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Is Corporate Social Responsibility a Catalyst in Distressed Mergers and Acquisitions? The Indian Evidence

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Abstract: *Our study examines the role of corporate social responsibility (CSR) in mergers and acquisitions (M&A) decisions and processes when target firms are financially distressed. We focus on the M&A market in India, where CSR spending is mandatory for firms. We examine three research questions focusing on whether CSR spending and compliance by distressed targets facilitate (i) deal completion likelihood, (ii) acquisition percentage, and (iii) deal completion time. We consider firms' overall CSR spending, voluntary CSR spending (the portion of overall CSR spending above their prescribed amount), and individual CSR dimensions. Using 375 Indian distressed M&As during 2015-2020, we find that distressed targets are more attractive target choices if they spend more on overall CSR and less on social CSR. Greater acquirer-target CSR similarity favorably impacts deal completion for distressed targets. Secondly, the acquisition percentage is lower when the acquirer and the distressed targets spend more on CSR overall. Lastly, high voluntary CSR spending by the distressed target slows down deal completion, confirming the CSR overinvestment theory. Our results establish the importance of CSR spending, compliance, and individual CSR dimensions on target choice and deal characteristics.*

Keywords: Corporate Social Responsibility, Mergers and Acquisitions, Distressed M&A, Mandatory CSR, Financial Distress

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1. Introduction

Mergers and acquisitions (M&As) are increasingly becoming a tool of inorganic growth by firms. The data by the Institute of Mergers, Acquisitions and Alliances (IMAA) reflects the popularity of this inorganic growth strategy: Compared to 2001 when 31,047 deals were completed worldwide with a total deal value of $1,866 billion, the numbers rose to 50,763 deals with a deal value of $3,384 billion in 2022; registering 63.5% and 81.4% growth in the number and value of deals, respectively.

A plethora of research focuses on the motives and determinants of M&A decisions (Nguyen et al., 2012), M&A deal characteristics (de Bodt et al., 2022; Lawrence et al., 2021), and post-M&A performance (Tao et al., 2017). Since sustainability and corporate social responsibility (CSR) are capturing the focus of firms as strategic instruments, researchers also focus on the role of CSR in M&A decisions, processes, and outcomes (Gomes, 2019; Krishnamurti et al., 2019).

One stream of M&A research examines distressed M&As, where a firm acquires a financially distressed target firm. Distressed acquisitions are considered alternatives to bankruptcy and liquidation (Hotchkiss & Mooradian, 1998; Pastena & Ruland, 1986). Such M&As are typically countercyclical (Gilson et

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al., 2015) and transactions taking place in the same or related industry (Almeida et al., 2011; Clark & Ofek, 1994). The liquidity of the firms facilitates the decision to acquire a distressed target (Almeida et al., 2011). However, there is not enough work which examines the potential influence of the firms' CSR spending on the M&A decision for distressed target firms.

CSR is established to have reputational capital and is a source of gain for firm performance and value (Godfrey, 2005; Gomes & Marsat, 2018). High CSR spending reportedly reduces financial risk (Boubaker et al., 2020). Keeping in mind the purportedly beneficial effects of CSR on firm performance and risk quotient, we probe the following research questions in this study: Does the CSR orientation of distressed firms make them more attractive targets and increase the acquires' stake in these firms; and does high firm-level CSR impact how fast deals complete in distressed M&As? We attempt to answer these questions using empirical analysis.

So far, research connecting M&A with CSR focuses on the voluntary CSR regime where firms make CSR spending at their discretion. Also, extant research leaves room for inspecting the role of CSR in the distressed M&A process and deal characteristics. Distressed M&As are fundamentally associated with greater financial risk since the targets are financially unhealthy. Therefore, these research gaps give rise to two inherent questions. One: Can CSR, being a risk-mitigator, act as a trigger in driving and influencing distressed M&As? And two: Even when firms are required to compulsorily spend for CSR by legal requirements and not voluntarily, does CSR spending still act as a stimulator for distressed M&As? To the best of our knowledge, we are the first to focus on the interlink between distressed M&As and CSR, in a legislated CSR setting. India is the third country in the world (after Indonesia and Mauritius) and the second emerging economy (after Indonesia) that implemented a mandatory CSR regulation under The Companies Act, 2013 (henceforth, the CSR regulation), effective financial year (FY) 2014-15[1]. This regulation requires firms operating in India to spend a minimum of 2% of the average of the previous three years' after-tax profit for current year's CSR if they fulfill at least one criterion: (i) net worth of INR 5 billion, (ii) turnover of INR 10 billion, or (iii) after-tax profit of INR 50 million. Firms spending less than 2% of average profit are non-compliant, while firms spending greater than 2% of average profit over-comply. In this regulatory setting, we seek answers to our research questions by examining the role of CSR in (i) acquisition decisions, (ii) percentage of stake acquired, and (iii) deal completion speed, in the acquisition of distressed target firms.

Using 375 Indian domestic M&A deals between the years 2015-2020 for our empirical analysis, we find that in the Indian distressed M&A market, greater overall CSR spending by distressed target firms increases the deal completion likelihood. Also, closer CSR proximity between the acquirer and distressed targets facilitates deal completion. These directly follow from the reputational effects of CSR: High CSR spending generates goodwill (Godfrey, 2005) and intangible assets (Aragón-Correa & Sharma, 2003); improving firm value (Lins et al., 2017). Also, CSR similarity reflects a greater cultural and strategic fit (Bereskin et al., 2018), which is appreciated by the acquirers while deciding on the target choice. However, high spending on the social CSR dimension by distressed targets is detrimental to completion likelihood, which corroborates the value-destructive effect of social CSR reported by Van Essen (2018), and Meckl and Theuerkorn (2018). We also provide evidence that firms acquire lesser stakes in distressed firms when the acquirer and the distressed target spend more on CSR. This demonstrates that the acquirers take a cautious approach toward how much to invest in a distressed target firm, in a high-CSR environment that puts downward pressure on the cash outflows for the combined entity. Finally, we record that high voluntary CSR spending by distressed target firms reduces the speed of deal completion, which highlights the adverse effects of CSR overinvestment caused by over-compliance (Utz, 2017; Wang et al., 2021).

2. Theoretical Background and Hypothesis Development

Distressed M&As occur when the target firm is financially distressed. Seminal studies argue that when a firm faces financial distress, M&As are a better alternative to liquidation or bankruptcy (Jensen & Ruback, 1983; Pastena & Ruland, 1986; Shrieves & Stevens, 1979). Distressed M&As are conducted typically when the distressed firm is liquid (Almeida et al., 2011) and when the targets and acquirers operate in the same or related industry (Faelten & Vitkova, 2014). We explore the impact of another strategic element as a decisive factor in distressed acquisitions: CSR spending by the firms. High CSR spending reduces the risks of information asymmetry and reputation loss (Cui et al., 2018). CSR also acts as a cushion and insurance against negative shocks affecting firms, which is established during bearish stock markets (Kim, 2014), the subprime mortgage crisis (Lins et al., 2017), the eurozone debt crisis (Magrizos et al., 2021), and the COVID-19 pandemic (Bae et al., 2021). In the Indian legislated CSR backdrop, high CSR spending reportedly increases firm value (Bhagawan & Mukhopadhyay, 2018; Panwar et al., 2023). Therefore, we propose that high overall CSR spending by distressed target firms makes them more attractive target choices. We similarly conjecture that high-CSR acquirer firms have a greater likelihood of acquiring distressed targets. This follows from the acquirer firms trying to mitigate the risks arising from the target's financial distress using their own CSR capital.

Up to FY 2020-21, the Indian CSR regulation followed a zero-penalty "comply or explain" provision, making non-compliant firms justify the reason for their non-compliance only in their annual report. Though some firms over-complied by spending more than the prescribed amount on CSR, there was widespread noncompliance: 70.5% of the firms falling under the regulation exhibited non-compliance, including 49.9% zero-CSR firms[2]. Therefore, firms with voluntary CSR spending (the portion of total CSR spending over and above the prescribed amount) exhibit regulatory compliance. Researchers find that firm performance improves with regulatory compliance (Malloy, 2003; Tariq & Abbas, 2013); specifically, for complying with environmental regulations (Rennings & Rammer, 2011; Yang & Yao, 2012). We propose that acquirers prefer high CSR-performer targets who are CSR-compliant. Especially, if a distressed firm ensures CSR compliance by spending voluntarily on CSR, acquirers value the beneficial effect of this regulatory compliance. On a similar note, CSR-compliant acquirers who acquire distressed targets gain from their own regulatory compliance. Therefore, we examine the impact of CSR compliance on deal completion likelihood by focusing on the voluntary CSR spending by the acquirers and the distressed targets.

We also examine individual CSR dimensions as influencers for distressed M&As. Environmental CSR spending is unanimously found to enhance firm value and performance (Aktas et al., 2011; Sardana et al., 2020; Van Essen, 2018; Yang et al., 2019) with a long-term focus (Nakamura, 2011) that aligns with the long-term strategic perspective of M&As. However, some researchers find social CSR to reduce firm value (Meckl & Theuerkorn, 2018; Van Essen, 2018). They report that the market and the investors reward firms when they have stronger environmental CSR focus, while social CSR performance is not valued by the market. The reason is that environmental CSR is found to have longer-term impacts on firm performance and value, while social CSR has a shorter-term perspective (Nakamura, 2011). Therefore, social CSR does not align with the long-term strategic intent of M&As. In addition, Cavaco and Crifo (2014) find that social CSR and environmental CSR are substitute dimensions for financial performance, which involves a trade-off. If firms spend more on both dimensions, it leads to stakeholder conflict and CSR overspending. They provide evidence that firms spending more on social CSR experience a fall in return on assets. We portend that if distressed firms spend more on the value-enhancing dimension (environmental CSR) and less on the potentially value-destructive dimension (social CSR), their attractiveness as acquisition targets gets augmented. Therefore, we propose that high environmental CSR and low social CSR by distressed target firms increase deal completion likelihood.

Lastly, some M&A researchers find that not only the individual CSR of the acquirers and targets but also their CSR similarity plays a role in acquisition likelihood. Specifically, high CSR similarity (low CSR differential) favorably influences the success of deals (Alexandridis et al., 2016; Bereskin et al., 2018; Stahl & Voigt, 2008). Therefore, we propound that deal completion is more likely for distressed targets when the acquirer-target CSR differential is low. Our first set of hypotheses follows.

Hypothesis 1a: *In distressed M&As, deal completion is more likely when target firms spend more on total (overall) CSR, voluntary CSR, and environmental CSR; and less on social CSR.*

Hypothesis 1b: *In distressed M&As, deal completion is more likely when the acquirer firm spends high on total (overall) CSR and voluntary CSR.*

Hypothesis 1c: *In distressed M&As, deal completion is more likely when the acquirer-target CSR differential is low.*

After deals are initiated, two deal characteristics assuming importance for deal finalization are acquisition percentage and the speed of completion. To the best of our knowledge, existing research does not directly focus on the role of CSR in acquisition percentage. Considering CSR as a benchmark of corporate culture (Hoi et al., 2013), and using extant evidence that relates higher corporate culture of firms with greater acquisition percentage (Arslan & Wang, 2015; Chari & Chang, 2009; Dang et al., 2018), we propose that high overall CSR spending by the acquirer and distressed target help the acquirers to reap benefits from their combined CSR capital, and high voluntary CSR spending ensures regulatory compliance for acquirers. Therefore, it would increase its stake in the target. In line with our first hypothesis, we also contend that lower social CSR and higher environmental CSR by distressed targets improve their acquisition percentage. Finally, we argue that low CSR-differential causes the acquirers to pick up greater stakes in distressed targets. The second hypothesis is formulated as follows.

Hypothesis 2a: *In distressed M&As, the acquisition percentage is greater for target firms that spend more on total (overall) CSR, voluntary CSR, and environmental CSR; and less on social CSR.*

Hypothesis 2b: *In distressed M&As, the acquisition percentage is greater when the acquirer firm spends more on total (overall) CSR and voluntary CSR.*

Hypothesis 2c: *In distressed M&As, the acquisition percentage is greater when the acquirer-target CSR differential is low.*

The third element of our study is the speed of deal completion. High CSR spending ensures stakeholder approval at each stage of deal completion (Deng et al., 2013), leading to faster completion. Additionally, greater CSR proximity leads to smoother post-M&A integration, hence deals get completed in less time (Bereskin et al., 2018). Finally, we contend that greater environmental CSR and lesser social CSR by the distressed targets align more with the long-term strategic focus of M&As, making the deals completed faster. Accordingly, we propose our final set of hypotheses:

Hypothesis 3a: *In distressed M&As, deals complete faster when target firms spend more on total (overall) CSR, voluntary CSR, and environmental CSR; and less on social CSR.*

Hypothesis 3b: *In distressed M&As, deals complete faster when the acquirer firms spend more on total (overall) CSR and voluntary CSR.*

Hypothesis 3c: *In distressed M&As, deals complete faster when the acquirer-target CSR differential is low.*

3. Data and Research Methodology

3.1. Data Sources

We extract the M&A data from the LSEG (formerly, Refinitiv) M&A deal database. We hand-collect CSR data from the National CSR Portal of Ministry of Corporate Affairs, Government of India; and lastly, we obtain firm-financial data from the ProwessIQ database of the Center for Monitoring Indian Economy (CMIE), the largest financial data repository of Indian firms by CMIE, India.

3.2. Measuring Financial Distress

The three major methods that define financial distress are the Altman Z-score, the legal metrics, and the financial metrics.

The Altman Z-score model examines the likelihood of bankruptcy of firms using a multiple discriminant analysis (Altman, 1968). The legal definition classifies a firm as distressed if it is under court protection (Pastena & Ruland, 1986) or is undergoing a bankruptcy/liquidation process (Meier & Sarvaes, 2014).

However, researchers in distressed M&A argue that since M&As result in different outcomes than bankruptcies, financial distress should be measured using alternative metrics (Ang & Mauck, 2011; Behnke & Foukaki, 2012; Bruton et al., 1994; Peel & Wilson, 1989). A firm may not be on the verge of bankruptcy and yet considered distressed; the financial metrics identify such firms. Extant literature provides evidence that decreasing or negative net income is a major indicator of an imminent bankruptcy and failure (El Hennaway & Morris, 1983; Taffler, 1984). Accordingly, a multitude of researchers classify a firm as financially distressed on the net income basis if its net income fell between the years (*t-2*) and (*t-1*), *t* being the deal year (Bruton et al., 1994); or if the firm incurred net losses in the previous year (Ang & Mauck, 2011; Behnke & Foukaki, 2012; Peel & Wilson, 1989). We follow the existing literature and use the financial metric approach to measure a firm's distress using a declining or negative net income (NI) as the proxy for financial distress[3].

3.3. Sample Selection

Indian mandatory CSR regulation is effective from FY 2014-15. Since M&A decisions for a year are taken on CSR and financial performances of firms in the prior year, our first deal year under consideration is FY 2015-16. To exclude the impacts of the COVID-19 pandemic, we restrict our analysis to FY 2019-20[4]. Starting with 5,471 initiated Indian domestic deals in the LSEG deal database, we exclude 733 deals that are government-initiated or joint ventures (with short-term focus contrary to the long-term focus of M&As). Next, we remove 168 tender offers, buybacks, and recapitalizations to arrive at 4,570 deals before extracting CSR data. For 4,175 deals, the target and acquirers fall outside the scope of CSR Regulation. Out of the resulting 395 deals, firm-level financial data is unavailable for 20 deals. Therefore, our final sample comprises 375 Indian domestic mergers and acquisitions during 2015-16 and 2019-20[5], with 280 acquirer firms and 333 target firms falling under the scope of mandatory CSR regulation.

3.4. Summary Statistics and Correlation Matrix

Table 1 shows the sample distribution. Panel (A) depicts the deal characteristics by year, which shows that our sample has 20.5% targets classified as distressed using the NI approach. Panel (B), exhibiting the CSR compliance by firms, reveals greater over-compliance by acquirer firms compared to targets. Panel (C) displays the CSR spending by dimensions and shows that on average, social CSR spending is 10-13 times more than environmental CSR spending by target firms.

Table 1. Sample Description

Panel A: Distribution of Deal Characteristics by Year

Financial Year (FY)[6]	Total deals	Completed Deals	Related-Industry Deals	Deals with Distressed Targets
2015-16	58	41	17	11
2016-17	81	51	33	23
2017-18	79	56	32	14
2018-19	58	28	29	7
2019-20	99	39	46	22
TOTAL	375	215	157	77

Industry relatedness is derived using first 2 digits of National Industrial Classification (NIC) codes of acquirer and target firm.

PANEL B: CSR Compliance Status of Acquirers and Targets

	Over-compliant	Compliant	Non-Compliant	Total
Number of Target Firms	108 (32%)	132 (40%)	93 (28%)	333
Number of Acquirer Firms	99 (35%)	96 (34%)	85 (31%)	280

A firm is compliant if it spends exactly 2%, over-compliant if it spends more than 2%, and non-compliant if it spends less than 2% of its prior-year profit on CSR.

PANEL C: CSR Spending by Dimensions: Distressed vs. Non-distressed Targets

	Social CSR (%)	Environmental CSR (%)	Others (%)
By Distressed Targets	39.52	4.36	56.12
By Non-Distressed Targets	54.78	4.23	40.99

Classification of CSR dimensions is in Appendix Table A2.

Table 2 shows the summary statistics (number of observations, mean, first quartile, median, third quartile, and standard deviation) for all variables considered in the study. We consider CSR spending on social development categories as "social" CSR, and activities on environmental and pollution-reduction activities as "environmental" CSR (per National CSR Portal). The summary shows that 56.4% of initiated deals are completed with the average stake acquired being 29.8%. The average deal completion time is 107.5 days.

Average target firms spent 1.71% of prior-year net profit on CSR, while average acquirers spent 2.24%. On average, target firms spent 2.06% and acquirer firms spent 0.99% of their prior-year profit on CSR voluntarily.

41.9% of deals have acquirer and target firms operating in the same or related industry, while 26.9% deals have the acquisition percentage exceeding 50%. The average acquirer and target exhibit liquidity with a current ratio exceeding 1.

Table 2. Summary Statistics

Variable	N	Mean	Q1	Median	Q3	S.D.
Dependent variables						
Completed (Dummy)	375	0.573	0.000	1.000	1.000	0.497
Acq_Percent (%)	215	29.840	0.000	4.626	70.000	41.393
Completion_Time (days)	215	107.500	0.000	6.000	130.000	182.713
Independent (Main) variables						
Tgt_Distress (Dummy)	375	0.205	0.000	0.000	1.000	0.431
Tgt_Total_CSR (%)	375	1.714	0.000	0.320	2.138	8.045
Tgt_Vol_CSR (%)	375	2.056	0.000	0.017	0.465	6.789
Tgt_CSR_Soc (%)	375	51.830	0.000	57.690	100.000	45.186
Tgt_CSR_Env (%)	375	4.315	0.000	0.000	0.000	14.344
Acq_Total_CSR (%)	375	2.244	0.000	1.159	2.355	8.626
Acq_Vol_CSR (%)	375	0.986	0.000	0.000	0.022	3.815
Total_CSR_Diff (%)	375	4.017	0.234	1.353	2.500	11.191
Control variables						
Industry (Dummy)	375	0.419	0.000	0.000	1.000	0.494
Deal_Size	375	10.130	0.000	15.150	17.310	8.623
Deal_Majority	375	0.269	0.000	0.000	1.000	0.444
Rel_Size	375	1.034	0.972	1.030	1.103	0.113
Tgt_CR	375	1.352	0.580	1.080	1.653	1.420
Tgt_Lev	375	0.788	0.000	0.270	0.933	1.375
Acq_CR	375	1.564	0.785	1.330	2.045	1.292
Acq_Lev	375	0.771	0.030	0.325	0.790	1.326

Variables are defined in Appendix Table A1.

The correlation matrix shown in Table 3 does not show significant correlations overall, except correlation between *Completed* and *Deal_Majority, Tgt_Total_CSR* and *Total_CSR_Diff*, and between *Acq_Total_CSR* and *Total_CSR_Diff*. We also test for potential multi-collinearity problems using Variance Inflation Factor (VIF) scores. All VIF values (not reported) are less than 4, indicating that multicollinearity is not a problem overall (Belsley, 1980).

Table 3. Correlation Matrix

		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1	Completed	1.000																	
2	Acq_Percent	0.511***	1.000																
3	Tgt_Distress	-0.085*	-0.039	1.000															
4	Tgt_Total_CSR	-0.005	0.041	-0.062	1.000														
5	Tgt_Vol_CSR	-0.055	-0.033	-0.026	0.049	1.000													
6	Tgt_CSR_Soc	0.016	-0.023	-0.135***	0.063	0.054	1.000												
7	Tgt_CSR_Env	0.002	0.024	0.004	-0.098*	-0.010	-0.090*	1.000											
8	Acq_Total_CSR	0.099**	0.070	0.064	-0.026	-0.011	-0.003	-0.033	1.000										
9	Acq_Vol_CSR	-0.066	-0.004	0.028	-0.013	0.020	0.115**	-0.026	-0.032	1.000									
10	CSR_Diff	0.007	0.016	0.099*	0.437***	0.024	0.080	-0.008	0.399***	0.010	1.000								
11	Deal_Size	0.122**	-0.011	-0.004	-0.014	-0.053	0.030	0.004	-0.003	-0.071	-0.091*	1.000							
12	Deal_Majority	0.427***	-0.011	-0.035	0.001	-0.022	-0.040	0.030	0.103**	-0.004	0.021	-0.012	1.000						
13	Industry	0.020	0.156***	-0.051	-0.079	-0.044	0.090*	0.027	-0.056	0.010	-0.076	0.028	0.138***	1.000					
14	Tgt_Lev	0.020	-0.029	0.195***	-0.059	0.046	0.054	-0.026	0.028	0.005	0.044	-0.005	-0.023	-0.057	1.000				
15	Tgt_CR	0.057	0.022	-0.209***	0.050	-0.015	0.133***	-0.024	-0.018	0.005	0.033	0.038	-0.019	0.078	-0.162***	1.000			
16	Acq_Lev	-0.002	-0.050	0.149***	-0.015	-0.033	0.026	0.055	-0.061	-0.010	0.054	-0.065	-0.072	-0.027	0.112**	-0.090*	1.000		
17	Acq_CR	0.021	0.055	-0.100*	0.050	-0.011	0.004	0.005	-0.054	0.000	-0.085*	0.075	-0.019	0.056	-0.016	0.084*	-0.256***	1.000	
18	Rel_Size	0.031	-0.051	-0.034	-0.037	-0.008	-0.041	-0.026	-0.066	0.064	-0.074	0.129**	-0.072	-0.01	-0.024	0.031	0.077	0.077	1.000

***, ** and * refer to 1%, 5% and 10% significance, respectively.

4. Results and Discussion

4.1. Impact of CSR of Distressed Firms on Deal Completion Likelihood

We contend that greater total, voluntary, and environmental CSR spending by distressed target firms increases deal completion likelihood. Deals are more likely to be completed for high-CSR firms acquiring distressed targets when the target firm spends less on social CSR, and when the acquirer-target CSR differential is low. We use the following model:

$$\begin{aligned}
\text{Completed}_{t} = {} & \beta_0 + \beta_1\, \text{Tgt_Distress}_{t-1} + \beta_2\, \text{Tgt_Total_CSR}_{t-1} + \beta_3\, \text{Tgt_Vol_CSR}_{t-1} \\
& + \beta_4\, \text{Tgt_CSR_Soc}_{t-1} + \beta_5\, \text{Tgt_CSR_Env}_{t-1} \\
& + \beta_6\, \text{Acq_Total_CSR}_{t-1} + \beta_7\, \text{Acq_Vol_CSR}_{t-1} + \beta_8\, \text{Total_CSR_Diff}_{t-1} \\
& + \beta_9\, (\text{Tgt_Distress}_{t-1} \times \text{Tgt_Total_CSR}_{t-1}) + \beta_{10}\, (\text{Tgt_Distress}_{t-1} \times \text{Tgt_Vol_CSR}_{t-1}) \\
& + \beta_{11}\, (\text{Tgt_Distress}_{t-1} \times \text{Tgt_CSR_Soc}_{t-1}) + \beta_{12}\, (\text{Tgt_Distress}_{t-1} \times \text{Tgt_CSR_Env}_{t-1}) \\
& + \beta_{13}\, (\text{Tgt_Distress}_{t-1} \times \text{Acq_Total_CSR}_{t-1}) + \beta_{14}\, (\text{Tgt_Distress}_{t-1} \times \text{Acq_Vol_CSR}_{t-1}) \\
& + \beta_{15}\, (\text{Tgt_Distress}_{t-1} \times \text{Total_CSR_Diff}_{t-1}) \\
& + \gamma\, (\text{Controls})_{t-1} + \theta\, (\text{Year FE, Industry FE}) + \varepsilon_{t}
\end{aligned} \tag{1}$$

We use the dummy variable *Completed* as the dependent variable, which equals 1 if the deal is completed and 0 otherwise. *Tgt_Distress* is a dummy variable which is 1 if the target is financially distressed and 0 otherwise. We control for deal size, majority acquisition, relative size, and liquidity and leverage of both acquirer and target firms. We include both year fixed effect and industry fixed effect.

Table 4 shows the logistic regression results. When the target firms are healthy, the coefficient of *Tgt_Total_CSR* is negative; signifying that greater overall CSR spending by targets reduces their acquisition likelihood. Also, the positive coefficient of *Total_CSR_Diff* implies greater deal completion likelihood when CSR-differnetial between the acquirer and target is high. These departures from our hypothesized relationships can be explained by the negative accounting impacts of CSR. Spending on CSR is not a business expenditure; in India, it is targeted at benefiting external stakeholders outside the firm[7]. Research shows that external CSR does not improve firm performance as much as internal CSR does (Habaragoda, 2018; Hawn & Ioannou, 2016). Therefore, high CSR-related cash outflows by targets, intended to benefit external stakeholders, are not perceived favorably by acquirers. Similarly, low CSR differentials occur when both firms spend high on CSR, or both firms spend low on CSR. While too low CSR spending exhibits a value-reduction effect, CSR overspending reportedly has adverse effects on shareholders (Fairhurst & Greene, 2022). Therefore, acquirers prefer firms having higher CSR differential to avoid the detrimental effects of too much or too little CSR spending by the combined entity. Also, in general, high-CSR acquirers are inclined to complete deals more (*Acq_Total_CSR* > 0).

When financially distressed target firms are acquired, the coefficient of the interaction (*Tgt_Distress x Tgt_Total_CSR > 0*) reveals that if a financially distressed target firm spends more on CSR, deal completion likelihood increases. Specifically, a 1-unit increase in overall CSR spending by distressed targets increases the odds of deal completion by 1.73 units[8]. This is justified: Financially distressed firms come with higher profitability risks since they face declining or negative profits. CSR research finds that when firms spend more on CSR, overall corporate risk falls (Gloßner, 2019). Thus, higher overall CSR spending by distressed targets shrinks their risk quotient.

The negative coefficient of (*Tgt_Distress x Total_CSR_Diff*) reveals that if a firm acquires a distressed target, then greater CSR proximity between them augments deal completion. For every 1-unit decrease in CSR-differential, the odds of completion increases by 0.63 units. This conforms to existing studies that find high CSR-proximity (low CSR differential) favors deal success (Alexandridis et al., 2016, Bereskin et al., 2018; Stahl & Voigt, 2008). Therefore, firms acquiring distressed targets firms reap benefits arising from the strategic similarities between them to mitigate the risks of acquiring a stressed firm, for completing the deal.

Among the CSR dimensions, (*Tgt_Distress x Tgt_CSR_Soc*) is negative; every 1-unit decrease in social CSR increases the odds of deal completion for distressed targets by 0.97 units more than for healthy targets.

This too complies with our proposition: Acquirers do not value target firms that experience distress and also spend more on the value-reducing CSR dimension that misaligns with the strategic objective of M&As.

Among the controls, larger-sized deals and majority acquisitions have greater completion likelihood (*Deal_Size > 0* and *Deal_Majority > 0*). Greater liquidity of target firms improves the odds of deal completion (*Tgt_CR > 0*), corroborating Almeida et al (2011) who reported that higher liquidity of distressed target firms increases acquisition likelihood.

Table 4. Impact of CSR on Deal Completion Likelihood for Distressed Target Firms

	Logistic	
Variable	**Coefficient**	**Standard Error**
Tgt_Distress	0.987	(0.604)
Tgt_Total_CSR	-0.115**	(0.055)
Tgt_Vol_CSR	-0.043	(0.028)
Tgt_CSR_Soc	0.002	(0.004)
Tgt_CSR_Env	0.000	(0.012)
Acq_Total_CSR	0.126**	(0.055)
Acq_Vol_CSR	-0.025	(0.103)
Total_CSR_Diff	0.091*	(0.053)
Tgt_Distress x Tgt_Total_CSR	0.547***	(0.195)
Tgt_Distress x Tgt_Vol_CSR	0.048	(0.046)
Tgt_Distress x Tgt_CSR_Soc	-0.030***	(0.010)
Tgt_Distress x Tgt_CSR_Env	0.078	(0.060)
Tgt_Distress x Acq_Total_CSR	0.267	(0.199)
Tgt_Distress x Acq_Vol_CSR	0.033	(0.103)
Tgt_Distress x Total_CSR_Diff	-0.464**	(0.105)
Deal_Size	0.007***	(0.021)
Deal_Majority	3.462***	(0.519)
Industry	-0.188	(0.341)
Tgt_Lev	0.107	(0.120)
Tgt_CR	0.242**	(0.115)
Acq_Lev	0.265**	(0.118)
Acq_CR	-0.067	(0.128)
Rel_Size	-0.189	(1.589)
Year Fixed Effect	Yes	
Industry Fixed Effect	Yes	
Pseudo R^2	0.387	
N	375	

***, ** and * refer to 1%, 5% and 10% significance, respectively.

4.2. Impact of CSR on Acquisition Percentage

We assert that greater total (overall), voluntary, and environmental CSR spending by a distressed target firm increases the stake acquired in the target; while higher social CSR and CSR-differential by such firms reduce it. Also, high-CSR acquirers tend to acquire greater stakes in distressed firms. The following model reflects this:

$$\begin{aligned} Acq\_Percent_{t} = {} & \beta_0 + \beta_1\, Tgt\_Distress_{t-1} + \beta_2\, Tgt\_Total\_CSR_{t-1} + \beta_3\, Tgt\_Vol\_CSR_{t-1} \\ & + \beta_4\, Tgt\_CSR\_Soc_{t-1} + \beta_5\, Tgt\_CSR\_Env_{t-1} \\ & + \beta_6\, Acq\_Total\_CSR_{t-1} + \beta_7\, Acq\_Vol\_CSR_{t-1} + \beta_8\, Total\_CSR\_Diff_{t-1} \\ & + \beta_9\, (Tgt\_Distress_{t-1} \text{ x } Tgt\_Total\_CSR_{t-1}) + \beta_{10}\, (Tgt\_Distress_{t-1} \text{ x } Tgt\_Vol\_CSR_{t-1}) \\ & + \beta_{11}\, (Tgt\_Distress_{t-1} \text{ x } Tgt\_CSR\_Soc_{t-1}) + \beta_{12}\, (Tgt\_Distress_{t-1} \text{ x } Tgt\_CSR\_Env_{t-1}) \\ & + \beta_{13}\, (Tgt\_Distress_{t-1} \text{ x } Acq\_Total\_CSR_{t-1}) + \beta_{14}\, (Tgt\_Distress_{t-1} \text{ x } Acq\_Vol\_CSR_{t-1}) \\ & + \beta_{15}\, (Tgt\_Distress_{t-1} \text{ x } Total\_CSR\_Diff_{t-1}) \\ & + \gamma\, (Controls)_{t-1} + \theta\, (\text{Year FE, Industry FE}) + \varepsilon_t \end{aligned} \tag{2}$$

Table 5 displays the OLS regression results. The dependent variable is *Acq_Percent*. We control for relative size and the liquidity and leverage of both acquirer and targets. We include both year fixed effect and industry fixed effect.

Table 5. Impact of CSR on Acquisition Percentage for Distressed Target Firms

	OLS	
Variable	**Coefficient**	**Standard Error**
Tgt_Distress	0.121	(0.116)
Tgt_Total_CSR	0.004	(0.005)
Tgt_Vol_CSR	0.001	(0.007)
Tgt_CSR_Soc	0.000	(0.001)
Tgt_CSR_Env	0.002	(0.002)
Acq_Total_CSR	0.002	(0.004)
Acq_Vol_CSR	-0.008	(0.010)
Total_CSR_Diff	0.001	(0.005)
Tgt_Distress x Tgt_Total_CSR	-0.070*	(0.037)
Tgt_Distress x Tgt_Vol_CSR	-0.019	(0.020)
Tgt_Distress x Tgt_CSR_Soc	0.000	(0.002)
Tgt_Distress x Tgt_CSR_Env	-0.006	(0.011)
Tgt_Distress x Acq_Total_CSR	-0.064*	(0.038)
Tgt_Distress x Acq_Vol_CSR	0.029	(0.019)
Tgt_Distress x Total_CSR_Diff	0.060	(0.037)
Industry	0.218***	(0.063)
Tgt_Lev	-0.022	(0.022)
Tgt_CR	-0.017	(0.020)
Acq_Lev	-0.019	(0.024)
Acq_CR	0.034	(0.024)
Rel_Size	0.037	(0.323)
Year Fixed Effect	Yes	
Industry Fixed Effect	Yes	
Adjusted R^2	0.015	
N	215	

Sample comprises completed deals only. ***, ** and * refer to 1%, 5% and 10% significance, respectively.

The negative coefficients of (Tgt_Distress x Tgt_Total_CSR) and (Tgt_Distress x Acq_Total_CSR) are revealing. For every 1-unit increase in overall CSR spending by the distressed target and the acquirer, the stake acquired falls by 0.07 and 0.06 units, respectively. This supports the CSR overinvestment theory, claiming that high CSR spending diminishes firm value and performance (Rajgopal & Tantri, 2022). Current-period CSR spending reportedly increases future value of firms, making high-CSR target firms attractive investment choices for the acquirers since they anticipate greater CSR-induced value and performance in future. At the same time, high overall CSR spending by the target and the acquirer increases the current-period cash outflows of the combined entity more. Especially, distressed targets spending more on CSR puts greater downward pressure on the already stressed-out bottom line. Buying lower stakes in such firms mitigates this immediate downside impact on the acquirer firm's cash outflows. Also, M&A research finds that Indian acquirer firms undergoing partial acquisitions experience relatively better post-M&A performance compared to full acquisitions (Dixit, 2020). Therefore, acquirers who buy financially unhealthy yet high-CSR firms attempt to gain performance improvement by acquiring lower stakes in such firms. This result manifests the cautious approach exercised by Indian acquirer firms when acquiring financially strained targets.

Among the controls, the positive coefficient of *Industry* signifies greater acquisition percentage when the acquirer and target belong to the same or related industry.

4.3. Impact of CSR on Deal Completion Time

We propose that greater overall, voluntary, and environmental CSR spending; and less social CSR spending by a distressed target firm speed up deal completion. Also, high-CSR acquirers and lower CSR differential reduce deal completion time. We use the following model:

$$\begin{aligned}\text{Completion\_Time}_{t} = {} & \beta_0 + \beta_1\, \text{Tgt\_Distress}_{t-1} + \beta_2\, \text{Tgt\_Total\_CSR}_{t-1} + \beta_3\, \text{Tgt\_Vol\_CSR}_{t-1} \\ & + \beta_4\, \text{Tgt\_CSR\_Soc}_{t-1} + \beta_5\, \text{Tgt\_CSR\_Env}_{t-1} \\ & + \beta_6\, \text{Acq\_Total\_CSR}_{t-1} + \beta_7\, \text{Acq\_Vol\_CSR}_{t-1} + \beta_8\, \text{Total\_CSR\_Diff}_{t-1} \\ & + \beta_9\, (\text{Tgt\_Distress}_{t-1} \times \text{Tgt\_Total\_CSR}_{t-1}) + \beta_{10}\, (\text{Tgt\_Distress}_{t-1} \times \text{Tgt\_Vol\_CSR}_{t-1}) \\ & + \beta_{11}\, (\text{Tgt\_Distress}_{t-1} \times \text{Tgt\_CSR\_Soc}_{t-1}) + \beta_{12}\, (\text{Tgt\_Distress}_{t-1} \times \text{Tgt\_CSR\_Env}_{t-1}) \\ & + \beta_{13}\, (\text{Tgt\_Distress}_{t-1} \times \text{Acq\_Total\_CSR}_{t-1}) + \beta_{14}\, (\text{Tgt\_Distress}_{t-1} \times \text{Acq\_Vol\_CSR}_{t-1}) \\ & + \beta_{15}\, (\text{Tgt\_Distress}_{t-1} \times \text{Total\_CSR\_Diff}_{t-1}) \\ & + \gamma\, (\text{Controls})_{t-1} + \theta\, (\text{Year FE, Industry FE}) + \varepsilon_t\end{aligned} \tag{3}$$

Table 6 displays the OLS regression results. The dependent variable is *Completion_Time,* which is the natural logarithm of deal completion time calculated as the number of days between deal announcement and effectiveness date (Lawrence et al., 2021) as per the LSEG deal database. We use the same controls and fixed effects as Equation (1).

For non-distressed firms, high overall and voluntary CSR speeds up deal completion, evidenced by the negative coefficients of *Tgt_Total_CSR* and *Tgt_Vol_CSR.* This conforms to reports evidencing high CSR speeding up stakeholder approvals at each stage of the deal (Bereskin et al., 2018).

However, when the target firm is distressed, the interaction (*Tgt_Distress x Tgt_Vol_CSR*) is positive, signifying higher deal completion time: A distressed target increasing its voluntary CSR spending by 1 unit experiences an increase in deal completion time by 0.186 units. This is plausible. High voluntary CSR by a distressed firm implies that despite facing profitability concerns, it is spending above its prescribed CSR limit. This reduces the firm's ability to respond and adjust to productive disturbances, in turn increasing the firm's idiosyncratic risk in terms of greater stock price volatility (Becchetti et al., 2015). The acquirers take more time to evaluate such risks arising from the acquisition of high-CSR distressed firms. This slows down deal completion.

The control coefficients show that greater deal size and majority deals speed up deal completion (*Deal_Size* > 0 and *Deal_Majority* > 0), which is attributed to greater complexity arising from larger deals. Related-industry deals take longer to complete. The Competition Act of India 2002 prohibits activities including acquisitions that reduce competition. This anti-competition risk is greater in deals where the firms are operating in the same or related industry, which requires more regulatory intervention and investigation; taking longer time to complete.

Table 6. Impact of CSR on Deal Completion Time for Distressed Target Firms

	OLS	
Variable	**Coefficient**	**Standard Error**
Tgt_Distress	-0.147	(0.636)
Tgt_Total_CSR	-0.056**	(0.027)
Tgt_Vol_CSR	-0.076*	(0.040)
Tgt_CSR_Soc	-0.002	(0.004)
Tgt_CSR_Env	0.007	(0.013)
Acq_Total_CSR	-0.012	(0.023)
Acq_Vol_CSR	0.066	(0.056)
Total_CSR_Diff	0.034	(0.025)
Tgt_Distress x Tgt_Total_CSR	0.231	(0.203)
Tgt_Distress x Tgt_Vol_CSR	0.186*	(0.109)
Tgt_Distress x Tgt_CSR_Soc	-0.003	(0.012)
Tgt_Distress x Tgt_CSR_Env	0.055	(0.062)
Tgt_Distress x Acq_Total_CSR	0.191	(0.209)
Tgt_Distress x Acq_Vol_CSR	-0.091	(0.105)
Tgt_Distress x Total_CSR_Diff	-0.224	(0.203)
Industry	0.929***	(0.357)
Deal_Size	0.064***	(0.020)
Deal_Majority	0.993***	(0.346)
Tgt_Lev	0.146	(0.124)
Tgt_CR	0.022	(0.113)
Acq_Lev	-0.252*	(0.130)
Acq_CR	-0.106	(0.132)
Rel_Size	1.763	(1.789)
Year Fixed Effect	Yes	
Industry Fixed Effect	Yes	
Adjusted R^2	0.120	
N	215	

Sample comprises completed deals only. ***, ** and * refer to 1%, 5% and 10% significance, respectively.

5. Conclusion and Implications

5.1. Conclusion

In this study, we aim to establish the impact of firm-level CSR on the decision and process of distressed M&As where the target firms suffer financial distress, focusing on the legislated CSR environment of India where CSR spending is mandatory.

Our first set of findings relates to the role of CSR spending in the decision to acquire financially distressed target firms, which is examined by our first hypothesis. We find evidence that financially distressed target firms that spend more on total CSR experience greater acquisition likelihood compared to non-distressed targets. This emphasizes the importance of CSR spending when the firms are financially stressed; the acquirers value the beneficial role of CSR when the targets are unhealthy. This finding corroborates the risk-reducing role of CSR as evidenced by Lins et al. (2017), Cui et al. (2018), and Boubaker et al. (2020). In addition, we find that greater CSR similarity between distressed targets and their acquirers improves acquisition likelihood. It reveals the acquirers' preference for target firms that exhibit greater CSR similarity, which indicates greater cultural proximity between the acquirer and its target. This is similar to the findings of Bereskin et al. (2018), which report the beneficial roles of CSR similarity in acquisition likelihood in a non-mandatory CSR backdrop. Finally, we establish that the target firm's social CSR spending weakens acquisition likelihood. It manifests the value-reducing effects of social CSR; bolstering the findings by Meckl and Theuerkorn (2015), and Van Essen (2018). Therefore, our first hypothesis is supported overall.

Our next finding pertains to the percentage of stake acquired in distressed target firms, which is tested by the second hypothesis. We report that compared to healthy M&As, acquirers tend to acquire lower stakes in distressed targets if the acquirer firm and target firm spend less on total CSR. A likely explanation is that if the acquirer invests a lower stake in a CSR-spending distressed target firm, it reduces the immediate downside impacts on the acquirer firm's cash outflows that are caused by CSR spending. Therefore, acquirers of unhealthy CSR-spending firms limit their stake to a low level, exercising caution. Thus, our second hypothesis is not supported.

Our last finding involves the role of CSR in the speed of deal completion in distressed M&As. We test this relationship using our third hypothesis, and report that if distressed targets spend more on CSR voluntarily, deal completion is slower compared to the speed of completion of non-distressed acquisitions. This portrays a possible CSR overspending effect arising from too much CSR that is spent voluntarily above the mandated amount, which potentially causes a further cash outflow pressure. This poses a downward cash flow risk, and the acquirers take time to assess such risks which slows down deal completion. This result endorses the evidence provided by Becchetti et al. (2015) who establish that if a firm spends more on CSR; it compromises its ability to respond to shocks and increases the firm's idiosyncratic risk. Therefore, our third hypothesis is not supported

5.2. Managerial Implications

Our study brings forth some important implications for managers. Higher CSR spending by distressed firms makes them safer havens for strategic investment choices, keeping the longer-term view. However, the immediate effect is a negative accounting impact on the bottom line, which requires the managers of acquirer firms going for distressed M&As to take a vigilant approach toward how much to buy in such firms, keeping in mind the short-term impacts of CSR overspending. Similar prudence should be exercised when a firm aims to acquire a distressed target that spends above the mandated limit. It gives rise to CSR overspending, which may require the acquirer firms to assess the potential risks and liabilities arising from the overspending, thus slowing down closure of the deal.

We also establish that acquirers view Social CSR as a value-eroding dimension. This is probably because managers of acquirer firms perceive high Social CSR spending as going against the fundamental longer-term objective of M&As. Cognizant of this, managers of financially distressed firms should reshuffle their strategic focus by diverting the project portfolio from social CSR activities towards more environmentally-focused CSR initiatives. Further research can evaluate the value implications of the shift in the CSR dimensional focus in the distressed M&A perspective.

In addition, future research can focus on the role of the distressed target firms' pre-acquisition CSR orientation on the acquirer firms' post-acquisition financial performance and CSR performance. This can provide an insight into the long-term aftermaths of CSR spending by financially unhealthy target firms. In the mandatory CSR context, additional research can provide justification on whether CSR spending and compliance by distressed target firms prove beneficial for their acquirers.

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End Notes

1. *In India, a financial year starts on April 1 of the current calendar year and ends on March 31 of the next calendar year.*
2. *Calculated using data from National CSR Portal, Government of India. https://www.csr.gov.in/content/csr/global/master/home/home.html*
3. *Even if a firm faces a falling or negative net income for two years, it may become profitable later. It is a potential constraint of using reduction in net income as a measure of distress. However, we adopt the existing findings that declining profitability or a net loss signals an impending bankruptcy or business failure, and use these indicators as proxies of financial distress.*
4. *Footnote 1 explains the span of a financial year (FY) in India.*
5. *In accordance with Indian financial year (FY), our sample period starts from April 1, 2015 and ends March 31, 2020.*
6. *FY 2015-16: From April 1, 2015 to March 31, 2016; FY 2016-17: From April 1, 2016 to March 31, 2017; FY 2017-18: From April 1, 2017 to March 31, 2018; FY 2018-19: From April 1, 2018 to March 31, 201; and FY 2019-20: From April 1, 2019 to March 31, 2020.*
7. *Indian mandatory CSR regulation does not consider activities benefitting the employees and the organization internally, including improvements in corporate governance, as CSR spending. Only external CSR is classified as CSR expenditure.*
8. *Coefficient of (Tgt_Distress x Tgt_Total_CSR) is 0.547, therefore the marginal effect of Tgt_Total_CSR on the odds of deal completion is* $e^{0.547} = 1.73$. *All the numbers reported are similarly obtained.*

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Appendixes

Table A1. Variable Definition

Variable	Definition
Dependent variables	
Completed	Dummy variable which equals 1 if deal is completed after initiation, and 0 otherwise
Acq_Percent	Percentage of acquisition in Target firm (in decimal)
Completion_Time	Natural logarithm of difference between Date of announcement of a deal, and its Effective (Completion) date as per LSEG (Refinitive) M&A Deal Database
Independent (main) variables	
Tgt_Total_CSR	= $(\text{Total CSR spending})_{t-1}$ / $(\text{Net income})_{t-2}$ for Target
Tgt_Vol_CSR	= $[(\text{Total CSR spending - Mandatory CSR spending})]_{t-1}$ / $(\text{Net income})_{t-2}$ for Target = 0, if Total CSR spending <= Mandatory CSR spending
Tgt_CSR_Soc	= $(\text{Social CSR spending})_{t-1}$ / $(\text{Total CSR spending})_{t-1}$ for Target
Tgt_CSR_Env	= $(\text{Environmental CSR spending})_{t-1}$ / $(\text{Total CSR spending})_{t-1}$ for Target
Acq_Total_CSR	= $(\text{Total CSR spending})_{t-1}$ / $(\text{Net income})_{t-2}$ for Acquirer
Acq_Vol_CSR	= $[(\text{Total CSR spending - Mandatory CSR spending})]_{t-1}$ / $(\text{Net income})_{t-2}$ for Acquirer = 0, if Total CSR spending <= Mandatory CSR spending
Total_CSR_Diff	= $\mid (\text{Acq\_Total\_CSR})_{t-1} - (\text{Tgt\_Total\_CSR})_{t-1} \mid$
Control Variables	
Deal_Size	Natural logarithm of Deal Size in USD Million
Deal_Majority	Dummy variable which equals 1 if Acquisition Percentage is greater than 50%, and 0 otherwise
Industry	Industry relatedness, a dummy variable equal to 1 if first 2 digits of the NIC code of acquirer and target firm are same, and 0 otherwise
Tgt_Lev	Target's Leverage (Debt/Equity), year (t-1)
Tgt_CR	Target's Current ratio, year (t-1)
Acq_Lev	Acquirer's Leverage (Debt/Equity), year (t-1)
Acq_CR	Acquirer's Current ratio, year (t-1)
Rel_Size	= $[\ln(\text{Acq\_Total\_Assets})_{t-1}]$ / $[\ln(\text{Tgt\_Total\_Assets})_{t-1}]$

Table A2. Classification of Social and Environmental CSR

CSR Dimension in Study	Categories of CSR spending defined by National CSR Portal, Ministry of Corporate Affairs, Government of India*
Classified as Social CSR:	(I) Education, differently-abled & livelihood (II) Gender Equality, Women Empowerment, Old Age Homes & Reducing Inequalities (III) Health, Eradicating Hunger, Poverty and Malnutrition, Safe Drinking Water & Sanitation (IV) Rural development (V) Slum area development.
Classified as Environmental CSR:	(I) Clean Ganga Fund (II) Environment, animal welfare & conservation of resources (III) Swachh Bharat Kosh

*: https://www.csr.gov.in/content/csr/global/master/home/home.html