The Impacts of Environmental, Social, and Governance Factors on Firm Performance: Panel Study of Malaysian Companies

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Abstract

Purpose - The ESG factor, which consists of environmental, social, and governance factors, represents the non-financial performance of a company. United Nations Principles for Responsible Investment (UN-PRI) invites investors to consider ESG issues when evaluating the performance of any company. Moreover, nowadays the contribution of corporations towards sustainable development is a major concern of investors, creditors, government, and other environmental agencies. Therefore, the purpose of this paper is to examine the impact of ESG factors on the performance of Malaysian public limited companies in terms of profitability, firm value, and cost of capital.

Design/methodology/approach – A total of 54 companies are selected from Bloomberg's ESG database that has complete ESG and financial data from 2010 to 2013. This study conducted panel data regressions such as the pooled OLS, fixed effect, and random effect.

Findings - Based on the regression results, there is no significant relationship between individual and combined factors of ESG and firm profitability (i.e., ROE) as well as firm value (i.e., Tobin's Q). Moreover, individually, none of the factors of ESG is significant with the cost of capital (WACC), but the combined score of ESG positively and significantly influences the cost of capital (WACC) of a company.

Practical implications - As this is a new study on Malaysia, the findings of this study will be useful to investors, SRI analysts, policy makers, and other related agencies.

Originality/value – To the best of the authors' knowledge, this study is among the first empirical study to examine the impact of ESG factors on the performance of Malaysian public limited companies in terms of profitability, firm value, and cost of capital.

Keywords: Environmental, Social, and Governance (ESG) Factor; Return of Equity (ROE); Tobin's Q; Cost of Capital (WACC); FTSE4Good Bursa Malaysia (F4GBM) Index

Introduction

Environmental, social, and governance factors, collectively known as ESG factors, is a term used in the capital markets to refer to a company's non-financial performance. In 2006, the United Nations Environment Programme Finance Initiative (UNEP-FI) and United Nations Global Compact, investment industry, and intergovernmental and governmental organisations collaborated to create the United Nations Principles for Responsible Investment (UN-PRI). The goals of the UN-PRI are to understand the implications of ESG and to support investors in integrating these issues in their investment practices (UN-PRI, 2015a). UN-PRI requests investors to consider ESG issues when evaluating the performance of any company (Caplan, Griswold, & Jarvis, 2013). Given the quantum of investment funds managed by the UN-PRI signatories, the public listed companies are compelled to engage in and report their ESG activities. Responsible investors will consider a company's performance in the ESG factors in addition to its financial performance when making investment decisions.

Therefore, investors and stakeholders are concerned about the ESG factors of a company to know where the company invests money and how the company conducts business. The environmental concerns of investors and stakeholders, for instance, are natural environment protection, climate change, and environmental impacts arising from a business operation. The social factors important to stakeholders are human rights, equality, diversity in

the workplace, and contribution to the society. Some of the concerned governance issues are ownership structure, board independence, equitable treatment of shareholders, minority shareholders' rights, transparency, and disclosure of corporate information.

Literature refers to the broad class of investment practice by a variety of names that integrates the consideration of ESG factors given the considerable acceptance of the UN-PRI among investors (Eccles & Viviers, 2011). Some of the more familiar ones include: Socially Responsible Investment (e.g., Abramson & Chung, 2000; Statman, 2008), Ethical Investment (e.g., Mackenzie & Lewis, 1999; Schwartz, 2003), Social Investment (e.g., Cox, Brammer, & Millington, 2007; Dunfee, 2003), Responsible Investment (e.g., Dembinsk et al., 2003; Thamotheram & Wildsmith, 2007; Viviers et al., 2009), and Sustainable Investment (e.g., Koellner et al., 2007; Weber, 2005). Aust (2013) opines that although there are some differences, corporate social responsibility (CSR) can be generally understood as roughly equivalent to ESG.

There is a growing body of study on ESG, especially based on developed countries. Therefore, the actual state of ESG practices and ESG impacts on companies from emerging economies have not been sufficiently explored. This study is an attempt to empirically investigate the impact of ESG factors on Malaysian companies.

There are strong justifications to conduct the study in Malaysia. Malaysia is an emerging economy that is targeted to achieve vision 2020 to become a developed nation by the year 2020. Therefore, the government of Malaysia has been steadily encouraging companies to exercise good corporate governance and place adequate emphasis on CSR issues, particularly in efforts to improve the overall quality of life, such as health and safety protection, pollution, and environmental concerns, in addition to environmental protection. The government launched SRI funds in 2003 with the objective of investing in profitable companies that are not involved in objectionable businesses such as alcohol and gambling while having good corporate credentials, such as good corporate governance and are environmentally conscious. These pioneer funds have been working together with various NGOs on ethical issues besides having a special advisory board to advice fund managers on matters pertaining to social responsibility, environmental protection, and corporate governance (Securities Commission, 2004).

Moreover, the Malaysian government supports responsible investment initiatives. In the national budget of 2014, the Government announced that efforts would be stepped up towards promoting Malaysia as a destination for SRI and an ESG Index would be established by Bursa Malaysia. On 22nd December 2014, Bursa Malaysia launched the ESG Index known as FTSE4Good Bursa Malaysia (F4GBM) Index in alliance with Financial Times Stock Exchange (FTSE) as part of the worldwide FTSE4Good Index Series and also aligned with other leading global ESG frameworks such as the GRI and the Carbon Disclosure Project. With this new index, investors, shareholders, and clients expect greater responsibility and transparency from companies and their investments (The Star, 2014). Furthermore, a government linked investment holding company, Valuecap Sdn. Bhd., was allocated RM one billion to create an ESG Fund used to buy shares from the Bursa Malaysia ESG Index (The Star, 2015). Given the above initiatives and the amount of resources allocated by the government, it is clear that the government intends to encourage the ESG integration in the investment practices in Malaysia. Therefore, this study on Malaysia will be highly beneficial for policy makers and related public and private agencies.

Literature Review and Hypotheses Development

ESG and Firm's Profitability

Studies examining the relationship between CSR/ Corporate Social Performance (CSP) and Corporate Financial Performance (CFP) are abundant in literature since the 1970s. Aggarwal (2013) claims that Narver in 1971 conducted the first study covering CSP and CFP relationship. Griffin and Mahon (1997) reviewed 62 research results from 51 prior articles that had analysed the relationship between CSR and financial performance. They found that 33 research results supported a positive relationship, 20 of the research supported a negative relationship, and nine of studies had no definite results.

Orlitzky, Schmidt, and Reynes (2003) in their meta-analysis of 52 empirical studies concluded that CSP was positively correlated with firm performance and the relationship tends to be simultaneous and bi-directional. They also found that CSP measures were more highly correlated with accounting-based indicators of firm performance (such as ROA and ROE) than with market-based measures (such as share price).

According to Clark, Feiner, and Viehs (2014), there are two common types of ESG studies that have been published. First, scholars have directly examined individual dimensions of ESG (e.g., governance), testing for correlations with firm performance. They claim that 85% of ESG studies only examine one aspect of ESG and not all three aspects at the same time. Results of the relationships between ESG and financial performance have been mixed (Wood, 2010; Yegnasubramanian, 2008). The second category of research is studies that focus on SRI funds. Researchers examine a group of SRI funds with a portfolio of non-SRI funds to assess results on indicators such as financial performance, market valuation, or stock returns (e.g., Brammer, Brooks, & Pavelin, 2006; Jones et al., 2008). Results have also generally been mixed, with various studies finding no significant differences between SRI and non-SRI funds' performance (Clark, et al., 2014). This study concentrates on the impact of ESG factors towards firm performance of Malaysian public limited companies. Based on the similar premise of previous literature, it is predicted that:

H1a: There is a significant positive relationship between ESG factors and profitability of Malaysian public limited companies.

ESG and Firm's Value

In the long run, in addition to good operating performance, non-financial performance such as environmental and social performance should be translated to a better valuation of listed firms (Bassen & Kovacs, 2008; Porter & Kramer, 2011; Al-Najjar & Anfimiadou, 2012). Derwall et al. (2005) studied the share price relationship with the corporate environmental performance for the period of 1995 to 2003 and found that companies with higher corporate environmental performance delivered higher returns. Eccles, Ioannou, and Serafeim (2014) investigated the performances of high-sustainability portfolio and low-sustainability portfolio and found that in the 18 years period of study, the high-sustainability portfolio delivered higher returns. Godfrey, Merrill, and Hansen (2009) found that high sustainability profile helped to mitigate any downwards pressure on share price upon the announcements of negative environmental event. Earlier, Cormier and Magnan (1997) reported that companies with higher pollution indicators had lower market value. In a similar vein, Hamilton (1995) argued that toxic releases announcements of a company would lead to significant negative reactions in the company's share price.

Many studies have also looked at governance mechanism impact on firms' value (such as Tobin's Q and price-to-book ratio). Good governance has been shown to increase investors' confidence which results in enhanced firm value (Bauer, Guenster, & Otten, 2004; Bebchuk, Cohen, & Ferrell, 2010; Gompers, Ishii, & Metrick, 2003; Lemmon & Lins, 2002; Bebchuk et al., 2010; Siagian, Siregar, & Rahadian, 2013).

In general, the majority of prior studies find positive relationships between sustainability and firm value. However, some authors find negative relationships between sustainability measures and stock price performance (e.g., Brammer et al., 2006; Fisher-Vanden & Thorburn, 2011). Following the results of prior researches, the relationship of ESG factors with firm value in this study is hypothesised as follows:

H1b: There is a significant positive relationship between ESG factors and firm value of Malaysian public limited companies.

ESG and Firm's Cost of Capital

A company's cost of equity is the rate of return on the shares required by investors. Thus, the cost of equity is the investors' expected return and reflects the investor's perception on a firm's riskiness of cash flows (Witmer & Zorn, 2007). Meanwhile, the cost of debt is the effective rate that a firm pays on all its bank loans, bonds, and other forms of debt. Theoretically, the cost of capital increases when the investors and creditors require a higher reward for the higher risk taken. Therefore, when the perceived risk decreases, the cost of capital decreases as well. Investors are becoming more sensitive to ESG issues of an investment target. Firms with higher risk profiles would generally have cost of debt (interest rate) and/or higher cost of equity capital (risk premium). On the other hand, a company with lower company risk profile would normally enjoy a lower cost of capital (Bassen, Meyer, & Schlange, 2006). Better disclosure of non-financial practices, such as ESG, can reduce a company's cost of capital by significantly decreasing the estimation risk in the capital markets (Easley & O'Hara, 2004) and by reducing information asymmetries and/or transaction costs (Graham et al., 2005). Additionally, studies investigating the impact of good sustainability practices on a firm's cost of debt have showed that firms with better environmental management systems have significantly lower credit spreads that lead to a lower cost of debt (Bauer & Hann, 2010). On the other hand, firms with major environmental issues have to pay significantly higher interest rates on their loans (Goss & Roberts, 2011).

Prior literature has also studied the effects of corporate governance on the cost of debt, and the findings are relatively positive: good corporate governance correlates with reduced borrowing costs and smaller credit spreads. It has been reported that certain corporate governance elements have significant effects on a company's cost of debt, for instance, the institutional investor ownership (Bhojraj & Sengupta, 2003; Cremers, Nair, & Wei, 2007), the ratio of outside directors (Bhojraj & Sengupta, 2003), and the information disclosure quality (Schauten & van Dijk, 2011). Similarly, Bradley et al. (2008) argue that a more stable board significantly reduces bond spreads and enhances credit ratings. These findings can be extended to the current study and it is hypothesised that:

H1c: There is a significant negative relationship between ESG factors and cost of capital of Malaysian public limited companies.

Methodology

Measurements of Variables

The research framework of this study is built in the stakeholder theory perspective. The stakeholder theory posits that a company needs to satisfy internal and external stakeholders' demands. ESG activities are seen as the management's efforts to pacify the stakeholders' demands and to gain better firm performance. This study attempts to investigate the effect of ESG factors towards firm performance in Malaysian public limited companies (PLC).

The use of both accounting-based and market-based measures as indicators of financial performance has been debated by academics since the 1980s (Gentry & Shen, 2010). To capture both the historical and potential future performance of the companies, this study will use both accounting and market measures in the measurements of financial performance. Therefore, the dependent variable – firm performance – is assessed using three criteria – profitability, firm value, and cost of capital. These models are modified and are an extension of prior researches such as Simpson and Kohers (2002), Mishra and Suar (2010), and Jang, Lee, and Choi (2013).

ROE is selected as the accounting based measurement in this study, as it is one of the more popular methods to measure financial performance (Griffin & Mahon, 1997), and the single most important indicator for investors to measure firm's management performance (Scott, 2003). It measures net income earned by a firm as a percentage of shareholders investment. Bloomberg calculates ROE using the following formula:

$$\text{ROE} = \text{Net Income Available for Common Shareholders} / \text{Average Total Common Equity} \times 100$$

In terms of market-based measurements, Tobin's Q and Weighted Average Cost of Capital (WACC) are used in this study. Tobin's Q is the measure of firm value, defined as the ratio of the market value of a firm over the value of firm's physical asset (Kim, Chung, & Park, 2013). It indicates how the market values a company's existing assets. This means higher valued companies will have higher Tobin's Q value compared to lower valued companies. Bloomberg database calculates Tobin's Q and WACC using the following formula:

$$\text{Tobin's Q} = (\text{Market Capitalisation} + \text{Total Liabilities} + \text{Preferred Equity} + \text{Minority Interest}) / \text{Total Assets}$$

$$\text{WACC} = [\text{KD} \times (\text{TD}/\text{V})] + [\text{KP} \times (\text{P}/\text{V})] + [\text{KE} \times (\text{E}/\text{V})]$$

where:

KD = Cost of Debt;

TD = Total Debt;

V = Total Debt + Preferred Equity + Equity Capital;

KP = Cost of Preferred Equity;

P = Preferred Equity;

KE = Cost of Equity;

E = Equity Capital.

The independent variable, the ESG factors, is measured using the ESG ratings published in the Bloomberg database. The Bloomberg database rates the ESG disclosure score using four disclosure scores that summarise a company's level of disclosure on environmental, social, and governance disclosure scores, and an overall ESG disclosure

score. All the disclosure scores are normalised to the range of 0.1 (for companies that disclose the minimum amount of data) to 100 (for companies that disclose every data point collected by Bloomberg). All data is weighted in terms of importance and higher weights are given to more relevant disclosures (Giannarakis, 2013).

Two common control variables in the literature, i.e., Leverage and Size of the company, are utilised in this study. Leverage is the funding sourced by a company from third parties to operate its business. It is measured by the ratio of total liabilities to total equity capital. Leverage is included in this study because managers typically disclose more ESG information as leverage increases as a result of additional scrutiny from financial institutions (Lanis & Richardson, 2013) and to lower a firm's cost of capital (Francis, Nanda, & Olsson, 2008; Healy & Palepu, 2001). Leverage of the past also represents an enterprise risk that could affect the financial performance in the future (Prior, Surroca, & Tribo, 2008).

Lastly, size is included as a control variable because previous studies showed that size has a positive relationship with CSR disclosure (Cho, Roberts, & Patten, 2010; Clarkson, Li, Richardson, & Vasvari, 2008). Size of a company in this study is measured by the total assets.

Estimation of Models

To estimate the hypotheses, this study relies on panel regression. The regression models used in this study are adopted and modified based on prior studies by Jang et al. (2013) and Saleh et al. (2011). There are six models to check the hypotheses – models 1.1 and 1.2 test hypotheses *H1a*; models 2.1 and 2.2 test *H1b*; and models 3.1 and 3.2 test *H1c*. The model of the study is shown in the following:

$$L_ROE_{it} = \beta_0 + \beta_1 L_ESG_{it-1} + \beta_2 L_SIZE_{it} + \beta_3 L_LEV_{it} + \varepsilon \quad (1.1)$$

$$L_ROE_{it} = \beta_0 + \beta_1 L_E_{it-1} + \beta_2 L_S_{it-1} + \beta_3 L_G_{it-1} + \beta_4 L_SIZE_{it} + \beta_5 L_LEV_{it} + \varepsilon \quad (1.2)$$

$$L_TQ_{it} = \beta_0 + \beta_1 L_ESG_{it-1} + \beta_2 L_SIZE_{it} + \beta_3 L_LEV_{it} + \varepsilon \quad (2.1)$$

$$L_TQ_{it} = \beta_0 + \beta_1 L_E_{it-1} + \beta_2 L_S_{it-1} + \beta_3 L_G_{it-1} + \beta_4 SIZE_{it} + \beta_5 LEV_{it} + \varepsilon \quad (2.2)$$

$$L_WACC_{it} = \beta_0 + \beta_1 L_ESG_{it-1} + \beta_2 SIZE_{it} + \beta_3 LEV_{it} + \varepsilon \quad (3.1)$$

$$L_WACC_{it} = \beta_0 + \beta_1 L_E_{it-1} + \beta_2 L_S_{it-1} + \beta_3 L_G_{it-1} + \beta_4 L_SIZE_{it} + \beta_5 L_LEV_{it} + \varepsilon \quad (3.2)$$

Where:

L_ROE_{it}	= Return on Equity (ROE) for company i in period t;
L_TQ_{it}	= Tobin's Q for company i in period t;
L_WACC_{it}	= Weighted Average Cost of Capital (WACC) for company i in period t;
L_ESG_{it}	= ESG score for company i in period t-1;
L_E_{it}	= Environmental score for company i in period t-1;
L_S_{it}	= Social score for company i in period t-1;
L_G_{it}	= Governance score for company i in period t-1;
L_SIZE_{it}	= Total Assets for company i in period t;
L_LEV_{it}	= Leverage for company i in period t;
ε	= Error term.

This study applies the three static panel approaches such as pooled OLS, fixed effects, and random effects models. The pooled OLS is a highly restrictive model, as it imposes a common intercept and slope coefficients for all cross-sections, and thus, disregards individual heterogeneity. The fixed effects model, on the other hand, assumes that the estimator has

common slopes and variance but with company-specific intercepts. Both the cross-sectional and time effects can be observed through the introduction of dummy variables, especially in the two-way fixed effects models. This estimator has common slopes and variance and individual-specific intercepts. The rationale behind using this estimator is to control for all possible unobserved characteristics of each company in the study. In contrast to the fixed effects model, the random effects model is relatively less problematic in terms of degrees of freedom by assuming common intercepts. Moreover, we applied the random effect where the variation across a company is assumed to be random and uncorrelated with the explanatory variables included in the model. Nevertheless, the random effects model has another limitation in that it considers the model to be time invariant. This implies that the error at any period is uncorrelated with the past, present, and future, known as strict exogeneity (Arellano, 2003). In real life, this assumption is very often invalid. Next, a Hausman test is used to compare two estimators where one, the more efficient, is consistent only under H0 and the other is inefficient under H1.

Sources of Data

ESG and firm performance data are collected from the Bloomberg database because currently it has relatively more Malaysian companies listed in its database compared to GRI, KLD, and the newly established Bursa Malaysia FTSE4Good Index databases. Bloomberg reports detailed ESG data (e.g., board composition, board independence, employee turnover percentage, and biodiversity policy) and the ESG data is updated on a yearly basis. The use of ESG and sustainability ratings are synonymous with the mainstream investment trends surrounding ESG integration practices currently being observed in financial markets (Xiao et al., 2013), as well as a credible source of information that benefits researchers in terms of savings in time and cost (Sekaran & Bougie, 2009; Waddock & Graves, 1997).

Bloomberg was launched in 2007 with 36 companies listed in the database. As at March 2015, there were 74 companies listed in Bloomberg ESG database for Malaysia, but only 54 companies have complete historical ESG data from the year 2010. This study's sample is finalised with the 54 companies given their complete ESG and financial data from 2010 to 2013 (most currently available data).

Consistent with other studies (Saleh et al., 2011), to understand the impacts of ESG factors on a firm's future performance, this study uses one period lag of ESG. Therefore, the data used in the estimation of the model are from 2010 to 2012 for ESG and for other variables from 2011 to 2013. All of the data are in the e-based logarithmic (*ln*) form.

Result and Discussion

This study conducted the Hausman test to identify the best estimator among three. The Hausman test confirms that the fixed effect (FE) estimator is the most efficient compared to the pooled OLS (POLS) and random effect (RE) for all the hypotheses. Thus, the study focuses on the FE estimators to explain the results.

The Impact of ESG Factors on Profitability of Firm

Table 1 shows that both the individual and combined scores of ESG are statistically insignificant in influencing the ROE. The finding shows that companies with ESG information do not perform any better than those with less ESG information. Meanwhile, leverage positively and significantly fosters ROE, and asset is negatively and significantly associated with ROE. The results imply that companies with higher leverage will record

higher profitability, and companies of a smaller size are predicted to be more profitable. Similar results on the impact of ESG on performance were also found in previous literature such as Crisóstomo et al. (2011); Aupperle, Carroll, and Hatfield (1985), and Ingram and Frazier (1980).

Table 1: Factors Influencing the Profitability of Firms

Variable: L_ROE	Pooled OLS	Fixed Effect	Random Effect	Pooled OLS	Fixed Effect	Random Effect
L_ESG	0.558*** -0.143	0.439 -0.274	0.485*** -0.181			
L_E				0.203** -0.0945	0.0266 -0.131	0.121 -0.0999
L_S				-0.0481 -0.0765	-0.0394 -0.175	-0.013 -0.0947
L_G				0.376 -0.775	0.357 -0.642	0.421 -0.591
L_Size	-0.187*** -0.0493	-0.440* -0.25	-0.242*** -0.0754	-0.199*** -0.0515	-0.458* -0.257	-0.247*** -0.078
L_LEV	0.353*** -0.108	1.036*** -0.269	0.549*** -0.15	0.411*** -0.109	1.005*** -0.277	0.575*** -0.152
Constant	2.330*** -0.561	4.305* -2.406	2.844*** -0.801	2.336 -3.111	4.435 -3.375	2.473 -2.437
Observations	162	162	162	162	162	162
R-squared	0.168	0.14		0.161	0.122	
Number of company		54	54	54	54	54
Hausman Between FE-OLS		8.22(0.0417)			8.89(0.113)	
Hausman Between RE-OLS		4.03(0.258)			5.22(0.389)	
Hausman Between FE- RE		4.93(0.176)			5.13(0.400)	

Fixed effect is efficient over RE and OLS

***, **, * indicate the value is significant at 1%, 5% and 10% level

The Impact of ESG Factors on Value of Firm

Table 2 shows that both the individual and combined scores of ESG are statistically insignificant in influencing the Tobin's Q. Similar results were found by Servaes and Tomayo (2013) and Haryono and Iskandar (2015). Meanwhile, leverage positively and significantly fosters Tobin's Q; and asset is negatively and significantly associated with Tobin's Q. These results imply that a smaller company is valued higher than a bigger company by the market, and a company with higher leverage will gain higher firm value. A smaller company is more valued by the market because the market anticipates that the company has the potential to be more valuable in the future. Similarly, a company that has a high leverage ratio is seen as more valuable with higher profitability.

Table 2: Factors Influencing the Value of Firms

Variable: L_TobinQ	Pooled OLS	Fixed Effect	Random Effect	Pooled OLS	Fixed Effect	Random Effect
L_ESG	0.539*** -0.0906	-0.0254 -0.0896	0.11 -0.0808			
L_E				0.201*** -0.0603	0.0181 -0.0422	0.0578 -0.0396

L_S				-0.024	-0.0633	-0.00386
				-0.0489	-0.0562	-0.0439
L_G				-0.0501	0.0721	0.101
				-0.495	-0.207	-0.206
L_SIZE	-0.173***	-0.309***	-0.228***	-0.191***	-0.305***	-0.237***
	-0.0313	-0.0819	-0.0443	-0.0329	-0.0826	-0.0454
L_LEV	-0.0274	0.283***	0.183**	0.033	0.270***	0.190***
	-0.0682	-0.0881	-0.0732	-0.0699	-0.0893	-0.0735
Constant	0.523	3.123***	2.081***	2.165	2.856***	2.001**
	-0.355	-0.787	-0.446	-1.985	-1.086	-0.906
Observations	162	162	162	162	162	162
R-squared	0.331	0.145		0.315	0.156	
Number of company	54	54	54		54	54
Hausman Between OLS-FE	651.58(0.000)			37.50(0.000)		
Hausman Between OLS-RE	19.38(0.000)			87.64(0.000)		
Hausman Between RE- FE	4.93(0.176)			12.01(0.0346)		

Fixed effect is efficient over RE and OLS

***, **, * indicate the value is significant at 1%, 5% and 10% level

The Impact of ESG Factors on Cost of Capital

Table 3 shows that the combined scores of ESG positively and significantly influence the WACC, but individually, none of the factors of ESG is significant in influencing the WACC. This finding is similar to the result of Ming, Zhi, and Hua (2013) who found that CSR practices in Asian firms generally could not reduce their cost of capital. Leverage positively and insignificantly influences the WACC, but asset is associated with WACC negatively and significantly. This means that a firm with a high ESG score will incur a higher cost of capital. On the other hand, the cost of capital is low for a large company and vice versa.

Table 3: Factors Influencing the Cost of Capital of Firms

Variable: L_WACC	Pooled OLS	Fixed Effect	Random Effect	Pooled OLS	Fixed Effect	Random Effect
L_ESG	0.0334	0.174**	0.0775			
	-0.0361	-0.0863	-0.0523			
L_E				0.0147	0.0429	0.0154
				-0.0238	-0.0411	-0.0305
L_S				-0.0125	-0.0245	-0.0142
				-0.0193	-0.0547	-0.0273
L_G				0.0148	0.238	0.109
				-0.195	-0.201	-0.199
L_SIZE	-0.00785	-0.572***	-0.0274	-0.0074	-0.586***	-0.0257
	-0.0125	-0.0789	-0.0199	-0.013	-0.0804	-0.0206
L_LEV	-0.110***	0.0183	-0.103**	-0.105***	0.00533	-0.0973**
	-0.0272	-0.0849	-0.0415	-0.0276	-0.0869	-0.0422
Constant	2.235***	6.948***	2.280***	2.272***	6.651***	2.062**
	-0.142	-0.758	-0.218	-0.783	-1.058	-0.807
Observations	162	162	162	162	162	162
R-squared	0.168	0.389		0.166	0.384	
Number of company	54	54	54	54	54	54
Hausman Between FE-OLS	59.09(0.000)			68.27(0.000)		

Hausman Between RE-OLS	3.07(0.381)	8.47(0.137)
Hausman Between FE- RE	56.02(0.000)	60.12(0.000)

Fixed effect is efficient over RE and OLS

***, **, * indicate the value is significant at 1%, 5% and 10% level

Conclusions

This study seeks to investigate whether there is a relationship between a company's ESG factors and firm performance, measured using three criteria, i.e., profitability, firm value, and cost of capital in the case of Malaysia. The results empirically show that there is no significant relationship between individual and combined factors of ESG and firm profitability (i.e., ROE) as well as firm value (i.e., Tobin's Q). The insignificant relationship implies that companies with more or less ESG information perform equally as well as poorly. In addition, ESG is also not perceived as increasing firm value; in other words, they are similarly valued in the market.

However, the combined score of ESG positively and significantly influences the cost of capital (WACC) of a company, but individually, none of the factors of ESG is significant in influencing the WACC. This could be attributed to the fact that the stakeholders are yet to have more confidence in the corporations' ESG initiatives that could eventually lower their cost of capital, as in the more developed countries as found by Ming, Zhi, and Hua (2013). In addition, ESG data may not be used extensively by the capital market in determining the cost of capital and another reason provided by Jang et al. (2013) on the positive relationship between ESG and WACC is that the measurement of cost of capital may be subject to errors.

Another possible explanation for the above results is that a short period of study of 3 years may not yield significant statistical results compared to prior literatures that used longer periods of study. For example, Eccles et al. (2014) argued that the relationship of sustainability and financial performance is only significant in the long term and not in the short term. Moreover, Malaysian public companies have been just recently listed in the Bloomberg ESG database, and many more companies have still yet to be listed in the FTSE4Good Bursa Malaysia Index to be known to the market of responsible investors or SRI analysts.

Studies on ESG impacts on companies in emerging economies including Malaysia have not been sufficiently explored; this study provides empirical evidence that could be useful to the capital market as well as to the policy makers in their effort to promote responsible investment in Malaysian public companies in line with the UN-PRI policy. To support this, companies should be compelled to engage and to report their ESG initiatives.

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