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Proposal for Master Thesis U.S.E.

Investigating ESG-influenced Merger and Acquisitions

Research Paper

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1. Introduction

Over the recent years, sustainability, corporate social responsibility (CSR) and Environmental, Social and Governance (ESG) are among many similar keywords that have been a heavy focus for companies, investors, and stakeholders. With the everchanging conditions of the world, arguably due to heavy environmental and social activities done across industries, companies are pushed more and more to act, moreover, take responsibility of their previous actions. Companies have pursued sustainability in many ways. Practices such as corporate green bonds (Flammer, 2021, Tang & Zhang, 2020), activities engaging in employee satisfaction (Edmans, 2011), and shareholder engagement through passing ESG-themed proposals (Flammer, 2015) besides being considered as sustainable practices, these practices have also shown financial benefits like positive stock market reactions. However, there is a lack of focal point on the importance of sustainability in Merger & Acquisition practices (M&A).

M&A activity is conducted for financial, economics or strategical motives for the acquirer (Angwin, 2007). These motives mostly overlap to fulfil a larger purpose, that when M&A deal succeeds it will improve corporate value. CSR activities have also been researched to develop corporate value. Albuquerque et al., (2019) explained both ESG and CSR activities creates value by increasing shareholder wealth and maximizing shareholder utility. Therefore, as ESG/CSR and M&A activities serve the same purpose, it can be assumed that engaging in ESG through M&A can enhance corporate value even more.

Current literature on CSR focusses heavily on the battle against stakeholder theory and shareholder theory. Stakeholder theory enhances the importance of CSR, because it argues companies that are strategically prioritize stakeholders, superior performance will be achieved which will lead to shareholder wealth (Laplume et al., 2008). In the discussion of CSR and M&A, Deng et al. (2013)

believes mergers can affect stakeholders in many ways, for example stakeholders will have to go through the process of renegotiating contracts to the new post-merger firm. An acquirer that prioritizes their long-term relationships with stakeholders, will be able to maintain those relationship throughout the M&A process. Therefore, it will not negatively affect and even more benefit the shareholders from the merger, supporting the stakeholder theory. The same can be assumed for ESG practices, as it focuses on inserting sustainability within the operationalization of the company which has even more stakeholder involvement.

This research would like to address the effects of engaging in ESG-influenced M&A deals. Specifically, this research will examine three aspects in ESG-influenced M&A activities. First is the type of acquirer that engage in ESG-influenced deals. We would like to determine whether acquirers with low ESG scores engage in M&A deals with high ESG score targets to increase their corporate & sustainability value (Tampakoudis & Anagnostopoulou, 2020) or do high ESG score acquirers engage with also high ESG score targets due to the similarities that may lead to cultural fit (Bereskin et al., 2018) or even more strategic fit.

Second, this research will examine the signaling effect of ESG-influenced M&A deals. Signaling theory is seen as a corresponding outlook to support stakeholder theory. Positive signaling, regarding CSR, can influence companies' stakeholders to recognize the company's good will and influence investors to recognize the company's ability to handle risk (Zhang et al., 2022). The signaling theory will be tested through investors' reaction towards ESG-influenced deals and whether low or high ESG companies receive a better stock market reaction. Based on the investors' reaction we can determine if the acquirers have signaled their sustainability efforts through M&A.

And lastly, this research will examine the long-term sustainability effects of ESG-influenced M&A deals through studying the long-term changes in ESG scores of the acquirers, post-merger.

Flammer, (2021) has reasoned that when a company's sustainability performance does not increase after conducting ESG activity, motive of greenwashing can be underlying in the ESG action. Through this examination we will determine whether the firms had the intention of bettering their sustainability value or it was an act of greenwashing.

The paper will continue as follows. Section 2 will discuss previous literature and the hypothesis development of the research. Section 3 will discuss the data, sample, regression models and methodology of the research. Section 4 will summarize the empirical results and provide discussion. And lastly section 5 will conclude the overall paper.

2. Literature Review

2.1. ESG-influenced M&A motives

As mentioned previously, M&A are conducted due to various motives and affected by different aspects. These motives and aspects are considered to fulfill the main goal of enhancing corporate value which will eventually increase shareholders wealth (Angwin, 2007). ESG activities also have been researched to increase corporate value. Gonçalves et al., (2022) directly examined the effect of ESG performance and cost of capital, where the results for cost of equity is lower for companies with greater ESG performances. The results for cost of debt on the other hand, supported the overinvestment theory that ESG activities should not take use of company resources, by having a positive relationship with ESG performance. However, other studies have proved otherwise when discussing CSR performance. Through credit ratings, Ge & Liu, (2015) disclosed that there is an indirect association between cost of debt and CSR performance, where better CSR performance led to lower yield spreads. (Oikonomou et al., 2014) studied good performance in Corporate Social Performance (CSP) components is associated with a decrease in cost of corporate debt. Besides direct links to cost of capital, through other means like operating performance (Gillan et al., 2021), valuation (Hong & Kacperczyk, 2009), and stock returns (Edmans, 2011) justifies ESG performance creating corporate value. By reason of the positive correlation between ESG performance and corporate value, this can motivate acquirers to engage in M&A with high ESG companies as their targets. Additionally, Krishnamurti et al. (2019) highlights that high CSR targets is within interest because they bear lower social and environmental risks. Which can also be implied for ESG targets as ESG practices is also known to handle externalities which has the purpose to lessen social and environmental risks.

Specifically, high-ESG acquirers may also conduct ESG-influenced M&A deals motivated by additional reasons. Many argue that high-ESG companies are stakeholder-oriented therefore become evidence for stakeholder theory. Stakeholder theory is a strategic fundamental for value creation which shareholders will benefit when stakeholders are taken into account (Freeman et al., 2010). Previous research discusses the benefits or the upper hand high-CSR acquirers in M&As. During M&A deals, the process effects the company's relationship with stakeholders, however high-CSR acquirers will be able to sustain this relationship. Deng et al., (2013), argues that due to the less likelihood of, in this case, high-CSR acquirers to violate contracts with stakeholders consequently the company is supported by the stakeholders. M&A processes are then completed quicker and improbable to fail. Through arbitrage spread, high-CSR companies have reduced the uncertainty in M&A completion (Arouri et al., 2019). From a shareholder standpoint, Deng et al. (2013) discovered that high CSR acquirers experience higher merger announcement returns and an increase of operating performance, post-merger in comparison to low CSR acquirers. As well as positive business performance during cross-border M&A (B. Kim et al., 2022). Research by Yen & André (2019) however, suggests that it is not so clear cut. In their study, they discovered, that financial costs were one of the main determinants for the M&A performance in comparison to CSR. They discover a decrease of abnormal returns with the increase of CSR performance, concluding that investors have "cost-benefit concerns" and CSR effects cannot be explained by shareholder theory or stakeholder theory alone.

Nevertheless, this research would like to support stakeholder theory, by studying whether companies that are stakeholder-oriented would more likely engage with companies that are also stakeholder-oriented. A study has discovered that due to similarities, high-CSR acquirers target high-CSR companies. Bereskin et al. (2018) saw corporate social responsibility characteristics as

a cultural aspect and discovered culturally similar firms are more likely to merge together. In this case of ESG, besides having cultural similarities, it can also be assumed that there will be more of a strategical fit between the acquirer and target on a ESG-level.

This research would like to determine the type of investors that are more likely to be ESG-influenced, the low-ESG acquirers to gain corporate value or the stakeholder oriented high-ESG acquirers. Based on previous research we hypothesize the latter, concluded below:

H1: Acquirers with high ESG scores are more likely to conduct ESG-influenced M&A deals.

2.2. ESG-influenced M&A reactions

Signaling theory emerged in management research as a way for companies to dissolve information asymmetry between themselves and outsiders. In finance, for example, the state of the firm's dividends or debt signals towards the quality of the firm (Connelly et al., 2011). Accordingly, a reaction or a change of perspective from outsiders are the expected outcome. M&A transactions can become valid channels for signals due to the two-way relationship between acquirers and targets and the potential of information asymmetry. Signaling has increased the effectiveness of the M&A market; costs for selection are reduced, acquirers become less uncertain to buyers, and reduce price discounting for prospecting acquirers (Wu et al., 2013). For the example of target selection, target characteristics such as historical earnings, endorsement from top investment bankers, and long lockup commitment are seen as signals by CFOs (Brau & Fawcett, 2006). However, this research particularly would like to see the signaling effect between the acquirers and the shareholders, where the ESG-influenced M&A transaction itself is trying to dissolve information asymmetry.

In the context of ESG, Flammer (2021) interpreted corporate green bonds issuance as a signal to investors that the firm is committed towards the environment. The study discovered the signaling effect from the positive market response during the green bonds' announcement. It can be important to low-ESG acquirers to signal investors through ESG-influenced M&A as a way to showcase their ESG practice and to show their commitment to ESG and ultimately dissolving the information asymmetry.

However, previous research has proven that high-CSR and high-ESG companies generally receive higher market reaction (Deng et. al., 2013, Krishnamurti et al., 2019, Teti et al., 2022). Deng et al. (2013) in particular discovered positive long-term stock returns for high CSR acquirers in comparison to low CSR acquirers. The long-term stock returns suggest that the stock market do not fully value CSR. Krishnamurti et al. (2019), study suggests that the shareholders perceive the activity as value creating for them. Thus, looking at the track record we could assume the same for ESG-influenced M&A.

This research would like to determine whether low-ESG acquirers or high-ESG acquirers will receive a better stock market reaction through ESG-influenced M&A announcements. The hypothesis based on previous similar research concludes:

H2: High-ESG acquirers receive better stock market reaction during ESG-influenced M&A announcements.

2.3. Greenwashing in post ESG-influenced mergers

Following up the merger, there are effects expected to take place. M&A transactions lead to "one-time" gains such as cost of capital reduction, debt profile adjustment, and stock market measures improvement (Angwin, 2007). The signaling that occurs during the M&A announcement can also

be a one-time gain. And if so, we can assume a motive of greenwashing. Greenwashing occurs when a company is communicative of green or CSR initiatives or performance however the actions are poor (Delmas & Burbano, 2011). The communicative act is usually motivated by external validation, corporate legitimacy, and reputation (Seele & Gatti, 2017). Greenwashing can be found through corporate activism (Laufer, 2003), corporate ESG policies (Ramus & Montiel, 2005), the company's products through means like eco-labels (Gosselt et al., 2019). In cases of ESG lending, greenwashing was discovered for companies that produced low quality disclosures (S. Kim et al., 2021). In comparison to the companies with high quality disclosure, the low quality disclosure companies had a deteriorating ESG performance after the lending issuance. Flammer, (2021) discovered a decrease in emissions and increase in environmental performance after the issuance of green bonds, however the research didn't divide the sample, so we cannot make a differentiation between issuers. Tampakoudis & Anagnostopoulou, (2020) examined targets' ESG performance on acquirers' post-merger market value and ESG performance. Their results showed that market value as well as the ESG performance of the acquirers' increased post-merging with a higher ESG performance target.

Greenwashing can be detected if there is no improvement in the company's ESG score after the merger. Therefore, this research hypothesizes below:

H3: High-ESG acquirers will experience an increase of ESG performance, low-ESG acquirers will not.

2.4. Theoretical Framework

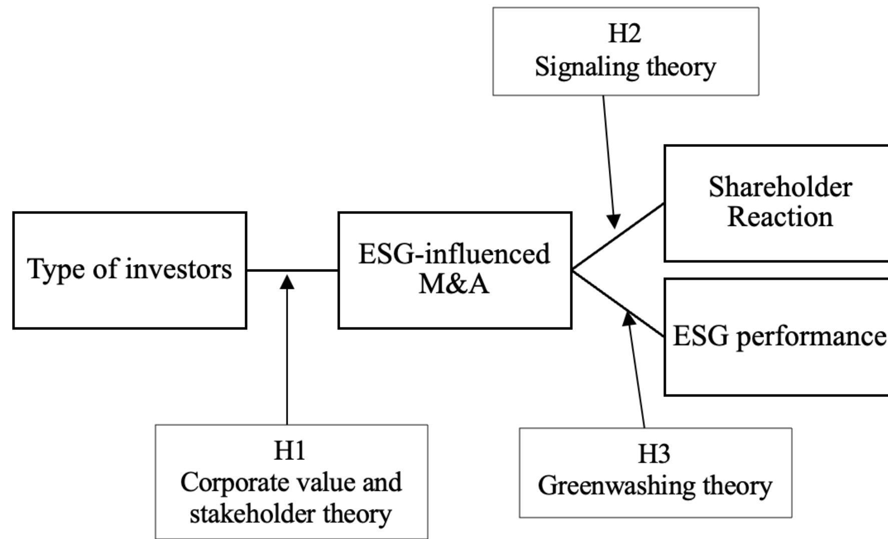

Figure 1: Theoretical Framework

Above is the theoretical framework of the research that is an overview of what is being conducted and examined. Starting from premerger stage, we will determine the type of investors that are engaging in ESG-influenced M&A. ESG-influenced M&A is defined as M&As of high-ESG targets which will be seen from the targets ESG performance. The premerger stage is supported by the first hypothesis that is based on the idea of corporate value enhancement and stakeholder theory. The next stage is during the ESG-influenced M&A announcement where this research will examine the shareholder reactions. This hypothesis that suggests high-ESG acquirers will receive a better reaction is supported by the signaling theory. And finally, post-merger, we will be reviewing the ESG performance of the acquiring company. We expect improving ESG performance for high-ESG acquirers and vice versa for the low-ESG acquirers, based on the greenwashing argument.

3. Data & Methodology

This study will conduct an extensive research on ESG-influenced M&A transactions starting from bidding to post-merger effects. In particular, we will test the type of investors that engage in ESG-influenced M&A, the stock market reaction during the M&A announcement and the post-merger ESG-performance.

3.1. Data

Data will be extracted from Refinitiv Eikon consisting of completed M&A deals within the US between 2016-2019. This time period is chosen to avoid any COVID-19 pandemic effects and as well because we want to see long-term effects for ESG performance, data after the pandemic does not suffice. The deals must be over US$1 million of value and consist of actors of acquirers and targets that both have ESG scores pre-merger, as well as 2 years ESG scores for the acquirer post-merger. The acquirers must also be public listed companies and have data such as market price during the event study period.

3.2. Methodology

3.2.1. Hypothesis 1

To test the first hypothesis, the research will be using a logit regression model as of below:

$$\boldsymbol{HLACQESG_{i,t}} = \boldsymbol{\alpha_0} + \boldsymbol{\beta_1 TARESG_{i,t}} + \boldsymbol{\beta_2}\textbf{Control}_{\boldsymbol{i,t}} + \boldsymbol{\varepsilon_{i,t}} \quad (1)$$

Where HLACQESG is the dependent binary variable, that takes a value of 1 if the Acquirer's ESG score is high, and 0 if the Acquirer's ESG score is low. To determine whether the score is considered High or Low, we will average the total samples ESG score and if the score is below the average, it will be considered low and vice versa. And the main independent variable will be the ESG score of the target company described as TARESG. This research expects a positive association between the target's ESG score and the type of investor.

3.2.2. Hypothesis 2

As for the second hypothesis, the research will conduct an event study to evaluate the stock market reaction to the M&A announcements. To conduct the event study, we will calculate the abnormal return of a five-day period using the following equation:

$$AR_{i,t} = R_{i,t} - NR_{i,t} \qquad (2)$$

$R_{i,t}$ denotes the abnormal return and $R_{i,t}$ is the observed return of company i on day t. alpha and beta are parameters for the companies. And $NR_{i,t}$ is the predicted stock return generated from the market model with the following equation:

$$NR_{i,t} = R_{f,t} + \hat{\gamma}_i R_{m,t} \qquad (3)$$

Afterwards, the Cumulative Abnormal Returns (CAR) will be then calculated using the following equation:

$$CAR_i = \sum_{t=0}^{L} AR_{i,t} \qquad (4)$$

And finally, to test the event effects of the 2nd hypothesis, we will use the information above in the following regression model:

$$CAR_i = \beta_0 + \beta_1 TARESG_{i,t} + \beta_2 \text{Control}_{i,t} + \delta_1 HLACQESG_{i,t} + \varepsilon_{i,t} \qquad (5)$$

Where all the variables will be the same as previously mentioned, and HLACQESG will act as a dummy variable to compare the effect between high and low ESG acquiring firms. The research will expect positive sign from TARESG as well as positive sign for HLACQESG.

For the robustness check, we will conduct the test again with different methods of normal return such as CAPM model.

3.2.3. Hypothesis 3

The final hypothesis will be conducted using the following panel data regression model:

$$\boldsymbol{ACQESG_{i,t}} = \boldsymbol{\alpha_i} + \boldsymbol{\alpha_s} \times \boldsymbol{\alpha_t} + \boldsymbol{\beta_1 DMADeal_{i,t}} + \boldsymbol{\beta_2}\textbf{Control}_{\boldsymbol{i,t}} + \boldsymbol{\delta_2 HLACQESG_{i,t}} + \boldsymbol{\varepsilon_{i,t}} \qquad (6)$$

ACQESG will be the outcome variable of a firm's ESG score. DMADeal is a dummy variable valued at 1 if an ESG-influenced M&A deal was conducted that year. And to see the change of effect we will replace the DMADeal dummy with dummies that represents one year before the deal, one year after the deal (short-term effect) and two years after the deal (long-term effect). As well as, we have additional sign for industry-year effect denominated as $\alpha_s \times \alpha_{t.}$ From this we will see the overall change of the ESG score from before, during, and after (short term and long term) the M&A transaction. We expect positive signs for all DMADeal dummy variables as we expect an increase of ESG score for high-ESG companies.

3.2.4. Control Variables

The control variables that will be used throughout the three hypotheses are derived from similar previous research by Krishnamurti et al. (2019), Deng et al. (2013), and Tampakoudis & Anagnostopoulou, 2020. The first variable is deal value (DV) of the M&A. Alongside acquirer characteristic variables including acquirers' Market Capitalization (MCAP) as a proxy for firm size, Tobin's Q (TQ) which is the market value of assets over book value of assets, leverage (LEV) which is book value of debts divided by market value of assets, and lastly ROA as a measure for profitability.

Thesis Timetable

PHASE		DETAILS	PERIOD 4												
			APR				MAY					JUN			
	WEEKS:		3-9	10-16	17-23	24-30	1-7	8-14	15-21	22-28	29-4	5-11	12-18	19-25	26-30
1	Data	- Data Collection			Collection										
		- Data Clean Up				Clean-up									
2	Empirical Research	- Research Conduction					Research Conduction								
3	Writing	- Chapter 4							Chapter 4						
		- Chapter 5								Chp 5					
		- Chapter 1, 2, 3 Revision									Revision				
		- Final Paper											Final Paper		
4	Feedback							Feedback		Feedback		Feedback			
5	Buffer													Buffer	
6	Project Close	Deadline													Deadline

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