FINANCIAL CONSTRAINT MODERATE THE EFFECT OF CORPORATE SOCIAL RESPONSIBILITY AND INSTITUTIONAL QUALITY ON BANK RISK TAKING IN IDX

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ABSTRACT
Banking sector holds a strategic position that demands excellent risk management. Improper risk management can lead to systemic failures which can affect the financial stability of a nation. Information asymmetry problems between managers and other parties can trigger moral hazard problems. This study examined how corporate social responsibility (CSR) and institutional quality affect bank risk taking and to determine the role of financial constraints in weakening the relationship between CSR and bank risk taking. This quantitative study involved banks listed on the Indonesia Stock Exchange from 2013-2020. Dynamic panel data regression analysis using system generalized method of moments (System GMM) approach was employed in data analysis. The results indicated that CSR and institutional quality had a significant negative influence on bank risk taking. Furthermore, as a moderating variable, financial constraint weakened the relationship between CSR and bank risk taking. The findings of this study added an empirical evidence in the field of financial management on the relationship between CSR, financial constraints, institutional quality and bank risk taking. Bank managers should employ CSR strategies to reduce bank risk taking. In addition, both the government and regulators can improve institutional quality to reduce bank risk taking.

Keyword: Bank risk taking, CSR, institutional quality, financial constraint.

1. INTRODUCTION
The banking sector is strategic financial institution that runs various functions such as supporting payment system operations, implementing monetary policy and achieving financial system stability. As stipulated in the Law Number 10 of 1998 concerning Banking, banks collect and distribute funds to the public in the form of credit to improve community's welfare. The Covid-19 pandemic in 2020 has caused Indonesia's economic growth to decline by 2.07 percent (BPS, 2021). This decline triggers public panic over the banking system, known as a bank panic. Under these conditions, people massively withdraw their funds from banks in large amounts as they assume banks might go bankrupt (Diamond & Dybvig, 1983). Such situation requires banks to perform careful risk management.

The Financial Services Authority Regulation Number 18 of 2016 concerning the Implementation of Risk Management for Commercial Banks states that the external situation poses more complex risks for the banking business activities. Bank risk is a crucial aspect to consider as it does not only affect the bank but it can also disrupt the whole financial stability in broader scope (Scholtens & Klooster, 2019). Banks commonly take risks to earn profits (Ismiyanti et al., 2018). In normal economic condition, risks taking can provide high returns, yet in volatile economic condition, risks

can lead to bankruptcy (Fang et al., 2014). Bankruptcy is a condition in which a bank fails to pay its obligations (Fukuda et al., 2005). Bank risk taking refers to the extent to which banks are willing to take risks, whether to take more risks or take less risks related to investment decisions (Yuwonoputro & Syaichu, 2019).

Risk taking reflects the compatibility between management decisions and shareholders' expectation (Habib & Hasan, 2017). Agency theory states managers and shareholders often have contradictory risk preferences, where managers (agents) expect to maximize their own interests, while shareholders want to maximize their value (Testa et al., 2018). This contradiction can be caused by information asymmetry (Hussain et al., 2018) as managers are more knowledgeable about internal information than shareholders and other parties (Bergh et al., 2019). Information asymmetry can cause moral hazard problems where managers take excessive risks since they do not bear the costs of these risks (Braham et al., 2020).

Agency theory states conflicts of interest the company can be reduced using voluntary disclosure method (Sun et al., 2010). Jo and Harjoto (2011) show that involvement in CSR (Corporate Social Responsibility) activities can reduce conflicts of interest among stakeholders. CSR is a participation of business community to support sustainable development and raising corporate awareness in the surrounding community. Stakeholder theory states that CSR helps establish more effective communication between managers and stakeholders (Freeman, 2004), thereby reducing the level of information asymmetry between the two (Yoon & Lee, 2019). Leung et al. (2019) stated greater concern on stakeholders tends to make banks rather low risk taking. Bolton (2020) states that CSR has a significant negative effect on risk taking. Nguyen (2020), Neitzert and Petras (2021)also found CSR activities significantly reduced bank risk taking. Dunbar (2020) found stronger CSR associated with higher risk taking.

H_1: CSR negatively affects bank risk taking.

Corporate governance instruments such as laws, rules, procedures affect every managerial decision. In addition to the influence of internal factors, managerial decisions can also be influenced by external factors such as the quality of regulations/laws, competition, and the media (Brigham & Daves, 2019: 421). Klomp dan De Haan (2014) stated that countries with strong institutional quality can formulate policies to tackle the adverse shocks in more effective way than countries with low institutional quality. Institutional quality reflects the quality of a country which at the same time can affect corporate quality. Ho and Michaely (1988) explained that good institutional quality reduces the occurrence of information asymmetry. Klomp and Haan (2012) in a study on the impact of regulation and supervision on bank risk taking found that good regulation and supervision could reduce bank risk taking. Quality institution raises the motivation of economic actors to comply with laws and regulations thereby they can function as an external governance instrument which at the same time protects the shareholders (Elamer et al., 2017). Williams (2014) conducted a study on the effect of institutional quality on bank risk taking which results assured that improvement in the institutional quality would reduce the level of bank risk taking in developed countries in Asia. Similarly, Rahman et al. (2020), Uddin et al. (2020), and Canh et al. (2021) found the institutional quality negatively influenced bank risk taking. On the other hand, Dias (2020) and Otero et al. (2020) found institutional quality positively and significantly affected bank risk taking.

H_2: Institutional quality negatively affects bank risk taking.

Financial constraint restricts a company from obtaining capital from available funding sources in making investment due to company's inability to gain external funding (Fazzari et al., 1987). Theoretically, financial constraints can exacerbate company risk through their effect on the sensitivity of investment cash flows and the ability to reduce the impact on dividend payments (Lin & Paravisini, 2012). On the other hand, financial constraints can encourage risk management (Froot et al., 1993). Companies are rather reluctant to engage in CSR when their financial condition is less good (Campbell, 2007). This statement supports the slack resource theory which states that companies will only use their fund for sustainable activities when their financial conditions are stable (Waddock & Graves, 1997). Meanwhile, the Article 74 of Law. No. 40 of 2007 mentions that Limited Liability Companies are required to carry out CSR activities. Banks with financial constraints need to consider funding CSR activities. Proper CSR activities can attract different stakeholders. Nguyen and Nguyen (2020) stated that financial constraints can moderate the effect of CSR on bank risk taking.

H_3: Financial constraint weakens the relationship between CSR and bank risk taking.

Research results on this issue remain inconsistent. Factors influencing bank risk-taking behaviour were not yet clearly determined, and no studies examined the two variables simultaneously. Therefore, this study was performed to analyze whether CSR and institutional quality have a significant effect on bank risk taking in Indonesia through financial constraints as the moderating variable.

Based on literature review and hypothesis development, the conceptual framework in this research is:
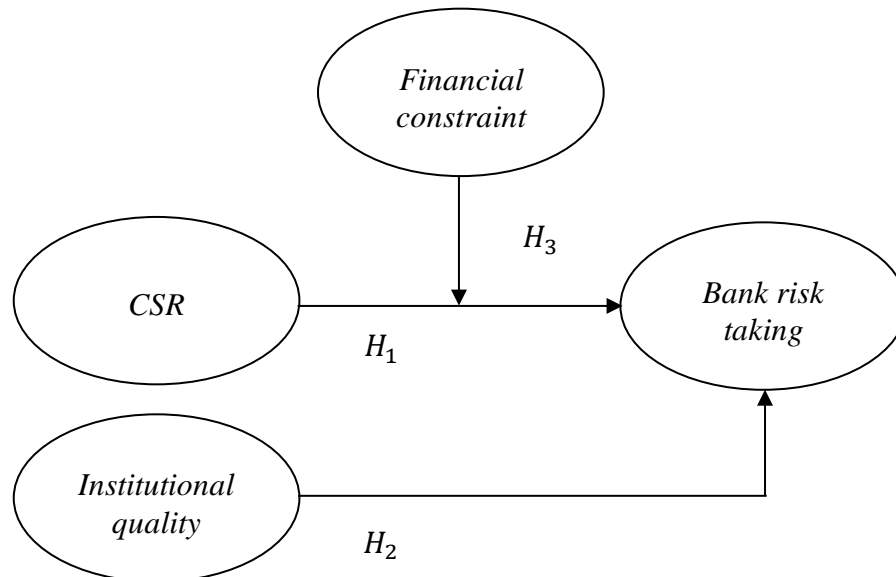

Figure 1. Conceptual Framework

2.METHODS

This research was conducted on 33 banks listed on the Indonesia Exchange from 2013-2020. Secondary data taken from the annual reports of each bank and the website https://info.worldbank.org were analyzed.

Bank risk taking is reflected in invers Z_score (Laeven & Levine, 2009; Foos et al., 2010; Altunbas et al., 2011; López-Penabad et al., 2021). Z_score is the ratio between the total return on assets and capital divided by the standard deviation of the return on assets. Greater Z_score indicates lower risk taking.

CSR can be categorized into four; community, environment, employees and product quality and social services (Gray et al., 1995; Haniffa & Cooke, 2005; Holder-Webb et al., 2007; Jizi et al., 2014; Scholtens & Klooster, 2019). In each item measuring whether the bank performs the activity, a score of 1 expresses yes and 0 expresses no. The total CSR index is calculated based on the sum of all points of the four categories (Nguyen & Nguyen, 2020).

Institutional quality is measured by the average of the six dimensions of institutional quality based on the index (worldwide governance indicators) provided by World Bank (Otero et al., 2020). The six dimensions are voice and accountability, political stability and absence of violence, government effectiveness, regulatory quality, rule of law, and control of corruption (Kaufmann et al., 2009).

The financial constraint is the dividend payout ratio which is the ratio of dividends to net income (Osinubi, 2020; Seth & Mahenthiran, 2022). In this study, financial constraint is shown in dummy variable, where a bank that does not pay dividends is regarded having financial constraint and coded 1 (Haryanto et al., 2021).

Dynamic panel data regression with system generalized method of moments (system GMM) approach was used to analyze the data. The dynamic panel data regression model is characterized by the addition of the lag of the dependent variable as a regressor (Baltagi, 2005). This addition causes endogeneity problems as it correlates with errors. Endogeneity issues in the dynamic panel data regression model can be overcome by system generalized method of moments (system GMM) approach.

Model specification tests were required for the dynamic panel data regression model, namely the Arellano-Bond test and the Sargan test (Arellano & Bond, 1991). The Arellano-Bond test was performed to determine the correlation between one residual component and another residual component in the first difference model. Meanwhile, the Sargan test determined the validity of the use of instrument variables which number exceeds the estimated variables (overidentifying restriction). This research was made using multiple regression using the RStudio application. The regression equation:

$$Z_{score_{it}} = \delta Z_{score_{i,t-1}} + \beta_1 CSR_{it} + \beta_2 IQ_{it} + \beta_3 FC_{it} + (CSR * FC)_{it} + u_{it}.$$

$Z_{score_{it}}$ represent bank risk taking; $Z_{score_{i,t-1}}$= lag dependent variable; CSR_{it}= CSR activity; IQ_{it}= institutional quality; FC_{it}= financial constraint and $(CSR * FC)_{it}$= CSR variables that interact with financial constraint.

3.RESULTS AND DISCUSSION

The descriptive statistics in this study describe the average value, standard deviation, minimum value and maximum value of each variable. Panel data which is a combination of cross section data and time series data were regarded in this study. In panel data, some of the same individuals were observed in a certain period of time. Individuals were 33 banks with a study period of eight years from 2013-2020. Based on the number of individuals and the period, 264 observations were performed. The results of descriptive analysis are presented in Table 1.

Table 1. The Results of Descriptive Analysis

Variable	Obs	Mean	Std Dev	Min	Max
Z_{score}	264	44.71	58.21	0.84	707.54
CSR	264	15.20	4.04	4.00	24.00
IQ	264	44.28	2.15	40.38	46.99
FC	264	15.57	19.83	0.00	73.00

 Souce: Processed Data, 2022

Table 1 presents the results of the descriptive analysis done in this study. The bank risk taking variable is reflected in the Z_score. The average Z_score of all banks from 2013-2020 is 44.71 with a standard deviation of 58.21. The value of the standard deviation is greater than the average, this indicates that the data distribution varies. The minimum value of 0.84 is found in PT Bank Pembangunan Daerah Banten Tbk and the maximum value of 707.54 is found in PT Bank Nationalnobu Tbk.

Furthermore, the average CSR disclosure of banking companies in Indonesia is 15.2 with a standard deviation of 4.04. Standard deviation value that is smaller than the average value indicates that the variation in data distribution is small or there is a small gap between the minimum and maximum values. The least value of 4 is found in PT Bank JTrust Indonesia Tbk and the maximum value of 24 is found in PT Bank Raya Indonesia Tbk.

The average value of institutional quality is 44.28 with a standard deviation of 2.15. The standard deviation value that is smaller than the average value indicates that the data distribution has a small variation or there is a small gap between the minimum and maximum values. The minimum score of 40.38 occurred in 2013 and the maximum value of 46.99 occurred in 2020. Indonesia's institutional quality score is still below 60 which indicates that institutional quality is still low (Kemenkeu RI, 2019).

The financial constraint was measured using the dividend payout ratio. The average dividend payout ratio variable is 15.68 with a standard deviation of 19.83. The value of the standard deviation is greater than the average, indicating that the data distribution varies. The minimum value is 0 and the maximum value is 73. This minimum value indicates that some companies did not distribute dividends in the 2013-2020 period.

At this stage, a dynamic panel data regression model is formed using a system GMM two-step estimator approach. The estimated bank risk taking model without moderating variables and with moderating variable are presented in Table 2.

Table 2. The Estimated Bank Risk Taking Model

Variable	Without Moderating Variable		With Moderating Variable	
	Coefficient	p_{value}	Coefficient	p_{value}
$L. Z_{score}$	0.5030	0.0000	0.7194	0.0000
CSR	0.0265	0.0000	0.0116	0.0000
IQ	0.0254	0.0000	0.0177	0.0075
FC	0.4708	0.0054	-0.9115	0.0000
$CSR * FC$			0.0602	0.0000
Wald Test		0.0000		0.0000
m_1		0.0022		0.0069
m_2		0.1780		0.1993
Sargan Test		0.2589		0.2060
Source: Processed Data, 2022				

Source: Processed Data, 2022

Table 2 presents the consistency of results on m_1 model testing without moderating variable, where p_value(m_1) =0.0022<α=0.05, indicating that H_0 is rejected. Meanwhile, the results of m_2 test on the model without moderating variable obtained p_value(m_2) =0.1780>α=0.05 which failed to reject the H_0. In the model with moderating variable, m_1 test resulted in p_value(m_1) =0.0069<α=0.05 which rejected the H_0. In m_2 test on the model with moderating variable gained p_value(m_2) =0.1993>α=0.05 which failed to reject H_0. It can be inferred that both models with and without moderating variable are consistent and no autocorrelation occurred. The Sargan test done on the model with and without moderating variable respectively showed p_value=0.2589>α=0.05 dan p_value=0.2060>α=0.05. Thus, H_0, failed to be rejected. It implies that overidentifying restriction in the estimated model is valid. The results of the dynamic data panel regression showed that both models passed the specification test, and parameter significance test could be proceeded.

The results of the simultaneous test of both the models in Table 2 resulted in p_value=0.000<α=0.05, rejecting H_0. It implies that there is at least one independent variable in both models that affects the Z_score. The lagged dependent variable in both models has a significant positive effect on Z_score, thus justifying the use of dynamic model.

The results of this study prove that CSR has a significant positive effect on the Z_score meaning that CSR has a significant negative effect on bank risk taking. This is indicated by the results of the regression test where the significance level of the CSR variable is p_value=0.000<α=0.05 and the regression coefficient value is 0.0265. Greater CSR value is followed by lower level of bank risk taking, vice versa. The stakeholder theory mentions CSR as a tool to establish better

communication between managers and stakeholders, thereby reducing the level of information asymmetry between the two (Freeman, 2004). Information asymmetry can lead managers to take risks without considering stakeholders' interests. The difference in risk preferences between managers and stakeholders lead to agency conflicts which can be reduced using voluntary disclosure method (Sun et al., 2010).

CSR gives a company direction in using company resources to meet stakeholders' needs. CSR does not only focus on maximizing shareholder value, but it also considers the interests of all different stakeholders. Companies that carry out CSR activities have positive image in the community which can attract stakeholders to engage in the company. In this situation, public trust to the company will raise and employee loyalty and trust will increase as well. On the other side, CSR also attracts investors to invest in the company. CSR protects the company when the company has poor performance and reduces the negative assessment of stakeholders which will reduce the bank risk taking. The results of the study stating that CSR can reduce bank risk taking conform with the ones found by Bolton (2020), Nguyen and Nguyen (2020), Neitzert and Petras (2021).

The results of this study prove that institutional quality has a significant positive effect on the Z_score meaning that institutional quality has a significant negative effect on bank risk taking. This is indicated by the results of the regression test where the significance level of the institutional quality variable is p_value=$0.000<\alpha=0.05$ and the regression coefficient value is 0.0254. Better institutional quality is associated with lower bank risk taking level, vice versa. The agency theory mentions that agency problems can be overcome by good corporate governance. In addition to internal factors, agency problems can also be influenced by external factors such as the quality of regulations/laws, competition, and the media (Brigham & Daves, 2019: 421). Institutional quality greatly influences the culture and behaviour of the people (Uddin et al., 2020).

Good institutional quality reflects the freedom of expression, stable politics, effective government, good regulatory quality, public compliance with the legal system and good corruption control. Good institutional quality provides value-added to the banks and reduces the occurrence of information asymmetry. Information availability and media independence can reduce the occurrence of information asymmetry and bank risk taking as well. Likewise, Canh et al. (2021) and Rahman et al. (2020) stated that high corruption rate of a country will result in unstable politics. Ashraf (2017) stated that political stability shows the capacity of a country in building and maintaining investor protection through quality laws and regulations. The rule of law and the quality of regulation demonstrate the ability of the government to formulate and implement sound policies by encouraging private sector development. In addition, a good law enforcement system effectively promotes economic integrity and minimizes immoral behaviour. Elamer et al. (2017) also said that strong institutional quality can motivate economic actors to comply with laws and regulations to function as an external governance instrument as well as a protector of shareholders. The results of this study are in line with research conducted by Williams (2014), Rahman et al. (2020), Uddin et al. (2020), and Canh et al. (2021).

In this study, Financial constraints can strengthen the influence of CSR on the Z_score value, indicating that financial constraints can weaken the relationship between CSR on bank risk taking. This is indicated by the results of the regression test where the significance level of the CSR variable is p_value=$0.000<\alpha=0.05$ and the regression coefficient value is 0.0602. The financial constraint variable is a quasi moderating variable because the variable has a significant negative effect on bank risk taking and has a significant effect when correlated with the CSR variable

(Sharma, 2003). Financial constraints can prevent banks from investing in profitable projects. Whereas, financial constraints can optimally prevent banks from taking too much risk. Martynova et al. (2019) stated that high bank profitability will reduce financial constraint problems thus allowing banks to take more risk and the relationship is stronger in banks that have low leverage levels.

Slack resource theory states that companies will only allocate their funds in sustainable activities when they are in good financial conditions (Waddock & Graves, 1997). Meanwhile, Article 74 of Law. No. 40 of 2007 states that Limited Liability Companies are required to carry out CSR activities. Carrying out CSR activities can provide non-financial information which reduces the occurrence of information asymmetry while attracting stakeholders' attention. Based on stakeholder theory, CSR establishes better communication between managers and stakeholders, thereby reducing the level of information asymmetry between the two (Freeman, 2004). Banks with financial constraints can rely on internal funding to carry out CSR activities. Relying on internal funding sources requires banks to be more careful in using their funds to be allocated on only what matters while it also acts as a stakeholder conflict mitigation. Banks that carry out CSR activities are considered to have responsibility for the surrounding environment and develop positive image and reputation in the community. This situation makes managers prefer lower risk taking. Therefore, financial constraints can weaken the influence of CSR on bank risk taking. The results of this study are in line with research conducted by Nguyen and Nguyen (2020).

The limitations of this study relies on its scope, in which only the variables of CSR, institutional quality and financial constraints on bank risk taking were analyzed. This study also only regarded secondary data if banks listed on the IDX in 2013-2020. Thus, this study cannot determine the psychological factors of managers in taking risks.

4. CONCLUSIONS

In regards to the results and discussion on the influence of CSR and Institutional Quality on Bank Risk Taking, as well as the influences of Financial Constraint in weakening the influence of CSR on Bank Risk Taking, conclusions were drawn as follows:

CSR has a significant negative influence on the risk taking of banks listed in Indonesian Exchange between 2013-2020. Financial constraint as a moderating variable weakens the influence of CSR on the risk taking. Bank management is expected to be able to involve stakeholders in CSR strategic planning by holding regular meetings or conducting surveys to the community. so that the CSR activities carried out are right on target. CSR activities that are well-targeted are expected to be able to effectively resolve conflicts of different stakeholders which in turn can reduce bank risk taking.

Institutional quality significantly and negatively influence the risk taking of banks listed in Indonesian Exchange between 2013-2020. The average score of the six dimensions of institutional quality in Indonesia is still low while the variable institutional quality has a significant negative effect on bank risk taking. The government is expected to act decisively in overcoming deviant behavior in the banking sector, such as moral hazard behavior. The OJK, which has the authority to regulate and supervise, is advised to always strengthen its regulations by evaluating and improving Indonesian banking regulations, especially in risk management.

Future research is expected to be able to analyze more deeply related to the psychological factors of managers in making bank risk such as managers' perceptions related to risk, emotional stability and effectiveness of decision making.

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