.11]*	*[3.63]*
Testbank-year	-0.197**	-0.191**	-0.210**	-0.207**	-0.217**
	[2.30]	*[2.22]*	*[2.44]*	*[2.40]*	*[2.49]*
Benchmarks	All firms	U.S. firms	Financial firms	U.S. Financial firms	Depository institutions
R^2	0.17	0.16	0.21	0.22	0.22
N	2,012	1,826	809	762	408

Panel B: Stress-test banks and benchmarks of U.S. depository institutions

	(1)	(2)	(3)	(4)	(5)	(6)
Constant	-2.301*	-3.635*	-1.414***	-2.103**	-1.283***	-1.562**
	[2.03]	*[1.94]*	*[3.14]*	*[2.69]*	*[3.39]*	*[2.71]*
CSR_{t-1}	-0.466***	-0.470***	-0.453***	-0.415***	-0.437***	-0.385***
	[8.03]	*[5.56]*	*[8.78]*	*[5.53]*	*[9.58]*	*[6.82]*
Testbank	-0.150	-0.253	-0.191*	-0.227*	-0.113	-0.131
	[1.60]	*[1.82]*	*[1.85]*	*[1.82]*	*[1.24]*	*[1.40]*
Crisis	0.133	0.171	0.050	0.062	0.114***	0.107**
	[1.13]	*[1.01]*	*[0.76]*	*[0.85]*	*[2.70]*	*[2.68]*
Testbank × Crisis	-0.057	0.069	0.032	0.149	-0.046	0.072
	[0.48]	*[0.35]*	*[0.40]*	*[1.21]*	*[0.70]*	*[0.74]*
Dodd	-0.128	-0.201	-0.101	-0.134	-0.118**	-0.129**
	[0.92]	*[1.11]*	*[1.12]*	*[1.23]*	*[2.38]*	*[2.39]*
Testbank × Dodd	0.620***	0.555*	0.584***	0.465**	0.591***	0.445**
	[3.31]	*[2.04]*	*[3.72]*	*[2.18]*	*[4.34]*	*[2.54]*
Testbank-year	-0.239**	-0.487**	-0.251**	-0.443***	-0.253**	-0.415***
	[2.22]	*[3.08]*	*[2.44]*	*[3.00]*	*[2.48]*	*[2.81]*
Testbanks	All banks	Assets < $100B	All banks	Assets < $100B	All banks	Assets < $100B
Benchmarks	Market Cap. $45-50B		Market Cap. $40-50B		Market Cap. $30B-50B	
R^2	0.20	0.27	0.20	0.25	0.20	0.23
N	405	157	473	225	650	402

Table 10: Institutional Investor Holding on CSR Trend

This table presents the results from OLS regressions. The sample consists of all firms in the KLD Research & Analytics, Inc. STATS database from 2003 to 2018. The dependent variable is either *ΔScaled CSR* or *ΔRaw CSR*, reflecting changes from year *t-1* to year *t*. *Scaled CSR* is the sum of the scaled differences between strengths (positives) and concerns (negatives) along five dimensions at each year. *Raw CSR* is the log of the sum of the raw differences across seven dimensions. *Crisis* is the year dummy after 2008; *Dodd* the dummy of the Dodd-Frank Act of 2010; and *Financial* is the dummy of financial firms. *Holding* is the fraction of shares outstanding held by institutional investors. *Nfund* is the number of institutional investors owning the stock. The coefficients of MBE_{t-1}, $Mktcap_{t-1}$, LDR_{t-1}, and ROA_{t-1} are not reported. *t*-statistics are based on the standard errors adjusted for heteroskedasticity and firm clustering. *, **, and *** denote significance at the 10%, 5%, and 1% level, respectively.

	(1)	(2)	(3)	(4)
Constant	-0.462***	-0.280***	-0.243***	0.096***
	[28.36]	*[9.35]*	*[12.44]*	*[2.62]*
CSR_{t-1}	-0.274***	-0.281***	-0.372***	-0.385***
	[47.89]	*[46.89]*	*[73.52]*	*[72.74]*
Financial	0.066***	-0.100*	0.162***	0.214***
	[3.63]	*[1.83]*	*[5.67]*	*[3.18]*
Crisis	0.072***	0.059*	0.059***	-0.011
	[5.02]	*[1.92]*	*[2.93]*	*[0.28]*
Financial × Crisis	0.028	0.161***	-0.014	0.083
	[1.12]	*[2.67]*	*[0.35]*	*[0.89]*
Dodd	0.085***	-0.220***	0.067***	-0.367***
	[4.95]	*[5.84]*	*[2.89]*	*[8.18]*
Financial × Dodd	-0.119***	-0.071	-0.120***	-0.243**
	[4.08]	*[1.06]*	*[2.63]*	*[2.45]*
$Holding_{t-1}$	0.032**		-0.161***	
	[2.10]		*[7.10]*	
$Holding_{t-1}$ × Financial	-0.041		-0.145***	
	[1.38]		*[3.15]*	
$Holding_{t-1}$ × Dodd	0.040*		0.244***	
	[1.81]		*[7.98]*	
$Holding_{t-1}$ × Dodd × Financial	0.106**		0.132**	
	[2.44]		*[2.04]*	
$Nfund_{t-1}$		-0.029***		-0.109***
		[3.90]		*[12.23]*
$Nfund_{t-1}$ × Financial		0.028**		-0.026*
		[2.41]		*[1.91]*
$Nfund_{t-1}$ × Dodd		0.067***		0.123***
		[8.58]		*[13.73]*
$Nfund_{t-1}$ × Dodd × Financial		0.004		0.040**
		[0.30]		*[2.00]*
CSR variable	Scaled CSR		Raw CSR	
R^2	0.14	0.15	0.21	0.21
N	33,568	33,568	33,568	33,568

Table 11: CSR Strength and Concerns around Financial Crisis

This table presents the results from OLS regressions. The sample consists of all firms in the KLD Research & Analytics, Inc. STATS database from 2003 to 2018. The dependent variable is either *ΔStrength* or *ΔConcerns* from year *t-1* to year *t*. *Strength (Concern)* is either the sum of scaled strengths (concerns) along five dimensions in KLD database or the sum of raw strengths (concerns) along seven dimensions. *Crisis* is the dummy of the postcrisis period after 2008; *Dodd* the dummy of the Dodd-Frank Act of 2010; and *Financial* is the dummy of financial firms. Market-to-book ratio (*MBE*) is the market value of equity divided by the book value of equity. Market capitalization (*Mktcap*) is the logarithm of the market value of equity. Long-term debt ratio (*LDR*) is the ratio of the book value of long-term debt to the book value of assets. Return on assets (*ROA*) is the ratio of net income to the book value of assets. The coefficients of MBE_{t-1}, $Mktcap_{t-1}$, LDR_{t-1}, and ROA_{t-1} are not reported. *t*-statistics are based on the standard errors adjusted for heteroskedasticity and firm clustering. *, **, and *** denote significance at the 10%, 5%, and 1% level, respectively.

	(1)	**(2)**	**(3)**	**(4)**
Constant	-0.267***	-0.389***	0.119***	-0.126***
	[28.80]	*[29.85]*	*[9.81]*	*[9.88]*
$Strength_{t-1}$	-0.119***	-0.255***		
	[18.73]	*[52.88]*		
$Concern_{t-1}$			-0.271***	-0.339***
			[30.95]	*[68.73]*
Financial	-0.007*	0.000	-0.051***	-0.104***
	[1.77]	*[0.03]*	*[7.99]*	*[9.77]*
Crisis	0.013***	0.001	-0.012***	-0.030***
	[6.17]	*[0.23]*	*[3.22]*	*[6.13]*
Financial×Crisis	-0.008*	-0.027**	-0.026***	-0.019
	[1.82]	*[2.46]*	*[3.27]*	*[1.57]*
Dodd	0.042***	-0.007	-0.069***	-0.263***
	[12.63]	*[1.12]*	*[15.63]*	*[37.68]*
Financial×Dodd	-0.005	0.028**	0.049***	0.103***
	[0.63]	*[2.04]*	*[5.69]*	*[7.48]*
CSR variable	Scaled Strength	Raw Strength	Scaled Concern	Raw Concern
R^2	0.06	0.14	0.15	0.23
N	30,114	32,042	30,114	32,042

Table 12: Change in Various CSR Dimensions around Financial Crisis

This table presents the results from OLS regressions. The sample consists of all firms in the KLD Research & Analytics, Inc. STATS database from 2003 to 2018. The dependent variable is the change from year *t-1* to year *t* in one of the five CSR dimensions: diversity, community, human rights, employee, and environment. Each CSR dimension is the scaled difference between strengths (positives) and concerns (negatives) along the dimension in KLD database. *Crisis* is the dummy of the postcrisis period after 2008; *Dodd* the dummy of the Dodd-Frank Act of 2010; and *Financial* is the dummy of financial firms. Market-to-book ratio (*MBE*) is the market value of equity divided by the book value of equity. Market capitalization (*Mktcap*) is the logarithm of the market value of equity. Long-term debt ratio (*LDR*) is the ratio of the book value of long-term debt to the book value of assets. Return on assets (*ROA*) is the ratio of net income to the book value of assets. The coefficients of MBE_{t-1}, $Mktcap_{t-1}$, LDR_{t-1}, and ROA_{t-1} are not reported. *t*-statistics are based on the standard errors adjusted for heteroskedasticity and firm clustering. *, **, and *** denote significance at the 10%, 5%, and 1% level, respectively.

	(1)	(2)	(3)	(4)	(5)
Constant	-0.060***	-0.016***	-0.305***	-0.080***	-0.046***
	[16.73]	*[4.12]*	*[32.28]*	*[17.10]*	*[7.29]*
CSR Dimension$_{t-1}$	-0.251***	-0.332***	-0.326***	-0.311***	-0.408***
	[32.65]	*[22.34]*	*[58.11]*	*[45.46]*	*[33.20]*
Financial	0.008***	0.007***	0.002	0.026***	0.003
	[5.13]	*[4.27]*	*[0.29]*	*[7.82]*	*[0.70]*
Crisis	0.010***	0.006***	0.008***	0.007***	-0.001
	[8.00]	*[5.35]*	*[2.59]*	*[3.37]*	*[1.03]*
Financial × Crisis	-0.005***	-0.005***	0.011*	0.003	0.014**
	[3.34]	*[4.11]*	*[1.77]*	*[0.67]*	*[2.40]*
Dodd	0.017***	0.011***	0.021***	0.057***	0.018***
	[10.22]	*[6.98]*	*[5.73]*	*[21.54]*	*[8.59]*
Financial × Dodd	-0.010***	-0.010***	-0.013	-0.026***	-0.011**
	[4.39]	*[4.08]*	*[1.63]*	*[5.75]*	*[2.16]*
CSR dimension	Environment	Human rights	Diversity	Employee	Community
R^2	0.14	0.16	0.14	0.18	0.19
N	33,981	33,981	33,981	33,981	33,981