

Do Peer Firms Affect Corporate Social Responsibility Policies?

Mei-Chen Lin, Hsiang-Lin Chih

National Taipei University, New Taipei City, Taiwan

Abstract--This paper examines whether firms react to their peers' CSR actions by changing their firm's CSR practices. We show that one important corporate social responsibility (CSR) determinant is their peers' CSR. This effect is stronger in peer firms with lower free cash flows and a higher market-to-book value. Higher-compensated CEOs also have stronger tendency of CSR-mimicking behaviors. The CSR policies of smaller in market value, less profitable, younger firms with lower institutional ownership, smaller market share, and lower earnings growth are very sensitive to the CSR policies of their more successful counterparts.

I. INTRODUCTION

The reasons why a company implements corporate social responsibility (CSR) have been an issue that academics, practitioners and government agencies are anxious to understand. From a CSR perspective, corporates are regarded as key drivers in the process of building a better world [33] and are therefore under pressure to act in social responsible ways [74]. During the past decades, the reporting of socially responsible activity is becoming more prevalent under the increasing scrutiny of investors, customers, and other stakeholders [10]. The emergence of the "market for virtues" such as Socially Responsible Investment creates further pressures for businesses to adopt CSR initiatives [85].

It's generally believed that the implementation of corporate social responsibility can help enhance the company's reputation [79], [80], [68], have better credit ratings and lower credit risk [2], [47], lower default risk [82], lower costs of capital [26], lower operating costs [4], [37], [69], improve firm performance [1], [12], and ameliorate financial transparency [24]. Moreover, Jo and Na [48] show that social responsible firms can reduce risk, and this risk-reduction effect is more economically and statistically significant in controversial industry firms. In addition to these strategic considerations, manager altruism is also one of the reasons [6], [7], [8]. Managers altruistic means managers think they (and their companies) have a moral responsibility to invest in corporate social responsibility activities, such as environmental protection, employee benefits and other humanitarian and community-based investments.

Furthermore, Borghesi, Houston, and Naranjo [8] argue that one of the reasons behind implementing corporate social responsibility is that managers care about their reputation. Barnea and Rubin [5] put forward a similar view; they found that the agency problem drives managers overinvest in socially responsible activities. Many theoretical studies have investigated the relationship between reputation and conformity (herding) [77], [90], [76]. Fama [29] and Lazear

and Rosen [57] considered the impact the reputation on managers' salaries, therefore managers may take a herd behavior because of the reputation consideration [45]. On the negative side, the herd behavior, which arises from the considerations of credibility, is associated with the "sharing-the-blame effect". That is, when their decision is wrong and different from others, its negative impact will be stronger than when they have the same wrong decisions as others [45]. On the positive side, Borghesi, Houston, and Naranjo [8] believe that managers tend to invest in corporate social responsibility activities, because they enhance their personal reputation. Therefore, no matter the reasons behind managers to take CSR activities are due to positive or negative-side considerations, they would be likely to mimic CSR-minded firms.

Third, based on past empirical findings, corporate social responsibility investments are often low reliable. First, there is a dispute for the meaning and scope on corporate social responsibility given by rating agencies [13], [27], [70], [75]. Second, organizational rhetoric, rather than actual actions, has greater influence on the evaluation of corporate social responsibility [15]. Third, the company can be simultaneously socially responsible and social irresponsible [81]. This makes the company's corporate social responsibility performance is difficult to measure. Finally, according to Schuler and Cording [78], previous empirical results often offer contradictory conclusions on the relationship between CSR and financial performance. For example, according to the review of Margolis and Walsh [63] of 127 empirical studies during 1972 to 2002, only 54 studies show a positive relationship. Margolis et al. [63] review 167 studies over the past 35 years and documents that the overall effect is positive yet small. These mixed results suggest that financial interests alone cannot drive a firm to take on CSR investments. Under the circumstance of a high noise regarding CSR investment performance, the company may be reluctant to be a leader, and may observe and imitate other companies' corporate social responsibility investment decisions within the same industry. This leads to a CSR-mimicking phenomenon.

Fourth, signaling effect is an alternative reason that managers imitate other companies to conduct corporate social responsibility investment. Kim, Park, and Wier [53] found that socially responsible firms are less likely to manage earnings through discretionary accruals to manipulate operating activities, and to become the subject of SEC investigations. Thus, some companies may mimic socially responsible firms in an attempt to signaling that these companies do not to manage earnings, and their financial statement information is transparent and reliable.

In sum, regardless of peer pressure, financial performance,

signaling and reputation considerations, firms are unwilling to behave worse in social responsible ways. A worse CSR performance will let the firm suffer from more pressure from investors, customers, and other stakeholders. Moreover, this worse-CSR-performing firm may experience subsequent decrease in financial performance and reputation, increases in costs of capital, and a lower market value.

Prior literature has shown that the behavior of peer companies does affect corporate capital structure [39], [58], corporate precautionary cash holdings [44], corporate investment decisions [32], earnings fraud, and other types of financial misconduct [71], [52]. In addition, analysts' earnings forecast [84] and stock recommendations [77] are associated with peer effects. Peer effect also appears in various business areas, such as the launching of new products, the adoption of management methods and organizational forms, and the time of entering a new market or an investment opportunity.

While many studies have investigated the peer effect on a firm's *financial* performance, little is known about its implications on a firm's *social* performance. To fill in this gap, in this context, we intend to explore whether the manager will observe and imitate other companies within the industry to make their corporate social responsibility investment decisions. Our results show that firms' CSR policies are strongly positively influenced by the CSR choices of their peers. This reveals that a firm's CSR activities may spill over to its peers. Our work contributes to the understanding of CSR determinants. Prior literature on the determinants of CSR mostly focuses on a firm's own financial motives [46], [50] and institutional environment [59]. Our work extends the research by empirically documenting that a firm's CSR policy can also be substantially changed by its peers' CSR practices.

We further explore a few channels through which such CSR-peer effects take place. First, we examine what types of firms mimic. Similarly, firms with higher market-to-book and lower free cash flows have stronger tendency of CSR-mimicking behaviors. Second, we explore what types of managers mimic? We find that CEOs with greater total pay have stronger propensity to mimic. Third, who is mimicking whom? We show that the CSR policies of smaller in market value, less profitable, younger firms with lower institutional ownership, smaller market share, and lower earnings growth are very sensitive to the CSR policies of their more successful counterparts.

Overall, these findings are also broadly consistent with the implications of peer pressure, financial performance, reputation, and signaling. That is, firms are under the pressure to not fall behind their competitors, and firms that mimic are the ones who have the greatest performance and reputational concerns. Moreover, since corporate social responsibility investments are often low reliable, the firms being mimicked are those most likely to be perceived as having greater expertise. At the same time, worse-performing firms are inclined to mimic to signal they are socially responsible.

The paper proceeds as follows. Section 2 introduces the

data and presents summary statistics and methodology. Section 3 presents our estimates of the peer effects. Section 4 examines cross-sectional heterogeneity in the effects to better understand the economic mechanisms behind the peer effects. Section 5 discusses whether CSR-mimicking firms perform better, and the following section concludes.

II. DATA AND METHODOLOGY

A. Data

We use the most commonly used measure of corporate responsibility performance, KLD (Kinder Lydenberg Domini Statistical Tool for Analysis of Trends) database for analysis. KLD began in 1991; it provides the data of approximately 650 US companies during the first decade, including S&P 500 Index and the Domini 400 Social Index. In 2001, the data expanded to cover 1000 companies. Since 2003, the data included the largest 3,000 enterprises.

KLD Research and Analytics Inc. rates companies on a variety of positive indicators (strengths) and negative indicators (concerns) in each non-exclusionary dimension, but evaluates only negative indicators in each exclusionary dimension. Strengths and concerns include the following list of characteristics: Corporate governance, Community, Diversity, Employee relations, Environment, Human rights, Products. Corporate governance is about how the firm is governed and directed. Diversity relates to the composition of the workforce, especially senior management and the board. Employee relations mention the relationship between the company and its employees and in general concerns issues related to employee compensation. Environment is referred to environmental management and policies. Finally, product is about strengths and weaknesses as regards the quality of the products and production processes of the firm. Exclusionary screen categories include alcohol, gambling, military contracting, nuclear power, and tobacco. For every attribute, we compute a firm-level score as the difference between its strengths and weaknesses. We construct a measure of aggregate corporate social responsibility (CSR) by adding the scores of these seven non-exclusionary attributes.

Following prior studies [86], [51], [13], [38], [16], [28], [25], we construct a CSR score as total strengths minus total concerns in KLD's first seven social rating categories. Because KLD compiles information on CSR beginning in 1991, our sample period covers 1991 to 2014. Manescu [62] argues that this simple summation approach cannot compare scores across years and dimensions. The reason is that the quantity of strength and concern indicators for most dimensions changes considerably over time. To overcome this issue, we follow Deng, Kang, and Low [23] to construct an adjusted strength (concern) by dividing the strength (concern) scores by the respective number of strength

(concern) indicators. That is, $Str_t^j = \frac{\sum_{s=1}^{u_t^j} strength_s^j}{u_t^j}$, $Con_t^j =$

$\frac{\sum_{r=1}^{K_t^j} concern_r^j}{K_t^j}$, $CSRscore_t^j = Str_t^j - Con_t^j$, where $CSRscore_t^j =$ CSR dimension j in year t; $u_t^j =$ number of strengths for dimension j in year t; $strength_s^j =$ strength indicator, equal to 1 if the firm meets strength s; j, otherwise 0; $K_t^j =$ number of concerns for dimension j in year t; $concern_r^j =$ concern indicator, equal to 1 if the firm meets concern r; j, otherwise 0. Then adjusted strength, adjusted concern, and adjusted score are denoted as $Str_t = \sum_{j=1}^7 Str_t^j$, $Con_t = \sum_{j=1}^7 Con_t^j$, and $CSRscore_t = Str_t - Con_t$, respectively. A higher strength (concern) indicates a better (worse) social performance.

We retrieve annual accounting and financial data from the Compustat database, and to collect stock price from the Center for Research in Security Prices (CRSP) database. We also obtain institutional ownership from Thomson-Reuters Institutional Holdings (13F) Database. We exclude observations of financial institutions (SIC codes 6000-6999) and utility firms (SIC codes 2200-2300) as the regulation of this industry is different. To ensure consistency throughout our primary analysis, we require each firm-year observation to have nonmissing data for the following variables: market value of assets, market leverage, profitability, free cash flow, market-to-book ratio, and the institutional ownership. In total, the sample has 6,767 firm-year observations from 617 distinct companies.

B. Summary statistics

Table 1 reports the summary statistics for all nonfinancial and nonutility firms in the annual Compustat database between 1991 and 2014 without missing data for all analysis variables. The table presents numbers of observations (N), mean, standard deviations (SD), the lower quartile (Q1), median, the upper quartile (Q3), minimum, and maximum for variables. Market value asset (MVA) denotes close price at annual fiscal end multiplied by common shares used to calculate earnings per share plus total debt and preferred stock liquidating value, and then subtract deferred taxes and investment tax credit; profitability denotes operating income before depreciation divided by total book asset; RDE denotes research and development expenses divided by sales. SGAE denotes sales, general and administrative expenses divided by total sales. Free cash flow (FCFA) denotes operating income before depreciation minus total taxes minus gross interest expenses on short and long-term debt, total dividend on preferred shares and total dividend on ordinary shares (COMDIV), and then scaled by total book asset. MB is market value asset divided by total book assets. FirmAge is the number of years since the firm's first appearance on CRSP. Institutional ownership (institutional) is the percentage of the average shares outstanding held by institutions. Market share is sales as a fraction of industry sales. Earnings growth is the percentage change of profitability.

TABLE I SUMMARY STATISTICS

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Variables	N	Mean	SD	Q1	Median	Q3	Minimum	Maximum
CSR score	6767	-0.097	0.755	-0.510	-0.200	0.125	-2.763	5.342
Strength	6767	0.434	0.734	0.000	0.167	0.500	0.000	5.900
Concern	6767	0.530	0.502	0.200	0.417	0.700	0.000	4.767
Market value assets	6767	7.999	1.675	6.763	7.788	9.051	3.661	13.849
Market leverage	6767	0.292	0.197	0.133	0.258	0.416	0.004	1.056
Profitability	6767	0.155	0.079	0.102	0.143	0.195	0.000	0.872
SGAE	6767	3.176	27.270	0.982	1.572	2.568	0.099	1861.500
RDE	6767	0.773	11.237	0.043	0.187	0.445	0.000	682.528
FCFA	6767	0.099	0.062	0.062	0.091	0.126	-0.519	0.671
Market-to-book	6767	3.695	8.762	1.738	2.629	3.988	0.075	591.409
Institutional	6767	0.736	0.224	0.615	0.761	0.883	0.000	5.236

Gender is 1 if CEO is male, and 0 otherwise. Total pay is the CEO total compensation, which includes salary plus bonus and long-term compensation. Growth in total pay is the percentage in CEO total compensation. Tenure as CEO is the years being CEO. Tenure at current company is the years CEO at company. We use MA-Score as a measure of managerial ability.

Table 1 shows the descriptive statistics for all the variables included in this study. It can be seen that the CSR score has a mean of -0.097; the strength has a mean of 0.434, and the concern has a mean of 0.530. This suggests that, on average, most firms exhibit negative CSR scores during the sample year. The aggregate CSR score ranges from -2.763 to 5.342 and displays greater variance than the sum of the variances of the individual attributes, strength and concern. In addition, the mean of profitability is 15.5%, which implies that \$0.155 of operating income was earned per book asset. The mean of institutional ownership is 0.736, suggesting that about 73.6% of sample firms are owned by institutions. Table 2 reports pairwise correlation coefficients between the aggregate CSR score, strength, concern and firm-characteristic variables. CSR strengths are positively correlated with CSR concerns (0.30), suggesting that corporates may simultaneously do well and do hurt.

C. Empirical model

We perform the following regression to test whether there is peer effect with respect to CSR investment decision:

$$CSR_{ijt} = \alpha + \beta \overline{CSR}_{-ijt-1} + \gamma' \bar{X}_{ijt-1} + \delta' X_{ijt-1} + \theta' u_j + \rho' v_t + \varepsilon_{ijt}, \tag{1}$$

Where CSR_{ijt} is KLD CSR score for firm i in year t,

\overline{CSR}_{-ijt-1} denotes peer firm average CSR score for firm i in year t-1; \bar{X}_{ijt-1} and X_{ijt-1} contain peer firm average (excluding firm i) and firm-specific characteristics, respectively. u_j and v_t denote industry and year, respectively. Peer firm average denotes variables constructed as the average of all firms within an industry-year combination, excluding the ith observation. Firms in the same 3-digit SIC code are assigned to the same industry group. Firm-specific factors denote variables corresponding to firm i's value in year t-1.

The firm-specific characteristics include market value of assets [22], [9], market leverage [9], [18], profitability [64], [67], [49], research and development expense over sales [65], free cash flow [87], [66], market-to-book value [34] and institutional ownership [40], [61], [8]. We use Petersen's [73] method, which allows for serial correlation across time and firms, to calculate firm-clustered standard deviation. A positive β would indicate there are peer effects with respect to CSR investment decisions.

III. EMPIRICAL RESULTS

A. Do corporate social responsibility activities exist peer effects?

Table 3 presents the regression results. The reported t-values are based on standard errors that are corrected for heteroscedasticity and clustered at the firm level using Petersen [73] approach. Among the results reported in the left part of Table 3, we find that the peer firm CSR policy is strongly positively related to CSR score. This is consistent with our primary conjecture that the managers imitate other companies within the industry to make their corporate social responsibility decisions.

TABLE 2 PEARSON CORRELATION COEFFICIENTS OF CONTROLS

This table shows the Pearson correlation coefficient between CSR score and firm characteristics. CSR score is KLD CSR score, which is the difference between strengths and concerns in the first seven dimensions. Strength is the degree of CSR strengths, and Concern is the degree of CSR concerns. Market value of assets (MVA) denote close price at annual fiscal end*common shares used to calculate earnings per share (MKVALT) + total debt(LT) + preferred stock liquidating value (PSTKL)- deferred taxes and investment tax credit(TXDITC); profitability denotes operating income before depreciation (OIBDP) divided by total book asset; SGAE is sales, general and administrative expenses divided by total sales; RDE denotes research and development expenses divided by sales. We use free cash flow (FCFA) defined by Lehn and Poulsen (1989). MB is market-to-book ratio, and Institutional is the concentration of institutional ownership, which is defined as the percentage of the average shares outstanding held by institutions

	1	2	3	4	5	6	7	8	9	10	11
1. CSR score	1										
2. Strength	0.77	1									
3. Concern	-0.37	0.30	1								
4. Market value assets	0.23	0.54	0.44	1							
5. Market leverage	-0.04	0.07	0.16	0.11	1						
6. Profitability	0.11	0.08	-0.04	0.18	-0.38	1					
7. SGAE	-0.01	-0.02	-0.03	-0.06	-0.02	-0.10	1				
8. RDE	-0.01	-0.02	-0.02	-0.04	-0.03	-0.09	0.97	1			
9. FCFA	0.09	0.03	-0.10	0.03	-0.36	0.59	-0.01	0.00	1		
10. Market-to-book	0.04	0.03	-0.01	0.13	-0.11	0.23	-0.01	0.00	0.10	1	
11. Institutional	-0.01	-0.07	-0.08	-0.01	-0.01	-0.03	0.01	0.01	0.04	-0.01	1

TABLE 3 REGRESSION TEST

The table presents estimated peer coefficients and t-statistics robust to heteroskedasticity and within firm dependence in parentheses. All variables are in all right hand side variables are lagged one year relative to the dependent variable. Peer firm average denotes variables constructed as the average of all firms within an industry-year combination, excluding the *i*th observation. Industry is defined by three-digit SIC code. Firm specific factors denotes variables corresponding to firm *i*'s value in year *t*-1. Statistical significance at the 10%, 5% and 1% levels are denoted by *, ** and ***, respectively.

	Estimate	t-value	Estimate	t-value
Intercept	-0.364*	-1.69	-0.506**	-2.11
\overline{CSR}_{it-1}	0.311***	6.06		
$\overline{CSR}_{it-1} * D(CSR_{it-1} \geq \overline{CSR}_{it-1})$			0.031	0.38
$\overline{CSR}_{it-1} * D(CSR_{it-1} < \overline{CSR}_{it-1})$			0.627***	7.89
\overline{MVA}_{it-1}	-0.064***	-3.08	-0.071***	-3.56
$\overline{Marketleverage}_{it-1}$	0.017	0.16	-0.012	-0.12
$\overline{Profitability}_{it-1}$	-0.033	-0.29	-0.032	-0.28
\overline{RDE}_{it-1}	0.000	0.45	0.000	0.28
\overline{FCFA}_{it-1}	0.155	1.12	0.114	0.81
\overline{MB}_{it-1}	0.000	0.13	0.000	0.29
$\overline{Institutional}_{it-1}$	0.211*	1.94	0.223**	2.15
MVA_{it-1}	0.124***	8.09	0.124***	8.24
$Marketleverage_{it-1}$	-0.159*	-1.95	-0.168**	-2.18
$Profitability_{it-1}$	0.465**	2.34	0.409**	2.13
RDE_{it-1}	0.000	0.45	0.000	0.61
$FCFA_{it-1}$	0.378**	2.13	0.387**	2.24
MB_{it-1}	-0.001	-1.25	-0.001	-1.26
$Institutional_{it-1}$	-0.096	-1.34	-0.089	-1.25
Adj. R ²	0.2012		0.2263	
N	6,767		6,767	

Except the effect of average peer firm market value of assets, other average peer firm characteristics have no significant effects on firms' CSR policy. This suggests that peer effects work primarily through peers' CSR policy, as opposed to peers' characteristics. Furthermore, the level of CSR score is positively related to firm size, operating profitability, and free cash flow. But profitability is negatively related to CSR concern, suggesting that less-profitable firms are more inclined to do social irresponsible things. Interestingly, larger firms and firms with lower market-to-book ratio and institutional ownership have greater tendency to contemporaneously do good and bad things.

One interesting issue is: When firms have better-than-peer CSR performance, will they increase their CSR investment in response to their peers' improved CSR engagements? Or, it's the worse-than-peer firms to mimic their peers' CSR activities. To address this question, we introduce two dummy variables. When firms' CSR score is larger than their peers average, the dummy $D(CSR_{ijt-1} \geq \overline{CSR}_{ijt-1})$ is one, and zero otherwise. When firms' CSR score is smaller than their peers average, the dummy $D(CSR_{ijt-1} < \overline{CSR}_{ijt-1})$ is one, and zero otherwise. We interact peer firm average CSR score for firm *i* in year *t*-1 (\overline{CSR}_{ijt-1}) with these two dummies, separately, and rerun the regression. Interestingly, from the right part result of Table 3, we find that forms have tendency to mimic their counterparts in the same industry only when

the fall behind the industry average. In other words, firms don't mimic their peers when their CSR performance is better.

Our KLD score is computed according to seven major facets (community, corporate governance, minority, employee relations, environment, human rights and corporate products, etc.). Hillman and Keim [43] argue that corporate social responsibility investments regarding the minority and community are less relevant with firm value, and managers have more discretion over these two facets. With regards to the environmental facet like some oil or chemicals industry, because of serious regulations, they are generally believed to have high environmental risk, therefore uncovered more corporate social responsibility report than companies in other industries [11], [30], [56]. Therefore, we doubt whether the peer effect only occurs in certain facets. To examine this issue, we do a similar analysis for each facet.

In particular, we consider the peer effects for each of the seven primary categories (Governance, Community, Diversity, Employee, Environment, Humanitarian and Product). These results are presented in Table 4. For the sake of saving space, Table 4 only reports β , the coefficients of lagged peer average CSR score. The results show that β coefficients are all significant at the 5% level, suggesting that peer effects occur in all seven categories. In comparison, the β coefficients are the highest for environment category.

TABLE 4 ARE THERE DIFFERENCES IN PEER EFFECTS BY CSR TYPE? REGRESSIONS USING SEVEN MAJOR CSR CATEGORIES

The table presents estimated coefficients, and t-statistics robust to heteroskedasticity and within firm dependence in parentheses. Peer firm average denotes variables constructed as the average of all firms within an industry-year combination, excluding the *i*th observation. Industry is defined by three-digit SIC code. Firm specific factors denotes variables corresponding to firm *i*'s value in year *t*. All specifications include one-period lagged peer firm averages and firm specific effects. We quantify each firm's social responsibility within each of the seven major CSR categories —governance, community, diversity, employee, environment, humanitarian, and product. Each of these major categories contains a variety of subcategory terms, some of which are strengths and other weaknesses. Statistical significance at the 10%, 5% and 1% levels are denoted by *, ** and ***, respectively. The number of observations is 6,767.

	Governance	Community	Diversity	Employee	Environment	Product	Humanity
Peer Firm Average CSR	0.083 (1.98)**	0.254 (4.07)***	0.197 (5.20)***	0.126 (3.27)***	0.433 (7.85)***	0.317 (6.33)***	0.317 (4.97)***
Peer Firm Average Characteristics	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Firm Specified Characteristics	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes

IV. CROSS-SECTIONAL HETEROGENEITY OF PEER EFFECTS

A. Which types of companies are more likely to have the peer effect?

According to the signaling effect, companies with low transparency of information have an incentive to imitate others social responsible firms to signal information to investors that the company is an honest business, not to manage earnings, and their financial statement information is transparent and reliable [53]. CSR Imitation may be also affected by resource constraints. Even if firms face the same environment, they may be unable to act similarly when they have very different resource endowments ([60]). The reason is that the current level of resources constrains a firm's strategy, as pointed out by many scholars of the resource-based view of the firm [20], [83].

Therefore, in order to understand what types of companies are more likely to have peer effects, we use a number of proxies which are related to information transparency, financial performance and resources. We separate the sample into high, medium and low groups based on their characteristics and observe whether the CSR-peer effect exists. Firm characteristics include: market leverage, profitability, research and development expense over sales (RDE), free cash flow (FCFA), and market to book ratio.

To address whether the peer effect coefficient varies with firm characteristics, we rank firm characteristics into three groups and focus on only the lowest (Low) and highest (High) of these groups. We interact the average change in peer firm CSR score with indicator variables identifying the lower (Low) and upper (High) thirds of each interaction variable's distribution. That is,

$$CSR_{ijt} = \alpha + \beta_1 \overline{CSR}_{-ijt-1} \times D(Low) + \beta_2 \overline{CSR}_{-it-1} \times D(High) + \gamma' \overline{X}_{ijt-1} + \delta' X_{ijt-1} + \theta' u_j + \rho' v_t + \varepsilon_{ijt}, \quad (2)$$

where *D(Low)* is a dummy variable with value 1 if it belongs to the lowest group, and 0, otherwise. Likewise,

D(High) is a dummy variable with value 1 if it belongs to the highest group, and 0, otherwise. Other variables are as defined in equation (1).

Table 5 shows the results regarding which firms mimic by examining whether the peer effect coefficient varies with firm characteristics ($\beta_1 = \beta_2$). The results in Table 5 show that firm with lower free cash flow tend to mimic their peers more strongly than their counterparts. By contrast, growth firms tend to mimic more. Since the performance of corporate social responsibility investment is mixed and harder to confirm, firms with lower free cash flow and growth firms may be more reluctant to become a leader in implementing corporate social responsibility, and may choose to be a follower. That is, they may believe that others' actions convey information, and first observe other firms' corporate social responsibility investment decisions within the industry, and then imitate them. This is consistent with the signaling and reputation effect, namely that firms mimic socially responsible firms in an attempt to signaling that they do not manage earnings, and their financial statement information is transparent and reliable. This to some degree also confirms with the argument of slack resource theory. That is, given the high noise regarding CSR investment performance, some firms without slack resources would choose to be a follower. Similarly in spirit, [54] argues that such "follow-the-leader" behavior is a result of risk minimization.

B. Which types of managers are more likely to have the peer effect?

Hong, Kubik, and Solomon [45] posit that the herd behavior arising from the credibility considerations are correlated with the manager's career. On the one hand, with the accumulation of experience, their management ability is less uncertain, and therefore they are less likely to follow the decisions of other managers. On the other hand, experienced managers are often older and have higher costs of career changes in case of making a wrong decision and forced conversion, then they will tend to follow the decisions of

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TABLE 5 WHICH FIRMS MIMIC?

The sample presents estimates for the peer firm average CSR interacted with indicator variables identifying the lower and upper third of the within industry-year distribution of lagged values for firm specific measures of whether the firm is with higher leverage, profitability, RDE, free cash flow (FCFA), market-to-book value, older, has higher liquidity in year $t - 1$. RDE denotes research and development expenses divided by sales. We exclude the middle third of the distribution for each of these regressions. Peer firm average denotes variables constructed as the average of all firms within an industry-year combination, excluding the i th observation. Industry is defined by three-digit SIC code. Firm specific factors denotes variables corresponding to firm i 's value in year $t-1$. All right hand side variables are lagged one year relative to the dependent variable. All test statistics are computed using standard errors that are robust to within firm correlation and heteroskedasticity. Statistical significance at the 10%, 5% and 1% levels are denoted by *, ** and ***, respectively. The number of observations is 4,511.

	Market leverage	Profitability	RDE	FCFA	Market-to-book
Peer Firm Average CSR× Low	0.436 (9.01)***	0.482 (10.08)***	0.343 (7.48)***	0.423 (9.19)***	0.276 (6.17)***
Peer Firm Average CSR× High	0.348 (9.41)***	0.379 (10.47)***	0.283 (7.99)***	0.302 (8.73)***	0.418 (11.54)***
Peer Firm Average Characteristics	Yes	Yes	Yes	Yes	Yes
Firm Specified Characteristics	Yes	Yes	Yes	Yes	Yes
Industry Fixed Effects	Yes	Yes	Yes	Yes	Yes
Year fixed Effects	Yes	Yes	Yes	Yes	Yes
H0: Peer Firm Average CSR×Low =Peer Firm Average CSR×High					
F statistics	2.24	3.27*	1.25	4.99**	6.88***

TABLE 6 WHICH CEOS MIMIC?

The sample presents estimates for the peer firm average CSR interacted with indicator variables identifying the lower and upper halves of the within industry-year distribution of lagged values for CEO characteristics: age, gender, total pay, growth in total pay, tenure as CEO, tenure at current company, and managerial ability. Peer firm average denotes variables constructed as the average of all firms within an industry-year combination, excluding the i th observation. Industry is defined by three-digit SIC code. Firm-specific factors denotes variables corresponding to firm i 's value in year $t-1$. All right hand side variables are lagged one year relative to the dependent variable. All test statistics are computed using standard errors that are robust to within firm correlation and heteroskedasticity. Statistical significance at the 10%, 5% and 1% levels are denoted by *, ** and ***, respectively.

	CEOAge	Gender	Total pay	Growth in total pay	Tenure as CEO	Tenure at current company	Managerial ability
Peer Firm Average CSR× Low	0.332 (7.43)***	0.114 (1.05)	0.245 (6.61)***	0.272 (7.22)***	0.462 (6.10)***	0.345 (4.62)***	0.355 (7.70)***
Peer Firm Average CSR× High	0.285 (7.73)***	0.323 (12.32)***	0.364 (11.29)***	0.341 (10.87)***	0.362 (7.40)***	0.352 (6.47)***	0.289 (8.05)***
Peer Firm Average Characteristics	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Firm Specified Characteristics	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
H0: Peer Firm Average CSR×Low =Peer Firm Average CSR×High							
F statistics	0.75	3.61*	6.71***	2.27	1.40	0.01	1.51

TABLE 7 WHICH FIRMS ARE MIMICKED?

The table presents estimated coefficients, and t-statistics robust to heteroskedasticity and within firm dependence in parentheses. Peer firm average denotes variables constructed as the average of all firms within an industry-year combination, excluding the i th observation. Industry is defined by three-digit SIC code. Firm specific factors denotes variables corresponding to firm i 's value in year t . All specifications include one-period lagged peer firm averages and firm-specific effects for the following characteristics: firm size, profitability, tangibility, and the market-to-book ratio. Firms are classified as either "Leaders" or "Followers" based on their within industry-year ranking by: market value, profitability, firm age, institutional ownership, market share, and earnings growth. The table restricts attention to the subsample of firms in the middle and lower thirds of the within industry-year distribution (i.e., Followers) of each classification variable and regresses their CSR (strength and concern) on the average change in market leverage of firms in the upper third (i.e., Leaders), as well as the control variables indicated towards the bottom of the table. Statistical significance at the 10%, 5% and 1% levels are denoted by *, ** and ***, respectively. The number of observations is 4,788.

	Market value	Profitability	Age	Institutional ownership	Market share	Earnings growth
Lead Firm Average CSR	0.157 (5.32)***	0.282 (6.46)***	0.168 (4.54)***	0.298 (5.64)***	0.134 (4.56)***	0.406 (10.25)***
Leader Firm Average Characteristics	Yes	Yes	Yes	Yes	Yes	Yes
Firm Specified Characteristics	Yes	Yes	Yes	Yes	Yes	Yes
Industry Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Year fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes

other managers. Lamont [55] finds that older analysts are less likely to be affected by other analysts; Chevalier and Ellison [14] show that younger fund managers are prone to give up their private information, and follow other fund managers' investment decisions. In addition, incompetent managers may follow the decisions of other managers, like hide in the herd, in order to maintain or achieve good reputation or to avoid being perceived its poor management capacity. Leary and Roberts [58] find that, due to reputation concern, CEOs with longer tenure, low-income and low income growth have greater tendency to imitate other company's capital structure policy within the same industry.

To examine how mimicking behaviors vary with CEO characteristics, we merge Execucomp data onto our CSR and Compustat sample. This merge largely reduces our sample size. Therefore, we adjust our empirical approach by ranking the CEO characteristics into only two groups on the basis of their position relative to the median. From Table 6, CEOs with higher total pay are more likely to mimic their peers. Since high-compensated CEOs are less likely to be considered as low management ability, their CSR-mimicking behaviors can be just a result of reputation concern. This finding appears consistent with the reputational concerns models of Scharfstein and Stein [77] and Zwiebel [90].

C. Which firms are mimicked?

Lieberman and Asaba [60] indicate that a firm's probability to be imitated increases with the information content of its signal, and actions taken by larger, more successful, or more prestigious firms may be more informative; companies that are highly visible are often respected as leaders. Consequently, they are more likely to be imitated. Similarly, many studies have shown that organizations of larger size and profitability are more likely to be followed [41], [42].

To examine which firms are being mimicked, we denote leaders and followers by sorting firms within each firm-year into three groups based on various measures of success – market value, profitability, firm age, institutional ownership, market share, and earnings growth. Followers are defined as firms in the bottom two thirds and leaders are firms in the top third of the distribution. To estimate the extent to which follower firms are sensitive to the CSR policies of leader firms, we exclude the top third of the distribution (i.e., the leaders) from the sample. Thus, the estimation is performed using only the subsample of follower firms. We also replace the peer firm average CSR (strength and concern) with that of the leaders.

The results in Table 7 show that the CSR policies of smaller market value, less profitable, younger firms are very sensitive to the CSR policies of their more successful counterparts. We find similar results for firms with lower institutional ownership, smaller market share, and lower earnings growth. Since corporate social responsibility investments are often low reliable, the firms being mimicked are those most likely to be perceived as having greater

expertise. At the same time, these findings are also broadly consistent with the implications of reputation and signaling effect. That is, those firms that mimic are the ones who have the greatest performance and reputational concerns.

We find that smaller firms may imitate large firms in an effort to upgrade their status or legitimacy, despite a lack of resources to do so successfully [31]. Likewise, firms lack of slack resources, like less profitability, smaller market share, and lower earnings growth, also have tendency to observe other firms' CSR activities before the adoption the CSR investments. Such a pattern is also consistent with information-based motives, where small and unprofitable firms draw upon on the superior ability of large and profitable firms to forecast potential rewards from engaging in CSR.

Our results are similar to Cohen and Levinthal [19], who find a pattern in which small firms mimic firms to be followed in cases of major innovations where uncertainty is high. In a study of investment timing by chemical producers, Gilbert and Lieberman [36] find a tendency for small firms to mimic the capacity expansions of large firms. The results also confirm the legitimacy theory argument that more visible firms would be under greater public pressure for accountability [17]. To maintain firm reputation, firms with greater visibility (like larger market value, more profitability, older in age, higher institutional ownership, greater market share, and more earnings growth) would be the CSR leaders. Other less visible firms would be prone to be the followers.

V. DO CSR-MIMICKING FIRMS PERFORM BETTER?

The previous section provides evidence that firms pay attention to the CSR activities of their peer firms and mimic them. Given the previous empirical results regarding the contradictory conclusions on the relationship between CSR and financial performance, this section examines whether firms can profit from CSR-mimicking strategy. To test for the effects of CSR-mimicking on firm performance, we interact the CSR scores with the lag peer firm average CSR score. In accordance with previous studies of CSR and firm performance, we control for size effects [3], [72], [86], [43], [14]. We also include variables like R&D intensity, R&D expenditure over sales (R&D), leverage ratio (Leverage), and market to book ratio (MB), which are also included in previous CSR-performance research ([65], [86]). The relevant independent variables are as defined in (4).

Because firms do not randomly engage in CSR activities, there are self-selection biases when we examine the relation between the change in CSR activities and firm performance. To avoid the self-selection problem, we adopt a Heckman two-stage regression, which is well-known in the testing of CSR-firm performance relationship. Following [89], the first step estimates the following (3) using the Probit model to yield inverse mills ratio (IMR). The dependent variable is one if the firm i receive positive KLD score at the end of year t , and zero otherwise.

TABLE 8: DOES MIMICKING PEER'S CSR ACTIVITY IMPROVE CORPORATE FINANCIAL PERFORMANCE?

This table reports the results from equation (7). CSR Premium is industry-adjusted CSR premium, which is the log difference between the value-weighted average industry-adjusted market-to-book ratio of the top CSR-minded and the bottom-CSR-minded firms. The market-to-book ratio is book assets minus book equity plus market equity all divided by book assets. CSR score is the difference between strengths and concerns in the first seven dimensions. Size denotes the natural log of total market value, which is measured in terms of million, at the end of the year; ROA is defined as operating income over total assets; Leverage is proxied by the debt to equity ratio. We use free cash flow defined by Lehn and Poulsen (1989). Institutional is the concentration of institutional ownership, which is defined as the percentage of the average shares outstanding held by institutions. *, **, and *** denote significant at the 10%, 5%, and 1% significance levels, respectively.

	Profitability(t+1)		Tobin's Q(t+1)	
	Estimate	t-value	Estimate	t-value
Intercept	0.002	0.12	-7.563	-1.53
CSR_{it}	0.001	1.55	0.112	1.26
\overline{CSR}_{it-1}	-0.001	-0.24	0.721	1.45
$CSR_{it} * \overline{CSR}_{it-1}$	-0.001	-1.27	-0.315	-0.82
MVA_{it}	0.002***	2.74	0.619*	1.81
$Marketleverage_{it}$	-0.014***	-3.68	-0.980	-1.39
$Profitability_{it}$	0.810***	38.56	15.417***	2.85
RDE_{it}	0.000***	6.39	0.005	1.21
MB_{it}	0.001**	2.01	0.455*	1.90
$Institutional_{it}$	0.001	0.16	-0.853	-1.19
IMR_{it}	0.004	0.70	2.818	1.40
Adj. R ²	0.7251		0.1120	
N	5,099		5,099	

$$P(CSR_{ijt} = 1) = \alpha + \beta \overline{CSR}_{-ijt-1} + \gamma \overline{X}_{ijt-1} + \delta' X_{ijt-1} + \theta' u_j + \rho' v_t + \varepsilon_{ijt}, \quad (3)$$

We then perform the following regression (7) to test whether mimicking the CSR activity of peer firms can improve firm financial or market performance:

$$ROA_{ijt+1} (Tobin's Q_{ijt+1}) = \alpha_1 + \alpha_2 CSR_{ijt} + \alpha_3 \overline{CSR}_{-ijt-1} + \alpha_4 CSR_{ijt} \times \overline{CSR}_{-ijt-1} + \delta' Y_{ijt} + \alpha_5 IMR_{ijt} + \theta' u_j + \rho' v_t + \varepsilon_{ijt}, \quad (4)$$

where Y_{ijt} denotes firm-specific characteristics. The variables are as defined in (1).

On the positive side, CSR imitation can speed the adoption of useful innovations, and spur firms to improve their products and services. However, it takes time to learn, and there are lags in learning processes. Moreover, even large firms may imitate the lip-deep features of other firms' CSR activities while failing to duplicate more subtle but indispensable elements. Prior studies show that early and late movers may differ in their motivations [31], [88]. In particular, early movers are inclined to be rational, whereas late movers often seek status and engage in symbolical actions. Thus, followers may fail when they lack a sufficient understanding of the critical CSR innovations made by the target firm.

The results in Table 8 show that mimicking peers' CSR behavior has no effects on a firm's returns on assets and Tobin's Q. This reveals that to mimic their peer's CSR behaviors may not be beneficial. Despite of this, firms are unwilling to persistently behave worse in social responsible ways. It's because a worse CSR-performing firm may suffer from more pressure from investors, customers, and other stakeholders. This will in turn lead to subsequent poorer financial performance and reputation, lower market value, and higher costs of capital.

VI. CONCLUSION

Despite a bunch of well-developed literature have examined the determinants of CSR, little is known about how the CSR activities can influence or be influenced by peer firms. In this paper, we show that the CSR policy of peer firms is an important determinant of corporate social responsibility policies.

Lower free cash flow and growth firms tend to mimic their peers more strongly than their counterparts. CEOs with higher total pay are more likely to mimic their peers. Our evidence indicates that peer pressure, financial performance, reputational and signaling concerns are motives for the peer effect. On the other hand, industry leaders tend to influence the CSR policy choices of their less successful peers. This reflects that worse-performing firms imitate the leaders in a hope to imitate their success. An interesting implication of this finding is the presence of externality in the CSR activities. Thus, policymakers could initiate CSR activities in some successful firms, and the external nature would be helpful in achieving an overall improvement in CSR. However, their CSR-mimicking behaviors can't improve firms' financial performance and Tobin's Q.

REFERENCES

- [1] Aktas, N., E. De Bodt and J. G. Cousin; "Do financial markets care about SRI? Evidence from mergers and acquisitions," *Journal of Banking and Finance*, vol. 35(7), pp.1753-1761, 2011.
- [2] Attig, N., S. El Ghoul, O. Guedhami and J. Suh; "Corporate social responsibility and credit ratings," *Journal of Business Ethics*, vol. 117(4), pp. 679-694, 2013.
- [3] Aupperle et al.; "An empirical examination of the relationship between corporate social responsibility and profitability," *Academy of Management Journal*, vol. 28(2), pp. 446-463, 1985.
- [4] Bansal, P. and I. Clelland; "Talking trash: Legitimacy, impression management, and unsystematic risk in the context of the natural environment," *Academy of Management Journal*, vol. 47(1), pp. 93-103, 2004.

- [5] Barnea, A. and A. Rubin; "Corporate social responsibility as a conflict between shareholders," *Journal of Business Ethics*, vol. 97(1), pp. 71-86, 2010.
- [6] Baron, D. P.; "Private politics, corporate social responsibility, and integrated strategy," *Journal of Economics and Management Strategy*, vol. 10(1), pp. 7-45, 2001.
- [7] Bénabou, R. and J. Tirole; "Individual and corporate social responsibility," *Economica*, vol. 77(305), pp. 1-19, 2010.
- [8] Borghesi, R., J. F. Houston and A. Naranjo; "Corporate socially responsible investments: CEO altruism, reputation, and shareholder interests," *Journal of Corporate Finance*, vol. 26, pp. 164-181, 2014.
- [9] Brammer, S. J. and S. Pavelin; "Corporate reputation and social performance: The importance of fit," *Journal of Management Studies*, vol. 43(3), pp. 435-455, 2006.
- [10] Brammer, S. and A. Millington; "The effect of stakeholder preferences, organizational structure and industry type on corporate community involvement," *Journal of Business Ethics*, vol. 45(3), pp. 213-226, 2003.
- [11] Broberg, P., T. Tagesson and S. Collin; "What explains variation in voluntary disclosure? A study of the annual reports of corporations listed on the Stockholm Stock Exchange," *Journal of Management and Governance*, vol. 14, pp. 351-377, 2010.
- [12] Cellier, A. and C. Pierre; "The impact of corporate social responsibility rating announcement on stock prices: An event study on European markets," 2011.
- [13] Chatterji, A. K., D. I. Levine and M. W. Toffel; "How well do social ratings actually measure corporate social responsibility?" *Journal of Economics and Management Strategy*, vol. 18(1), pp. 125-169, 2009.
- [14] Chevalier, J. and G. Ellison; "Risk taking by mutual funds as a response to incentives," *Journal of Political Economy*, vol. 105, pp. 1167-1200, 1997.
- [15] Cho, C. H., R. P. Guidry, A. M. Hageman and D. M. Patten; "Do actions speak louder than words? An empirical investigation of corporate environmental reputation," *Accounting, Organizations and Society*, vol. 37(1), pp. 14-25, 2012.
- [16] Cho, S. Y., C. Lee and R. J. Pfeiffer; "Corporate social responsibility performance and information asymmetry," *Journal of Accounting and Public Policy*, vol. 32(1), pp. 71-83, 2013.
- [17] Chu, C., B. Chatterjee and A. Brown; "The current status of greenhouse gas reporting by Chinese companies: A test of legitimacy theory," *Managerial Auditing Journal*, vol. 28(2), pp. 114-139, 2012.
- [18] Clarkson, Li., Richardson and Vasvari; "Does it really pay to be green? Determinants and consequences of proactive environmental strategies," *Journal of Accounting and Public Policy*, vol. 30(2), pp. 122-144, 2011.
- [19] Cohen, W. M. and D. A. Levinthal; "Absorptive capacity: A new perspective on learning and innovation," *Administrative Science Quarterly*, pp. 128-152, 1990.
- [20] Collis, D. J.; "A resource-based analysis of global competition: The case of the bearings industry," *Strategic Management Journal*, vol. 12(S1), pp. 49-68, 1991.
- [21] Coombs, J. E. and K. M. Gilley; "Stakeholder management as a predictor of CEO compensation: Main effects and interactions with financial performance," *Strategic Management Journal*, vol. 26(9), pp. 827-840, 2005.
- [22] Cormier, D. and I. M. Gordon; "An examination of social and environmental reporting strategies," *Accounting, Auditing and Accountability Journal*, vol. 14(5), pp. 587-617, 2001.
- [23] Deng, X., J. K. Kang and B. S. Low; "Corporate social responsibility and stakeholder value maximization: Evidence from mergers," *Journal of Financial Economics*, vol. 110(1), pp. 87-109, 2013.
- [24] Dhaliwal, D. S., S. Radhakrishnan, A. Tsang and Y. G. Yang; "Nonfinancial disclosure and analyst forecast accuracy: International evidence on corporate social responsibility disclosure," *Accounting Review*, vol. 87(3), pp. 723-759, 2012.
- [25] Di Giuli, A. and L. Kostovetsky; "Are red or blue companies more likely to go green? Politics and corporate social responsibility," *Journal of Financial Economics*, vol. 111(1), pp. 158-180, 2014.
- [26] El Ghoul, S., O. Guedhami, C. C. Kwok and D. R. Mishra; "Does corporate social responsibility affect the cost of capital?," *Journal of Banking and Finance*, vol. 35(9), pp. 2388-2406, 2011.
- [27] Entine, J.; "The myth of social investing," *Organization and Environment*, vol. 16(3), pp. 352-368, 2003.
- [28] Erhemjants, O., Q. Li and A. Venkateswaran; "Corporate social responsibility and its impact on firms' investment policy, organizational structure, and performance," *Journal of business ethics*, vol. 118(2), pp. 395-412, 2013.
- [29] Fama, E. F.; "Agency problems and the theory of the firm," *Journal of Political Economy*, pp. 288-307, 1980.
- [30] Fernandez-Feijoo, B., S. Romero and S. Ruiz-Blanco; "Women on boards: Do they affect sustainability reporting? Corporate social responsibility and environmental management," 2013.
- [31] Fligstein, N.; "The structural transformation of American industry: An institutional account of the causes of diversification in the largest firms, 1919-1979," *New institutionalism in organizational analysis*, vol. 311, 1991.
- [32] Foucault, T. and L. Fresard; "Learning from peers' stock prices and corporate investment," *Journal of Financial Economics*, vol. 111(3), pp. 554-577, 2014.
- [33] Friedman, A. L. and S. Miles; "Developing stakeholder theory," *Journal of Management Studies*, vol. 39(1), pp. 1-21, 2002.
- [34] Galema, R., A. Plantinga and B. Scholtens; "The stocks at stake: Return and risk in socially responsible investment," *Journal of Banking and Finance*, vol. 32(12), pp. 2646-2654, 2008.
- [35] Garcia-Castro, R., M. A. Ariño, and M. A. Canela; "Does social performance really lead to financial performance? Accounting for endogeneity," *Journal of Business Ethics*, vol. 92(1), pp. 107-126, 2010.
- [36] Gilbert, R. J. and M. Lieberman; "Investment and coordination in oligopolistic industries," *Rand Journal of Economics*, vol. 18(1), pp. 17-33, 1987.
- [37] Godfrey, P. C., C. B. Merrill, J. M. and Hansen; "The relationship between corporate social responsibility and shareholder value: An empirical test of the risk management hypothesis," *Strategic Management Journal*, vol. 30(4), pp. 425-445, 2009.
- [38] Goss, A. and G. S. Roberts; "The impact of corporate social responsibility on the cost of bank loans," *Journal of Banking and Finance*, vol. 35(7), pp. 1794-1810, 2011.
- [39] Graham, J. R. and C. R. Harvey; "The theory and practice of corporate finance: Evidence from the field," *Journal of financial economics*, vol. 60(2), pp. 187-243, 2001.
- [40] Graves, S. B. and S. A. Waddock; "Institutional owners and corporate social performance," *Academy of Management Journal*, vol. 37(4), pp. 1034-1046, 1994.
- [41] Haunschild, P. R. and A. S. Miner; "Modes of interorganizational imitation: The effects of outcome salience and uncertainty," *Administrative Science Quarterly*, pp. 472-500, 1997.
- [42] Haveman, H. A.; "Follow the leader: Mimetic isomorphism and entry into new markets," *Administrative Science Quarterly*, pp. 593-627, 1993.
- [43] Hillman, A. J. and G. D. Keim; "Shareholder value, stakeholder management, and social issues: What's the bottom line?," *Strategic Management Journal*, vol. 22(2), pp. 125-139, 2001.
- [44] Hoberg, G. and G. Phillips; "Product market synergies and competition in mergers and acquisitions: A text-based analysis," *Review of Financial Studies*, vol. 23, pp. 3773-3811, 2012.
- [45] Hong, H., J. D. Kubik and A. Solomon; "Security analysts' career concerns and herding of earnings forecasts," *Rand Journal of Economics*, vol. 31(1), pp. 121-144, 2000.
- [46] Hong, H. G., J. D. Kubik and J. A. Scheinkman; "Financial constraints on corporate goodness," working paper, may 2012.
- [47] Jiraporn, P., N. Jiraporn, A. Boeprasert and K. Chang; "Does corporate social responsibility (CSR) improve credit ratings? Evidence from geographic identification," *Financial Management*, vol. 43(3), pp. 505-531, 2014.
- [48] Jo, H. and H. Na; "Does CSR reduce firm risk? Evidence from controversial industry sectors," *Journal of Business Ethics*, vol. 110(4), pp. 441-456, 2012.
- [49] Jennifer Ho, L. C. and M. E. Taylor; "An empirical analysis of triple bottom-line reporting and its determinants: Evidence from the United States and Japan," *Journal of International Financial Management and*

- Accounting*, vol. 18(2), pp.123-150, 2007.
- [50] Jo, H. and M. A. Harjoto; "The causal effect of corporate governance on corporate social responsibility," *Journal of Business Ethics*, vol. 106(1), pp.53-72, 2012.
- [51] Johnson, R. A. and D. W. Greening; "The effects of corporate governance and institutional ownership types on corporate social performance," *Academy of Management Journal*, vol. 42(5), pp.564-576, 1999.
- [52] Kaustia, M. and V. Rantala; "Social learning and corporate peer effects," *Journal of Financial Economics*, in Press.
- [53] Kim, Y., M. S. Park and B. Wier; "Is earnings quality associated with corporate social responsibility?," *Accounting Review*, vol.87(3), pp.761-796, 2012.
- [54] Knickerbocker, F. T.; "Oligopolistic reaction and multinational enterprise," *International Executive*, vol. 15(2), pp.7-9, 1973.
- [55] Lamont, O.; "Macroeconomic forecasts and microeconomic forecasters," working paper, October 1995.
- [56] Lattemann, C., M. Fetscherin, I. Alon, S. Li and A. M. Schneider; "CSR communication intensity in Chinese and Indian multinational companies," *Corporate Governance: An International Review*, vol. 17(4), pp.426-442, 2009.
- [57] Lazear, E. and S. Rosen; "Rank-order tournaments as optimum labor contracts," *Journal of Political Economy*, vol.89, pp. 841-64, 1981.
- [58] Leary, M. T. and M. R. Roberts; "Do peer firms affect corporate financial policy?," *Journal of Finance*, vol.69(1), pp.139-178, 2014.
- [59] Liang, H. and L. Renneboog; "Finance and society: On the foundations of corporate social responsibility," working paper, June 2014.
- [60] Lieberman, M. B. and S. Asaba; "Why do firms imitate each other?," *Academy of Management Review*, vol.31(2), pp. 366-385, 2006.
- [61] Mahoney, L.S. and R.W. Roberts; "Corporate social performance, financial performance and institutional ownership in canadian firms," *Accounting Forum*, vol. 31(3), pp. 233-253, 2007.
- [62] Mănescu, C.; "Stock returns in relation to environmental, social and governance performance: Mispricing or compensation for risk?," *Sustainable development*, vol.19(2), pp.95-118, 2011.
- [63] Margolis, J. D. and J. P. Walsh; "Misery loves companies: Rethinking social initiatives by business," *Administrative Science Quarterly*, vol. 48(2), pp. 268-305, 2003.
- [64] Margolis, J. D. and J. P. Walsh; "People and profits: The search for a link between a company's social and financial performance," *Psychology Press*, 2001.
- [65] McWilliams, A. and D. Siegel; "Corporate social responsibility: A theory of the firm perspective," *Academy of Management Review*, vol. 26(1), pp.117-127, 2001.
- [66] Naser, K.; "Comprehensiveness of disclosure of non-financial companies: Listed on the Amman financial market," *International Journal of Commerce and Management*, vol. 8(1), pp. 88-119, 1998.
- [67] Orlitzky, M., F. L. Schmidt and S. L. Rynes; "Corporate social and financial performance: A meta-analysis," *Organization Studies*, vol. 24(3), pp.403-441, 2003.
- [68] Orlitzky, M.; "Corporate social performance and financial performance: A research synthesis," *The Oxford Handbook of Corporate Social Responsibility*, pp.113-134, 2008.
- [69] Orlitzky, M. and J. D. Benjamin; "Corporate social performance and firm risk: A meta-analytic review," *Business and Society*, vol.40(4), pp.369-396, 2001.
- [70] Orlitzky, M and D. L. Swanson; "Assessing stakeholder satisfaction: Toward a supplemental measure of corporate social performance as reputation," *Corporate Reputation Review*, vol. 15(2), pp.119-137, 2012.
- [71] Parsons, C. A., J. Sulaeman and S. Titman; "The geography of financial misconduct (No. w20347)," *National Bureau of Economic Research*, 2014.
- [72] Pava, M. L. and J. Krausz; "The association between corporate social-responsibility and financial performance: The paradox of social cost," *Journal of Business Ethics*, vol. 15(3), pp.321-357, 1996.
- [73] Petersen, M. A.; "Estimating standard errors in finance panel data sets: Comparing approaches," *Review of Financial Studies*, vol. 22(1), pp.435-480, 2009.
- [74] Pinkston, T. S. and A. B. Carroll; "Corporate citizenship perspectives and foreign direct investment in the US," *Journal of Business Ethics*, vol. 13(3), pp.157-169, 1994.
- [75] Porter, M. E. and M. R. Kramer; "The link between competitive advantage and corporate social responsibility," *Harvard Business Review*, vol.11, pp. 78-92, 2006.
- [76] Prendergast, C. and L. Stole; "Impetuous youngsters and jaded old-timers: Acquiring a reputation for learning," *Journal of Political Economy*, pp.1105-1134, 1996.
- [77] Scharfstein, D. S. and J. C. Stein; "Herd behavior and investment," *American Economic Review*, pp.465-479, 1990.
- [78] Schuler, D. A. and M. Cording; "A corporate social performance-corporate financial performance behavioral model for consumers," *Academy of Management Review*, vol. 31(3), pp.540-558, 2006.
- [79] Sen, S. and C. B. Bhattacharya; "Does doing good always lead to doing better? Consumer reactions to corporate social responsibility," *Journal of Marketing Research*, vol.38(2), pp.225-243, 2001.
- [80] Smith, N. C.; "Corporate social responsibility: Not whether, but how," working paper, Sep 2003.
- [81] Strike, V. M., J. Gao and P. Bansal; "Being good while being bad: Social responsibility and the international diversification of US firms," *Journal of International Business Studies*, vol. 37(6), pp.850-862, 2006.
- [82] Sun and Cui; "Linking corporate social responsibility to firm default risk," *European Management Journal*, vol. 32(2), pp.275-287, 2014.
- [83] Teece, D. J., G. Pisano and A. Shuen; "Dynamic capabilities and strategic management," *Strategic Management Journal*, vol. 18(7), pp.509-533, 1997.
- [84] Trueman, B.; "Analyst forecasts and herding behavior," *Review of financial studies*, vol. 7(1), pp.97-124, 1994.
- [85] Vogel, D. J.; "Is there a market for virtue? The business case for corporate social responsibility," *California Management Review*, vol.47(4), 2005.
- [86] Waddock, S. A. and S. B. Graves; "The corporate social performance," *Strategic Management Journal*, vol. 8(4), pp.303-319, 1997.
- [87] Wallace, R. O. and K. Naser; "Firm-specific determinants of the comprehensiveness of mandatory disclosure in the corporate annual reports of firms listed on the stock exchange of Hong Kong," *Journal of Accounting and Public Policy*, vol.14(4), pp. 311-368, 1996.
- [88] Westphal, J. D., R. Gulati and S. M. Shortell; "Customization or conformity? An institutional and network perspective on the content and consequences of TQM adoption," *Administrative Science Quarterly*, pp.366-394, 1997.
- [89] Wu, M. W. and C. H. Shen; "Corporate social responsibility in the banking industry: Motives and financial performance," *Journal of Banking and Finance*, vol. 37(9), pp.3529-3547, 2013.
- [90] Zwiebel, J.; "Corporate conservatism and relative compensation," *Journal of Political Economy*, pp. 1-25, 1995.