

## Determinants of Bank's Resilience in Emerging Market: SEM PLS Approach

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### Abstract

*The banking industry is one of the industries that plays a role in global economic conditions, thus the resilience of the Bank is very important. The purpose of this study was to determine the effect of Bank Competition, Good Corporate Governance (GCG), and Bank Performance on Bank Resilience in Emerging Market. This research is a quantitative study by taking bank data listed on the Indonesia Stock Exchange during 2015-2019. This study used panel data and applied regression analysis with the Structural Equation Modeling (SEM) approach. The findings state that only the Bank Performance was the only variable that is significant for Bank Resilience, while the other two variables were not significant.*

### Keywords

bank resilience; bank competition; good corporate governance; bank performance; emerging market



## I. Introduction

The last global financial crisis in 2007-2008, clearly exposed the fragility of the financial system (Silva *et al.*, 2017), resulting in a global economic recession as well as banking failures in the identification and assessment of systemic risks (Hashem and Abdeljawad, 2018). A decade after the global financial crisis of 2007-2008, the global financial landscape has changed considerably. Gross cross-border capital flows (Foreign Direct Investment, bond and equity purchases, loans and other investments) have shrunk 65% since 2007, from \$12.4 trillion to \$4.3 trillion. Half of the decline reflects a sharp reduction in cross-border lending and other banking activities (Lund *et al.*, 2017). This phenomenon reflects the widespread decline of overseas business and the shift away from cross-border funding by major European and US banks.

Differentiating healthy banks from non-performing banks is very important because it can improve policies on banking early warning monitoring systems (MoyoMoyo *et al.* *et al.*, 2014), because a strong and resilient banking system is the foundation for sustainable economic growth and development, especially in developing countries (, 2014). BCBS, 2009; Mutarindwa *et al.*, 2018).

Development is a change towards improvement. Changes towards improvement require the mobilization of all human resources and reason to realize what is aspired (Shah *et al.*, 2020). The development of human resources is a process of changing the human resources who belong to an organization, from one situation to another, which is better to prepare a future responsibility in achieving organizational goals (Werdiastutie *et al.*, 2020). Organization must have a goal to be achieved by the organizational members (Niati *et al.*, 2021). The success of leadership is partly determined by the ability of leaders to develop their organizational culture (Arif, 2019). Motivation in management is only aimed at human resources in general and in particular subordinates (Purba and Sudibjo, 2020).

The economic condition of the population is a condition that describes human life that has economic score (Shah *et al.*, 2020). Economic growth is still an important goal in a

country's economy, especially for developing countries like Indonesia (Magdalena and Suhatman, 2020).

Competition in the banking sector is important to produce efficient financial services, quality financial products, and the level of financial innovation (Claessens & Laeven, 2013). The 2007 financial crisis has also identified bank funding structures and financial innovation in bank activities as potential sources where competition can affect its stability (OCDC, 2010). The IMF (1998) concluded that poor corporate governance was the main source of the Asian crisis in 1998, which occurred because many companies had not implemented consistent corporate governance, especially in corporate business ethics (Herdjiono & Mega Sari, 2017). Furthermore, the Basel Committee on Banking Supervision (2015) also concluded that the weakness of Good Corporate Governance (GCG) in banks played an important role in weakening the resilience of the financial system.

Tan & Anchor (2017) found that in the banking sector in China during the 2003-2013 period, there was greater competition in each bank ownership leading to credit risk, liquidity risk, and higher capital risk, but lower insolvency risk. Furthermore, Noman et al. (2018) who examined the banking industry in ASEAN countries during the period 1990-2014 stated that competition increases financial stability and reduces credit risk. In addition, Goetz (2018) who studied the banking sector using the US Metropolitan Statistical Area (MSA) during the period 1976-2006, stated that increased market competition significantly increased bank stability. In addition, greater competition reduces the probability of bank failure, that is, the share of bad debts.

Research conducted by Mollah et al. (2017) on 52 Islamic banks and 104 conventional banks in 14 countries during the period 2005-2013, found that the governance structure in Islamic banks has an important role in taking risks and allowing them to take risks. Furthermore, Mutarindwa et al. (2018) who examined 216 banks in 44 African countries also stated the importance of improving governance and stability after the introduction of the corporate governance code, because it can strengthen bank resilience. These researchers are supported by research conducted by Iramani et al. (2018) which states that good corporate governance increases financial stability. Research conducted by Chen et al. (2016) who used a panel of bank data in the United States, found that a higher level of competition and a larger margin of safety in the banking sector were less affected by financial spillover. Meanwhile, capital helps small banks to increase the probability of survival and market share at any time and capital also improves the performance of upper-middle-level banks, especially during the banking crisis (Berger & Bouwman, 2013).

Furthermore, Baselga-Pascual et al. (2018), who examined banks in Europe using the GMM (Generalized Method of Moments) estimator, found that diversification setting restrictions on the global banking model can reduce bank profitability which, together with low interest rates, can damage the bank's resilience system. In addition, banks with higher credit growth rates are riskier and banks will be more stable if they increase non-interest income due to better diversification of income sources (Köhler, 2012).

Based on previous studies, the researcher wants to examine the effect of competition, Good Corporate Governance (GCG), and Bank Performance on Bank Resilience using the approach Structural Equation Modeling (SEM), because previous research has rarely examined variables related to the SEM approach.

## II. Research Methods

The research method used in this study is the explanatory method, namely research that aims to explain the position of the variables studied and the relationship between one variable and another (Ghozali & Latah, 2015). Where the independent variables (independent variables) in this study are Competition, Good Corporate Governance, Bank Performance, while the dependent variable (dependent variable) in this study is Bank Resilience. The population in this study are State-Owned Banks and National Private Banks listed on the Indonesia Stock Exchange during 2015-2019. While the sampling technique used is purposive sampling, namely the technique in determining the sample according to the criteria. Based on data on the number of banks listed on the IDX in 2019, there were 44 banks, but to adjust the data taken for research, only 34 banks met the criteria.

The data collection method used in this study is secondary data where secondary data is obtained from the financial statements of each sample used. This study used panel data and performed regression using SmartPLS 3.0 software.

**Table 1.** Variabel Operasional

Variables	Formula	Reference Articles
<i>Bank Resilience</i>	$Z\text{-score} = \frac{ROA + \text{capital ratio}}{\sigma(ROA)}$	Mutarindwa <i>et al.</i> (2018)
<i>Competition</i>	$Lerner_{it} = \frac{Price_{it} - MC_{it}}{Price_{it}}$	Amidu & Wolfe (2013)
GCG	Board of Directors, Audit Committee, Board of Comissioners, Independent Comissioners	Mutarindwa <i>et al.</i> (2018)
<i>Performance</i>	ROA, ROE, NIM	Mergaerts & Vennet (2016)

Source: processed authors, 2020

$$SR_{it} = \beta_0 + \beta_1 Bank\_Res_{it} + \beta_2 Lerner\_Ind_{it} + \beta_3 BOD_{it} + \beta_4 Audit\_Comm_{it} + \beta_5 BOC_{it} + \beta_6 BOC_{it} + \beta_7 Indp\_Comm_{it} + \beta_8 ROA_{it} + \beta_9 ROE_{it} + \beta_{10} NIM_{it} \varepsilon_{it}$$

### III. Results and Discussion

**Table 2.** Descriptive Analysis

	No.	Missing	Mean	Median	Min	Max	Std. Dev.	Excess Kurtosis	Skewness
Z-Score	1	0	88.225	67.52	0.08	729.45	118.733	14.903	3.741
Lerner Index	2	0	0.588	1	0	1	0.492	-1.892	-0.362
Board of Directors	3	0	7.018	7	3	14	2.771	-0.802	0.45
Audit Committee	4	0	3.971	4	2	7	1.108	0.15	0.974
Board of Commissioners	5	0	5.012	5	2	9	1.955	-0.898	0.536
Independent Commissioners	6	0	2.8	3	1	6	1.021	-0.011	0.812
ROA	7	0	0.546	1.04	-12.28	3.28	2.158	12.932	-3.133
ROE	8	0	2.891	7.02	-132.53	21.86	18.117	21.996	-4.085
NIM	9	0	5.146	4.99	0.38	11.66	2.172	1.547	0.938

Source: processed by the author, 2020

**Table 3.** Construct Reliability and Validity

	Cronbach's Alpha	Rho_A	Composite Reliability	Average Variance Extracted (AVE)
Bank Resilience	1.000	1.000	1.000	1.000
Competition GCG	1.000	1.000	1.000	1.000
Performance		1.000		

Source: processed by the author, 2020

Based on Table 3. Cronbach's Alpha, rho\_A, Composite Reliability, and AVE values for each variable meet the criteria. For indicators, GCG variables (BOD, Audit Committee, Board of Commissioners, Independent Commissioners) and Performance (ROA, ROE, NIM) are formative indicators because they can stand alone and interpret their construct variables (Hair *et al.*, 2017).

**Table 4.** Fornell-Locker (FLC)

	Bank Resilience	Competition	GCG	Performance
Bank Resilience	1.000			
Competition	-0.045	1.000		
GCG	0.384	0.051	1.000	
Performance	0.225	0.123	0.120	1.000

Source: processed by the author, 2020

For Discriminant Validity, based on table 4 above, it meets the criteria, Fornell-Locker (FLC) namely the Square root AVE value of each variable (1,000) is greater than the correlation between variables/constructs (-0.045, 0.051, 0.120, 0.225, 0.123).

**Table 5. R Square**

	R Square	R Square Adjusted
Bank Resilience	0.187	0.173

Source: processed by the author, 2020

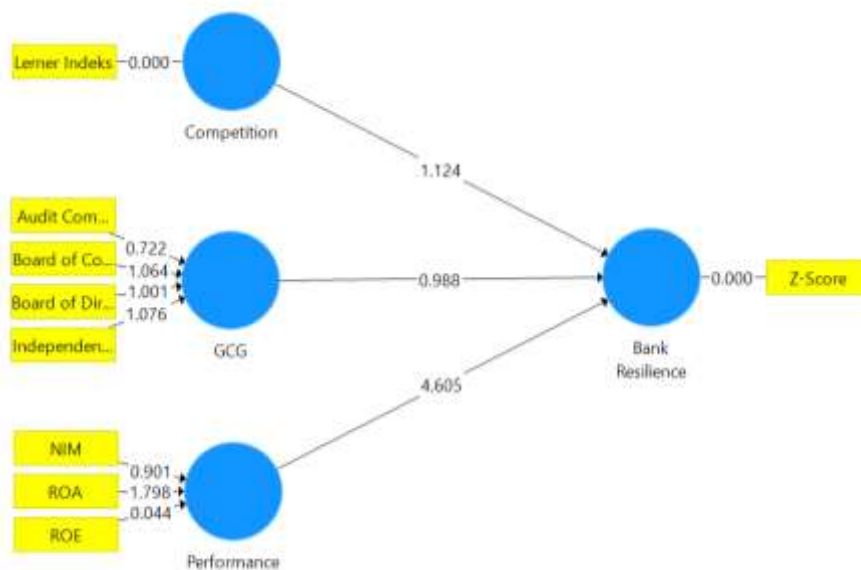
Based on Table 5. The value of R Square is 0.187, which means that the variable Competition (X1), GCG (X2), and Performance (X3) is able to explain the variable Bank Resilience (Y) by 18.7%, while the rest is explained by other variables.

**Table 6. Hypothesis Test**

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics ( O/STDEV )	P Values
Competition -> Bank Resilience	-0.087	-0.078	0.078	1.124	0.262
GCG -> Bank Resilience	0.365	0.084	0.370	0.988	0.324
Performance -> Bank Resilience	0.192	0.207	0.042	4.605	0.000

Source: processed by the author, 2020

If you look at the P Values, only the variable Performance (X3) is significant to the variable Bank Resilience (Y) because the P Values < 0.05. This finding is in line with the research conducted by Baselga-Pascual et al. (2018) and Köhler (2012). Meanwhile, the variables Competition (X1) and GCG (X2) are not significant because (P Values > 0.05). GCG is not significant to Bank Resilience similar to the findings of Chen et al. (2016). Findings related to competition between banks that have no effect on Bank Resilience is a new finding.



**Figure 1. Bootstrapping Final Model (processed by the author, 2020)**

## IV. Conclusion

Based on data processing carried out with the SEM approach, it was found that only Bank Performance affects Bank Resilience in Indonesia. For the other two variables, namely Bank Competition and Corporate Governance, are not significant. A new finding was found, namely competition between banks which has no effect on Bank Resilience. This may be due to the lack of financial literacy and the interest of the Indonesian people in using the financial services provided by banks. This means that competition between banks does not have a major role in bank resilience in the Indonesian banking industry.

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