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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 (Werdhiastutie 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

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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
Bank Resilience	$\text{Z-score} = \frac{ROA + capital\ ratio}{\sigma(ROA)}$	Mutarindwa *et al*. (2018)
Competition	$Lerner_{it} = \frac{Price_{it} - MC_{it}}{Price_{it}}$	Amidu & Wolfe (2013)
GCG	Board of Directors, Audit Committee, Board of Commissoners, Independent Comissioners	Mutarindwa *et al*. (2018)
Performance	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 Commissoners	5	0	5.012	5	2	9	1.955	-0.898	0.536
Independent Comissioners	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	1.000	1.000	1.000	1.000
GCG		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 thecriteria, 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.

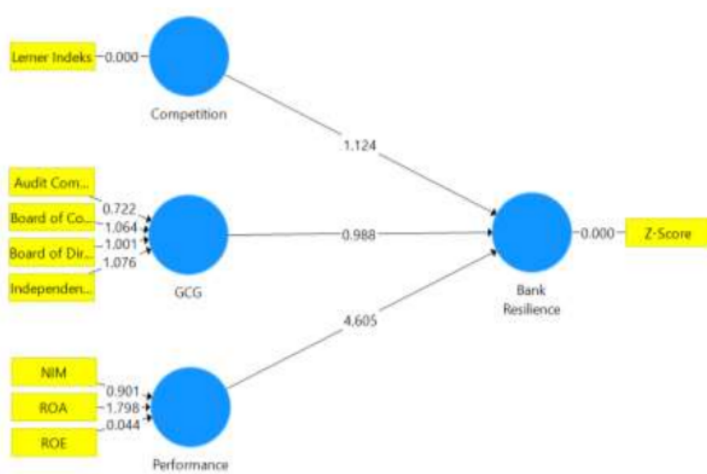

***Figure 1.** Bootstraping Final Model (processed by the author, 2020)*

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.

References

Amidu, M., & Wolfe, S. (2013). Does bank competition and diversification lead to greater stability? Evidence from emerging markets. Review of Development Finance, 3(3), 152–166.

Arif, S. (2019). Influence of Leadership, Organizational Culture, Work Motivation, and Job Satisfaction of Performance Principles of Senior High School in Medan City. *Budapest International Research and Critics Institute-Journal (BIRCI-Journal)*. P. 239-254.

Bank Indonesia. (2018). *Financial Stability Review 2018*.

Basel Committee on Banking Supervision. (2009). Strengthening the Resilience of the Banking Sector. In *Bank for International Settlements*.

Basel Committe on Banking Supervision. (2011). Basel III: A Global Regulatory Framework for More Resilient Banks and Banking Systems. In *BCBS Report No. 189, Bank for International Settlement*. Retrieved from http://www.bis.org/publ/bcbs189.htm

Baselga-Pascual, L., del Orden-Olasagasti, O., & Trujillo-Ponce, A. (2018). Toward a more resilient financial system: Should banks be diversified? *Sustainability (Switzerland)*, *10*(6), 1–16.

Berger, A. N., & Bouwman, C. H. S. (2013). How does capital affect bank performance during financial crises? *Journal of Financial Economics*, *109*(1), 146–176.

Chen, W., Hamori, S., & Kinkyo, T. (2016). Banking sector resilience to financial spillovers. *Applied Economics Letters*, *24*(6), 422–426.

Claessens, S., & Laeven, L. (2013). What Drives Bank Competition? Some International Evidence. *Journal of Money, Credit and Banking*, *36*(3), 563–583.

Ghozali, I. & Latah, H. (2015). *Partial Least Squares: Konsep, Teknik, dan Aplikasi Menggunakan Program SmartPLS 3.0 edisi ke-2*. Semarang: Badan Penerbit – UNDIP.

Goetz, M. R. (2018). Competition and bank stability. *Journal of Financial Intermediation*, *35*, 57–69.

Griffin, D., & Basak, S. (2019). *Deutsche Bank, BNP Face Reality of $168 Billion Hedge-Fund Deal*. Retrieved from https://www.bloomberg.com/news/articles/2019-07-16/deutsche-bank-bnp-face-reality-of-168-billion-hedge-fund-deal.

Hair, J. F., Hult, G. T. M., Ringle, C. M., Sarstedt, M. (2017). *A Primer on Partial Least Squares Structural Equation Modelling* (PLS-SEM) *Second Edition*. Los Angeles: SAGE.

Hashem, S. Q., & Abdeljawad, I. (2018). Islamic Banks' Resilience to Systemic Risks: Myth or Reality-Evidence from Bangladesh. *Management of Islamic Finance: Principle, Practice, and Performance*, *19*, 37–68.

Herdjiono, I., & Mega Sari, I. (2017). The Effect of Corporate Governance on the Performance of a Company. Some Empirical Findings from Indonesia. *Journal of Management and Business Administration. Central Europe*, *25*(1), 33–52.

IMF. (1998). The Asian Crisis: Causes and Cures. Retrieved from Finance & Development website: https://www.imf.org/external/pubs/ft/fandd/1998/06/imfstaff.htm

Iramani, R. R., Mongid, A., & Muazaroh, M. (2018). Positive contribution of the good corporate governance rating to stability and performance: evidence from Indonesia. *Problems and Perspectives in Management*, *16*(2), 1–11.

Jiménez, G., Lopez, J. A., & Saurina, J. (2013). How does competition affect bank risk-taking? *Journal of Financial Stability*, *9*(2), 185–195.

Köhler, M. (2012). Which banks are more risky? The impact of loan growth and business model on bank risk-taking. In *Deutsche Bundesbank No. 33* (Vol. 96).

Magdalena, S., Suhatman, R. (2020). The Effect of Government Expenditures, Domestic Invesment, Foreign Invesment to the Economic Growth of Primary Sector in Central Kalimantan. *Budapest International Research and Critics Institute-Journal (BIRCI-Journal)*. Volume 3, No 3, Page: 1692-1703.

Mckinsey. (2017). *The new dynamics of financial globalization*. Retrieved from https://www.mckinsey.com/industries/financial-services/our insights/the-new-dynamics-of-financial-globalization.

Mergaerts, F., & Vennet, R. Vander. (2016). Business models and bank performance. *Journal of Financial Stability*, *22*(C), 55–75.

Mollah, S., Hassan, M. K., Al Farooque, O., & Mobarek, A. (2017). The governance, risk-taking, and performance of Islamic banks. *Journal of Financial Services Research*, *51*(2), 195–219.

Niati, D. R., Siregar, Z. M. E., & Prayoga, Y. (2021). The Effect of Training on Work Performance and Career Development: The Role of Motivation as Intervening Variable. *Budapest International Research and Critics Institute (BIRCI-Journal): Humanities and Social Sciences*, *4*(2), 2385–2393. https://doi.org/10.33258/birci.v4i2.1940

Purba, K., Sudibjo, K. (2020). The Effects Analysis of Transformational Leadership, Work Motivation and Compensation on Employee Performance in PT. Sago Nauli. *Budapest International Research and Critics Institute-Journal (BIRCI-Journal)* Volume 3, No 3, Page: 1606-1617

Shah, M. M., et al. (2020). The Development Impact of PT. Medco E & P Malaka on Economic Aspects in East Aceh Regency. *Budapest International Research and Critics Institute-Journal (BIRCI-Journal)*. Volume 3, No 1, Page: 276-286

Werdhiastutie, A. et al. (2020). Achievement Motivation as Antecedents of Quality Improvement of Organizational Human Resources. *Budapest International Research and Critics Institute-Journal (BIRCI-Journal)* Volume 3, No 2, Page: 747-752.

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