

“Positive contribution of the good corporate governance rating to stability and performance: evidence from Indonesia”

AUTHORS	RR. Iramani Muazaroh Muazaroh Abdul Mongid  https://orcid.org/0000-0001-5778-9194
ARTICLE INFO	RR. Iramani, Muazaroh Muazaroh and Abdul Mongid (2018). Positive contribution of the good corporate governance rating to stability and performance: evidence from Indonesia. <i>Problems and Perspectives in Management</i> , 16(2), 1-11. doi: 10.21511/ppm.16(2).2018.01
DOI	http://dx.doi.org/10.21511/ppm.16(2).2018.01
RELEASED ON	Monday, 16 April 2018
RECEIVED ON	Thursday, 19 October 2017
ACCEPTED ON	Monday, 19 March 2018
LICENSE	 This work is licensed under a Creative Commons Attribution 4.0 International License
JOURNAL	"Problems and Perspectives in Management"
ISSN PRINT	1727-7051
ISSN ONLINE	1810-5467
PUBLISHER	LLC “Consulting Publishing Company “Business Perspectives”
FOUNDER	LLC “Consulting Publishing Company “Business Perspectives”



NUMBER OF REFERENCES

35



NUMBER OF FIGURES

1



NUMBER OF TABLES

3

© The author(s) 2026. This publication is an open access article.



BUSINESS PERSPECTIVES



LLC "CPC "Business Perspectives"
Hryhorii Skovoroda lane, 10, Sumy,
40022, Ukraine

www.businessperspectives.org

Received on: 19th of October, 2017

Accepted on: 19th of March, 2018

© RR. Iramani, Muazaroh Muazaroh,
Abdul Mongid, 2018

RR. Iramani, Associate Professor,
DR, MSi, STIE Perbanas Surabaya,
Indonesia.

Muazaroh Muazaroh, Assistant
Professor, Dr., MMT, STIE Perbanas
Surabaya, Indonesia.

Abdul Mongid, Associate Professor,
Doctor of Economics, MA, Ph.D,
STIE Perbanas Surabaya, Indonesia.



This is an Open Access article,
distributed under the terms of the
[Creative Commons Attribution 4.0](https://creativecommons.org/licenses/by/4.0/)
International license, which permits
unrestricted re-use, distribution,
and reproduction in any medium,
provided the original work is properly
cited.

RR. Iramani (Indonesia), Muazaroh Muazaroh (Indonesia),
Abdul Mongid (Indonesia)

POSITIVE CONTRIBUTION OF THE GOOD CORPORATE GOVERNANCE RATING TO STABILITY AND PERFORMANCE: EVIDENCE FROM INDONESIA

Abstract

This paper aims to examine the impact of Good Corporate Governance (GCG) practice on bank stability and performance. Governance is measured using the GCG rating that covers eleven aspects. The authors apply instrumental regression to link governance to performance and stability. The study covers a sample of 150 banks. The result shows that bank stability can mediate bank governance and bank performance. On the determinant of bank performance, it can be concluded that the GCG rating is positive and directly influences bank performance. Bank stability is also positive for bank performance indicating the indirect contribution of the GCG rating to bank performance. NPL, LDR, CAR and bank's size (LASSET) are all negative and significant. The aim of this paper is to provide strong empirical evidence on the importance of governance and stability for performance. The limitations of this paper are the size of the sample and that it only covers public banks which are theoretically required to apply better governance in all aspects of their business by the Capital Market Authority.

Keywords

good governance, ROA, ROE, Z-score, stability, two-stage regression, Indonesia

JEL Classification G21, D24

INTRODUCTION

Governance (corporate governance) is a concept that has many dimensions. Therefore, it is very difficult to fully define what governance is about. Governance is derived from the English "government", and can literally be interpreted as a series of processes, including the customs, policies or rules that exist in an institution and affect the management and control of the company.

The Asian economic crisis occurred in early 1998. It changed the landscape of the East Asian economy, including that of Indonesia. The IMF (1998) concluded that poor governance was the main source of the Asian crisis in 1998. It marked the beginning of the importance of good governance in both the private and public sectors. Following the great economic crisis of the day, it became the priority of the national agenda for economic policy. Thereafter, the Good Corporate Governance Code (GCG) was introduced and then an institution (business firm) that is ultimately responsible for campaigning and assisting the implementation of GCG.

The problem of GCG implementation in Indonesia is related to the environment in which banks operate. According to Mongid and Tahir

(2011), corruption is the most difficult problem and it is also the most persistent. Recently, Murharsito, Fauziah, Kristijadi, and Iramani (2017) studied corruption and bank performance at the provincial level. Because GCG is enforced from the outside and has not been adopted internally, the question is whether or not it has an impact on performance.

Further, The Basel Committee on Banking Supervision (BCBS, 2015) also concluded that the weakness of GCG in banks plays an important role in undermining the resilience of the financial system and should be addressed by improving the corporate governance of banks.

This study aims to contribute to the existing literature on the impact of GCG on bank performance by using cases in Indonesia. As we know, the study of GCG largely focuses on developed countries where a culture of governance is established and strong. This paper reviews the role of corporate governance in the banking sector of developing countries, especially Indonesia, where the level of corruption is extensive.

Gibson (2003) asserted that the effect of the corporate governance mechanism on corporate performance in an emerging market is problematic. La Porta, Lopez-de-Silanes, Shleifer, and Vishny (2000) concluded that in countries where the legal system does not perform an adequate job of protecting shareholder rights, GCG cannot operate properly. This paper tries to question the implementation of GCG in an emerging market.

Most studies have discussed good corporate governance mechanisms using international cases and treated it as largely exogenous meaning the effectiveness of one dimension may be conditioned by another dimension. As GCG regulation requires the existence of mostly independent board and commissioners, the use of a traditional GCG indicator may not be suitable in the banking sector as independence is compulsory. For example, independent commissioners must exceed non-independent commissioners. To solve this problem, we apply an index that represents various (eleven) aspects of GCG required by the banking authority (Indonesia FSA).

Referring to Laeven and Levine (2009), Mongid and Muazaroh (2017), Williams (2014) and Love (2011), this paper examines how a good corporate governance index impacts bank stability and bank performance in Indonesia using the case of public banks. Public banks are used because they represent a specific nature where they also report to the Capital Market Authority. The problem of the research is formulated as follows: Does the governance index contribute directly to risk taking? Does the governance index contribute directly to performance? Is bank stability able to mediate governance in contributing to banking performance?

1. LITERATURE REVIEW

The basic theory that supports the need for corporate governance is made up of three theories. The first is agency theory. Agency theory is an information-based theory and has evolved in two directions called positivist and principal-agent (Jensen, 1983; Jensen & Ruback, 1983). Positivists have focused on identifying situations in which principals and agents tend to have conflicting aims and then describe governance mechanisms that limit the agent's behavior. Principal-agent deals with the general theory of principal-agent relationships,

such as employer-employee and buyer-supplier relations. This theory is considered the main theory underlining the needs of corporate governance. The essence of this theory is the difference of interests between shareholders and managers. As a characteristic of modern enterprises, there is a separation of ownership and control.

The second is stewardship theory. Under this theory, it is assumed that managers are responsible for their functioning and they strive to ensure that their personal motivations are in line with the goals of their key shareholders. The stewardship

perspective ensures that the steward (manager) is satisfied and motivated to achieve the organization's goals in order to achieve organizational success even at the expense of the personal goals of the steward. Under this theory, we assume that managers are responsible and they strive to ensure that their personal motivations are in line with the goals of their key shareholders.

The third is stakeholder theory. Unlike agency theory, stakeholder theory argues that managers in the organization are not only responsible for the interests of the shareholders, but also serve the network of relationships to include suppliers, employees and business partners. Stakeholder theory goes beyond the orientation of the shareholders, which means that decisions are made regarding the different companies beyond the shareholders of the company.

Using the case of the 1998 Asian crisis, Mongid (2007) conducted a study to explain why the costs were so high during the economic crisis of 1998. By making international comparisons it was found that the governance (good governance) of a state determines whether the cost of the crisis will be large. The governance index includes the variables of banking system openness, corruption and legal conditions. The study showed that bailout costs or bank rescues for various countries ranged from high, 55% of GDP for Indonesia, 16% of GDP for Malaysia, 34% for Thailand, and 24% for Japan. This means that countries with poor governance tended to pay a greater sum to resolve the banking crisis compared to better governance countries.

Dewi (2009) studied the impact of the bank's corporate governance perception index (CGPI) on performance and risk. The study concludes that there is a difference in LDR (loan to deposit ratio), NPL (non-performing loan), non-performing productive assets, FACR (fixed asset capital ratio), IRR (interest rate risk) and OCOI (operating cost to operating income). A bank with higher CGPI is better in all aspects. Beltratti and Stulz (2012) found the irony of GCG during the banking crisis. They found that banks with good GCG performed worst during the crisis. The banks operating in countries with more stringent regulatory capital requirements and stronger and more independent supervisors performed better.

Mongid and Tahir (2011) investigate the determinants of the profitability of banks in ASEAN countries. They found that a higher ratio of personnel costs to total costs and equity to total assets increased bank profitability and was negatively associated with higher regulatory capital (CAR), net loans ratio, and efficiency ratio. Economic growth was positive but not significant. Surprisingly, the corruption index is positive and significant. Halkos and Salamouris (2004) provide evidence that larger banks are more profitable. They also found that the efficiency ratio is negative and equity to assets ratio is positive and significant to the ROAA. GDP growth has a positive and significant impact on the banks' performance, but inflation has an opposite effect. Bikker and Hu (2012) and Goddard et al. (2004) also found the positive impact of size on banks' profitability. Ghalib (2017) and Suhartono (2017) found a similar result that size, credit risk and capital are significant for profitability.

Very few previous studies have examined the effect of governance on risk. Aebi, Sabato, and Schmid (2012) made an attempt to find the relationship of the global financial crisis (GFC) which occurred in 2008 with the corporate governance practices and risk management on the performance of the banks in Europe. They concluded that a governance approach that emphasizes compliance is less appropriate because initially the core governance rules are for building a healthy bank management culture. Good governance practices occur if the company has a specialized risk management committee to monitor the implementation of risk management.

In addition, Williams (2014) examined the relationship between governance (good governance) in a state with risk taking in banks operating in selected ASEAN countries. He compared the governance of different countries and its impact on risks taken by banks. He uncovered the existence of a U-shape relationship between risks taken and capital governance (equity capital) where the higher or lower the capital, the higher the risk. Further, high value of permits (charter value) will have a lower risk because shareholders fear that if there is a serious risk problem in the bank, it should be closed by the authorities. The general conclusion is that the improvement of good governance (good

governance regulation) has a good impact that lowers the risk, however, not for the short-term, but more as a long-term process.

Nur'ainy, Nurcahyo, Kurniasih, and Sugiharti (2013) investigated the impact of the application of good corporate governance on listed companies using economic value added (EVA). GCG is positive for performance when it is measured by EVA. The study also shows that GCG affects performance indirectly through the size of the company. Lutfi, Silvy, and Iramani (2014) examined the effect of governance implementation transparency on the operational efficiency and profitability of national commercial banks in Indonesia. A well-functioning board of commissioners improved the operational efficiency and profitability of the bank. Haryati and Kristijadi (2014) observed a positive impact of GCG implementation on the performance of the banks. Furthermore, they found that of the eleven indicators of corporate governance, transparency and the provision only to related parties is a key indicator in the GCG assessment.

De Haan and Vlahu (2016) conducted a comprehensive review of empirical studies on corporate governance. The survey found that there is a consensus in the literature on corporate governance having a positive impact on the number of independent board members and performance. On the contrary, this is not the case for the banks. However, the conclusive importance of the governance mechanisms on performance does not imply that the mechanism cannot vary depending on the environmental conditions in which the bank operates.

Okike and Turton (2009) also examined the GCG contribution to the performance of banks in the UK using the Corporate Governance Scorecard (Corp-Gov Score). The goal is to test the level of corporate governance practices that lead to improved performance levels of a company before the global financial crisis (1999–2006). They concluded that improvement of corporate governance can improve performance (ROE).

Subanidja, Rajasa, Suharto, and Atmanto (2016) studied the impact of GCG on the performance of the manufacturing sector. Using agency theory that postulates the conflict of interest be-

tween managers (agents) and owner (principals), they apply it to the manufacturing sector only, because in the banking sector, the implementation of Good Corporate Governance (GCG) is mandatory. GCG is defined as an independent commissioner, managerial ownership, and audit quality. By applying a moderated regression analysis (MRA) the study found that the earnings management and the mechanism of GCG have an impact on the firm value. Sastrosuwito and Suzuki (2012) using the Indonesian banking market identify the determinants of bank profitability such as capital ratio (ETA), intermediation ratio (LDR), credit risk (NPL), efficiency (CIR) are significant for bank profitability. In addition, Berger, Clarke, Cull, Klapper, and Udell (2005) find a positive causation in both directions between capital and profitability. As the impact of corporate governance on bank's performance produced a mixed result we have strong foundation that governance rating is positive to risk taking and performance.

2. METHOD

2.1. Framework

According to Daniri (2014), the best implementer of GCG in Indonesia is the banking sector. This is because the banking authority is very active in promoting the GCG principle and has established a bank soundness indicator. The Indonesia Financial Service Authority (OJK) applies a GCG rating based on eleven GCG indicators. According to a Circular Letter of Bank Indonesia No. 15/15/DPNP/2013, from these eleven aspects, the bank performs self-assessment to rate its governance practice, where the best is 1 and the worst is 5. There is also a requirement that banks maintain or increase the bank's soundness by applying prudential principles and risk management in conducting its business activities. Regarding their soundness rating, banks are required to conduct a Risk-based Bank Rating (RBBR) either individually or collectively. This must be done at least every semester for end-June and December positions. In some cases, a bank may be required to update its self-assessment of its soundness at any time when required by the authority. There are four areas for a bank's soundness rating:

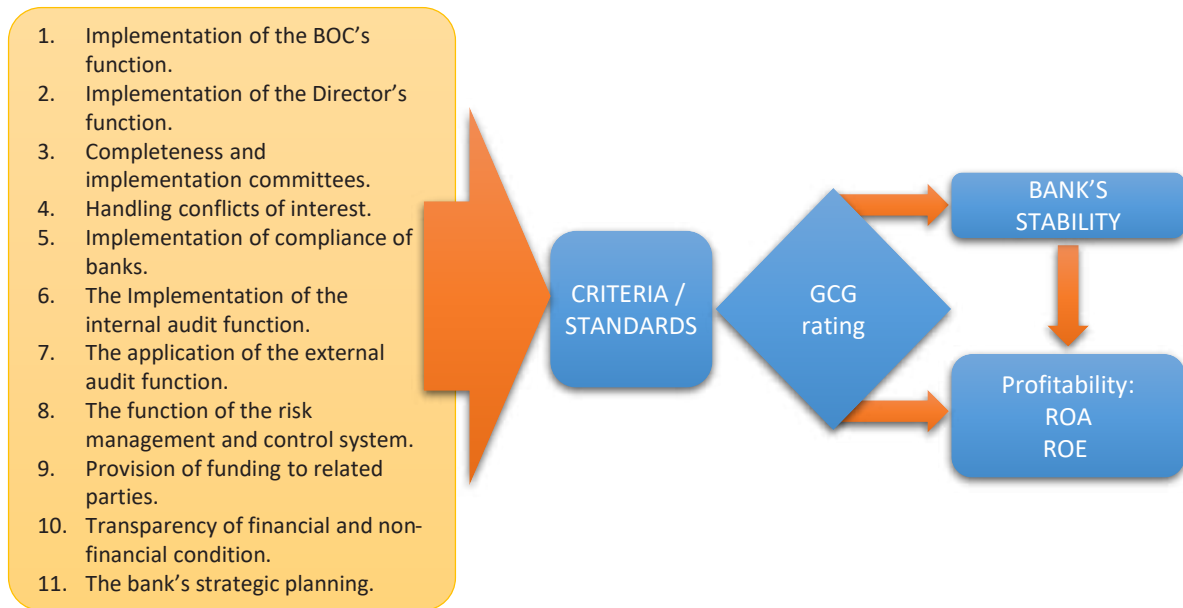


Figure 1. Research framework

1. Risk profile.
2. Good corporate governance (GCG).
3. Profitability (earnings).
4. Capital (capital).

In this study, our focus is on the impact of GCG rating on bank stability and profitability.

2.2. Variables

This paper investigates the impact of governance rating (GCG) and bank stability on banks' performance. To measure the performance, this study applies two measures.

Dependent variables

1. ROA, this is the most important ratio in the firm profitability measure. A higher ratio is better and represents the ability of management to employ resources to generate profit.
2. ROE, this is used to indicate the company profit from the shareholders' perspective and calculated after tax.

To represent the determinant of a bank's performance, there are ten independent variables.

Independent variables

1. NPL. The main known credit risk indicator for a bank. This is because Indonesian banking is still at the traditional stage, credit is the main business. It can raise due to internal process such as less scrutiny. Macroeconomic variables can add to the credit risk as it threatens the credit quality. We measure credit risk using the ratio of non-performing loans to total loan (NPL). NPL is negative to profitability as it reduces interest income and increases operating expenses.
2. LDR. We measure the forward looking credit risk using the loans to deposit ratio (LDR). LDR can represent liquidity risk also. LDR provides a future credit risk. Total loans to total deposit ratio (LDR) can give indication that there is a positive association between profits and LDR.
3. CAR. Capital is the capital strength indicator. It measures total capital divided by risk-weighted asset. A bank with higher CAR may have less risk taking as it has benefited from a lower cost of funding due to a lower probability of failure. Well-capitalized banks are less risky and it means investors can expect lower profits.
4. ETA. Equity to total asset is a real picture of the bank's capital position as it only considers

Table 1. Variables, definition and sources of data

No	Variable	Definition	Sources
1	ROA	Profit before tax / asset	Internal bank / financial report
2	ROE	Profit after tax / equity	Internal bank / financial report
Dependent variables			
1	NPL	Problem loan / total loan	Internal bank / financial report
2	LDR	Loan / total deposit	Internal bank / financial report
3	GCGI	GCG rating – extrapolated	GCG report
4	CAR	Equity capital / risk-weighted asset	Internal bank / financial report
5	ETA	Equity capital / total asset	Internal bank / financial report
6	LASSET	Logarithm of asset	Internal bank / financial report
7	BANK STABILITY	(Equity ratio + Profit ratio) / standard deviation of profit ratio = ZSCORE	Internal bank / financial report
8	CIR	Operating expenses / operating income	Internal bank / financial report
9	ECGRW	Economic growth (annual)	Indonesia statistics office
10	INFL	Inflation rate (consumer prices – annually)	Indonesia statistics office
11	DCONS	Growth of domestic consumption	Indonesia statistics office

equity and total asset. It is a relatively stronger measure as no managerial policy can influence it compared to CAR.

5. LASSET. Size signals a specific bank risk. Larger bank has a greater position the market and it may enjoy a strong position in the market such as lending rates may be as high as the peers. In contrast, larger bank pays less interest on deposits and consequently larger banks may enjoy higher profits. To capture the relationship between size and bank profitability, we proxy bank size by using the logarithm of total assets.

6. GCG. We apply the GCG rating as it is the best indicator of bank GCG practice. GCG is positive to bank profitability as a higher rating means a better decision-making process, surveillance and disclosure.

7. ZSCORE. It indicates the stability of the bank and is used as an indication of bank risk. High value indicates stability, while a lower value means less stability.

8. ECGRW. Economic growth represents the ability of the economy to increase its real income and represents the improvement of income and welfare.

9. INFL. Inflation rate indicates the inability of the economy to stabilize the price level. A high inflation rate will reduce purchasing power.

10. DCONS. Growth of domestic consumption. It represents the total growth of household and government. Domestic consumption is the main source of economic growth.

The definition and the sources of variables are presented in Table 1.

Model

Model for profitability (Y) is:

$$Y_{it} = \alpha_0 + \beta_1 NPL_{it} + \beta_2 LDR_{it} + \beta_3 GCG_{it} + \beta_4 CAR_{it} + \beta_5 LASSET_{it} + \beta_6 ZSCORE_{it} + \varepsilon_{it}. \quad (1)$$

As our estimations also apply instrumental regression to test the impact of the GCG rating on bank stability and performance, bank stability is defined and measured using ZSCORE. The model for the bank stability instrument is:

$$ZSCORE_{it} = \alpha_{it} + \beta_1 GCG_{it} + \beta_2 LASSET_{it} + \beta_3 CIR_{it} + \beta_4 LDR_{it} + \beta_5 ECGRW_{it} + \beta_6 INFL_{it} + \beta_7 DCONS_{it} + \varepsilon_{it}. \quad (2)$$

$$Y_{it} = \alpha_0 + \beta_1 NPL_{it} + \beta_2 LDR_{it} + \beta_3 GCG_{it} + \beta_4 CAR_{it} + \beta_5 LASSET_{it} + \beta_6 ZSCORE_{it} + \varepsilon_{it}. \quad (3)$$

In this paper, Y is ROA and ROE that represent bank profit indicators and ZSCORE represents bank stability. These are the most used to measure bank profit and bank stability. We apply in-

Table 2. The data description

Sources: Indonesia capital market directory ICMD and FSA (OJK).

Variable	Obs	Mean	Std. Dev.	Min	Max
ROA	150	1.667	1.539	-7.64	5.37
ROE	150	12.023	17.113	-142.48	59.03
CAR	150	16.66	4.303	9.41	45.75
LDR	150	83.21	14.09	40.22	140.72
NPL	150	1.58	1.543	0	8.9
LLASSET	150	2.833	.0873	2.658	3.005
GCG	150	4.25	.6225	2	5
ZSCORE	150	8.871	2.224	4.996	17.44
ECGRW	150	5.65	.5419	4.88	6.22
INFL	150	5.604	.8939	3.98	6.41
DCONS	150	5.133	.2651	3.74	5.49

strumental regression as it provides advantages in terms of the ability to fit one equation of a multiple-equation system without specifying the functional form of the remaining equations. According to Cameron and Trivedi (2005), this method is regarded as the best solution to endogenous regressors to obtain consistent parameter estimates. As our model is over identified, we apply Two Stage Least Square (2SLS) regressions. Before we use the model for analysis, we perform the following test such as first stage regression testing, tests of endogeneity and tests of over identifying restrictions

The details of these tests are available on the STATA website (<https://www.stata.com/manuals13/rivregress.pdf>). When the model passes the tests, we use it for analysis (Greene, 2017).

3. EMPIRICAL RESULT

Table 2 presents the data description of the variables used in this paper. There are 30 banks in the sample for the period 2012–2016 (balance panel). The mean of ROA is 1.67% with minimum value 7.64% and maximum profit 5.37%. The mean is bigger than the standard deviation. For ROE, the mean is 12% with minimum 142% and maximum 59%. For the capital adequacy ratio (CAR) we can see that the mean value is 17%. As the minimum is set at 8%, all banks are above the minimum level. For Loan deposit ratio (LDR), the mean is 83%. This means that, in general, the LDR is above the sound level required by the banking authority (75%). However, there is a bank with a very low LDR of 40%. However, the maximum is 140%

which is very high and risky.

The first problem to elaborate is whether the GCG is significant for bank stability (ZSCORE). Based on the result using OLS, we find the F-statistic is 10.47 and significant at 1%. The R-squared is 37%. The coefficient for GCG is 0.96 and significant at 1.2%. The asset size is negative and significant. Cost efficiency (CIR) is negative and significant. Economic growth is -1.93 and significant. In general, we can conclude that GCG is positive to bank stability. This means that bank stability can be used as the instrumented variable.

NPL is on average 1.5% with maximum 8.9%. According to regulation, the maximum is 5%. Beyond this point, a bank is regarded as unsound. Asset size is on average 2.8 with maximum 3. Please note that we use trillions of rupiah. For GCG, the maximum is 5 and minimum 2. On average, GCG is very good as the mean is 4.25. ZSCORE is a bank stability indicator; higher value is better with a minimum of 5 and maximum of 17. The variability is very low as the variation index is 25%. For macroeconomic variable, all data are very low in variability. The mean for economic growth is 5.65%, inflation is 5.6% and domestic consumption growth (DCONS) is 5.1%.

To test the eligibility of the model IVREG-2SLS of bank ROA to be used for further estimation, we test the first stage regression. The result shows that the R-squared is 89% with an F-value (5,121) of 196,731 and significant at 1%. The minimum eigenvalue is 18.37. This means the instrument used in this model is strong as the bias is low. For the

Table 3. The results compared

Sources: STATA output.

Variable	OLSROA	OLSROE	IVIROA	IVIROE	OLSZSCORE
CAR	-.18***	-.21***	-.13***	-.14***	–
LDR	-.018**	-.28**	-.014*	-.22*	.02
LLASSET	-.55	-.19	-.34	-.16	–8.7***
NPL	-.2***	-.14	-.23***	-.18*	–
GCG2	.5**	7.8***	.57***	8.7***	.96**
ZSCORE	.42***	3.8***	.29***	2.1**	–
BOPO	–	–	–	–	–.088***
EGRW	–	–	–	–	–.02*
INFL	–	–	–	–	.014
DCONS	–	–	–	–	.93
_CONS	2.1	57	1.1	46	41
CHI2	26.33	10.93	111	46	10.47
Adj-R ²	37.15	53.79	35.36	31.59	33.59
N	150	150	150	150	150

Note: Significance level – *** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$.

ROE model, the first stage regression test shows that the R-squared is 89% with the minimum eigenvalue statistic 196.731. The minimum to reject the bias (5%) is 18.37. It means the IVREG-2SLS for ROE is eligible for further analysis.

We also test the over identification restriction condition of the models. For the ROA, the Sargan score is 55.0421 and Basmann Chi-square 86.542. These tests show that all are significant at 1%. For ROE, the test of over identifying restrictions shows that the Sargan score is 58.74 and the Basmann Chi-square is 97.02. It means all tests are significant at 1%. It means the model is identified.

We apply the test on the endogeneity problem using the Durbin test and Wu-Hausman test. Based on the Durbin test, we find that the Chi-square is 69.46 and significant at 1%. Based on the Wu-Hausman test, we find that Chi-square is 137.71 and significant at 1%. For ROE, the parameter is smaller. Durbin test, we find the Chi-squared is 46.30 and for Wu-Hausman test, the Chi-squared is 86.54., all test are significant at 1%. It means that, based on these three tests, the IVREG-2SLS model for ROA and ROE are eligible for using in further analysis.

According to the ordinary least square (OLS) model, the coefficient for CAR is negative for ROA and ROE. This result is initially surprising as CAR refers to capital strength. However, clear investigation reveals that the measurement of the

CAR as indicator of capital strength is not really strong owing to a weakness in its methodology. A bank that owns less risky assets may have a higher CAR. As the risk is related to the return, lower risk means lower potential return. As a consequence, with a higher CAR, a bank will earn less profitability. This fact is in line with the finding. When analysing the impact of the CAR on profitability using an instrumental variable, we find the result is in line with the OLS model. In terms of significance, IVROA is significant at 1%. It means the impact of the CAR on profitability is stronger when estimated using an instrumental regression model (IVREG-2SLS). The finding confirms that a bank with high CAR will have lower profitability measured both by ROA and ROE.

Loan to deposit ratio (LDR) is negative but not significant for a model estimated using the OLS method. When estimation is carried out using IVREG-2SLS, LDR is negative and significant for both ROA and ROE. In general, we can conclude that any increase in LDR will reduce profitability. It means higher LDR will reduce the profitability. This finding is rational because the average LDR is already 83%. According to the banking authority, the bank should not exceed 85% of LDR as it makes the bank riskier. It means higher LDR can be risky. Further, as LDR is also a measure for liquidity risk, high LDR also means higher liquidity risk.

Non-performing loan (NPL) is an indicator of credit risk. It means higher NPL is very nega-

tive for the bank as it reduces potential income. Further, the cost of maintaining the non-performing loan (NPL) is expensive and it can lower the income and profit. The finding is in line with the assumption that NPL is negative to profitability. For the model using OLS, all are negative and significant at 1%. When the model is estimated using IVREG-2SLS, NPL is significant at 5%. It means any increase in NPL will reduce bank profit. For the ROE, NPL is not significant. This result is in line with Mongid and Tahir (2011), Dewi (2009) and Nur'ainy et al. (2013).

The size is important in business especially in the competitive market. The banking industry is a very competitive market. It means in banking, size matters. Big banks enjoy a better position in the market in terms of reputation and implicit guarantee from the government. However, our result shows differently. The size of bank asset (LASSET) is negative but not significant. There is a tendency that big banks tend to be less efficient and this reduces their profit. We should note that the result is not significant, meaning the asset size may or may not determine the profit. This result is not in line with Halkos and Salamouris (2004), Haryati and Kristijadi (2014) and Mongid and Tahir (2011). Bikker and Hu (2012) and Goddard et al. (2004) found that there was a positive correlation between bank's performance and its size.

The Good Corporate Governance (GCG) index is positive and significant in all models. It means better GCG is positive to bank profitability. A bank with the highest rating (5) will have 3.5% ROA for the OLS and 3.4 for IVREG-2SLS. This result un-

derlines the importance of GCG in the banking industry. Referring to Okike and Turton (2009) on the UK case, this finding supports the importance of GCG in banking. As banks depend on trust, a good rating on GCG means the bank is operating using transparency, responsibility, accountable and independence. This finding is supported by previous studies such as Mongid (2007), Dewi (2009), Lutfi, Silvy, and Iramani (2014), Okike and Turton (2009) and Subanidja, Rajasa, Suharto, and Atmanto (2016). From this finding, we can conclude that GCG directly improves bank performance.

ZSCORE is a measure of banking stability or risk. The higher the value, the lower the risk. ZSCORE is a common measure of stability at the level of individual institutions. ZSCORE compares capital buffers of a bank compared to the risk derived from the volatility of bank's profit. Volatility of profit indicates a risk of failure or solvency risk. This measure of risk is widely used in Laeven and Levine (2009) and Čihák and Hesse (2010). From Table 3, we can conclude that the use of instrumental regression (IVREG-2SLS) produces a stronger result as the CAR has better significance than the OLS model. For ROE, it is positive but not significant. For the IVREG-2SLS, both ROA and ROE are significant at 1%. It means less risky banks are more profitable. As ZSCORE is an instrumented variable, we then can conclude that a bank that is strong in profit and capital, will have a better profitability. This finding is in contrast to Aebi, Sabato, and Schmid (2012). This finding implied that GCG can influence the bank performance indirectly via its role on bank stability (ZSCORE).

CONCLUSION

Efforts to improve governance in all aspects of business in Indonesia have been made and show a positive result. Using the case of public banks, we can conclude that GCG is positive and significant for bank stability. It means banks with a better governance rating will have higher stability. We then use the bank stability as instrumented variable to test whether the governance rating has an indirect impact on performance. Our result shows that bank stability can mediate bank governance for bank performance. Our analysis on the determinants of bank performance provide interesting insights. We can conclude that bank governance rating can directly influence bank performance measured using ROA and ROE. Bank governance rating is positive and significant for both the ROA and ROE models. Bank stability is also positive for bank performance indicating the indirect contribution of GCG rating on bank performance. NPL is negative and significant. LDR, CAR and bank size (LASSET) are all significant but negative.

This study contributes to the empirical work by presenting strong evidence on the importance of GCG implementation. Unlike previous studies on GCG that focus on the board size, independent commissioner and audit, this study focuses on the implementation of the GCG regulation that covers eleven aspects. We apply instrumental regression to capture the direct and indirect effect of GCG on performance. However, these findings leave the question of whether there is an efficiency issue related to size or whether it is a managerial issue. This finding should attract new studies using different types of bank to assess the importance of GCG on performance.

The limitations of this paper are as follows. First, we used only 150 bank observations in this study. Therefore, there might be unstable results during estimation. In terms of bank asset size, state banks are too dominant compared to other private listed banks. Thus, there might be ownership bias that gives a further limitation on the results of this study. Further research should cover more banks.

ACKNOWLEDGEMENT

The researchers acknowledge the Financial Support under the National Research Grant under University Excellence Research Scheme (PDUPT) from the Ministry of Research, Technology and Higher Education, Indonesia, 2449/Tg.2003/01/17-2017.

REFERENCES

1. Aebi, V., Sabato, G., & Schmid, M. (2012). Risk Management, Corporate Governance, and Bank Performance in the Financial Crisis. *Journal of Banking & Finance*, 36(12), 3213-3226. <https://doi.org/10.1016/j.jbankfin.2011.10.020>
2. BCBS (2015). *Basel Committee on Banking Supervision: Corporate governance principles for banks*. Retrieved from <https://www.bis.org/publ/bcbs294.pdf>
3. Bank Indonesia (2013). *Circular Letter on GCG Implementation*. Retrieved from <http://www.bi.go.id/id/peraturan/perbankan/Documents/f8688e071dd1448c9206ed-470f2af533SEGCGFinal1.pdf>
4. Beltratti, A., & Stulz, R. M. (2012). The credit crisis around the globe: Why did some banks perform better? *Journal of Financial Economics*, 105(1), 1-17. Retrieved from <https://pdfs.semanticscholar.org/9670/e1142499dd48a0548d67d7f1b-7d87c5ee01e.pdf>
5. Berger, A. N., Clarke, G. R., Cull, R., Klapper, L., & Udell, G. F. (2005). Corporate Governance and Bank Performance: A Joint Analysis of the Static, Selection, and Dynamic Effects of Domestic, Foreign and State Ownership. *Journal of Banking & Finance*, 29(8), 2179-2221. <https://doi.org/10.1016/j.jbankfin.2005.03.01>
6. Bikker, J. A., & Hu, H. (2012). Cyclical patterns in profits, provisioning and lending of banks and procyclicality of the new Basel capital requirements. *PSL Quarterly Review*, 55(221). Retrieved from <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.476.1691&rep=rep1&type=pdf>
7. Cameron, A. C., & Trivedi, P. K. (2005). *Microeconometrics: Methods and Applications*. New York: Cambridge University Press. Retrieved from <http://www.centroportici.unina.it/centro/Cameron&Trivedi.pdf>
8. Čihák, M., & Hesse, H. (2010). Islamic Banks and Financial Stability: An Empirical Analysis, *Journal of Financial Service Research*, 38, 95. <https://doi.org/10.1007/s10693-010-0089-0>
9. Daniri, Mas Achmad (2014). *Lead by GCG*. Gagas Bisnis. Retrieved from https://books.google.co.id/books/about/Lead_by_GCG.html?id=DT-HoAEACAAJ&redir_esc=y
10. De Haan, J., & Vlahu, R. (2016). Corporate governance of banks: A survey. *Journal of Economic Surveys*, 30(2), 228-277. <https://doi.org/10.1111/joes.12101>
11. Dewi, Nurul Hasanah Uswati (2009). The Impact of Corporate Governance Practices on Indonesia Banking Industry (July 1-2, 2009). *17 Annual Conference on Pacific Basin Finance, Economic, Accounting, and Management (PBFEM) the 3rd International Conference on Business in Asia*. Retrieved from https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2046382
12. Ghalib, S. (2017). Microfinance strategy and its impact on profitability and operating efficiency: evidence from Indonesia. *Investment Management and Financial Innovations*, 14(2), 51-62. [https://doi.org/10.21511/imfi.14\(2\).2017.05](https://doi.org/10.21511/imfi.14(2).2017.05)
13. Gibson, M. S. (2003). Is corporate governance ineffective

- in emerging markets? *Journal of Financial and Quantitative Analysis*, 38(1), 231-250. <https://doi.org/10.2307/4126771>
14. Goddard, J., Molyneux, P., & Wilson, J. O. S. (2004). Profitability of European Banks: A Cross-Sectional and Dynamic Panel Analysis. *E Manchester School*, 72(3), 363-381. Retrieved from <https://onlinelibrary.wiley.com/doi/full/10.1111/j.1467-9957.2004.00397.x>
 15. Greene, W. H. (2017). *Econometric Analysis* (8th ed.). Prentice Hall. Retrieved from <https://www.pearson.com/us/higher-education/program/Greene-Econometric-Analysis-8th-Edition/PGM334862.html>
 16. Halkos, G. E., & Salamouris, D. S. (2004). Efficiency measurement of the Greek commercial banks with the use of financial ratios: A data envelopment analysis approach. *Management Accounting Research*, 15, 201-224. Retrieved from https://mpira.ub.uni-muenchen.de/2858/1/MPRA_paper_2858.pdf
 17. Haryati, S., & Kristijadi, E. (2014). The Effect of GCG Implementation and Risk Profile on Financial Performance at Go-Public National Commercial Banks. *Journal of Indonesian Economy and Business: JIEB*, 29(3), 237. Retrieved from <https://journal.ugm.ac.id/jieb/article/view/6471/5100>
 18. IMF (1998). *East Asian Crisis: Causes and Cure, Finance and Development*. Retrieved from <http://www.imf.org/external/pubs/ft/fandd/1998/06/imfstaff.htm>
 19. Jensen, M. C. (1983). Organization theory and methodology. *Accounting Review*, 319-339.
 20. Jensen, M. C., & Ruback, R. S., 1983. The market for corporate control: The scientific evidence. *Journal of Financial Economics*, 11(1-4), 5-50. [https://doi.org/10.1016/0304-405X\(83\)90004-1](https://doi.org/10.1016/0304-405X(83)90004-1)
 21. Laeven, L., & Levine, R. (2009). Bank governance, regulation and risk taking. *Journal of Financial Economics*, 93(2), 259-275. <https://doi.org/10.1016/j.jfineco.2008.09.003>
 22. La Porta, R., Lopez-de-Silanes, F., Shleifer, A., & Vishny, R. W. (2000). Agency problems and dividend policies around the world. *The Journal of Finance*, 55(1), 1-33. <https://doi.org/10.1111/0022-1082.00199>
 23. Love, I. (2011). *Corporate governance and performance around the world: What we know and what we don't*. The World Bank Research Observer. <https://doi.org/10.1093/wbro/lkp030>
 24. Lutfi, L., Silvy, M., & Iramani, R. (2014). The role of board of commissioners and transparency in improving bank operational efficiency and profitability. *Journal of Economics, Business & Accountancy Ventura*, 17(1), 81-90. Retrieved from <https://journal.perbanas.ac.id/index.php/jebav/article/view/268>
 25. Mongid, A. (2007). The Political Openness of Banking System, Political Governance, Law Enforcement, and Cost of Banking Crisis: Indonesia in the International Perspective. Paper delivered at 32nd Annual Conference of FAEA. Bangkok, and December 7-8. Retrieved from <https://ssrn.com/abstract=3123533>
 26. Mongid, A., & Muazaroh, M. (2017). On the nexus between risk taking and profitability: Evidences from Indonesia. *International Journal of Business and Society*, 18(2), 271-284. Retrieved from <http://www.ijbs.unimas.my/images/repository/pdf/Vol18-no2-paper4.pdf>
 27. Mongid, A., & Tahir, I. M. (2011). Impact of corruption on banking profitability in ASEAN countries: An empirical analysis. *Banks and Bank Systems*, 6(1), 41-48. Retrieved from [https://business-perspectives.org/journals?task=callelement&format=raw&item_id=3803&element=e46cdb75-ca7e-4c69-97ee-741acaab6046&method=download&args\[0\]=0](https://business-perspectives.org/journals?task=callelement&format=raw&item_id=3803&element=e46cdb75-ca7e-4c69-97ee-741acaab6046&method=download&args[0]=0)
 28. Murharsito, Fauziah, F. E., Kristijadi, E., & Iramani, R. (2017). Provincial corruption and local development bank performance. *Economic Journal of Emerging Markets*, 9(1), 66-73. <https://doi.org/10.20885/ejem.vol9.iss1.art7>
 29. Nur'ainy, Remmy, Bagus Nurcahyo, Sri Kurniasih A., & Sugiharti (2013). Implementation of Good Corporate Governance and Its Impact on Corporate Performance: The Mediation Role of Firm Size (Empirical Study from Indonesia). *Global Business and Management Research: An International Journal*, 5(2 & 3). Retrieved from <https://www.questia.com/library/journal/1G1-349488994/implementation-of-good-corporate-governance-and-its>
 30. Okike, E., & Turton, A. (2009). Corporate Governance Reform within the UK Banking Industry and its Effect on Firm Performance. *Corporate Ownership & Control*, 7(1-4), 456-470. <https://doi.org/10.22495/cocv7i1c4p3>
 31. Sastrosuwito, S., & Suzuki, Y. (2012). The determinants of post-crisis Indonesian banking system profitability. *Economics and Finance Review*, 1(11), 48-57. Retrieved from http://www.businessjournalz.org/articlepdf/EFR_11107.pdf
 32. Subanidja, S., Rajasa, A., Suharto, E., & Atmanto, J. D. (2016). The determinants of firm value: The role of earnings management and good corporate governance. *Corporate Ownership & Control*, 13(4-4), 609-615. Retrieved from <http://www.virtusinterpress.org/IMG/pdf/cocv13i4c4p10.pdf>
 33. Suhartono, S. (2017). Productive efficiency of banks in ASEAN countries. *Banks and Bank Systems*, 12(2), 91-99. [http://dx.doi.org/10.21511/bbs.12\(2\).2017.09](http://dx.doi.org/10.21511/bbs.12(2).2017.09)
 34. Stata, Stata Manual Book. Retrieved from <https://www.stata.com/manuals13/u.pdf>
 35. Williams, B. (2014). Bank risk and national governance in Asia. *Journal of Banking & Finance*, 49, 10-26. <https://doi.org/10.1016/j.jbankfin.2014.08.014>