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**Ima Andriyani, Rosalina Pebrica Mayasari, Dwi Septa Aryani**

Department of Management Faculty of Economy Universitas Tridinanti Palembang

Jl. Kapten Marzuki No.2446, Palembang, 30129, Indonesia

✉ Corresponding Author:

**Ima Andriyani:**

Tel +62 711 355 961;

Fax. +62 711 358 566

Email: [ima\\_andriyani@yahoo.co.id](mailto:ima_andriyani@yahoo.co.id)

**Ima Andriyani (Indonesia), Rosalina Pebrica Mayasari (Indonesia), Dwi Septa Aryani (Indonesia)**

## **Soundness Rating of Commercial Banks Before and After Implementation of RGEC Method in Indonesia**

### **Abstract**

This research aims to analyze the differences in the soundness of commercial banks before and after the implementation of Risk Profile, Good Corporate Governance, Earning, Capital (RGEC) method in Indonesia. The unit of analysis is a commercial bank with purposive sampling method of 10 banks. The study period is 2008-2016. Data analysis technique using comparative test with a different test of t-test for a related sample. Hypotheses testing with paired sample t-test and data processing with SPSS 24. The research findings show that the research model based on F test is fit so that the model formed can be used to test the difference of soundness level of commercial banks. Referring to each RGEC variable, it is found that the risk profile proxy with Non Performing Loan (NPL) and earning with proxy Net Interest Margin (NIM) not significant before and after RGEC implementation while Good Corporate Governance (GCG) and Capital Adequacy Ratio (CAR) have significant difference before and after the implementation of RGEC. This study for GCG testing still uses self-assessment which can be seen directly on the score of each bank.

**Keywords:** Capital; Earning; Good Corporate Governance; Risk Profile  
**JEL Classification:** G21; G34

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### **Abstrak**

*Penelitian ini bertujuan untuk menganalisis perbedaan tingkat kesehatan bank umum sebelum dan sesudah implementasi metode Risk Profile, Good Corporate Governance, Earning, Capital (RGEC) di Indonesia. Unit analisis adalah bank umum dengan metode purposive sampling sebanyak 10 bank. Periode penelitian adalah 2008-2016. Teknik analisis data menggunakan uji komparatif dengan uji beda t-test. Pengujian hipotesis dengan paired sample t-test dan pengolahan data dengan SPSS 24. Temuan penelitian menunjukkan bahwa model penelitian berdasarkan uji F adalah fit sehingga model yang dibentuk dapat digunakan untuk menguji perbedaan tingkat kesehatan bank umum. Merujuk pada masing-masing variabel RGEC ditemukan bahwa risk profile yang diproksi dengan Non Performing Loan (NPL) dan earning yang diproksi Net Interest Margin (NIM) terbukti tidak memiliki perbedaan signifikan sebelum dan sesudah implementasi RGEC sedangkan good corporate governance dan capital diproksi oleh Capital Adequacy Ratio (CAR) terbukti memiliki perbedaan signifikan antara sebelum dan sesudah implementasi RGEC. Penelitian ini untuk pengujian GCG masih menggunakan penilaian self assessment yang langsung dapat dilihat dari skor masing-masing bank.*

**Kata kunci:** Modal; Laba; Tata Kelola; Profil Risiko

## Soundness Rating of Commercial Banks Before and After Implementation of RGEC Method in Indonesia

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The experience of the global financial crisis led to increase effectiveness of risk implementation and Good Corporate Governance (GCG) for the banking world in Indonesia. The objective of that banks are able to recover the services of banking activities. Management of risk management and GCG implementation are expected to be more resilient banks in the face of crisis. Implementation of GCG will reduce some of the costs of eliminating non-performing loans (Bastomi et al., 2017).

The fundamental objective of the banking business is giving the financial services to people (Yuliani, 2007). If the bank is able to maintain its performance well, especially its high profitability, the business prospects can be grow and be able to fulfill the prudential banking requirements. The bank's business activities include three things including funding, lending and providing services to the community. The synergy of these business activities will maximize profit during the bank operation, in which the bank is required to have better earnings performance. Profit performance becomes one of the reflection of the bank's soundness criteria that is earnings ratio. The measurement of bank soundness is done thoroughly to find out the success of banking so that necessary method in assessing bank soundness.

The current rating of bank soundness in Indonesia has been using RGEC method through PBI No.13/1/PBI/2011 and SEBI No.13/24/DPNP as of January 2012 replacing the old method of bank soundness assessment by CAMELS method. The stages in RGEC are risk-oriented, proportionality, materiality, significance, comprehensive and structured require the commercial bank to conduct self-assessment and consolidation.

The research of several previous studies on the RGEC method is Ramadhany, Suhadak, & Zahroh

(2015) and Putri & Damayanthi (2013) by looking at the differences between large banks and small banks using RGEC found that there is no difference in soundness levels between large banks and small banks with the period 2011-2012. Research with the object of commercial banks and using RGEC method has Kusumawati (2014), Anggraini, Dzulkirom, & Saifi (2015), and Ramadhany, Suhadak, & Zahroh (2015). RGEC at commercial banks in Indonesia, especially the period after three years of implementation. The next section of this paper is to explain the method of research, results and discussion. The final part of the paper are conclusions and suggestions.

### HYPOTHESES DEVELOPMENT

The new bank's general soundness rating is the RGEC method implemented in 2012. PBI No.13/1/PBI/2011 regarding the rating of soundness commercial bank. The PBI supersedes previous PBI No.6/10/PBI/2004 concerning commercial bank rating system which has been in effect for almost seven years. The technical guidance of the implementation of refers to SEBI No.13/24/DPNP. Assessment of RGEC actually has similarities in the assessment of risk profile, earnings and capital.

Inappropriate with the PBI No.13/1/PBI/2011 concerning the rating of commercial banks, banks are required to conduct a bank rating based on the risk-based bank rating. The bank's rating is performed on an individual or consolidated basis. The stages of the bank's assessment of RGEC may be called the bank's soundness assessment model that is loaded with risk management. According to BI in the PBI, the bank for risk oriented, proportionality, materiality, and significance, and comprehensive and structured. The framework of this research on Figure 1.

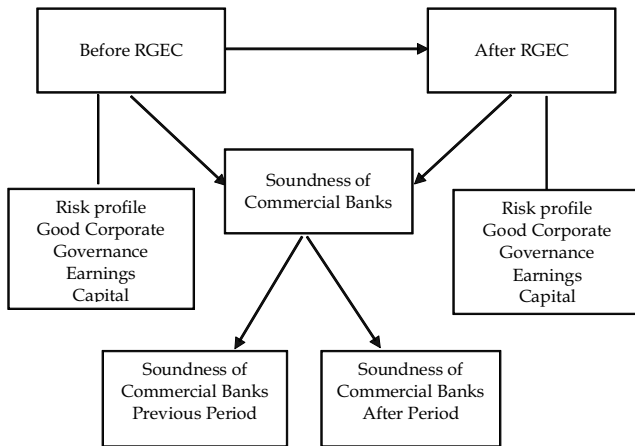


Figure 1. Research Framework

Based on the theory and some researches related to RGEC method at commercial bank hence hypotheses of this research are:

H<sub>1</sub>: there is a significant difference of risk profile between before and after implementation of RGEC method.

The soundness level of the bank is the result of an assessment of the bank's condition on the risks and performance of the bank or in another sense of soundness of the bank is a reflection that a bank can perform its functions well. Bank soundness is measured by various assessments ranging from capital, asset quality, management, earnings, and liquidity. Assessment of these factors is undertaken through the assessment of the industry and the national economy.

This risk profile study is defined as the risk of giving credit to the debtor. The risk profile variable proxied by Non Performing Loans (NPL) is the percentage of non performing loans (with criteria of substandard, doubtful and loss) to the total loan disbursed by the bank. Credit risk can be caused by several causes. The cause can be sourced from the debtor. According to Thalib (2016) the risk can be generated from the performance of one or more of the bad debtors, can be caused by the credit management is not careful including how the assessment

of collateral and the character of the debtor. The higher the ratio, the worse the credit quality of the bank, the higher the number of non-performing loans, the possibility of a bank in increasingly troubled conditions. The results of the study Iqbal (2017) indicate that the impact is large enough for conventional banks if there is an increase in non-performing loans. The impact of the NPL will have a significant effect on the achievement of bank profit so that in the end with the application of RGEC method the bank will book an optimum profit. Loans in this case are credits granted to third parties excluding credits to other banks.

H<sub>2</sub>: there are significant differences between Good Corporate Governance before and after the implementation of the RGEC method.

GCG is a system used in directing and controlling the business activities of a company (Ali, 2006). GCG can also be interpreted as the relationship between the board of commissioners, board of directors, stakeholders, and shareholders of the company. Based on PBI No.13/1/2011 which obliges banks in Indonesia to incorporate GCG factor into one of the banks soundness rating, it is deemed necessary to have a big responsibility in maintaining the stability of the banking system so as to obtain the predicate of application sound corporate governance.

H<sub>3</sub>: there is a significant difference between the earning before and after the implementation of the RGEC method

Profitability is the ability of a bank to make a profit. The element of bank income depends on the services offered by the bank. Banks provide loans, invest portfolios, make remittances and other services. Banks earn income consisting of interest on the loan or compensation for services provided by the bank and profit on investment portfolio. Assessment of profitability factor using Net Interest Margin (NIM) ratio. This ratio illustrates the level of net interest income earned by using earning assets owned by the bank, so the greater the value of NIM

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it will be profits derived from interest income and will affect the level of soundness of bank financial performance.

$H_4$ : there are significant differences between Capital before and after the implementation of the RGEC method

Assessment of capital factor includes evaluation of capital adequacy and adequacy of capital management. Capital valuation using Capital Adequacy Ratio (CAR). If the lower is owned by the bank, it is the bank's capital of assets. CAR means capital owned to bear the risk asset.

### METHODS

The source of research data is secondary data by accessing Indonesian banking directory from [www.bi.go.id](http://www.bi.go.id) and [www.ojk.go.id](http://www.ojk.go.id) and Infobank Magazine from 2008-2017. Data collection is documentation study. The population of this study is amounted to 119 based on Indonesian Banking Statistics year 2014. Sampling is done by purposive sampling method. Sample criterion is the bank has the largest asset and have good performance and have data in accordance with research variables. Based on the criteria selected by 10 commercial banks, namely Bank Mandiri Tbk, Bank BRI Tbk, Bank BNI Tbk, Bank BTN Tbk, Bank BCA Tbk, Bank CIMB Niaga Tbk, Bank Pan Indonesia Tbk and Bank Permata, Bank Danamon Indonesia Tbk and Bank Mega Tbk. Research period 2008-2016.

The research designed to explain with the type of comparative research which is the implementation of RGEC method. The population of research is all commercial banks in Indonesia amounted to 119 based on Indonesian Banking Statistics Year 2014. Sampling by purposive sampling method. Sample criterion is the bank has the largest asset and have good performance and have data in accordance with research variables. Based on the criteria selected by 10 commercial banks, namely Bank Mandiri Tbk, Bank BRI Tbk, Bank BNI Tbk, Bank BTN Tbk, Bank BCA Tbk, Bank CIMB Niaga Tbk, Bank Pan Indonesia Tbk and Bank Permata, Bank Danamon Indonesia Tbk and Bank Mega Tbk. Research period 2008-2016. Data collection techniques is documentation by accessing the website of each research sample, infobank magazine June 2008-2016. Data analysis techniques are descriptive and inferential statistically. Hypotheses testing using paired t-test for paired samples. The study period is 2008-2016.

The GCG assessment indicator is using the weighting of the valuation based on the composite value of the provisions of Bank Indonesia. The composite value is shown in Table 1.

**Table 1.** Rating of GCG Level

Composit Value	Predicate of Composite
Composit Value < 1.5	Very Good
$1.5 \leq$ Composit Value < 2.5	Good
$2.5 \leq$ Composit Value < 3.5	Pretty Good
$3.5 \leq$ Composit Value < 4.5	Not Good
$4.5 \leq$ Composit Value < 5	Bad

Source: Bank Indonesia, 2014

**Table 2.** Descriptive statistics (N=40)

Variables	Condition	Minimum	Maximum	Average	Standart Deviation
NPL (%)	Before	0,49	18,63	3,77	4,48
	After	0,38	8,83	2,67	1,71
GCG	Before	0,00	0,00	0,00	0,00
	After	1,00	3,00	1,78	0,58
NIM (%)	Before	1,60	11,30	6,11	2,12
	After	0,87	9,60	6,02	1,61
CAR (%)	Before	10,85	21,79	15,84	2,44
	After	14,24	26,21	17,93	2,79

**Table 3.** Normality Test Shapiro-Wilk

Variable	Condition	Statistic	Sig	Information
NPL (%)	Before	0,613	0,000	Abnormal Distribution
	After	0,767	0,000	Abnormal Distribution
GCG	Before	-	-	-
	After	0,000	0,000	Abnormal Distribution
NIM (%)	Before	0,885	0,001	Abnormal Distribution
	After	0,945	0,050	Normal Distribution
CAR (%)	Before	0,968	0,305	Normal Distribution
	After	0,930	0,017	Abnormal Distribution

## RESULTS

The results are discussed descriptively and inferentially. Descriptive statistical results provide an overview of the soundness of commercial banks with RGEC method before and after its application. The following is the result of the description of the data in Table 2.

Table 2 shows that the average NPL of commercial banks in this study is 3.77%, which means that the projected profile profile with NPLs before the RGEC method is applied. After the implementation of RGEC there was an average decrease of 2.67%. This shows that the RGEC is able to reduce the NPL at commercial banks that become the sample of research. Referring to the description of the NPL data below NPL before. GCG composite values between before and after on average for commercial banks got better. Ie GCG before 0.00 and after rising to 1.78. The composite value before 0.00 is due to the new RGEC effective 2012 so that GCG data prior to the implementation of RGEC is not yet available. This shows that the importance for banks in business activities to pay attention to good corporate governance based on the basic principles of GCG set by the regulator in Indonesia.

The average of NIM between pre and post is also different. The average NIM before RGEC is lower than the average NIM after RGEC. This means that after the enactment of RGEC, the bank seeks to

increase the NIM derived from interest income. The CAR variable as a proxy of capital shows good results because RGEC is applied. The average of CAR before is 15.84% and after 17.93% means that the bank will be touched the capital adequacy ratio so that the public will be assured of the deposited funds. Maximum CAR value between before and after can happen difference. CAR increase between before and after, meaning commercial bank in Indonesia from the side of capital adequacy have good. Table 2 also shows the standard deviation or standard deviation of the research variables. It appears that it is not too different between before and after. RGEC for all variables studied. Based on the above explanation then descriptively from the variables studied only RGEC instead of difference loans while the other variables show better bank soundness performance. Prior to hypotheses testing, the condition of use of t-test paired adalh must be ensured data normality. This study has 40 data so that the normality testing tool uses the Shapiro-Wilk test. The results of normality test data shown in Table 3.

Table 3 shows that the NPL after, before and after the GCG, the NIM before and after is not normally distributed. This means that the distribution of observations is relatively small so that distributed it can continue for hypotheses testing. Before the hypotheses testing will be discussed about the relationship between banks soundness levels before and after RGEC can be seen in the following table:

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**Table 4.** Relationship Before and After RGEC

	Correlation	Sig.
Pair 1 NPL before dan after	-0,017	0,917
Pair 2 GCG before dan after	0,000	0,000
Pair 3 NIM before dan after	0,744	0,000
Pair 4 CAR before dan after	-0,207	0,201

Table 4 shows the relationship between the NPL variables before and after the implementation of the RGEC method. It appears that there is no correlation or correlation between NPLs before and after RGEC at  $\alpha= 5\%$ . That is, the problem of non-performing loans in commercial banks is not proven to be correlated. Furthermore, the GCG variable before and after RGEC proved no correlation with the test results on the significance of more than 5% so that it can be interpreted that commercial banks after applied RGEC then the level of bank soundness that no correlation. NIM before and after the implementation of RGEC is shown by the numbers correlation of 0.744 and a significance level of less than 5%. CAR variable as a proxy of capital indicates there is no correlation.

After testing the normality and correlation then followed by testing the hypotheses by using a paired t-test or known as t-test paired. This test aims to compare a similar variable but observations made at different times or periods. The paired t-test results are shown in Table 5.

### DISCUSSION

The findings of the research are indicated in Table 5 that there is no significant difference in soundness of commercial banks as measured by RGEC so that  $H_1$  is rejected. RGEC in accordance

with PBI No.13/1/PB/2011 where the bank in conducting the soundness assessment must use a risk-based approach. One of the measurements is the risk profile. There is no difference between NPL before and after the implementation of RGEC indicates that commercial banks in fixed fund allocation activities based on the principle of caution so that NPLs do not experience significant differences.

Risk profile banking includes credit risk, liquidity risk, market risk, operational, law, strategy, compliance and reputation. The Non Performing Loan (NPL) is a non-performing loan or non-performing loan. Measurement of NPL by looking at the percentage of nonperforming loans to total loans disbursed by banks. The smaller the value of NPL then the performance of the bank will be better. The provision of OJK is  $<5\%$  meaning this performance is smaller then the better. The findings of this study differ from the results of research (Putri & Damayanthi, 2013) in which the study distinguishes between large banks and small banks by using the Mann-Whitney test method.

Referring to Table 5 it appears that GCG before and after the implementation of RGEC is empirically proven so that  $H_2$  is accepted. The research results indicate that there are differences in GCG variables obtained from self assessment with final value is composite of weights 1 to 5. Referring to descriptive statistics presented in Table 2 where the average GCG composite value of the research sample is prior to the implementation of 0.000 and after the implementation of 1.78. The findings on GCG are consistent with (Putri & Damayanthi, 2013) for major banks and small banks categories. The results of previous research indicate that there are differences in GCG between large and small banks.

**Table 5.** Hypotheses Test Results with T-test paired

	t	Sig. (2-tailed)	Information
Pair 1 NPL before dan after	1,436	0,159	$H_1$ Rejected
Pair 2 GCG before dan after	-19,463	0,000	$H_2$ Accepted
Pair 3 NIM before dan after	0,386	0,701	$H_3$ Rejected
Pair 4 CAR before dan after	-3,257	0,002	$H_4$ Accepted

The findings of this study for earning test proxy with NIM shows no difference so that  $H_3$  rejected. Empirical evidence of this study indicates that OJK and BI. This provision refers to the BI rate which would be an external factor for banks to adjust the provisions. The high NIM shows the higher the bank's financial performance. This study used NIM while the previous research used more ROA as in (Anggraini, Dzulkirom, & Saifi, 2015, Hendrayana & Yasa, 2015, Kusumawati, 2014, Ramadhany, Suhadak, & Zahroh, 2015; Wulandari & Mertha, 2017).

Findings about the difference between capital and the implementation of RGECC RGECC finds the RGECC empirical evidence are changes in the increase. Commercial banks seek to maintain capital adequacy for the soundness insurance for the sustainability of the bank business activities can be seen from the adequacy of capital. Capital is proxied by CAR is the ability of banks to guarantee their own capital with risk-weighted assets. The minimum CAR is 8% and the higher the better.

Referring to the descriptive statistics it appears that the average CAR before RGECC implementation is 15.84%. This figure indicates that the commercial banks have a very soundness capital category ratios before the implementation of RGECC. The fact also shows after the implementation of RGECC there is an increase in the average of CAR ratio of commercial banks almost 19%.

The bank's capital is the size of the bank group because the banking regulation in Indonesia has classified the banks according to Commercial Banks and Business Activities (BUKU). Each BOOK is based on core capital group where for group with core capital Rp 30 trillion and above is BOOK 4; BOOK 3 has a core capital of Rp 5 trillion up to below Rp 30 trillion; BOOK 2 has a core Rp1 trillion up to under Rp 5 trillion and BOOK 1 has core capital below Rp 1 trillion.

The findings of this study (Kusumawati, 2014; Yuliani, 2007) that CAR contributes to the increase

in bank earnings and RGECC method is able to increase the CAR so that ultimately the performance of the bank becomes better. In contrast to (Putri & Damayanthi, 2013) that there is no CAR difference between large banks and small banks. Similarly, the results of research (Witjaksono & Nathalia, 2014) that the CAR has no effect on stock returns for banks in groups of BOOK 3 and BOOK 4.

## CONCLUSION AND SUGGESTIONS

### Conclusion

Some of the conclusions of this study that the profile with the NPL after the implementation of RGECC proved to have no significant difference. GCG variables proved significant after RGECC implementation, earnings did not have significant difference while RGECC provided different models after different applications. Commercial banks seek to maintain capital adequacy for the soundness insurance for the sustainability of the bank business activities can be seen from the adequacy of capital.

### Suggestions

Based on the above conclusions, suggestions for the banking sector, especially commercial banks that carry out activities to raise funds, allocate funds and provide services to the public need to pay attention to bank performance, especially the ratios used with the RGECC method. Two different ratios with the CAMELS method of risk profile and good corporate governance make the bank wajib self assessment so the application of valuation based on composite value make the bank must have good performance with existing process. This research is based on ratios that are quantitative so that in-depth information that is qualitative has not been accommodated. This research has not differentiated banks according to core capital in BOOK 3 and BOOK 4 so that future research can be analyzed by differentiating banks according to the BOOK group.

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