

THE VALUE RELEVANCE OF ESG DISCLOSURE PERFORMANCE IN INFLUENCING THE ROLE OF STRUCTURED WARRANTS IN FIRM VALUE CREATION

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Abstract: This research empirically explores the impact of ESG (Environmental, Social and Governance) disclosure on structured warrants and firm value based on Malaysia environment. The study applied the panel regression analysis and sampled 37 Malaysian firms and 795 structured warrants through years 2012 to 2017. The results suggested the ESG disclosure performance (proxied by ESG score) associated positively with the firm value. The moderation effect of ESG disclosure performance on the nexus between structured warrants and firm value is evident. This study concluded that ESG disclosure drives transparency, increases the information processing ability of superior investors who prefer to trade in structured warrants and eventually impounds the information into equity market. Listed firm which is close to its fundamental will be valued by the market due to lower investment risk. To-date, the impact of ESG disclosure on the nexus between structured warrants and firm value has never been explored. This study aims to provide direction to both stock exchange regulator and firms on the source of firm value enhancement and suggests new research avenue to future researchers.

Key words: ESG disclosure, firm value, Malaysia, structured warrants, sustainability reporting

DOI: 10.17512/pjms.2019.20.1.40

Article history:

Received September 14, 2019; *Revised* October 18, 2019; *Accepted* November 8, 2019

Introduction

Euroregions ESG (Environmental, Social and Governance) disclosure which is also known as the reporting of Corporate Social Responsibility and Sustainability has become one of the most important aspects in financial reporting in many countries including Malaysia. Recent Nielsen Global Survey on Corporate Social Responsibility indicates that the consumers' willingness to pay extra for products provided by firms which are socially responsible is 66 per cent in 2017 as compared to 55 per cent in 2014. Also, survey by KPMG in 2017 reveals that 78 per cent of Fortune 500 companies have incorporated the ESG information in their annual reports on contrary with just 44 per cent in 2011. Nelson (2017) states that investors viewed sustainability reporting as the effort made by companies to improve corporate reputation with their stakeholders. Obviously, sustainability reporting has entered the mainstream of financial reporting.

In 2015, Bursa Malaysia revamped its Main Market Listing Requirements by mandating all public listed firms to disclose the corporate social responsibility

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practices in their respective annual reports. Under Appendix 9C, Para 29, listed companies need to clearly divulge how they integrate social responsible behavior into their businesses through ‘Sustainability Statement’. Survey by Nelson (2017) indicates that investors view ESG factors as a way to recognize new investment opportunities and managing long-term investment risk with their investee firms. Investment professionals do seek reliable information about the ESG performance through public and private sources, and relying on the non-financial information in their investment decisions.

In view of the heightened interest in non-financial information disclosure worldwide including Malaysia, this paper is thus motivated to shed light on whether ESG disclosure is relevant to firms based on Malaysian setting. ESG disclosure is still a relatively recent concept in the arena of performance reporting in Malaysia; hence this study contributes knowledge to the market regulators and firms on the sensibility of adopting ESG disclosure in complementing the conventional financial reporting practice. This research further explores as to whether the benefits of ESG disclosure also extend to structured warrants. This study postulates that ESG disclosure performance (proxied by ESG disclosure score) interacts with structured warrants in firm value creation. It offers first-hand evidence to future researchers who intend to blend in derivative instruments in the study of non-financial information (Arniati, 2019).

Literature Review and Hypotheses Development

ESG disclosure may include firms’ best practices and procedures in handling environmental issues, employees’ well-being, commitment towards shareholders and society etc. Firms are obliged to behave responsibly under ESG policies. For example, firms’ code of conduct in complying with regulatory standards in waste management may free firms from paying hefty penalties in future and therefore less risky. Besides, compliance of ESG principles enables firms to improve its market positioning by building a sustainable relationship with various stakeholders. For instance, measures to ensure conducive workplace tend to enhance employees job satisfaction and productivity. Satisfied employees will in turn improve customer service and consequently lead to better brand image and customer loyalty which are crucial to capture market share (Pirzada, 2016). Likewise, effort in ensuring the proper implementation of corporate governance signaling firms’ determination in protecting the interest of minority shareholders. In short, ESG disclosure offers an avenue for investors to review firms’ business strategies and commitment in a more comprehensive manner. This will facilitate the information search of investors, alleviating information asymmetry between insiders and outsiders, thus discouraging managerial rent extraction, lowering the adverse selection risk of corporate stakeholders and eventually enhancing firm value (Solikhah, 2017).

Studies by Ng and Rezee (2015) and Chauhan and Kumar (2018) show that ESG disclosure performance has a negative association with cost of capital as a corporate disclosure promotes transparency, enables investors to appraise

investment opportunities more precisely. Crifo et al. (2017) suggest that ESG disclosure quality has a significant inverse association with the cost of debts. The authors opine that the reduction of information searching costs lowers the risk premium demanded by creditors and hence lower cost of debt financing. Cho et al. (2013) allege that non-financial disclosure convey incremental information to superior investors and improves their information processing ability (Pirzada, 2015). The authors find supporting evidence that non-financial information disclosure performance lowers the bid-ask spread, the proxy of information asymmetry. Nurcahyanti and Widhianningrum (2018) claim that ESG disclosure performance on environmental aspect positively affecting stock price. Dianawati et al. (2018) state that ESG disclosure rating has favourable impact on price to book ratio. Moreover, studies suggest that ESG disclosure quality can be associated positively with Tobin's Q (Li et al., 2017; Chauhan and Kumar, 2019). It has been argued that enhanced stakeholders' confidence level and the improved transparency and accountability are the booster to firm value. Taken together recent studies suggest that ESG reporting lowers the information searching costs, enhance the information processing ability of investors, reduce information asymmetry of corporate stakeholders and eventually drives firm value. Based on the above premises, this study proposes:

H1: ESG disclosure affects firm value

This study is motivated to extend past research by suggesting that quality ESG disclosure could influence the nexus between structured warrants and firm value. A structured warrant is a financial derivative which derives its value from the underlying asset (Wati, 2019). In Malaysia, structured warrant is normally available over equity. This derivative instrument gives the holder the right to buy and sell the underlying asset at an exercise price within a stipulated time frame. It offers investor a low-cost alternative to participate in the future stock price movements at a truncated cost, thereby limiting the downside risk (Indayani, 2019). Black (1975) and Jin et al. (2012) collectively opine that features such as lower transaction cost and higher leverage gain offered by options will induce informed traders with firm-specific information to shift their trading venue from stock to options market. When informed investors start to trade based on their information set, the private information will be impounded into spot price and contributes to information efficiency. Easley et al. (1998) and Pan and Poteshman (2006) suggest that options trading could shape the future stock price direction. Truong and Corrado (2014) contend that options trading transmit earnings information into stock price and hence enhancing information efficiency in the equity market (Jaffar, 2018). Taken together, informed trading induced by derivatives makes prices reflect more information and consequently reducing the risk of investing in the underlying assets, which, in turn, tends to raise the asset's prices (Cao, 1999). Motivated by past studies, the current work thus postulates that ESG disclosure may stimulate the ability of certain category of investors to gather firm-specific

information (Chauhan and Kumar, 2019) as not all investors are homogeneous in their level of informedness (Cho et al., 2013). Informed investors with information concerning future direction of stock price due to quality ESG disclosure will be induced to trade in structured warrants to earn profits on their information set, which in turn impounds such information into the equity market, improves stock price efficiency and eventually the firm value. Based on the above discussion, this study proposes:

H2: ESG disclosure moderates on the nexus between structured warrants and firm value.

Data and Methodology

The study sampled 37 Malaysian public listed firms with ESG disclosure score and 795 structured warrants from year 2012 to 2017. Table 1 presents the distribution of firms and structured warrants by business sector. The sample firms with ESG disclosure rating are selected from various industries where consumer products segment ranks the highest, which is 27.03 per cent, while property segment ranks the lowest, which is 2.7 per cent. A majority of structured warrants studied in this research are drawn from consumer products segment, which is 26.67 per cent, whereas property sector ranks the lowest, which is 2.77 per cent.

Table 1: Distribution of Firms and Structured Warrants by Sector from 2012-2017

Sector	Number of firms	(%)	Number of structured warrants	(%)
Consumer products	10	27.03	212	26.67
Telecommunication	5	13.51	92	11.57
Finance	4	10.81	42	5.28
Industrial products	3	8.11	28	3.52
Construction	3	8.11	105	13.21
Utilities	3	8.11	103	12.96
Energy	2	5.41	72	9.06
Healthcare	2	5.41	48	6.04
Plantation	2	5.41	29	3.65
Transportation & logistics	2	5.41	42	5.28
Property	1	2.70	22	2.77
Total	37	100	795	100

All financial data, together with Environmental, Social, and Governance (ESG) disclosure score are retrieved from Bloomberg database. ESG disclosure score is used to quantify the degree in which a firm discloses its non-financial information. The range of Bloomberg's ESG disclosure score is between 0 (lowest) to 100 (highest). The study uses multiple sources collected from annual reports, websites, surveys, face-to-face interviews etc to build the ESG disclosure score. It consists of 247 environmental, social and governance indicators, covering carbon

emissions, waste management, community relations, human rights, human resource policy, etc.

Similar to Chauhan and Kumar (2018), this research adopts the ESG score as the independent variable and firm value, as proxied by Tobins' Q, (Q) as the dependent variable. Tobin's Q is a market-based measure which is able to capture investor's perception about a firm's net worth. In this study, Tobin's Q is calculated by the market value of assets divided by the book value of assets. The market value is in turn measured by market value of equity plus book value of debt. In order to quantify the impact ESG disclosure on the association between structured warrants and firm value, the number of structured warrants issued by third party (NOSW) has been employed as the independent variable in this research. The information concerning structured warrants is directly purchased from the Knowledge Center of Bursa Malaysia. Control variables are made up of MTB (market to book value), Dividend (dividend per share), Size (natural logarithm of total assets) and DTA (debt to total asset). This study adopts panel regression techniques to run the analysis (Le Thi, 2018).

The regression models of this study are as follows:

$$Q_{i,t} = \beta_0 + \beta_1 \text{ESG score}_{i,t} + \beta_2 \text{DTA}_{i,t} + \beta_3 \text{Dividend}_{i,t} + \beta_4 \text{Size}_{i,t} + \beta_5 \text{MTB}_{i,t} + \varepsilon \quad (1)$$

$$Q_{i,t} = \beta_0 + \beta_1 \text{ESG score}_{i,t} + \beta_2 \text{NOSW}_{i,t} + \beta_3 (\text{ESG Score} * \text{NOSW})_{i,t} + \beta_4 \text{DTA}_{i,t} + \beta_5 \text{Dividend}_{i,t} + \beta_6 \text{Size}_{i,t} + \beta_7 \text{MTB}_{i,t} + \varepsilon \quad (2)$$

Results and Discussions

The descriptive statistics is presented in Table 2. The mean value of Q ratio and ESG disclosure score are 1.61 and 23.41 respectively. On average, there are 3.58 structured warrants being issued on each firm. Besides, the sample firm pays RM0.28 USD (USD 0.067) dividend per share. The mean of market to book value (MTB) ratio of the sample firm is 2.69, implying that investors are willing to pay 2.69 times higher the book value for each unit of share possessed. Also, the average of leverage ratio (DTA) is 26.85, indicating around 26.85 per cent of the total assets are financed through debts while the mean value of firm size (Size) is about RM9.73 million (USD 2.34 million).

Table 2: Descriptive Statistics

Variable	N	Mean	Std. Dev	Min	Max
Q	222	1.61	2.41	0.05	14.48
ESG	204	23.41	11.38	10.53	50.83
NOSW	222	3.58	2.85	0.00	12.00
ESG*NOSW	204	86.22	82.82	0.00	385.20
MTB	220	2.69	4.10	0.30	29.89
Dividend	186	0.28	0.63	0.01	6.98
DTA	211	26.85	15.57	0.08	61.18
Size	222	9.73	1.40	6.49	13.14

Table 3 indicates the correlation coefficients among variables. Multicollinearity issue is not apparent as the highest correlation coefficient is and below the threshold value of 0.90 (Hair et al., 2010).

Table 3: Correlation Matrix

	Q	ESG	NOSW	ESG* NOSW	MTB	Dividend	DTA	Size
Q	1							
ESG	0.43	1						
NOSW	-0.12	0.03	1					
ESG* NOSW	0.06	0.51	0.81	1				
MTB	0.90	0.43	-0.14	0.02	1			
Dividend	0.78	0.41	-0.20	-0.08	0.80	1		
DTA	-0.07	-0.04	0.09	0.05	0.06	0.05	1	
Size	-0.48	0.02	0.23	0.21	-0.43	-0.31	0.17	1

Table 4 model 1 reports the results of estimating equation 1. The coefficient of ESG score is 0.083 and is significant at 5 per cent level. It means that each unit increase in ESG score leads to 8.3per cent increase in firm value. This finding supports H1 and is in line with the following view: ESG disclosure enhances firm transparency, reduces information asymmetry, reduces the adverse selection risks of investors and improves firm value. This finding is consistent with Li et al. (2017) and Chauhan and Kumar (2018).

This study intends to impart new knowledge by suggesting that ESG disclosure has a moderating effect on the connection between structured warrants and firm value. Table 4 of model 2 presents the results of equation 2 and the interaction term (ESG*NOSW) is the key variable of interest of model 2.

The estimated value of ESG*NOSW coefficient is 0.029 and is statistically significant at 5 per cent level. The evidence indicates that ESG disclosure score has a moderating impact on the nexus structured warrants and firm value. This finding supports H2 and is in line with the postulation that the interaction between ESG disclosure and structured warrants positively influences firm value.

Taken together, the evidence obtained implies that it is timely for both Malaysian stock exchange regulator and listed firms to implement and adopt ESG disclosure due to the advantages passed on by the non-financial information reporting. The outcome from this study is expected to increase the incentive for managers to make sure proper internal control mechanism is in place in order to ensure ESG policies is being complied with. Quality ESG disclosure serves as an indication that the stakeholders' interest is being taken care of and eventually drives firm value in the long-run.

Table 4: Regression Results

	Model 1	Model 2
Constant	4.819 (1.48)	6.995** (2.14)
ESG	0.083** (2.41)	-0.039 (-0.64)
NOSW		-0.447 -1.4
ESG*NOSW		0.029** 2.31
MTB	2.279*** 13.39	2.254*** 13.41
DIV	3.596** 2.48	4.999*** 3.36
DTA	-0.084*** -3.9	-0.089*** -4.19
SIZE	-0.5135 -1.63	-0.567* 1.83
tdum1	4.397*** 4.11	4.509*** 4.32
tdum2	3.651*** 3.54	3.854*** 3.82
tdum3	-2.996*** (-3.82)	3.202*** 3.19
tdum4	0.562 0.55	0.839 0.84
tdum5	-	-
tdum6	-	-
Breusch-Pagan-LM test	50.13*** 0.0000	37.91*** 0.0000
Observations	175	175
Multicollinearity (VIF)	2.4	
Heteroskedasticity (chi-square)	62026.12*** 0.0000	36110.43*** 0.0000
Serial Correlation (F-stat)	2.385 0.1318	2.264 0.1417

Note: Figures in the parentheses are z-statistics, except for Breusch-Pagan LM test, Hausman test, Heteroskedasticity and Serial Correlation tests, which are p-values.

* $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$

Conclusion

The attention of corporate stakeholders on non-financial information disclosure has been on the rise in recent years. This study casts new insights to the literature by focusing on the relationship between ESG disclosure performance, structured warrants and firm value based on Malaysian market. The evidence derived through panel regression analysis reveals that ESG disclosure score-the proxy of ESG

disclosure performance has positive and significant impact on the association between structured warrants and Tobin Q. Overall, the outcome implies that non-financial disclosure reduces positively the information asymmetry of investors and consequently lead to better firm value. The outcome generated from this study implies that the adoption of ESG disclosure in complimenting the conventional financial reporting practices is timely in Malaysia. Firms should seek ways to enhance their internal control in order to ensure ESG policies are being upheld. This study provides several contributions to the literature: First, it would be the first study that attempts to link derivative instrument with firm value by including ESG disclosure performance as the moderating variable. Second, this study advances the non-financial information disclosure literature by suggesting that a new research avenue to future researchers.

This study suffers some limitations. First, this research only considers the interaction impact of structured warrants and ESG disclosure performance on firm value, other financial instrument such as exchange-traded bond is not considered in this study. Hence, future study could consider whether ESG disclosure performance also interacts with bonds in firm value creation. Second, this study is confined to Malaysian market. Results obtained in Malaysian market may not be applicable in other market setting. Thus, future work could consider market such as Singapore or Hong Kong as these markets are well-known financial services hub and more matured as compared to Malaysia.

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STRATEGIE RÓŻNORODNOŚCI: PROBLEMY ZARZĄDZANIA PRAKTYKAMI I PERSPEKCJE W PRYWATNYCH ORGANIZACJACH

Streszczenie: Artykuł przedstawia wpływ ujawnienia ESG (środowisko, społeczeństwo i zarządzanie) na strukturyzowane warranty i wartość firmy w oparciu o środowisko

Malezji. W badaniu zastosowano analizę regresji paneli i objęto próbą 37 malezyjskich firm i 795 warrantów strukturyzowanych w latach 2012–2017. Wyniki zaskoczyły ujawnianie ESG (przybliżone wynikiem ESG) pozytywnie związane z wartością firmy. Oczywisty jest wpływ moderacji wyników ujawniania informacji ESG na związek między warrantami strukturyzowanymi a wartością firmy. W niniejszym badaniu stwierdzono, że ujawnianie informacji przez ESG zwiększa przejrzystość, zwiększa zdolność przetwarzania informacji przez nadrzędnych inwestorów, którzy wolą handlować strukturyzowanymi warrantami i ostatecznie wprowadza informacje na rynek akcji. Firma giełdowa, która jest bliska swojej podstawowej wartości, zostanie wyceniona przez rynek ze względu na niższe ryzyko inwestycyjne. Do tej pory nigdy nie zbadano wpływu ujawnienia ESG na związek między warrantami strukturyzowanymi a wartością firmy. Badanie to ma na celu wskazanie zarówno regulatorowi giełdy, jak i firmom źródła wzrostu wartości firmy, i sugeruje nowe kierunki badań dla przyszłych badaczy.

Słowa kluczowe: ESG, wartość firmy, strukturyzowane warranty, raporty zrównoważonego rozwoju Malezja

ESG披露绩效在影响企业价值创造中结构性担保的作用中的价值相关性

摘要:本研究以马来西亚环境为基础,探索了ESG(环境,社会和治理)披露对结构性认股权证和公司价值的影响。该研究应用了面板回归分析,并在2012年至2017年间对37家马来西亚公司和795份结构性权证进行了抽样。结果表明,ESG披露绩效(由ESG得分代替)与公司价值成正相关。ESG披露业绩对结构性认股权证与公司价值之间联系的适度影响是显而易见的。这项研究得出的结论是,ESG信息披露可以提高透明度,提高倾向于投资结构性认股权证的高级投资者的信息处理能力,并最终将信息纳入股票市场。由于投资风险较低,接近基本面的上市公司将被市场估值。迄今为止,从未探讨过ESG披露对结构性认股权证与公司价值之间关系的影响。这项研究旨在为证券交易所监管机构和公司提供有关公司增值来源的指导,并为未来的研究人员提出新的研究途径。

关键词:ESG披露,公司价值,马来西亚,结构化认股权证,可持续发展报告。