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CSR 表現與企業跨國併購之關係

The Relationship Between CSR Performance and Cross-Border Mergers & Acquisitions

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摘要

併購是企業追求快速成長的常用手段，過去的相關研究指出企業社會責任(CSR) 也是併購績效的影響因素之一。企業經營通常期望能永續發展，因此近年企業社會責任逐漸被許多企業納入經營政策與重要決策考量，但過去針對併購與CSR 關聯的研究較多為全球樣本或侷限在美國上市企業，鮮少有對東南亞併購案的獨立研究。本研究以環境、社會、公司治理 (ESG) 分數衡量區域全面經濟夥伴協定(RCEP)國家中企業 CSR 的表現，探討其與併購企業成效之相關性，在857 件 2002 到 2020 年間 RCEP 的跨國併購案中，發現在短期併購宣告效果中，ESG 分數較低的併購公司在併購非屬東南亞國協(ASEAN)的 RCEP 公司時有較佳的累積異常報酬；在長期併購績效中，ESG 分數並未有顯著差異，但併購非屬ASEAN 的 RCEP 公司則會相較併購 ASEAN 公司有更好的表現。

關鍵字：跨國併購、企業社會責任、東南亞國家協會、區域全面經濟夥伴協定

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Abstracts

Mergers and acquisition (M&A) is a common method for enterprises seeking rapid growth, and corporate social responsibility (CSR) acts as one of the drivers influencing M&A performance. The goal for business operation usually aims at sustainable development, and thus CSR is gradually becoming part of the corporate policies and decision-making concerns. However, few studies of M&As in the Association of Southeast Asian Nations (ASEAN) countries was discussed. This study uses the ESG score to measure how companies perform in the CSR area and discuss the relationship between CSR and acquiring firms. Using a sample of 857 cross-border M&A deals in the Regional Comprehensive Economic Partnership (RCEP) countries between 2002 and 2020, this study finds that: low ESG acquirers have better accumulative abnormal returns when buying non-ASEAN targets. However, for the long run, the ESG scores have no significant difference on buy-and-hold abnormal returns. The performance tends to be better in buying non-ASEAN targets compared to ASEAN targets.

Keywords: Mergers and Acquisitions (M&As), Corporate Social Responsibility (CSR), The Association of Southeast Asian Nations (ASEAN), The Regional Comprehensive Economic Partnership (RCEP)

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Contents

摘要.....I

Abstracts II

Contents III

List of Tables.....IV

1. Introduction.....1

2. Literature Review.....4

2.1 CSR engagement.....4

2.2 CSR and M&A.....5

2.3 ASEAN and RCEP.....7

3. Methodology.....9

3.1 Data and sample.....9

3.2 Description of variables 20

4. Empirical Analysis and Discussion.....22

5. Conclusion 32

5.1 Summary.....32

5.2 Limitation and recommendation 33

References.....35

Appendix I: Variable definition.....37

Appendix II: ESG score weights.....38

Appendix III: ESG category score definition 39

DOI:10.6814/NCCU202101728

List of Tables

Table 1 Annual Frequency of M&As in Target Countries from 2002 to 2020 11

Table 2 Major Target and Acquiring Countries..... 12

Table 3 Acquiring Countries of M&As in Target Countries 14

Table 4 Industry Distribution of Acquiring Firms 16

Table 5 Descriptive statistics of variables..... 23

Table 6 Merger announcement effects for different subgroups 26

Table 7 Post-merger Performance for different subgroups 27

Table 8 Correlation analysis between ESG variables and merger performance 28

Table 9 Merger performance by ESG performance 30

DOI:10.6814/NCCU202101728

1. Introduction

Merge and acquisition (M&A) is a common corporate investment strategy when a firm is on highly growth stage. To reach bigger market sales and resources across nation, firms have high incentives to do cross-border takeovers. Prior studies show that the volume of cross-border M&As has been growing more than twice worldwide since 1998 (Erel, Liao, & Weisbach, 2012; Liang, Renneboog, & Vansteenkiste, 2020).

At the same time, to maintain sustainable business, firms gradually emphasize more on corporate social responsibility (CSR). CSR becomes an important issue worldwide over the past decades. Many firms in developed and developing countries have taken CSR as one of the main visions and policies in their operations. Investors and shareholders are also inspecting potential firms for their CSR actions (Deng, Kang, & Low, 2013). In the concept of CSR, the ESG performance helps to concretize as environmental (E), social (S) and corporate governance (G) to evaluate the impact of the conduct of CSR.

Among the rapid growing global market, the Association of Southeast Asian Nations (ASEAN) is building more connections to world economics and sustainable development. ASEAN was established in 1967, of which Member States are Brunei Darussalam, Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, Philippines, Singapore, Thailand, and Vietnam. ASEAN is looking to accelerate the economic, social and cultural development in the Southeast Asian region through joint partnership and to promote active collaboration on aspects of common interest in the economic, social, cultural, and technical fields. In order to enhance the competence and sustainability of related nations, ASEAN has come to more sustainable policies, and more companies in the Southeast Asian region are taken into accounts of the CSR related or sustainability rating.

The RCEP aims to enhance regional economic integration taking the ASEAN as the core and extending to China, Japan, Korea, Australia and New Zealand. Since the development of the Regional Comprehensive Economic Partnership (RCEP) starting from 2011, the ASEAN countries are gaining more opportunities to accelerate their regional development and business activity, for example, M&As or other cross-border cooperation. It is expected that the transaction among the RCEP countries will keep

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growing and the relationship among the ASEAN countries will come closer, with companies becoming more easily to enter ASEAN for further market through acquisitions within the same region.

Many researchers have focused on the effect of CSR activity on corporate decision making and firm performance. However, most of the studies concentrated on M&As which acquirers and targets usually are the United States and European countries because of the mature economic and capital market development. Also, the CSR data of ASEAN countries are not much as the United States and European Union countries, which may restrict researches in the related field. There is little empirical work on the ESG performance on the cross-border M&A decisions, especially when the target is located in ASEAN countries.

Motivated by the increasing importance of ESG performance in M&As and the scarce related evidence on ASEAN countries, I make a preliminary research and examine tests for the difference of the market react and merger performance between ASEAN and non-ASEAN acquirers, also for the ESG performance of acquiring firms to get a general view on the ESG performance to cross-border M&As effect, using a sample of cross-border M&A deals in the ASEAN and the RCEP countries between 2002 and 2020. To measure the ESG performance, I use data from Thomson Reuters' ASSET4 ESG database for comprehensive assessment of firms' CSR practices.

The main empirical findings can be summarized as follows. In the comparison of ASEAN and non-ASEAN acquirers, ASEAN acquirers have relatively good announcement effect when buying non-ASEAN targets rather than ASEAN targets, while non-ASEAN acquirers do not have a consistent market response result. In terms of post-merger performance, ASEAN acquirers perform better than non-ASEAN acquirers in most conditions. Furthermore, acquirers tend to gain better outcome when buying non-ASEAN targets rather than ASEAN targets.

On the aspect of ESG performance, the ESG scores have no linear relationship with neither announcement effect nor post-merger performance. For further examination on the role of ESG performance, acquirers are differentiated by the ESG score. It is found that higher ESG acquirers buying ASEAN targets can cause positive market responses, but lower ESG acquirers buying non-ASEAN targets can perform even better. It can be inferred that since the developing ASEAN targets exist more risk,

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the market investors believe that high ESG acquirers have made prudent consideration. Moreover, lower ESG acquirers buying non-ASEAN targets have the best performance regarding the announcement effect. This could mean that the market has confidence in lower ESG acquirers for operating the merged company efficiently. In terms of post-merger performance, both high and low ESG acquirers have better outcome when they buy non-ASEAN targets, and no significant differences exist between these groups.

The rest of the paper is organized as follows. Section 2 presents the literature review. Section 3 describes the data and methodology used in this paper. Section 4 summarizes the main results and examines of announcement effect and post-merger performance. Section 5 presents conclusion and limitation.

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2. Literature Review

2.1 CSR engagement

Over the past twenty years, the interest in corporate social responsibility (CSR) has become the world trend, with increasing evidences showing that firms are adopting CSR policies and reporting. The reasons of engaging in CSR practice are often building firm image, gaining higher return rate, reducing firm risk or other financial management purpose. For the long-run business concern, an organization must improve performance along all of environmental (E), social (S), and governance (G) dimensions while improving its own operations and products, which in results could contribute to sustainable development of markets and the society (Burritt, Christ, & Rammal, 2020). This could be directed by the "ESG" principle, a crucial guideline and indicator often used to judge a company's sustainability along innovation and new opportunities, which was initially mentioned by the United Nation Global Compact.

According to Henisz, Koller, and Nuttall (2019), the E refers to the environmental criteria, including the energy resource a company uses and the waste it produces, and the impacts for the nature and living beings in consequence. Therefore, every company is affecting and being affected by the environment. The highly frequent topics of E involve climate change and carbon emissions. The S represents the social criteria, which reflects the relationships a company has and the reputation it builds with other people, institutions and communities. S includes but not restricts to labor relations and diversity. Every company operates within a broader, diverse society. The G is the governance criteria, and it can be described as the internal system of processes, management and practices a company adopts, which aims to improve effective decision-making, comply with the regulation and law, and meet the expectation of external stakeholders. Every company as a legal entity will require governance.

A broader perspective to explain and evaluate the CSR activity was adopted by Hoi, Wu and Zhang (2013), describing it as a shared belief of "right" actions by an organization affecting the firm's various stakeholders, including shareholders, employees, customers, the society and the government, which induces impact not only internally but also externally on the economic, social and environmental aspects. Firms

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involve and disclose their CSR practices to communicate with stakeholders about their visions, key strategies and values (Bereskin, Byun, Officer, & Oh, 2018). Renneboog and Vansteenkiste (2019) also gave the point that allocating resource in CSR policies and practices may enhance the firm's reputation for sustaining its commitment to stakeholders.

CSR practices not only influence the business operation and reputation, but also provide a reference for managers to evaluate investment decisions. As the concept of CSR is rising, firm managers have been putting effort on the various aspects of CSR, expecting to generate higher returns and lower business risks. Social and economic interests in ESG also encouraged investors and asset managers to incorporate ESG into investment decisions, with taking the record of CSR into account when assessing firm values and intentions (Deng et al. 2013). As a result, CSR can be seen as one of the decisive factors during the financial decision process.

Other empirical results show that the success in control and management of CSR practice makes great impact on the market value of firms, the cost of capital, the financial risk of companies, the value of cash holdings, financial performance and stock price (Arouri, Gomes, & Pukthuanthong, 2019). Cai, Cui and Jo (2016) pointed out that pursuing environment-oriented initiatives could bring the positive effect of firm risk reduction for a company. Harjoto and Laksmana (2018) also suggested that CSR performance has a positive impact on firm value because CSR reduces excessive risk taking and risk avoidance.

2.2 CSR and M&A

Motivations for cross-border M&As usually include going into international markets for larger market share and sales growth and reducing manufacturing costs. This process is influenced by political, social and economic factors. Among the factors of merger success and failure, business culture is a critical managerial issue and important determinant, which makes great impact on the integration process of two firms, especially when the merging firms originate from different countries. Some of the M&As may turn out to be unsuccessful, thus there exists completion risk that the deal may not go smoothly or reduce the expected synergy effect (Arouri et al. 2019). Given the difficulty of measuring corporate culture in an appropriate way for empirical

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study, limited research examining effects of corporate culture on deal success was conducted (Renneboog and Vansteenkiste, 2019).

To understand more specific relations between corporate culture and post-merger integration, Bereskin et al. (2018) has taken CSR as an indicator of corporate culture, suggesting that the CSR similarity between merging firms' corporate cultures is a factor influencing post-merger integration and merger success, turning out to be associated with synergies, long-run operating performance and adverse goodwill impairment.

As CSR is getting more concern both from the society and the business, more M&A deals are completed in business administration practice. Studies on M&As are vast and researches on CSR topics are emerging, but only a few studies tried to bridge these important business trends. In addition, most of the studies made researches in aspects of the CSR focused on acquirers' CSR performance to discuss. Bereskin et al. (2018) was one of the study taking both acquirer's and target's CSR score firms into analysis, and founded that short-run stock returns and long-run operating performance can both be heightened by the higher CSR similarity between acquiring firms and target firms, suggesting that CSR similarity can increase the likelihood of deal success. Another study by Aktas et al. (2011) focused on the CSR investment of the target, with the outcome that acquirers buying targets with high CSR investment would result in higher announcement returns and concluded that the market would favor indirect investment in CSR.

An overview literature (Renneboog and Vansteenkiste, 2019) concluded that short-term M&A returns do not always predict or sustain to long-term effects. By suggesting that the market does not fully value the benefits of CSR immediately, Deng et al. (2013) used a large sample of US deals, finding that acquirers with higher CSR score would gain better results in short-term and long-term stock returns and long-term operating performance comparing with acquirers with lower CSR score, and argued that the higher engagement in CSR, the more likely stakeholders be motivated to devote more to sustainable goals, as a result benefits the firm's operation. They found that acquirers with higher CSR score took less time to complete and had smaller possibility to fail mergers comparing to those with lower CSR score. Investors would react more positively to M&A announcements by firms with strong CSR credentials. Zhang, Zhang and Yang (2020) also examined the CSR engagement effect on acquirer returns and found that acquirers with high CSR can have a positive acquirer return during the

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announcement. Hawn (2013) studied the influence of CSR in the expansion of multinational companies in the emerging market with M&A method and found that high CSR acquirers lead to faster deal completion. As empirical results showed that CSR avocation and action benefits the firms in the M&A market, it is worth discussing whether acquirers' pre-announcement CSR performance causes positive market reactions and leads to acquirer returns.

According to previous reviews and empirical studies, the relationship of CSR performance on cross-border M&As is investigated from two perspectives: (1) the relative higher CSR performance of a firm (no matter an acquirer or a target) as a factor, and (2) the relative difference between the acquirer and the target as a factor. Most studies took the former as the research basis, for the targets are often non-listed companies, which will cause a limitation for the data availability. For another consideration, the relative difference between the acquirer and the target is not adequate for distinguishing the sustainability information of a certain company. Therefore, in this study I adopt the former perspective as the main basis to establish the hypothesis.

2.3 ASEAN and RCEP

The unique demographics, increasing middle class purchasing power, and broad land for infrastructure development and gaining the production of ASEAN countries are attracting significant investment opportunities. In addition, the combination of relatively stable markets such as Singapore and Malaysia and growing markets such as Indonesia, the Philippines and Vietnam is also expected to provide vast opportunities.

In November 2020, after eight years of negotiations, the RCEP Agreement brought together the ASEAN members with Australia, China, Japan, South Korea, and New Zealand. RCEP will cover a market of 2.2 billion people with a combined size of US$26.2 trillion or 30% of the world's GDP and accounts for nearly 28% of global trade. As a framework for facilitating free and more efficient trade arrangements between the ASEAN and the RCEP countries, the deal will improve market access and business trade under specific rules and regulations, encouraging firms to invest more in the ASEAN region and create major opportunities.

Although endowed with rich natural resources that sustain essential daily life and

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economic activities for society operating, ASEAN faces extensive environmental deterioration due to increasing population, rapid economic growth, and region-wide social inequities among the ASEAN countries. The increasing energy and resource consumption and waste generation would harm the environment and lead to unsustainable development. Therefore, keeping the balance among environmental sustainability, social, and economic growth is a critical issue in ASEAN.

Some analysts and investors believe that ESG investments could stimulate economic growth in Asia countries, including ASEAN and RCEP, when most economies in the region are still growing rapidly and have a significant focus on heavy industry or high-tech base industry, which can drive sustainability in the energy and infrastructure sectors. Some economies in the ASEAN region already accept this. Singapore launched a Green Plan 2030, where sustainable living, energy reset and the green economy are seen as integral pillars to its economic growth and climate and resource resilience. China announced its plan of realizing carbon neutrality by 2060. Japan also set a "net-zero" emissions target for 2050.

DOI:10.6814/NCCU202101728

3. Methodology

3.1 Data and sample

For the study of cross-border M&A activity, starting with a sample of mergers as large as possible, the M&A deal samples were collected from the Thomson Reuters Securities Data Company (SDC) Platinum Mergers and Acquisitions Database, considering ASEAN and RCEP targets between 1990 and 2020. The disclosed deal value of less than $1 million will not be considered in the sample. The selecting criteria are listed below:

1. The form of the deal is classified as an acquisition, acquisition of assets, acquisition of certain assets, acquisition of majority interest, or merger.
2. The acquirer's public status is a public, subsidiary, joint venture, government-owned, investor, unknown, or mutually-owned. This is considered for the need for stock market returns available to examine the effects.
3. The disclosed deal value is at least 1 million dollars.
4. The deals are cross-border deals.
5. The ratio of deal value over acquirer assets is at least 0.01.

Observations with sufficient available financial data are retained to construct the variable data. The financial data was obtained from Thomson Reuters DataStream. As a result, there are 4081 deals before merging with the CSR data.

For the ESG data, the main two databases widely used in prior CSR studies are the MSCI ESG KLD database and the Thomson Reuters' ASSET4 ESG database. Although the KLD database was initiated in 1991 and contains data from over 3000 companies, there are some discontinued data and the last update ended in 2018. Also, the indicators in the KLD database vary from year to year, making a comparison across years and dimensions difficult. To cover publicly available ESG information as much as possible, the CSR performance of firms in this study is measured using the data from the ASSET4 ESG database, which provides rating scores of firms' practices on environmental, social, corporate governance, and economic issues on the annual basis since 2002. The data are built based on the information from public statements, annual reports, and CSR

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reports, covering around 9000 firms worldwide. To assure the comparability across all companies, the database consists of firms included in the S&P 500, Russell 1000, NASDAQ 100, MSCI Europe, FTSE 250, ASX 300, STOXX 600, the MSCI World Index, and the MSCI Emerging Markets Index. The ASSET4 ESG database is also widely used in many prior studies. (e.g., Ferrell, Liang, & Renneboog, 2016; Liang and Renneboog, 2017; Dyck, Lins, Roth, & Wagner, 2019; Liang et al. 2020).

The ASSET4 ESG score consists of 10 categories: resource use, emissions, innovation, workforce, human rights, community, product responsibility, management, shareholders and CSR strategy. Each of these categories has more detailed subcategories to make classifications with their own criteria, rolling up into the three pillar scores of environment, social, and corporate governance. The ESG combined (ESGC) score is a reflection of a company's engagement in CSR activity and ESG performance, commitment and effectiveness.

Next, I match the deal samples with ESG data. The need to match mergers from SDC with the ESG performance measure requires ASSET4 data for acquiring firms, which means that deals of acquirers without ESG data would be deleted. Given that the ASSET4 ESG data point is available starting from 2002, 734 deals between 1990 and 2001 are also dropped. Among the remaining 3347 deals, 532 firms made more than one deal across the sample period, thus the actual number of acquiring firms is 2457, among which 1862 firms are not included in the ESG universe. It results from the merging process using the DataStream code of the entire sample, since the M&A section of the SDC Platinum Database provides this datatype which is also provided in the ASSET4 ESG database of Thomson Reuters. The reason for not using the ticker symbol or CUSIP to merge our data is the disunion of format and the absence of complete data, with a possibility that it may change over time which can cause a problem. The final sample consists of 595 firms with 857 deals between 2002 and 2020, where acquiring firms are from 42 different countries. Notice that one possible reason for the smaller sample size may be driven by the sample bias for that the composition of database is mostly chosen from the primary market indices. This will cause relative scarcity data for some publicly traded firms.

The annual M&A deals in target countries are reported in Table 1. The number of M&A deals in target RCEP is fairly distributed around 30 firms between 2002 and 2004, and around 40 to 60 since 2005, increasing slightly with volatility.

DOI:10.6814/NCCU202101728

Table 1 Annual Frequency of M&As in Target Countries from 2002 to 2020

The countries are ordered by the number of target firms.

	Australia	China	Singapore	New Zealand	Japan	South Korea	Malaysia	Indonesia	Thailand	Philippines	Vietnam	Cambodia	Laos	Myanmar(Burma)	Total
2002	3	10	2		1	4		3	1	1					25
2003	12	8	2	1	1	1		1			1				27
2004	8	6	2	4	1	3	1	1	1	2					29
2005	13	14	4	5	1	1			1						39
2006	17	16	7	6		2	1	1	2	2					54
2007	21	13	6	3	1	1	1		2	1					49
2008	14	7	6	1		1	1	3							33
2009	18	12	4	1	2		3	1			1				42
2010	23	24	5	3	3	5	2	1		1					67
2011	20	13	4	3	5	5	5	2			1				58
2012	24	9	4	3	5	3	2	3	2	1	1				57
2013	13	14	1	1	2	2	1	1				1			36
2014	21	7	7	2	6	2	3				2				50
2015	22	12	6	7	3			1		1	1	1			54
2016	18	14	7	7	4	2	3	1	1						57
2017	22	7	4	4	1	3	2	2		1					46
2018	18	2	4	9	1	2		1	2				1		40
2019	23	5	8	6	2	4	1	2	2		2		1	1	57
2020	14	3	3	5	5		2	2	1	1	1				37
Total	324	196	86	71	44	41	28	26	15	11	10	2	2	1	857
(%)	37.8%	22.9%	10.0%	8.3%	5.1%	4.8%	3.3%	3.0%	1.8%	1.3%	1.2%	0.2%	0.2%	0.1%	100%

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Table 2 shows the main acquirers and targets of the sample. Most of the M&A deals take place in Australia, China, Singapore and New Zealand. The main acquirers are from the United States, Hong Kong, Australia, the United Kingdom, Singapore and Japan. The largest acquiring country is the United States, but does not represent the majority of the entire M&A sample.

Table 2 Major Target and Acquiring Countries

Target Nations	No. of Acquisitions	Acquiring Nations	No. of Acquisitions
Australia	324	United States	178
China	196	Hong Kong	105
Singapore	86	Australia	76
New Zealand	71	United Kingdom	70
Japan	44	Singapore	53
South Korea	41	Japan	49
Malaysia	28	Canada	39
Indonesia	26	New Zealand	36
Thailand	15	China	21
Philippines	11	India	21
Vietnam	10	South Africa	20
Cambodia	2	France	19
Laos	2	South Korea	19
Myanmar(Burma)	1	Malaysia	17
		Taiwan	15
		Switzerland	13
		Thailand	13
		Sweden	10
		Norway	9
		Philippines	9
		Belgium	7
		Netherlands	7
		Finland	6
		Indonesia	5
		Italy	4
		Denmark	4
		Austria	3
		Brazil	3
		Israel	3
		Bermuda	3
		Ireland-Rep	3
		Turkey	2
		Qatar	2
		Isle of Man	2
		Spain	2
		Vietnam	2
		Mexico	2
		Utd Arab Em	1
		Gibraltar	1
		Russian Fed	1
		Monaco	1
		Malta	1
Total	857	Total	857

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Table 3 and 4 show the distributions of M&A deals in target RCEP, by acquirer country and acquirer industry, respectively. The classification of industry follows the 2-digit SIC (Standard Industrial Classification) code of the United States Securities and Exchange Commission. As presented, the main acquirers including the United States, the United Kingdom, Singapore, Canada and New Zealand buy most targets in Australia. While Hong Kong and South Korea buy most targets in China, Japan and China also buy a certain target in Singapore, and Taiwan makes most deals in China and Singapore. Viewing the ASEAN acquirers, Malaysia buys most targets in Singapore, Thailand buys targets more evenly in the RCEP countries; Philippines and Indonesia focus their M&A deals in non-ASEAN countries, and Vietnam makes deals in the smaller ASEAN countries. A trend that acquirers buy targets with geographical proximity can be seen, and the economic development of acquirers also implies the abilities to make different scale of M&A deals.

From the perspective of industry, most of the acquiring firms are active in manufacturing, finance, insurance, and real estate, services, transportation, communications, electric, gas, and sanitary services and mining industries. Acquiring firms in mining industry buy most targets in Australia, as it contains abundant mineral resources. Manufacturing firms buy targets most in Australia and China, probably for the plants and labors consideration; firms in transportation, communications, electric, gas, and sanitary services have the same M&A activities, for the tech development and related government policies. On the other hand, in ASEAN targets, Indonesia, Malaysia, Philippines and Thailand are bid most by manufacturing firms, while Singapore are bid also by firms in services and transportation, communications, electric, gas, and sanitary services industries.

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Table 3 Acquiring Countries of M&As in Target Countries

The columns represent the countries of the acquirer firms and the rows represent those of the target firms. The countries are rank ordered by the number of target firms in each country.

	Australia	China	Singapore	New Zealand	Japan	South Korea	Malaysia	Indonesia	Thailand	Philippines	Vietnam	Cambodia	Laos	Myanmar(Burma)	Total
United States	82	34	15	7	14	15	3	2	3	3					178
Hong Kong	9	90	3	2	1										105
Australia		3	7	49	1	3	2	4	1	4	1	1			76
United Kingdom	49	4	2	3	2	4	4		1		1				70
Singapore	22	9		2	9	2	6	3							53
Japan	14	5	9	1		6	3	5	4	1	1				49
Canada	31	5		2		1									39
New Zealand	35	1													36
China	9		8		1	1	1	1							21
India	7		5		2	2	1	1	3						21
South Africa	17		1			1	1								20
France	9	6			2	1		1							19
South Korea	1	9			3		2	2		1	1				19
Malaysia		2	9		1			2	2		1				17
Taiwan		6	5		2	1					1				15
Switzerland	6	3	2			1	1								13
Thailand	1	1	1		2		1	2		1	3		1		13
Sweden	3	2	3	1			1								10
Norway	3	2	3	1											9
Philippines	2	2	1	1			2		1						9
Belgium	3	2	1			1									7
Netherlands	1	2	2			1					1				7
Finland	4		2												6
Indonesia	1	2	2												5
Italy	2	1	1												4
Denmark	1	2	1												4
Austria		1	1	1											3

DOI:10.6814/NCCU202101728

Brazil	3														3
Israel					2	1									3
Bermuda	1		1		1										3
Ireland-Rep	1	2													3
Turkey					1			1							2
Qatar								2							2
Isle of Man	2														2
Spain	2														2
Vietnam												1	1		2
Mexico	1									1					2
Utd Arab Em				1											1
Gibraltar														1	1
Russian Fed	1														1
Monaco			1												1
Malta	1														1
Total	324	196	86	71	44	41	28	26	15	11	10	2	2	1	857

DOI:10.6814/NCCU202101728

Table 4 Industry Distribution of Acquiring Firms

This table presents the industry distribution of acquiring firms buying firms in target countries.

	Australia	Cambodia	China	Indonesia	Japan	Laos	Malaysia	Myanmar(Burma)	New Zealand	Philippines	Singapore	South Korea	Thailand	Vietnam	Total
A. Agriculture, Forestry, And Fishing	**6**			**1**					**1**		**2**				**10**
Agricultural Production Crops	2								1						3
Agriculture Production Livestock And Animal Specialties	1														1
Agricultural Services	1														1
Forestry	2			1							2				5
B. Mining	**41**		**15**	**6**					**1**	**3**	**6**	**1**		**2**	**75**
Metal Mining	28		6	3						3	2	1			43
Coal Mining	3		1												4
Oil And Gas Extraction	7		8	3					1		4			2	25
Mining And Quarrying Of Nonmetallic Minerals, Except Fuels	3														3
C. Construction	**7**		**3**	**1**					**2**						**13**
Building Construction General Contractors And Operative Builders	3		1												4
Heavy Construction Other Than Building Construction Contractors	4		2	1					2						9
D. Manufacturing	**89**	**1**	**83**	**9**	**24**	**1**	**17**		**14**	**6**	**39**	**27**	**10**	**4**	**324**
Food And Kindred Products	18	1	17	1		1	4		2	3	7	3	5		62
Tobacco Products				1						1					2
Textile Mill Products	3														3
Apparel And Other Finished Products Made From Fabrics And Similar Materials	1		2									1			4
Furniture And Fixtures			1						1						2
Paper And Allied Products	3		1	1					1	1	2				9

DOI:10.6814/NCCU202101728

Printing, Publishing, And Allied Industries	4	1							2				7
Chemicals And Allied Products	19	13	3	5		6			3	2	1	2	54
Petroleum Refining And Related Industries	1						1						2
Rubber And Miscellaneous Plastics Products	2	3	1	1		1	3		1				12
Leather And Leather Products										1			1
Stone, Clay, Glass, And Concrete Products	3	2									1	1	7
Primary Metal Industries	7	4	1						3	4	1	1	21
Fabricated Metal Products, Except Machinery And Transportation Equipment	4	1		1			1		3				10
Industrial And Commercial Machinery And Computer Equipment	7	9		3		2	3		4	5			33
Electronic And Other Electrical Equipment And Components, Except Computer Equipment	3	18		11		2	1	1	13	5	2		56
Transportation Equipment	3	3	1	1		1				3			12
Measuring, Analyzing, And Controlling Instruments; Photographic, Medical And Optical Goods; Watches And Clocks	11	7		2		1	1		1	3			26
Miscellaneous Manufacturing Industries		1											1
E. Transportation, Communications, Electric, Gas, And Sanitary Services	**29**	**34**	**3**	**4**	**1**	**1**	**4**	**1**	**13**	**2**	**4**	**2**	**98**
Local And Suburban Transit And Interurban Highway Passenger Transportation	2										1		3
Motor Freight Transportation And Warehousing	7						1						8
Water Transportation	6	1		1					8				16
Transportation By Air			1	1		1							3

DOI:10.6814/NCCU202101728

Transportation Services	3		1					1		2		3		10
Communications	5		2	2						2	1		2	14
Electric, Gas, And Sanitary Services	6		30		2	1		2	1	1	1			44
F. Wholesale Trade	**11**		**3**	**2**				**5**	**1**	**1**			**1**	**24**
Wholesale Trade-durable Goods	10			2				2		1			1	16
Wholesale Trade-non-durable Goods	1		3					3	1					8
G. Retail Trade	**6**		**8**	**1**	**3**			**8**		**2**				**28**
Building Materials, Hardware, Garden Supply, And Mobile Home Dealers			1											1
General Merchandise Stores	1		1	1										3
Food Stores	1				1			2						4
Automotive Dealers And Gasoline Service Stations	2							1						3
Apparel And Accessory Stores	1													1
Home Furniture, Furnishings, And Equipment Stores			3					3						6
Eating And Drinking Places			2		1									3
Miscellaneous Retail	1		1		1			2		2				7
H. Finance, Insurance, And Real Estate	**66**		**34**	**2**	**11**		**5**	**21**		**6**	**5**		**1**	**151**
Depository Institutions				1						1	1			3
Non-depository Credit Institutions	1							4					1	6
Security And Commodity Brokers, Dealers, Exchanges, And Services	9		1	1			1	1		1	1			15
Insurance Carriers	3		1					2						6
Insurance Agents, Brokers, And Service	2						1							3
Real Estate	3		27		1			2		1				34
Holding And Other Investment Offices	48		5		10		3	12		3	3			84
I. Services	**69**	**1**	**16**	**1**	**2**		**5**	**1**	**12**	**17**	**6**	**1**		**131**
Hotels, Rooming Houses, Camps, And Other Lodging Places	6	1	1				1					1		10
Personal Services										1				1
Business Services	39		9	1	2		2		6	11	6			76

DOI:10.6814/NCCU202101728

Automotive Repair, Services, And Parking	2										1				3
Motion Pictures	2		3						3						8
Amusement And Recreation Services	2							1							3
Health Services	1						1		2						4
Educational Services	1														1
Social Services									1		1				2
Engineering, Accounting, Research, Management, And Related Services	16		3				1				3				23
J. Public Administration									**3**						**3**
Administration Of Environmental Quality And Housing Programs									3						3
Total	324	2	196	26	44	2	28	1	71	11	86	41	15	10	857

DOI:10.6814/NCCU202101728

3.2 Description of variables

The variables used in the study include acquirers' cumulative abnormal return (CAR) surrounding the acquisition announcement date of the merger, and the market-adjusted 12-month, 24-month, and 36-month buy-and-hold abnormal return (BHAR) after deal completion.

CARs are used to measure the impact of the acquisition announcement of an acquirer on stock prices, representing the immediate market responses. A 3-day cumulative abnormal return (CAR (-1, +1)) is calculated by the sum of abnormal returns over three days, and a 5-day cumulative abnormal return (CAR (-2, +2)) is calculated by the sum over five days.

BHARs (BHAR (12), BHAR (24), BHAR (36)) are used to measure the long-term performance of an acquiring company, which indicates the excess return over the market that an investor who buys shares of the acquirer would have received had they purchased the company's shares in the month of the acquisition.

For CSR related variables, the ESG score, the environment pillar score, the social pillar score, the governance pillar score, the ESG controversies score, and the ESG combined score are used. Appendix I shows the definition of these variables. ESG score is a common way to assess the level of the CSR of a firm, representing the combined performance of ESG engagement, information disclosure and effectiveness. According to the ESG score instruction of Thomson Reuters, the score is calculated from the firm's public reports including financial statements, press releases and third-party information, containing over 450 company-level ESG measures and being processed by analysts manually with cautious standardization.

The indicator score is calculated as the rule below:

$$\text{score} = \frac{\text{no. of componanies with a worse value} + \frac{\text{no. of componaniets with the same value included current one}}{2}}{\text{no. of companies with a value}}$$

It is a percentile rank score, and therefore the effects of outliers can be minimalized. When ranking, it does not take all companies as comparison. When processing the environmental and social categories, industry group is taken for reference for that these

DOI:10.6814/NCCU202101728

topics are more pertinent to companies within the similar or same industries. The environment category includes issues on reducing pollution emission, and the social category includes employment-related policies. When processing the governance pillar score, the country of incorporation is taken for reference as the governance practices of companies are more consistent within countries. This makes the comparison result more meaningful in analysis. Besides, if the indicator is a Boolean data rather than a numeric data, it will be converted into numeric values as 1 or 0. Notice that some indicators are industry-specific and appropriate for a particular sector, thus it will be excluded from the calculation. To get the pillar score of environment, social and governance, category weights are applied to reflect the relative importance of each topic. The ESG score is aggregated based on the 10 category weights which are normalized to percentages ranging between 0 and 100%, therefore it is a relative measure of performance. The score weights can be found in Appendix II.

The ESG controversies score is calculated based on 23 ESG controversy topics, which are benchmarked on industry group. If ESG controversies happens during the fiscal year, the ESG controversies score is calculated for that some significant controversies will impact the company. The ESG combined score is calculated as the average of the ESG score and ESG controversies score. When the controversies score is greater than ESG score, then ESG score is equal to ESG combined score. Scoring between 0 and 100 presents how the company performs in the related issues relative to the entire database companies on the basis of the indicator score. More detailed score descriptions are provided in Appendix III.

When analyzing firms' merger performance, the study takes the ESG combined score instead of the ESG score and the ESG controversies score, since the ESG combined score represents the overall ESG performance and is more meaningful. The environment, social and governance pillar score is also included to distinguish the relative importance more detailed.

DOI:10.6814/NCCU202101728

4. Empirical Analysis and Discussion

The descriptive statistics of the sample is presented in Table 5. For the mean difference test which results will be shown later, I separate the original 857 deal sample into three subgroups: ASEAN acquirers (N=99), non-ASEAN acquirers (N=201), and non-RCEP acquirers (N=557). The ASEAN acquirers are firms in the 10 ASEAN countries, the non-ASEAN acquirers are firms in the RCEP countries but not in the ASEAN countries, and the non-RCEP acquirers are firms in neither ASEAN nor RCEP countries. Notice for BHARs over the three different windows (12-month, 24-month and 36-month), some data are not accessible for all acquirers for the whole 36-month post-merger period, therefore, the number of observations declines for all three subgroups. As for ESG related variables (including the ESG score, the ESG controversies score, the ESG combined (ESGC) score, all three pillar scores and indicator scores), the number of observations also declines, since part of the companies are included in the ASSET4 ESG database for different starting periods, the score of observation before the included time point will be missed. In addition, the latest data of the last fiscal year of the study may not have been calculated or updated, as the score is not available for a certain company in 2020.

For ASEAN acquirers, the average 3-day (5-day) CAR is -0.0012 (0.0037). BHARs perform better at 24-month and is worst at 36-month. The mean of ESGC score is 40.0059 and the standard deviation is 36.825, and among three pillar scores, the environment pillar score performs worst. It may be inferred that ASEAN are developing countries with less restricted environmental regulation comparing to developed countries, as a result causing more environment problems.

For non-ASEAN acquirers, the average 3-day (5-day) CAR is 0.0108 (0.0102), indicating that the announcement effect is positive. BHARs decline at 24-month and 36-month, which may suggest that ASEAN acquirers underperform their respective country market indices in the three years following the acquisition. The mean of ESGC score is 39.3733 and the standard deviation is 36.16, with higher governance pillar score comparing to ASEAN acquirers but lower social pillar score.

For non-RCEP acquirers, the average 3-day (5-day) CAR and BHARs perform similar to those of non-ASEAN acquirers. The mean of ESGC score is 41.6113 and the

DOI:10.6814/NCCU202101728

standard deviation is 41.17, with higher environment and social pillar score comparing to ASEAN and non-ASEAN acquirers.

Table 5 Descriptive statistics of variables

This table presents the descriptive statistics for the observations of ASEAN acquirers, non-ASEAN acquirers, and non-RCEP acquirers between 2002-2020. Appendix I outline the definition of all variables as showed.

Panel A: ASEAN acquirers						
	No. of observations	Mean	Std dev.	Median	Minimum	Maximum
CAR(-1,+1)	98	-0.0012	0.0018	0.0411	-0.1279	0.1402
CAR(-2,+2)	98	0.0037	-0.0009	0.0614	-0.1743	0.352
BHAR(12)	45	0.0035	0.0056	0.0187	-0.059	0.0721
BHAR(24)	41	0.005	0.0039	0.0168	-0.0294	0.0842
BHAR(36)	38	0.0027	0.0055	0.0117	-0.0333	0.0276
ESG Score	34	40.1824	37.7	18.9561	10.87	83.06
ESG Controversies Score	34	97.9412	100	12.0049	30	100
ESG Combined Score	34	40.0059	36.825	18.9666	10.87	83.06
Environment Pillar Score	34	29.2462	23.715	26.4168	0	90.78
Resource Use Score	34	32.1212	26.455	28.4978	0	94.7
Emissions Score	34	31.1538	26.875	32.2591	0	99.26
Environmental Innovation Score	34	23.2147	8.675	29.0884	0	84
Social Pillar Score	34	42.3668	39.3	22.2507	14.22	87.36
Workforce Score	34	57.6644	58.585	26.376	12.63	98.61
Human Rights Score	34	21.6479	0	33.2384	0	95.76
Community Score	34	41.0965	29.835	30.1445	0.93	92.98
Product Responsibility Score	34	43.1903	33.235	33.0454	0	99.93
Governance Pillar Score	34	45.9285	45.93	22.2492	9.82	85.53
Management Score	34	46.0606	43.98	30.6629	6.82	97.73
Shareholders Score	34	50.5053	48.89	25.28	10.4	96.67
CSR Strategy Score	34	38.4079	31.97	35.5753	0	97.62

DOI:10.6814/NCCU202101728

Panel B: non-ASEAN acquirers						
CAR(-1,+1)	199	0.0108	0.0042	0.0622	-0.1924	0.288
CAR(-2,+2)	199	0.0102	0.0042	0.0737	-0.2239	0.4082
BHAR(12)	119	0.0011	-0.0018	0.0261	-0.0707	0.092
BHAR(24)	113	-0.0002	-0.0003	0.0194	-0.053	0.0663
BHAR(36)	105	-0.0004	0.0007	0.02	-0.0727	0.0533
ESG Score	111	39.561	36.16	21.6462	5.16	85.55
ESG Controversies Score	111	98.5571	100	6.4195	47.83	100
ESG Combined Score	111	39.3733	36.16	21.3238	5.16	83.32
Environment Pillar Score	111	31.2368	20.98	31.1179	0	90.51
Resource Use Score	111	31.1168	23.56	31.1894	0	90.88
Emissions Score	111	35.7208	23.18	37.3573	0	97.06
Environmental Innovation Score	111	23.0068	0	32.1575	0	96.67
Social Pillar Score	111	36.5295	36.16	23.6461	0.64	91.85
Workforce Score	111	48.7641	48.93	29.4457	0.49	98.48
Human Rights Score	111	15.459	0	27.184	0	98.33
Community Score	111	43.3408	40.28	28.6785	0.89	98.35
Product Responsibility Score	111	36.154	30	33.5825	0	99.14
Governance Pillar Score	111	50.0721	49.77	23.0151	7.84	94.76
Management Score	111	54.1541	54.93	27.9737	4.31	99.86
Shareholders Score	111	49.587	53.11	28.3754	0.12	98.96
CSR Strategy Score	111	30.3897	18.05	32.9439	0	98.22

Panel C: non-RECP acquirers						
CAR(-1,+1)	528	0.0083	0.0019	0.0648	-0.1986	0.6709
CAR(-2,+2)	528	0.008	0.0028	0.0702	-0.2669	0.6755
BHAR(12)	402	0.0016	0.001	0.0301	-0.1281	0.1311
BHAR(24)	381	-0.0007	-0.0007	0.0215	-0.0763	0.0952
BHAR(36)	358	-0.0005	-0.0003	0.0176	-0.064	0.0566
ESG Score	317	43.4394	41.81	20.5684	3.41	91.99
ESG Controversies Score	317	89.5445	100	23.7932	2.38	100
ESG Combined Score	317	41.6113	41.17	19.0923	3.41	89.7
Environment Pillar Score	317	35.0595	31.88	28.3374	0	94.66
Resource Use Score	317	40.16	39.56	34.1245	0	99.48
Emissions Score	317	39.4069	37.3	32.5121	0	99.65
Environmental Innovation Score	315	19.4324	0	26.2821	0	95.83
Social Pillar Score	317	45.3538	44.38	23.7568	0.96	96.48
Workforce Score	317	55.6129	55.21	27.1421	1.54	99.62
Human Rights Score	317	27.6261	2.7	34.8256	0	98.31
Community Score	317	53.7179	58.19	29.1565	0	99.81
Product Responsibility Score	317	41.0239	40	31.5377	0	99.22
Governance Pillar Score	317	49.213	50.06	22.8207	1.31	97.18
Management Score	317	51.4857	52.94	28.6707	0.71	99.65
Shareholders Score	317	49.9344	50	29.7019	0.15	99.84
CSR Strategy Score	317	36.7675	31.25	34.3526	0	98.96

To understand the changes of merger announcement effect and post-merger

DOI:10.6814/NCCU202101728

performance between ASEAN and non-ASEAN acquirers, I further split the subgroups into those of ASEAN target and non-ASEAN target for different tests. The test result of CARs and BHARs are in shown in Table 6 and 7 respectively.

Table 6 presents the test results of CARs for different acquirers and targets. ASEAN acquirers have relatively good market responses in 3-day or 5-day CAR when they make acquisitions in non-ASEAN countries rather in ASEAN countries. For non-ASEAN acquirers, the market response performs better in 3-day CAR with ASEAN targets but in 5-day CAR with non-ASEAN targets. The results also indicate that non-ASEAN acquirers has a better market response than ASEAN acquirers, except in 5-day CAR for ASEAN targets. However, all these differences are not significant.

Table 7 presents the test results of BHARs for different acquirers and targets. Except for BHAR at 12-month with ASEAN targets, ASEAN acquirers have better post-merger performance than non-ASEAN acquirers. Non-ASEAN targets perform better in no matter 12, 24, or 36 months comparing to ASEAN targets. These results do not exist significantly differences.

To check if the ESG variables and merger performance are closely related, the correlations between them are computed and the results are presented in Table 8. All three ESG pillar scores has significantly positive relation with ESGC score. There is also a positive relationship between 3-day CAR and 5-day CAR, and BHARs at 12-month, 24-month and 36-month are positively correlated with each other. This indicates that if a company has a positive actual post-acquisition performance 12 months after the acquisition, the effect can last for the next 2 years. However, neither the three ESG pillar scores nor the ESGC score has a linear relationship with both CARs and BHARs, although the relations are not statistically significant.

DOI:10.6814/NCCU202101728

Table 6 Merger announcement effects for different subgroups

Panel A: CAR(-1,+1)								
		ASEAN acquirers (A1)		non-ASEAN acquirers (A2)		non-RCEP acquirers (A3)		Diff (A1-A2)
		N	Mean	N	Mean	N	Mean	
ASEAN target	(T1)	40	-0.0028	58	0.0110	74	0.0132	-0.0138
Non-ASEAN target	(T2)	58	-0.0001	141	0.0107	454	0.0075	-0.0108
Diff (T1-T2)			-0.0027		0.0003			

Panel B: CAR(-2,+2)								
		ASEAN acquirers (A1)		non-ASEAN acquirers (A2)		non-RCEP acquirers (A3)		Diff (A1-A2)
		N	Mean	N	Mean	N	Mean	
ASEAN target	(T1)	40	0.0098	58	0.0036	74	0.0093	0.0062
Non-ASEAN target	(T2)	58	-0.0006	141	0.0129	454	0.0078	-0.0135
Diff (T1-T2)			0.0103		-0.0093			

DOI:10.6814/NCCU202101728

Table 7 Post-merger Performance for different subgroups

Pane A: BHAR(12)								
		ASEAN acquirers (A1)		non-ASEAN acquirers (A2)		non-RCEP acquirers (A3)		Diff (A1-A2)
		N	Mean	N	Mean	N	Mean	
ASEAN target	(T1)	9	-0.0074	29	-0.0058	59	-0.0003	-0.0016
Non-ASEAN target	(T2)	36	0.0062	90	0.0033	343	0.0019	0.0029
Diff (T1-T2)			-0.0136		-0.0090			

Panel B: BHAR(24)								
		ASEAN acquirers (A1)		non-ASEAN acquirers (A2)		non-RCEP acquirers (A3)		Diff (A1-A2)
		N	Mean	N	Mean	N	Mean	
ASEAN target	(T1)	8	0.0034	28	-0.0061	54	-0.0017	0.0096
Non-ASEAN target	(T2)	33	0.0054	85	0.0018	327	-0.0006	0.0036
Diff (T1-T2)			-0.0020		-0.0079			

Panel C: BHAR(36)								
		ASEAN acquirers (A1)		non-ASEAN acquirers (A2)		non-RCEP acquirers (A3)		Diff (A1-A2)
		N	Mean	N	Mean	N	Mean	
ASEAN target	(T1)	7	0.0027	25	-0.0078	51	-0.0036	0.0105
Non-ASEAN target	(T2)	31	0.0027	80	0.0019	307	0.0000	0.0008
Diff (T1-T2)			0.0000		-0.0097			

DOI:10.6814/NCCU202101728

Table 8 Correlation analysis between ESG variables and merger performance

This table presents the Pearson correlation between the ESG variables, including the three pillar scores and combined score, and the variables of merger performance (CARs, BHARs).

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
Environment Pillar Score (1)	1.00										
Social Pillar Score (2)	0.70*	1.00									
Governance Pillar Score (3)	0.42*	0.38*	1.00								
ESG Score (4)	0.86*	0.88*	0.68*	1.00							
ESG Controversies Score (5)	-0.21*	-0.27*	-0.13	-0.25*	1.00						
ESG Combined Score (6)	0.83*	0.84*	0.66*	0.96*	-0.04	1.00					
CAR(-1,+1) (7)	-0.10	-0.12	-0.04	-0.11	0.07	-0.09	1.00				
CAR(-2,+2) (8)	-0.12	-0.12	-0.05	-0.12	0.02	-0.11	0.86*	1.00			
BHAR(12) (9)	-0.08	-0.04	-0.06	-0.08	-0.04	-0.08	0.03	0.05	1.00		
BHAR(24) (10)	-0.08	-0.05	-0.09	-0.08	0.01	-0.08	0.05	0.03	0.68*	1.00	
BHAR(36) (11)	-0.01	0.03	-0.04	0.00	-0.05	-0.01	0.08	0.04	0.53*	0.80*	1.00

*: p value<0.0001.

DOI:10.6814/NCCU202101728

To understand the role of ESG performance differences in the M&A sample, comparing the CARs and BHARs for high and low ESG acquirers, I follow Deng et al. (2013) and divide all the acquirers into high and low ESG acquirers according to the median of ESG combined score of the entire sample. The results in Table 9 show that high ESG acquirers have positive market responses both in 3-day CAR and 5-day CAR with ASEAN targets, while low ESG acquirers with non-ASEAN targets perform better than the former subgroup. A possible reason may be that the high ESG acquirers are more prudent when making decisions on buying ASEAN targets as there exists risk, while non-ASEAN targets mostly locate in developed countries and some consideration is easily neglected. Although low ESG acquirers with ASEAN targets perform worst, they have the highest CAR both in 3-day CAR and 5-day CAR when buying non-ASEAN targets, and the 5-day CAR also increases comparing to its 3-day CAR. It may be explained that the market is more confident on the low ESG acquirers when buying non-ASEAN targets for they may be capable of managing and efficiently operating the merged company. However, these results are not statistically significant.

For BHARs, results show that the only positive performance appears at mergers by low ESG acquirers with non-ASEAN targets at 12-month. Overall, table 9 shows that for both high and low ESG acquirers, acquisitions in non-ASEAN countries lead to higher merger performance no matter at 12-month, 24-month and 36-month. Still, there are no significant differences statistically.

Comparing with previous research by Deng et al. (2013), although they identify that high ESG acquirers have higher announcement returns, they do not examine specifically for different target groups. Zhang et al. (2020) also suggests that sustainable CSR engagement can enhance the acquirer's cumulative abnormal return. Because both studies are examined based on mergers in the United States, our result may need further empirical research discussion. For the study which measures the environmental and social performance using the Intangible Value Assessment (IVA) (Aktas, De Bodt and Cousin, 2011), acquirers' abnormal returns do not seem to depend on the level of ESG performance of acquirers.

The results of BHAR also contrast to the literature (Deng et al. 2013), as they document that low ESG acquirers do not have significant long-term post-merger stock returns no matter for the holding periods of 12-month, 24-month and 36-month. In addition, high ESG acquirers result in positive long-term performance with in holding

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periods of 12-month and 24-month. The same concern appears as their study does not set different target groups, leaving this result for future exploration.

Table 9 Merger performance by ESG performance

Panel A: CAR(-1,+1)						
		High ESG acquirers (H)		Low ESG acquirers (L)		Diff (H-L)
		N	Mean	N	Mean	
ASEAN target	(T1)	45	0.0050	37	-0.0041	0.0091
Non-ASEAN target	(T2)	175	-0.0023	190	0.0082	-0.0104
Diff (T1-T2)			0.0073		-0.0122	

Panel B: CAR(-2,+2)						
		High ESG acquirers (H)		Low ESG acquirers (L)		Diff (H-L)
		N	Mean	N	Mean	
ASEAN target	(T1)	45	0.0049	37	-0.0038	0.0087
Non-ASEAN target	(T2)	175	0.0004	190	0.0129	-0.0125
Diff (T1-T2)			0.0046		-0.0167	

Panel C: BHAR(12)						
		High ESG acquirers (H)		Low ESG acquirers (L)		Diff (H-L)
		N	Mean	N	Mean	
ASEAN target	(T1)	33	-0.0061	20	-0.0101	0.0041
Non-ASEAN target	(T2)	130	-0.0016	143	0.0026	-0.0042
Diff (T1-T2)			-0.0044		-0.0127	

Panel D: BHAR(24)						
		High ESG acquirers (H)		Low ESG acquirers (L)		Diff (H-L)
		N	Mean	N	Mean	
ASEAN target	(T1)	30	-0.0054	19	-0.0065	0.0011
Non-ASEAN target	(T2)	122	-0.0043	130	-0.0023	-0.0020
Diff (T1-T2)			-0.0011		-0.0042	

Panel E: BHAR(36)						
		High ESG acquirers (H)		Low ESG acquirers (L)		Diff (H-L)
		N	Mean	N	Mean	
ASEAN target	(T1)	25	-0.0094	18	-0.0094	0.0001
Non-ASEAN target	(T2)	109	-0.0022	121	-0.0028	0.0006
Diff (T1-T2)			-0.0071		-0.0066	

Another important discovery within the United States context by Bereskin et al., (2018) stated that if there is high CSR similarity between acquiring firms and target

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firms, they would lead to higher combined announcement returns. However, it is unknown that whether the ESG score is both high or both low can still cause the same effect.

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5. Conclusion

5.1 Summary

RCEP is the largest free trade agreement in the world, composed of the 10 countries of ASEAN plus China, Japan, South Korea, Australia and New Zealand. The members account for nearly a third of the world's population and 29 percent of global GDP. On the way to deeper economic integration, cross-border mergers and acquisitions have become a noteworthy proportion of foreign direct investment in RCEP. According to the report of the United Nations Conference on Trade and Development (UNCTAD), transactions in RCEP members accounted for about 40 percent of global M&A activities in 2010-2020. However, a majority of M&A sales concentrates in Japan, China, Singapore and South Korea for their relatively mature M&A environment. Still more, over 40 percent of M&As are intra-RCEP transactions.

As more business activities across ASEAN and RCEP are getting more complex, corporate social responsibility issues and ESG performance have been one of the critical investment themes in recent years. While the regional economy becomes increasingly integrated, the role of CSR in firms will be even more important in the future. However, most research studies about M&As focus on domestic deals and/or U.S.-based firms, with little issues discussing ESG performance. In this paper, I analyze the effect using the worldwide database of ESG score. In the sample of 857 cross-border deals in ASEAN targets that occurred between 2002 and 2020, over a half of the acquiring firms are not RCEP member. In addition, the ESG scores least available for ASEAN acquirers. This indicates that ASEAN countries are struggling with the sustainability while their economies running up and more CSR research is to be done.

Results in the difference univariate t-test show that: for announcement effect (CARs), no significant differences are observed between ASEAN acquirers and non-ASEAN acquirers no matter in 3-day or 5-day CAR, but ASEAN acquirers have relatively good market responses when they make acquisitions in non-ASEAN countries rather in ASEAN countries. A possible explanation can be that these ASEAN firms have relative good reputations which investors and the market believe merging firms from China, Japan, South Korea, Australia and New Zealand would make profits.

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For post-merger performance with the same acquiring subsamples, no significant differences are observed, while ASEAN acquirers seem to perform better than non-ASEAN acquirers. This indicates that if firms in ASEAN countries are capable of making acquisitions, they might also be capable of making good integration and business running.

In the correlation analysis between acquiring firms' ESG score and merger performance, no significant linear relationships are found. However, the difference tests show that when lower ESG acquiring firms buy non-ASEAN target, the announcement effect is better than higher ESG acquiring firms buying ASEAN targets, while both have positive market responses. In addition, all acquirers have better post-merger performance when their target is non-ASEAN RCEP country rather than ASEAN target. It can be inferred that merging with non-ASEAN firms may provide more resource which contributes to the merged firms.

It is likely that more mergers will happen in the ASEAN and the RCEP countries and their sustainable developments be heavily concerned since the economic integration is speeding up, investors seeking long-term value creation and the government making policies. This paper provides a preliminary analysis of relationship between ESG performance and cross-border mergers and acquisitions.

5.2 Limitation and recommendation

There are several limitations in this study. One is that the small sample size may bias the testing result. As the ASSET4 ESG database includes only publicly-traded firms, most of which are indexed companies and in the market, and firm data are not adequate for the study period, deals made by smaller firms are not in the analysis sample. Therefore, future works should work on using other database for larger sample and comparison. Another important topic is the ESG effect on merger performance. Since ESG is a long-term issue, and related practices usually take time to implement and so do the effects, the performance of M&As should be examined for longer period after the completion. Moreover, according to Arouri et al. (2019), target's CSR is also a factor affecting deal completion, as a result causing bias. Therefore, including target's ESG score in the analysis should be considered. As the study does not run the regression model of the merger performance of acquiring firms, country-level and industry-related

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variables are not controlled, as a result the fixed effects are not tested and may cause the non-significant results.

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Appendix I: Variable definition

This table describes the ESG variables used in the paper.

Variable	Description
ESG Combined Score	Takes the ESG controversies into account when measuring a comprehensive ESG performance of the company.
ESG Controversies Score	Measures the condition when the company is exposed to or encounters ESG related controversies and negative events during a fiscal year.
ESG Score	An overall company's ESG performance and practices based on publicly reported information. Calculated by the sum of the environmental pillar score, the social pillar score and the corporate pillar score weights.
Environment Pillar Score (E)	Measures a company's conducts and impact on the natural environment and the complete ecosystems, including resource use, emissions, climate risk, waste and pollution, etc.
Social Pillar Score (S)	Measures a company's practices to manage the relationship with its employees, customers and the society for trust and loyalty, including workforce, human right, community, product responsibility, health and safety, etc.
Corporate Governance Pillar Score (G)	Measures a company's systems, policies and processes, ensuring its board members and executives act in the best interests of its shareholders, including management, shareholders, CSR strategy, board structures, etc.

*Source: Thomson Reuters ASSET4 ESG Database.

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Appendix II: ESG score weights

Pillar	Category	Indicators in Rating	Weights
Environmental	Resource use	20	15%
	Emissions	28	15%
	Innovation	20	13%
Social	Workforce	30	13%
	Human rights	8	5%
	Community	14	9%
	Product responsibility	10	4%
Governance	Management	35	17%
	Shareholders	12	5%
	CSR strategy	9	3%
Total		186	100%

*Decimal places to be considered.
*Source: Thomson Reuters ASSET4 ESG Database.

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Appendix III: ESG category score definition

Category	Definition
Resource use	Measures a company's performance on reduction of resource use including the use of energy, water, and materials, and on related policies and solutions for improving resource efficiency, for example sustainable packaging.
Emissions reduction	Measures a company's value and conducts on environmental emissions reduction, for example greenhouse gas emissions, throughout the operation and production.
Innovation	Measures a company's capacity of minimizing environmental impact for its customers with related expenditures or financing for creating eco-friendly products, technologies and processes.
Workforce	Measures a company's polices and conducts of ensuring a safe work environment, the diversity of employees and equal opportunities for career development, in results improving job satisfaction.
Human rights	Measures a company's polices and conducts on valuing fundamental human rights, for example avoiding the use of child labor and forced labor.
Community	Measures a company's value and conducts to be involved in the community, being a fair competitor, defending public health and improving business ethics.
Product responsibility	Measures a company's polices and conducts on product quality management in the consideration of protecting customer's health, safety and privacy.
Management	Measures a company's conducts on board structures and functions, for example the audit committee independence.
Shareholders	Measures a company's policies of engaging and equally treating shareholders.
CSR strategy	Measures a company's practices of the disclosure of sustainability policies and performance.

*Source: Thomson Reuters ASSET4 ESG Database.

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