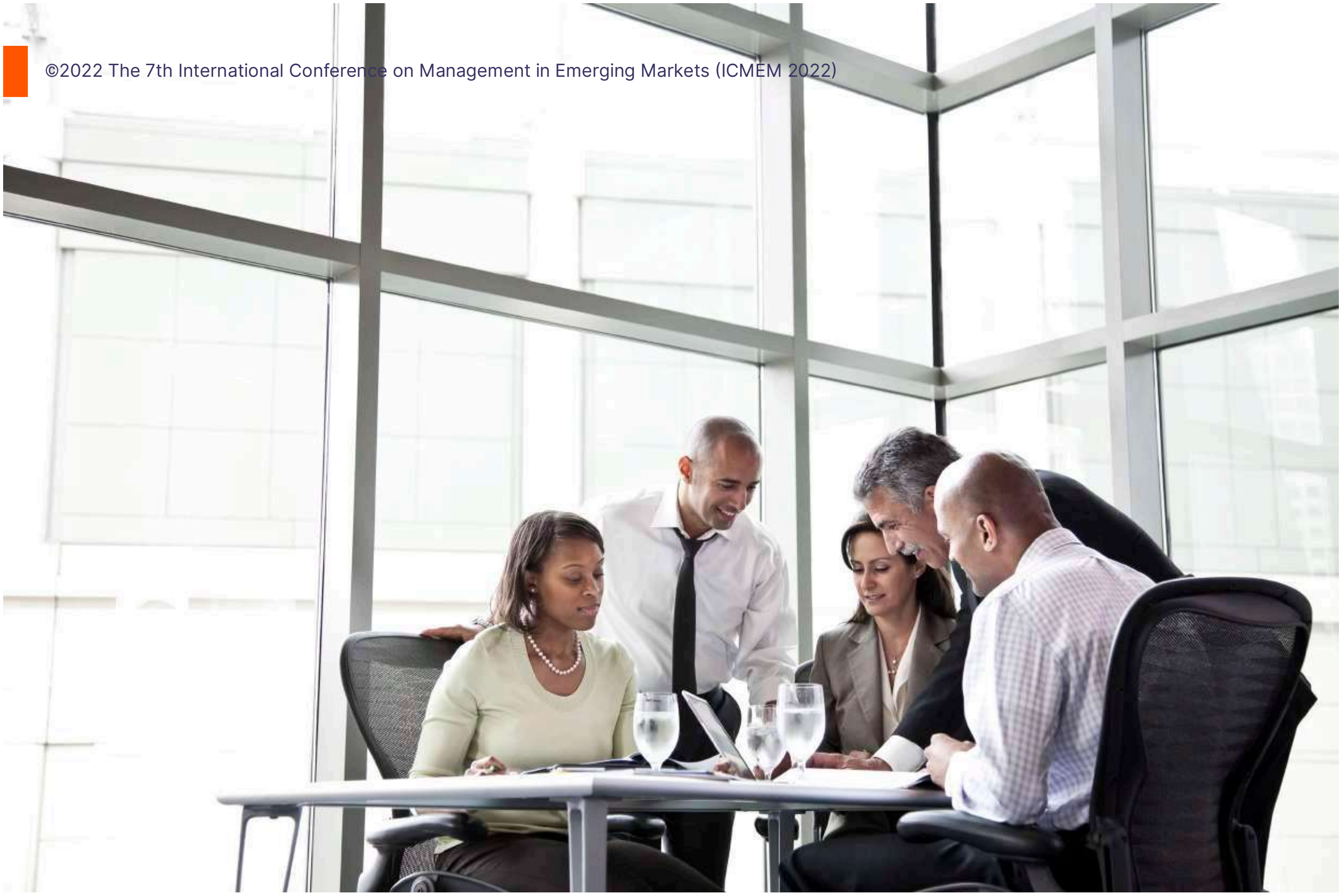

Paper 44

Does CSR help reduce firm risk during a financial crisis : Evidence from listed Indonesian corporations

Mathys Erawan

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Abstract - **A corporation's Corporate Social Responsibility provides insight into how it is being managed. Corporations with good CSR performance have shown that CSR can be used as a tool to enhance a corporation's image and reduce its firm risk. The Covid-19 pandemic provides a valuable exercise to help examine the relation between CSR and firm risk during a financial recession. This study aims to give a deeper insight towards how CSR and its parts affects firm risk through its usage of a CSR Index score, instead of using disclosure data. This paper examines a sample of 40 firms listed on the Indonesian Stock Exchange (IDX) from 2018 to 2021. This paper expects to find that CSR negatively affects a firm's total risk and systematic risk.**

Keywords – **CSR, Firm Risk, Risk Reduction, Indonesia, Covid-19, Recession**

I. INTRODUCTION

The Coronavirus Disease 2019 (Covid-19) pandemic has brought upon unprecedented effects to Indonesia. Due to the respiratory virus being easily transmitted to other people, many governments implemented lockdown procedures to try and limit the spread of the disease. The Ministry of Health in Indonesia issued regulations that implemented a limit on public movement on the 8th of April 2020 by which time there had been 2,956 confirmed cases, all 34 provinces had cases, and Indonesia having the fourth worst Covid-19 testing rate of countries with populations over 50 million. While the limit of public movement was deemed necessary to maintain public health, it had an adverse effect on almost all industry sectors in Indonesia leading to an economic recession in Indonesia (Miharja et al., 2020).

The recession created an unstable environment for the companies that operated publicly in Indonesia. The Jakarta Composite Index experienced a high-low decline of 37.7% in the first three months of 2020 during the period before the pandemic started and when the first Covid-19 case was found in Indonesia and subsequently the first limit of public movement was instilled. With an unstable economy, companies struggle with increasing firm risk. Using stock return volatility as a proxy for total risk and CAPM beta as proxy for systematic risk.

The predominant thought has been that Corporate Social Responsibility (CSR) is a way to maximize shareholder welfare through endeavors has been shown to have a positive impact on firm risk during a recession (Lins, Servaes, and Tamayo, 2017). During periods of severe instability, such as a recession, investors' behavior is influenced by CSR since CSR acts as a measure that instills trust in the company

As a period of recession, the Covid-19 pandemic is very much different from the recession that have come before it. This is due to the reason the recession was started. Rather than an economic situation the recession was started due to a public health issue, and it has caused a shock to international markets (Bernanke, 2020). Lending to the belief that this is an unprecedented opportunity to study the relationship between CSR and firm risk in Indonesia.

The literature that examines firm risk and CSR Indonesia currently is limited to research that utilizes Kinder, Lydenberg, and Domini's KLD Research Analytics database and CSR disclosure (Eriandani and Wijaya, 2021; Devie, Liman, Tarigan, and Jie, 2020). With rating data for Community, Employees, Environment, and Government dimensions provided by CSRHUB, this paper tries fill the void by examining the relations of each dimension of CSR to firm risk and if there are significant differences between each one to the other.

According to Minor and Morgan, (2011) The correct strategy for businesses to deal with the hazards they experience in a business climate that is becoming increasingly dynamic is to have precautions. CSR efforts are a kind of corporate self-defense. The incorporation of corporate social responsibility and management of risk should not be avoided due to the immediate costs the firm faces but to enhance the brand in the long-term. Due to this, firm that approach not only the economic factor but also approach environmentalist and ethical factors can develop a more robust brand, more options to innovate and reduce firm risk (Godfrey, 2005b; Luo and Bhattacharya, 2009). When companies with excellent social performances meet economic volatility, they are less likely to be affected due to their strong social presence attracting support from more stakeholders than a company with poor social presence. According to Albuquerque et al. (2019), a company's profit circumstances will be less affected by aggregate economic conditions if it has loyal customers. Existing research also demonstrates that CSR can influence employee attitudes and behavior by fostering organizational pride. CSR influences, for example, employee attachment to and pride in their organization, and consequently their work-related attitudes and behaviors. By fostering a positive work environment and developing internal CSR policies, businesses may increase employee productivity and happiness. Dedication to CSR positively affects employee morale and commitment (Flammer and Kacperczyk, 2016). The support and confidence of these stakeholders generates sustainability and reduces the company's future risk. Investors believe that companies with poor CSR are riskier investments (Spicer, 1978), and CSR can lower stock volatility when something negative occurs (Becchetti et al., 2015). Good CSR performance can reduce information asymmetry, serve as an indicator of creditworthiness, and reduce the risk of default in debt transactions. The literature discussing the effect CSR has on firm risk and financial performance during the pandemic also have shown that CSR affects firm risk negatively (Albuquerque et al., 2020; Huang and Ye, 2021; Ding et al, 2020).

The previous literature review on CSR effect on firm risk led to the following hypotheses:

H1: CSR reduces firm risk faced during the COVID-19 pandemic.

II. METHODOLOGY

A. Sample Selection

The data we decided to include covers the span of 2018 to 2021 which is two years before the pandemic started and two years that are attributed as Covid-19 years. To source the CSR data, we utilized CSRHUB. For the period of 2018-2021, CSRHUB had 48 Indonesian companies that were available. From the 48, 8 financial companies were removed due to the difference in characteristics, as per Huang and Ye (2020). From the 40 firms we collected stock return data from January 2016 to December 2021 and accounting records from 2018 to 2021 both sourced from Yahoo Finance. The data from January 2016 accounts for the rolling window firm risk. Table 1 will present the definition of the variables and Table 2 will be showing the summary statistics, which will include the average, standard deviation, lowest value, median, and highest, on all the variables that are used in the paper.

B. CSR

During the research, we have elected to utilize CSR data ratings that we acquired from the ESG services provider CSRHub. We acquired data over the period from 2018 to 2021 to examine the effect CSR has firm risk in Indonesian corporations before and during the pandemic. The reasons are as follows. There have not been any studies on the effects of CSR on firm risk that utilize rating data, instead using CSR disclosure and KLD (Eriandani and Wijaya, 2021; Devie, Liman, Tarigan, and Jie, 2020). According to CSRHub, it generates ratings with data sourced from a multitude of publications, socially accountable investing firms, ESG indexes, and government agencies to provide CSR ratings of more than 5000 companies from 65 countries. Some sources provide numerical scores while others use relative rankings or signs ("+" or "-"). CSRHUB takes in all the data sources then screens, aggregates, and normalizes the data from these sources, CSRHub then outputs a data format that provides a single value ranging from 0 to 100 for each category/subcategory, which allows for easier interpretation based on the relationships found in the analysis.

Past studies that have utilized the KLD database as a reference for CSR sustainability ratings have included these six dimensions: corporate governance, employee community engagement, diversity, relations, the environment, and the product. KLD employs numerous criteria to analyze businesses, including positive and negative screens that indicate firm strength and weakness, respectively. Each screen is a binary variable with values of 1 and 0. Studies that utilize CSR disclosure also rely on a binary variable but is even less specific as the contents of the reports and potential wrongdoings are not considered.

C. Firm Risk

We utilized total risk and systematic risk as proxies for firm risk. Total risk measures a company's aggregate susceptibility to COVID-19 risk. Systematic risk evaluates the market risk. Since the COVID-19 epidemic affected global financial markets, we investigate the influence of CSR on several types of corporate risk. Following Jo and Na, (2012), Initially, we measure the firms' total risk (Stock volatility) as the standard deviation of rolling monthly stock returns over the last 36 months. To depict the shock effect COVID-19 had on the global markets, we adopt 36-month rolling windows as opposed to 60-month rolling windows. A longer rolling window can lessen COVID-19's impact on the sample. Using a 36-month rolling windows we use the capital asset pricing model (CAPM) (Sharpe, 1964) to serve as proxy for the systematic risk (Beta) where the excess return on the stock uses Jakarta Composite Index as the proxy for the market, with data collected from Yahoo Finance.

D. Control Variables

Following Albuquerque et al. (2020), Ding et al. (2020),

Huang and Ye (2021), and Jo and Na (2012), we include firm-level controls such as firm size (Size), market-to-book ratio (Market to Book), profitability (ROA), and financial leverage (Leverage).

E. Model Construction

We constructed the following regression model:

$$Risk_{it} = \beta 0+\beta 1*COVID*CSR_{it}+\beta 2*COVID + \beta 3*CSR_{it} + \beta 4*Size_{it} + \beta 5*ROA_{it} + \beta 6*leverage_{it}+ \beta 7*Market\ to\ Book_{it} + Firm\ fixed\ effects + Industrv\ fixed\ effects+ \varepsilon_{it}:$$

where *Riskit* includes the stock volatility and systematic risk, *CSRit-1* includes the scores of the four CSR dimensions, Sizeit-1 is the natural logarithm of the total assets, *ROAit-1* is the net income divided by total assets, *leverageit-1* is the total debt divided by total assets, *Market to Bookit-1* is the market cap divided by the book value of equity, and ε*it* is the error term for firm *i* in year t.

Table 1 - VARIABLE DEFINITIONS

No.	Variables	**Definition**	*Source*
	Panel 1: Dependent Variables		
1	Total risk	Uses the standard deviation of a rolling monthly stock return sample over the past 36 month to serve as proxy for total risk	Yahoo Finance
2	Systematic risk	Uses the CAPM Beta estimations of a rolling monthly stock return sample over the past 36 month to serve as proxy for systematic risk.	Yahoo Finance
	Panel 2: Firm-level variables		
3	COVID	Dummy variable that is used to signify the pandemic happening. Equals zero from 2018 to 2019 and equals 1 from 2020 to 2021.	
4	Overall	CSRHUB's overall CSR rating.	CSRHUB
5	Community	CSRHUB's Community category rating which covers the company's commitment to human rights, supply chain, product quality and safety, product sustainability, community development, philanthropy.	CSRHUB
6	Employees	CSRHUB's employee category rating which covers commitment to diversity, labor rights, compensation, benefits, training, health, and worker safety	CSRHUB
7	Environment	CSRHUB's Environment category rating which covers commitments to environmental policy, environmental reporting, waste management, resource management, energy use, climate change policies, and performance.	CSRHUB
8	Governance	to leadership ethics, board composition, executive compensation, transparency, and reporting, stakeholder treatment	CSRHUB
9	Size	Uses the natural logarithm of the company's total assets.	Yahoo Finance
10	ROA	Uses the net income which is divided by total assets.	Yahoo Finance
11	Market to Book	Uses the Market Cap (outstanding stocks minus treasury stock multiplied by stock price), divided by the Book value of equity.	Yahoo Finance
12	Leverage	Uses the total debt divided by the total assets	Yahoo Finance

Table 2 - SUMMARY STATISTICS

Variables	N	MEAN	STDEV	MIN	MEDIAN	MAX
STOCK VOLATILITY	160	0.121054432	0.04890893	0.054317805	0.115103573	0.423400525
SYSTEMATIC RISK	160	1.522636114	0.695257591	0.118297044	1.468489325	3.540543044
OVERALL	160	51.15984844	6.338539976	36	51	70
COMMUNITY	160	52.40520625	8.014736097	28	51.5	75
SOCIAL	160	53.1294875	6.666980577	38	53.5	69
ENVIRONMENT	160	52.2153125	8.480081435	30	51	72
GOVERNANCE	160	46.9831375	7.160568112	27	47	68
ES	160	52.6724	6.625430917	36.5	52	70.5
SIZE	160	31.33120815	0.897580757	29.20646989	31.1786561	33.53723002
ROA	160	0.067912674	0.086318519	-0.171426159	0.048699807	0.466601393
MARKET TO BOOK	160	3.01450354	7.217377324	0.167747245	1.26273645	53.33660176
LEVERAGE	160	0.256140888	0.183203423	0	0.244884381	0.785234274

III. EXPECTED FINDINGS

This paper has an expected output of the following. First, firms that perform well in CSR will have a smaller change in their stock volatility and their systematic risk when the Covid-19 pandemic arrives than firms that have worse performance in CSR as CSR has been proven to protect firms from risk during an periods of economic recession by Lins, Servaes, and Tamayo (2017) . We expect to find that the CSR dimensions will not have the same weight in affecting the firm risk in the pandemic. As Albuquerque, et al (2020) has found the CSR dimensions of environment and community have a closer tie to public health and will be a crucial indicator of CSR strength during a crisis of public health like Covid-19. We expect that firms with low leverage ratio will have a lower effect of CSR to firm risk during the pandemic as it has been proven by Huang and Ye (2021) that firms with lower leverage ratio will be protected from firm risk regardless of CSR performance. The managerial implications that this paper hopes to affect will be the changing of perception of CSR no longer seen as a cost that is wasted to fulfill regulations but as a possible safety net for companies for the future, with added focus for companies that are operating with higher leverage ratios as they are more in risk during periods of recession. This paper hopes to contribute towards the existing literature on corporate social responsibility and corporate risk management.

REFERENCES

1. Albuquerque, R., Koskinen, Y., Yang, S. and Zhang, C. (2020). Resiliency of Environmental and Social Stocks: An Analysis of the Exogenous COVID-19 Market Crash. The Review of Corporate Finance Studies, [online] 9(3), pp.593–621. doi:10.1093/rcfs/cfaa011.

2. Becchetti, L., Ciciretti, R. and Hasan, I. (2015). Corporate social responsibility, stakeholder risk, and idiosyncratic volatility. Journal of Corporate Finance, [online] 35, pp.297–309. doi:10.1016/j.jcorpfin.2015.09.007.

3. Bernanke, B.S. (2020). The New Tools of Monetary Policy. American Economic Review, [online] 110(4), pp.943–983. doi:10.1257/aer.110.4.943.

4. Devie, D., Liman, L.P., Tarigan, J. and Jie, F. (2020), "Corporate social responsibility, financial performance and risk in Indonesian natural resources industry", Social Responsibility Journal, Vol. 16 No. 1, pp. 73-90. https://doi.org/10.1108/SRJ-06-2018-0155

5. Ding, W., Levine, R., Lin, C. and Xie, W. (2021). Corporate immunity to the COVID-19 pandemic. Journal of Financial Economics, [online] 141(2), pp.802–830. doi:10.1016/j.jfineco.2021.03.005.

6. Eriandani, R. and Wijaya, L.I. (2021). Corporate Social Responsibility and Firm Risk: Controversial Versus Noncontroversial Industries - Ubaya Repository. Ubaya.ac.id.[online]doi:/39045/7/Liliana%20Inggrit_Corporate%20Social%20Responsibility%20and%20Firm%20Risk.pdf.

7. Flammer, C. andamp; Kacperczyk, A.J., 2016. CSR and the Prevention of Knowledge Spillovers: Evidence from the inevitable disclosure doctrine. Academy of Management Proceedings, 2016(1), p.10870.

8. Godfrey, P.C., 2005. The relationship between corporate philanthropy and shareholder wealth: A risk management perspective. Academy of Management Review, 30(4), pp.777-798.

9. Huang, H. and Ye, Y. (2021). Rethinking capital structure decision and corporate social responsibility in response to COVID19. Accounting and Finance, [online] 61(3), pp.4757–4788. doi:10.1111/acfi.12740.

10. Jo, H. and Na, H. (2012). Does CSR Reduce Firm Risk? Evidence from Controversial Industry Sectors. Journal of Business Ethics, [online] 110(4), pp.441–456. doi:10.1007/s10551-012-1492-2.

11. Marjan Miharja, Sri Setiawati and Lestari, A. (2020). How Dangerous the Indonesian Recession Due to COVID-19 Pandemic: Review Policy and Strategy to Recovery. International Journal of Social Sciences and Humanities, [online] 4(3), pp.121–129. doi:10.29332/ijssh.v4n3.470.

12. LINS, K.V., SERVAES, H. and TAMAYO, A. (2017). Social Capital, Trust, and Firm Performance: The Value of Corporate Social Responsibility during the Financial Crisis. The Journal of Finance, [online] 72(4), pp.1785–1824. doi:10.1111/jofi.12505.

13. Luo, X. and Bhattacharya, C.B. (2009). The Debate over Doing Good: Corporate Social Performance, Strategic Marketing Levers, and Firm-Idiosyncratic Risk. Journal of Marketing, [online] 73(6), pp.198–213. doi:10.1509/jmkg.73.6.198.

14. Minor, D. and Morgan, J. (2011). CSR as Reputation Insurance: Primum Non Nocere. California Management Review, [online] 53(3), pp.40–59. doi:10.1525/cmr.2011.53.3.40.

15. Sharpe, W.F. (1964). CAPITAL ASSET PRICES: A THEORY OF MARKET EQUILIBRIUM UNDER CONDITIONS OF RISK*. The Journal of Finance, [online] 19(3), pp.425–442. doi:10.1111/j.1540-6261.1964.tb02865.x.

16. Spicer, B.H., 1978. Investors, Corporate Social Performance and Information Disclosure: An Empirical Study. The Accounting Review, Vol. 53(No. 1 (Jan., 1978)), pp.94–111.