



# Effectiveness of Risk Profile, GCG, Earning and Capital (RGEC) Methods on Managerial Performance Assessment in Green Banking Implementation

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**Abstract.** The purpose of this study was to determine the soundness level of Indonesia's national private banking, namely Conventional Banks (PT. Bank BCA and PT. Bank Bukopin) and Islamic Banks PT. Bank BCA Syariah and PT. Bank BTPN Syariah) for the 2020–2022 period in supporting the green banking program as measured using the RGEC method. The results of the study show the Risk Profile of PT. Bank BCA is in good health and PT. Bank Bukopin is in an unhealthy state. Meanwhile PT. Bank BCA Syariah is in good health and PT. Bank BTPN Syariah is in an unhealthy condition. From the GCG factor, all companies have implemented GCG principles properly. On the profitability factor, PT. Bank BCA has a very healthy predicate, while PT. Bank Bukopin has an unhealthy predicate. For PT. Bank BCA Syariah has an alarming level of health, while PT. Bank BTPN Syariah has a very healthy predicate. In terms of capital, Conventional Banks and Islamic Banks are said to be good because they have capital to overcome risks. Good bank health can support the Green Banking program. If the bank is not healthy, the bank will suffer losses. Thus, banks with poor soundness are expected to make improvements. Banking was also able to show excellent managerial performance due to an increase in the company's Capital Expenditure from year to year. Thus it can be concluded that national private banks in Indonesia are healthy and feasible to implement the Green Banking program.

**Keywords:** RGEC Method · conventional banks · Islamic banks · Capital Expenditure

## 1 Introduction

On data the World Health Organization (WHO) the global health crisis is increasing, where around 7 million people lose their lives per year. Hence the slogan returning to nature began to be heard everywhere, including the banking industry in Indonesia. Efforts

to make the industry green and are in process of restoring natural environment with a view ensuring ecological balance sustainable and safety green., Malhotra & Bhardwaj (2013) [6]. The United Nations Environment Program (UNEP, 2014) defines green banking as “one that results in while significantly reducing environmental risk and ecological scarcity, increased human well-being and social equity”.

Green banking is also one of the influences of the banking sector in Indonesia today, especially since Bank Indonesia (BI) requires all banks in Indonesia to implement green banking practices in their business.

Y Firdiansyah (2020) [3] said that almost all state-owned banks have implemented green banking practices and reported them in the Bank’s annual reports and sustainability reports for 3 consecutive years, namely 2017, 2018 and 2019.

Diah Anggraini, Dwi Nita Aryani, Irawan Budi Prasetyo (2020) [4] said that green banking and bank efficiency (BOPO) policies affect bank profitability so that the adoption of green banking in banking must be fully supported in terms of strengthening the use of electronic information technology to support paperless activities in operations daily. This is necessary so that every bank in Indonesia contributes and supports t implementation regulation OJK Number 51/PJOK.03/2017 regarding the Financial Program for Issuers, Financial Services Institutions, and Public Companies in implementing environmental and risk management in their business processes.

In supporting the Green Banking program, of course, it must be supported by the health of the bank. Budisantoso, Totok and Nuritomo (2014) [5] that health bank is a very important element in the world of banking for the survival of banking institutions. Bank health is the bank’s ability to carry out normal banking operations and be able to fulfill its obligations in accordance with applicable regulations.

Safitri, Ervita, Fildzhah Rani, and Darma Yanti (2021) [8] said that based on the healthy of Banks using the RGEC method, Conventional Commercial Banks are in the very healthy category with a rating of 1 (PK-1), while Islamic Commercial Banks are in the unhealthy category with a rating composite 4 (PK-4) this shows a performance Conventional Commercial Banks is better than Islamic banks.

In contrast to the research by Rizal, Fitra, and Muchtim Humaidi (2021) [7] which said that the average BUS NPF ratio in Indonesia for 2015–2020 was 3.99% indicating that BUS is in the title of Healthy. The smaller the NPF, the healthier the bank. The average BUS ROA ratio for 2015–2020 is 1.03%, indicating that the BUS is considered quite healthy. The greater the ROA, the healthier the bank. And the average 2015–2020 BUS CAR ratio of 18.73% indicates that BUS is in the title of very healthy. The bigger the CAR, the healthier the bank. These facts indicate that the performance of BUS in Indonesia needs to be improved in order to maximize the profit (ROA).

From the differences of opinion, this researcher will prove that banks in Indonesia are in good health and ready to implement the Green Banking program. We chose this research because we wanted to know the healthy of banks in supporting the Green Banking program. We chose to do research on private banks to support green banking. Because this can be used as a tool to analyze the healthy of bank with other banks and used a benchmark for these banks in unhealthy or healthy category.

## 2 Literature Review

### 2.1 Conventional Bank

A bank is a financial institution to collect funds from the public and channel them back to the community and provide other Kasmir (2016: 3) [2]. The main function of the bank is to collect funds from the community and distribute them back to the community for various purposes or as a financial intermediary Santoso and Nuritomo (2014: 9) [5]. PT. Bank BCA the largest private banks in Indonesia engaged in banking and other financial services, BCA operates as a commercial bank. The company started operating in banking since 1957. PT. Bank BCA is also one of the various banks in Indonesia that are used by the public in matters related to finance. Through BCA branches and ATMs that are connected online throughout Indonesia as well as internet mobile banking services, BCA makes transactions easy. Bank Bukopin is a private bank that is engaged in finance. In addition, PT. Bank Bukopin also focuses on 3 other sectors, namely SMEs, micro, consumers. PT. Bank Bukopin is also used by the public to invest or make other transactions. PT. Bank Bukopin has various branches spread across various regions in Indonesia.

### 2.2 Islamic Bank

Law Number 10 of 1998 Islamic banks operate on the basis of Islamic principles, agreements between banks and other parties based on Islamic law for depositing money, financing commercial activities and other activities specified in Islamic regulations.

The source of the foundation of Islamic banks is found in the Qs. An-Nisa': 29 [1] which reads:

يَا أَيُّهَا الَّذِينَ آمَنُوا لَا تَأْكُلُوا أَمْوَالَكُم بَيْنَكُم بِالْبَاطِلِ إِلَّا أَنْ تَكُونَ تِجَارَةً عَنْ تَرَاضٍ مِنْكُمْ وَلَا تَقْتُلُوا أَنْفُسَكُمْ إِنَّ اللَّهَ كَانَ بِكُمْ رَحِيمًا

Means:

“O people of faith, do not eat one another of your neighbor’s treasures by a vanity path, except by the consensual way of commerce among you. And ye shall not kill yourselves; verily God is Most Merciful to you. The verse explains that Islamic Banks in carrying out their duties must not come out of the teachings of Islam (vanity) but must help to create prosperity.”

PT. Bank BCA Syariah was established and started its business activities based on islamic principles after Bank Indonesia obtained a islamic business based on BI Governor Decree Number. 12/13/KEP. GBI/DpG/2010 on March 2, 2009, then on April 5, 2010 it officially became a Islamic Bank. BTPN Syariah is a Islamic Bank that has expanded its segment to reach low-productivity underprivileged customers by implementing the Tunas Usaha Rakyat (TUR) Piloting Project in 2010.

### 2.3 RGEC Analysis

The bank tries to carry out normal operational activities and is able to properly finance its obligations in accordance with applicable regulations (Susilo et al. 2000) [9]. Regulation bank Central of Indonesia No. 13, 2011 Article 6, banks to evaluate the healthy level of bank individually use a risk approach (Risk-based) the following factors is:

**Risk-Profile.** Risk assessment includes legal risk, strategic risk, compliance risk and reputation risk, market risk, liquidity risk, credit risk, operational risk, (PBI No. 13/I/PBI/2011). Among the eight risks, credit risk and liquidity risk are used in the research.

**Good-Corporate-Governance (GCG).** Good Cooperate Governance is a system that manages and controls the company to create added value for interested parties., Sutedi, (2012: 2). The method Good-Corporate-Governance was initially analyzed based on Indonesia Central bank Circular Number. 09/12/DPNP 2007. Over time, Indonesia Central bank again issued circular letter Nom. 15/15/DPNP, 2013. Good-Corporate-Governance analysis is grouped into three aspects, namely aspects of governance processes, governance structures, and governance outcomes.

**Earning.** Assessment of profitability is very important because it is used to calculate the rating of the bank's healthy level related to the bank's ability to earn-profits.

**Capital.** Capital is the important factors for a bank because then the bank will run smoothly in activities. Capital is measured using the CAR to measures the capital-adequacy on the ratio of total capital to risk-weighted assets.

**Capital Expenditure.** Expenditures for capital formation are to increase fixed assets/inventories that provide benefits for more than one period, including maintenance costs which aim to maintain their useful life, and increase the capacity and quality of assets.

### 2.4 Green Banking

Green banking is a program that gives priority to sustainability (sustainable environmental preservation) in its business. The role of banking in supporting environmental management (green banking) is in line with Law no. 32 of 2009 concerning Environmental Protection and Management (UUPPLH).

Based on the above, important role greenbanking on business sustainability in the future is very beneficial for all aspects of the industry and for maintaining environmental balance. Business sustainability in the future, which is supported, among others, by the implementation of green technology, is a basic prerequisite for a business to be able to pass through crisis phases, starting from the energy crisis, natural resource crisis, to the human capital crisis. It can be understood that an environmentally friendly industry is actually not only contributing to preserving natural resources which are clearly needed for the company's needs, but also becoming an investment for industrial activities itself because the current trend of society is that people really value environmentally friendly

industrial products. That way, the impact for the company is increasing public interest in its products.

With the regulation governing green banking practices, it is hoped that banks operating throughout Indonesia will soon adopt and implement hujau banking practices which are currently a global issue in an effort to encourage sustainable financial inclusion.

### 3 Methods

Zakarsyi (2008) RGEC method is an update of the CAMELS method in which RGEC uses a Risk Profile calculation which is assessed based on 2 assessment dimensions, namely the assessment of inherent risk and the quality of implementing risk management in bank operational activities so that it makes it easier for banks to measure their health. The RGEC method also uses the Good Corporate Governance system, which is a system that regulates the relationship between stakeholders in order to achieve company goals.

The focus of this research is as follows:

#### 3.1 Research on Conventional Banks and Islamic Banks Using Risk factors

##### Using NPL ratio, LDR ratio, NPF ratio and FDR ratio.

Formula risk profile of conventional banks:

$$NPL = \frac{\text{Problem credit}}{\text{Total credit}} \times 100\% \quad (1)$$

$$LDR = \frac{\text{Total credit}}{\text{3rd party fund}} \times 100\% \quad (2)$$

And Islamic banks is:

$$NPF = \frac{\text{Problem credit}}{\text{Total credit}} \times 100\% \quad (3)$$

$$FDR = \frac{\text{Total credit}}{\text{3rd party}} \times 100\% \quad (4)$$

GCG factors. **GCG analysis is grouped in three aspects, aspects of governance structure, governance process, governance outcomes.**

Earning factors. **Using ROA ratio, NIM ratio for conventional banks, NOM ratio for Islamic banks. Earning assessment can be calculated using 3 formulas, namely:**

$$ROA = \frac{\text{Profit BT}}{\text{Ave total assets}} \times 100\% \quad (5)$$

$$NIM = \frac{\text{Net interest income}}{\text{Ave Earning assets}} \times 100\% \quad (6)$$

$$NOM = \frac{\text{Net interest income}}{\text{Ave Earning assets}} \times 100\% \quad (7)$$

Capital factors. **Using CAR ratio. The formula used is:**

$$CAR = \frac{\text{Capital}}{\text{Risk weighted assets}} \times 100\% \quad (8)$$

Capital expenditure factors. **Using CAPEX ratio. The formula used is:**

$$\text{CAPEX} = \frac{\text{Net increase in fixed assets} - \text{depreciation expense}}{\text{Fixed assets (end year)} - \text{fixed assets (beginning year)}} \quad (9)$$

### 3.2 The Level of Healthy of the Bank Using the RGEC Method

To measure the Risk Profile in conventional banks, it uses NPL and LDR ratios while Islamic banks use NPF and FDR ratios. Calculating GCG as measured by three aspects of GCG. Calculates Earnings as measured by ROA, NIM, and NOM ratios. Calculates Capital as measured by CAR ratio. Describe the results of the analysis of RGEC factors.

### 3.3 Population and Sample

This study uses populations at Conventional Banks (PT. Bank BCA and PT. Bank Bukopin) and Sharia Banks (PT. Bank BCA Syariah and PT. Bank BTPN Syariah). Sampling used the proportional sampling method, namely annual financial reports and quarterly financial reports that have been published for the period 2020 to 2022.

### 3.4 Type and Source Data

The types and sources of data use secondary data in time series data taken from annual and quarterly financial statements for the period 2020 to 2022. BCA and Bukopin as conventional banks while for Islamic banks using annual and quarterly financial statements of BCA Syariah and BTPN Syariah published for the period 2020 to 2022, PT. Bank BTPN Syariah corporate governance report for the period of 2020 and 2021.

## 4 Results

### 4.1 According to the Risk Profile

#### NPL Ratio

BCA implements disciplined risk management in lending, the NPL ratio was recorded at 1.8% at the end of 2020, an increase from 1.3% in 2019. This achievement is still within the limit of the Bank's risk appetite and this is inseparable from the role of regulators in relaxing credit. Based on POJK No. 11/2020 in March 13, can be categorized as collectability 1 or current for debtors who meet the criteria.

This is done in order to reduce the potential for a decline in the performance of financial services institutions and maintain financial stability and support economic

**Table 1.** Composite assessment of PT. Bank BCA's NPL

Years	Ratio	Bank health criteria	Predicate
2020	1,8%	$0\% < \text{NPL} < 2\%$	Very healthy
2021	2,2%	$2\% \leq \text{NPL} \leq 5\%$	Healthy
2022	9,89%	$2\% \leq \text{NPL} \leq 5\%$	Healthy

Source: Data processed 2022

growth. There were fluctuations over the course of 3 years. In 2020 Table 1 NPL of 1.8% which is in the 1st position with a very good predicate because it is less than 5% and in 2021 it is 2.2% with a healthy predicate while the NPL in 2022 NPL is 2.16%, this condition has increased with a healthy predicate. If the NPL ratio is lower, this shows that the quality of bank financing is getting better.

Procedures for granting financing and policies for managing risk have been implemented properly and according to scale, and operational activities are safe and sound, and transparent (Table 2).

In the calculation of PT. Bank Bukopin's NPL, there are fluctuations for 3 years. In 2020 Table 1 NPL was 10.13% with the unhealthy predicate because the NPL was more than equal to 8% and less than 12%, in 2021 it was 11.16% this condition decreased with the unhealthy predicate because the NPL was more than equal to 8% and less than 12%. In June 2022, NPL of 9.89% of this condition increased from previous years.

If NPL ratio lower, this shows that the quality financing bank getting better. Procedures for providing and policies financing management risk financing been implemented properly and accordance with the bank's business scale, as well as supporting safe and healthy operational activities, and are well documented and administered.

### LDR Ratio

Based on the LDR assessment at PT. Bank BCA, Tbk. From 2020 to 2022, there was an increase in 2020 to 2021. In 2020, the LDR was 65.8% with a very healthy predicate because the LDR was less than 75%. Meanwhile, from 2021 with an LDR of 62% has decreased in 2022 with an LDR of 63.34% with a very good predicate because the LDR is less than 100%. Looking at the LDR ratio, banks are expected to maintain their credit well (Tables 3 and 4).

**Table 2.** Composite assessment of PT. Bank Bukopin's NPL

Years	Ratio	Bank health criteria	Predicate
2020	10,13%	$8\% \leq \text{NPL} \leq 12\%$	Unhealthy
2021	11,16%	$8\% \leq \text{NPL} \leq 12\%$	Unhealthy
2022	9,89%	$8\% \leq \text{NPL} \leq 12\%$	Unhealthy

Source: Data processed 2022

**Table 3.** Composite assessment of PT. Bank BCA's LDR

Years	Ratio	Bank health criteria	Predicate
2020	65,8%	$50\% \leq \text{LDR} \leq 75\%$	Very healthy
2021	62%	$50\% \leq \text{LDR} \leq 75\%$	Very healthy
2022	63,34%	$50\% \leq \text{LDR} \leq 75\%$	Very healthy

Source: Data processed 2022

**Table 4.** Composite assessment of PT. Bank Bukopin's LDR

Years	Ratio	Bank health criteria	Predicate
2020	135,46%	$\text{LDR} > 120\%$	Unhealthy
2021	106,46%	$100\% < \text{LDR} \leq 120\%$	Unhealthy
2022	108,05%	$100\% < \text{LDR} \leq 120\%$	Unhealthy

Source: Data processed 2022

LDR assessment at PT. Bank Bukopin, Tbk. From 2020 to 2022 there was an increase in 2020 to 2021. In 2020, the LDR was calculated at 135.46% with an unhealthy predicate because the LDR was more than 120%. Meanwhile, in 2021 106.46% experienced a decrease in 2022 with an LDR of 108.05% in the unhealthy predicate because the LDR was more than 100%. Looking at the LDR ratio, banks are expected to maintain their credit. If third-party funds are unable to finance excessive credit, the LDR ratio will be higher.

### NPF Ratio

Calculation of NPF Gross at PT. Bank BCA Syariah for 3 years, it is in a very healthy predicate because the ratio is less than 2%. In 2020 the NPF was 0.50% in the very healthy predicate, in 2021 it was 1.13% in the very healthy predicate, but decreased from the previous year, and in 2022 by 1.38% it decreased again but remained in the very healthy predicate.

If the NPF ratio is lower, this shows that the quality of Islamic bank financing is getting better. Policies and procedures for providing financing and risk management have been implemented properly and in accordance with the bank's business scale, as well as supporting safe, healthy, well-documented and administrated operational activities (Tables 5 and 6).

Based on the calculation of Gross NPF at PT. Bank BTPN Syariah for 3 years, it has fluctuated. In 2020 the NPF of 1.91% in the predicate is very healthy because the NPF is less than 2%. In 2021 it was 2.37% and in 2022 it was 2.36% in a healthy predicate because the NPF was less than 5%.

If NPF ratio is lower, this shows that the quality of Islamic bank financing is getting better. Procedures for providing and Policies procedures for providing financing and managing risk of financing have implemented properly and in accordance with the



**Table 5.** Composite assessment of PT. Bank BCA Syariah's NPF

Years	Ratio	Bank health criteria	Predicate
2020	0,50%	0% < NPL < 2%	Very healthy
2021	1,13%	0% < NPL < 2%	Very healthy
2022	1,38%	0% < NPL < 2%	Very healthy

Source: Data processed 2022

**Table 6.** Composite assessment of PT. Bank BTPN Syariah's NPF

Years	Ratio	Bank health criteria	Predicate
2020	1,91%	0% < NPL < 2%	Very healthy
2021	2,37%	2% ≤ NPL < 5%	Healthy
2022	2,36%	2% ≤ NPL < 5%	Healthy

Source: Data processed 2022

business scale banks, as well as supporting safe and healthy operational activities, and are well documented and administered.

### FDR Ratio

Based on FDR's assessment of PT. Bank BCA Syariah from 2020 to 2022, it has decreased every year. In 2020, FDR was 81.3% and in 2021 it was 81.4% with a healthy predicate because FDR was less than 85%. Meanwhile, in 2022, 88.74% in the predicate is quite healthy because FDR is less than 100% which means it has decreased from the previous year. Seeing FDR's ratio getting higher, banks are expected to maintain their credit. If third-party funds are unable to finance excessive credit, FDR's ratio will be even higher (Tables 7 and 8).

Based on FDR's assessment of PT. Bank BTPN Syariah from 2020 to 2022, there was an insignificant increase. From 2020, FDR calculated at 97.37%, in 2021 at 95.17% and in 2022 at 95.60%. For the past 3 years FDR has been ranked 4th with the title of unhealthy because FDR is less than 100%. Seeing FDR's ratio getting higher, banks are expected to maintain their credit. If third-party funds are unable to finance excessive credit, FDR's ratio will be even higher.

**Table 7.** Composite assessment of PT. Bank BCA Syariah's FDR

Years	Ratio	Bank health criteria	Predicate
2020	81,3%	75% < LDR ≤ 85%	Healthy
2021	81,4%	75% < LDR ≤ 85%	Healthy
2022	88,74%	75% < LDR ≤ 85%	Healthy Enough

Source: Data processed 2022

**Table 8.** Composite assessment of PT. Bank BTPN Syariah's FDR

Years	Ratio	Bank health criteria	Predicate
2020	97,37%	$85\% < \text{LDR} \leq 100\%$	Healthy Enough
2021	95,17%	$85\% < \text{LDR} \leq 100\%$	Healthy Enough
2022	95,60%	$85\% < \text{LDR} \leq 100\%$	Healthy Enough

Source: Data processed 2022

## 4.2 According to GCG

### PT. Bank BCA

Implementation GCG within BCA is important in order to support sustainable performance business still attention to interests of shareholders and stakeholders. Good corporate governance supports the achievement of the Bank's vision and mission and provides benefits and added value for shareholders and stake holders. In addition, good corporate governance also maintains and improves continuity business competitive in long term.

BCA has implemented in GCG principles, namely accountability, transparency, responsibility, fairness, independence, and equality in every aspect of business and the implementation of relationships with shareholders and stake holders. This is done, among others:

1. Provide information in a timely, accurate manner adequate, and clear;
2. Procedures, duties establish policies, and responsibilities for BCA organs;
3. Comply with regulations & laws
4. Carry out
5. Attention Pay to the interests of share holders and stake holders based on equality and fairness in accordance with the benefits and contributions made to BCA.

In addition, BCA achieved an "Excellent" rating for good corporate governance implementation in 2021. Since 2020, BCA is of the listed in ASEAN category based on the results of an assessment conducted by the Domestic Ranking Body (DRB) using the ASEAN Corporate Governance Scorecard (ACGS) assessment parameters.

In 2019–2020 period, PT BCA, experienced a decline because the points earned by PT.BCA, Tbk did not meet the criteria to get an excellent rating. This can happen due to a decrease in the quality of management based on predetermined aspects and factors. In the year period 2019–2020, PT (BCA once again obtained a Composite Rating of 1. Source: BCA bank statement.

### PT. Bank Bukopin

This self-assessment is intended to map the strengths and weaknesses of the implementation of GCG at Bank Bukopin in terms of three aspects, namely:

*Governance-Structure.* Governance structure aims to see the adequacy of the structure and infrastructure of Corporate Governance so that the process of implementing GCG

principles produces good outcomes for the Company's stakeholders. Including Commissioners, Directors, Committees, and work units. Infrastructure includes policies, procedures and management information systems as well as the duties and functions of each organizational structure.

*Governance-Process.* Objective is to assess the effectiveness of the process of implementing GCG principles supported by adequate Good Corporate Governance structures and infrastructure to produce outcomes that meet stakeholder expectations.

*Governance-Outcome.* Assess to quality of the outcome according to stakeholder expectations. The results of the process of implementing GCG principles supported by the scope of structure and infrastructure of Good Corporate Governance include qualitative and quantitative aspects, including: transparency, laws and regulations, Consumer-protection, Objectivity, Performance, Increasing/decreasing.

The self-assessment includes 11 (eleven) GCG implementation assessments which include:

1. Duties and responsibilities Implementation Board of Commissioners
2. Duties and responsibilities of the Board of Directors
3. Implementation and Completeness of the duties of the Committee
4. conflict of interest
5. compliance function of Implementation
6. Internal Audit function
7. External Audit function
8. Risk management the Internal Control System
9. Provision funds to large exposures and related parties
10. Transparency of Bank's
11. Corporate Governance and internal reporting

#### Bank Strategic Plan

Implementation GCG to Bukopin. Company constantly monitors implementation of GCG by realizing the Corporate-Culture at every level organization by service quality, upholding integrity, and prudential banking in every business-process of the company. Corporate-culture and awareness of the importance of GCG implementation is carried out through internalization processes into systems and procedures as well as formation of a culture in accordance with prevailing norms and values.

Source: Bank BukopinGCG Report (Table 9).

Looking at the comprehensive and structured results, including the governance process, governance structure, and governance outcomes for 2020 and 2021, it is known

**Table 9.** Composite assessment of PT. Bank BCA Syariah's GCG

Years	Ratio	Rank	Predicate
2020	<1,5	1	Excellent
2021	<1,5	1	Excellent

Source: data processed 2022

**Table 10.** Composite assessment of PT. Bank BTPN Syariah's GCG

Years	Ratio	Rank	Predicate
2020	<2,5	2	Good
2021	<2,5	2	Good

Source: data processed 2022

that the implementation of corporate governance in general has been carried out very, very well. This is reflected in the very good and adequate application of the principles of corporate governance (Table 10).

Looking at the comprehensive and structured results, including the governance process, governance structure, and governance outcomes for 2020 and 2021, it is known that the implementation of corporate governance in general has been carried out very, very well. This is reflected in the very good and adequate application of the principles of corporate governance.

### 4.3 According to the Earning

#### ROA Ratio

Seeing this, bank management is expected to maintain bank's performance in managing assets to increase revenue and or reduce costs (Tables 11 and 12).

Based on the ROA calculation at PT. Bukopin in 2020–2022, there is an increase and decrease in bank's performance in measuring level of bank ability to acquire its assets. From 2020 ROA calculated at -4.61% with the predicate of an unhealthy bank, then

**Table 11.** Composite assessment of PT. Bank BCA's ROA

Years	Ratio	Bank health criteria	Predicate
2020	3,3%	1.5% < ROA	Very healthy
2021	3,14%	1.5% < ROA	Very healthy
2022	3,69%	1.5% < ROA	Very healthy

Source: Data processed 2022

**Table 12.** Composite assessment of PT. Bank Bukopin's ROA

Years	Ratio	Bank health criteria	Predicate
2020	-4,61%	ROA < 0% (or negative)	Unhealthy
2021	4,93%	1.5% < ROA	Very healthy
2022	-10,61%	ROA < 0% (or negative)	Unhealthy

Source: Data processed 2022

**Table 13.** Composite assessment of PT. Bank BCA Syariah's ROA

Years	Ratio	Bank health criteria	Predicate
2020	1,1%	0.5% < LDR < 1.25%	Healthy Enough
2021	1,1%	0.5% < LDR < 1.25%	Healthy Enough
2022	1,07%	0.5% < LDR < 1.25%	Healthy Enough

Source: Data processed 2022

increased significantly in 2021 by 4.93% with a very healthy predicate, and experienced a drastic decline again in June 2022 of -10.61%. During these 3 years the ROA assessment has been in a significant up-and-down position. Seeing this, the bank management is expected to manage assets to revenue increase and or reduce costs (Table 13).

Based on the ROA calculation at PT. Bank BCA Syariah in 2020–2022, there was an insignificant decrease in the ratio. From 2020 ROA was calculated at 1.1%, in 2015 it was 1.1%, and in 2016 it was 1.07%. For the last 3 years, the ROA assessment has been ranked 3rd with a fairly healthy predicate because the ROA is less than 1.25%. Seeing this, the bank management is expected to be more able to manage assets to increase revenue (Table 14).

Based on the ROA calculation at PT. Bank BTPN Syariah in 2020–2022, there was a significant increase in the ratio by showing an increase in the bank's performance in measuring the level of bank profitability of its assets. From 2020, the ROA is calculated at 7.16%, in 2021 it is 10.72% and in 2022 it is 11.53%. For the last 3 years, the ROA assessment has been ranked 1st with a very healthy predicate because the ROA is more than 1.5%.

### **NIM Ratio**

From the results of the NIM assessment at PT. Bank BCA, Tbk. in 2020–2022, there was a decrease and increase again. In 2020 NIM was calculated at 5.7% with a very healthy predicate. But in 2021 NIM decreased to 5.1% and in 2022 NIM rose again to 5.13% with a very healthy predicate (Tables 15 and 16).

NIM assessment at PT. Bukopin, Tbk. in 2020–2022, there was an increase. In 2020 NIM was calculated at 0.61% with an unhealthy predicate. However, in 2021 NIM increased to 1.00% and in 2022 NIM again increased to 1.64% with an unhealthy predicate. This should be improved again and bank management must immediately

**Table 14.** Composite assessment of PT. Bank BTPN Syariah's ROA

Years	Ratio	Bank health criteria	Predicate
2020	7,16%	1.5% < ROA	Very healthy
2021	10,72%	1.5% < ROA	Very healthy
2022	11,53%	1.5% < ROA	Very healthy

Source: Data processed 2022

**Table 15.** Composite assessment of PT. Bank BCA's NIM

Years	Ratio	Bank health criteria	Predicate
2020	5,7%	3% < NIM	Very healthy
2021	5,1%	3% < NIM	Very healthy
2022	5,13%	3% < NIM	Very healthy

Source: Data processed 2022

**Table 16.** Composite assessment of PT. Bank Bukopin's NIM

Years	Ratio	Bank health criteria	Predicate
2020	0,61%	$NIM \leq 1\%$	Unhealthy
2021	1,00%	$1 < NIM \leq 1.5\%$	Unhealthy
2022	1,64%	$1 < NIM \leq 1.5\%$	Unhealthy

Source: Data processed 2022

respond to this condition by preparing strategies to increase profit growth and interest income.

### **NOM Ratio**

Based on the calculation of NOM PT. BCA Syariah experienced an insignificant decrease. From 2020 NOM of 1.2%, in 2021 it was 1.2% and in 2022 it was 1.08%. For the last 3 years, PT. Bank BCA Syariah has been ranked 4th with the title of unhealthy. This is very worrying, bank management must immediately respond to this condition by preparing strategies to increase profit growth and interest income.

In general, the Earning factor is ranked 4th which means low rentability ability to anticipate potential losses and increase capital. The application of the principles of accounting, revenue recognition, cost recognition and profit distribution has not been in accordance with applicable regulations (Tables 17 and 18).

Based on the calculation of NOM PT. BTPN Syariah has increased significantly every year. From 2020 NOM of 7.68%, in 2021 it was 11.54% and in 2022 it was 12.17%. For the last 3 years, PT. Bank BCA Syariah has been ranked 1st with a very healthy predicate.

**Table 17.** Composite assessment of PT. Bank BCA Syariah's NOM

Years	Ratio	Bank health criteria	Predicate
2020	1,2%	$1 < NIM \leq 1.5\%$	Unhealthy
2021	1,2%	$1 < NIM \leq 1.5\%$	Unhealthy
2022	1,8%	$1 < NIM \leq 1.5\%$	Unhealthy

Source: Data processed 2022

**Table 18.** Composite assessment of PT. Bank BTPN Syariah's NOM

Years	Ratio	Bank health criteria	Predicate
2020	7,68%	3% < NOM	Very healthy
2021	11,54%	3% < NOM	Very healthy
2022	12,17%	3% < NOM	Very healthy

Source: Data processed 2022

#### 4.4 According to the Capital

##### CAR Ratio

From CAR results of the 2021–2022, it shows that BCA has a very good ability to refute bank assets despite the increase and decrease. In 2020, the CAR ratio was 25.8%, in 2021 the CAR ratio was 25.7%, and in 2022 the CAR ratio was 25.6%. Over the past three years, PT. Bank BCA's CAR ratio assessment has been ranked 1st with a very good predicate because the CAR ratio is more than 12%. This shows that the bank has enough capital to cope with current and future risks (Tables 19 and 20).

From the results of the 2020–2022 CAR assessment, it shows that Bukopin. has a very good ability to refute bank assets despite the increase and decrease. In 2020, the CAR ratio was 12.08%, in 2021 the CAR ratio was 20.26%, and in 2022 the CAR ratio was 18.83%. For the last three years of the CAR ratio assessment, PT. Bank BCA, Tbk. has been ranked 1st with a very good predicate because the CAR ratio is more than 12%. This shows that the bank has enough capital to cope with current and future risks.

**Table 19.** Composite assessment of PT. Bank BCA's CAR

Years	Ratio	Bank health criteria	Predicate
2020	25,8%	12% < CAR	Excellent
2021	25,7%	12% < CAR	Excellent
2022	25,6%	12% < CAR	Excellent

Source: Data processed 2022

**Table 20.** Composite assessment of PT. Bank Bukopin's CAR

Years	Ratio	Bank health criteria	Predicate
2020	12,8%	12% < CAR	Excellent
2021	20,26%	12% < CAR	Excellent
2022	18,83%	12% < CAR	Excellent

Source: Data processed 2022

**Table 21.** Composite assessment of PT. Bank BCA Syariah's CAR

Years	Ratio	Bank health criteria	Predicate
2020	45,3%	12% < CAR	Excellent
2021	41,4%	12% < CAR	Excellent
2022	43,88%	12% < CAR	Excellent

Source: Data processed 2022

**Table 22.** Composite assessment of PT. Bank BTPN Syariah's CAR

Years	Ratio	Bank health criteria	Predicate
2020	7,16%	12% < CAR	Excellent
2021	10,72%	12% < CAR	Excellent
2022	11,53%	12% < CAR	Excellent

Source: Data processed 2022

The capital level is significantly higher than the applicable KPMM provisions and is expected to remain at this level for the next 12 (twelve) months (Table 21).

From the results of the 2020–2022 CAR assessment, PT. BCA Syariah has a very good ability to refute bank assets despite the increase and decrease. In 2020 the CAR ratio was 45.3%, in 2021 the CAR ratio was 41.4%, and in 2022 the CAR ratio was 43.88%. For the last three years, PT. Bank BCA Syariah's CAR ratio assessment has been ranked 1st with a very healthy predicate because the CAR ratio is more than 12%. This shows that the bank has enough capital to cope with current and future risks (Table 22).

From the results of the CAR assessment from 2020 to 2022, it shows that PT. Bank BTPN Syariah has a very good ability to refute bank assets. In 2020 the CAR ratio was 49.4%, in 2021 the CAR ratio was 58.3%, and in 2022 the CAR ratio was 59.96%. For the last three years of the CAR ratio assessment, PT. Bank BTPN Syariah has been ranked 1st with a very healthy predicate because the CAR ratio is more than 12%.

#### 4.5 According to the Capital Expenditure

**PT. Bank BCA.** PT. Bank BCA's Capital Expenditure in 2021 has decreased from the previous year, namely 2020. In 2021 PT. Bank BCA's capital expenditure is IDR 3.3 trillion while in 2020 it is IDR 3.8 trillion. Difference in the decrease in PT. BCA's capital expenditure of IDR 500 billion. The decrease in capital expenditure affected the increase in operating expenses.

**PT. Bank Bukopin.** PT. Bank Bukopin's Capital Expenditure in 2021 has increased from the previous year, namely 2020. In 2021 PT. Bank Bukopin's capital expenditure is IDR 310 billion while in 2020 it is IDR 155 billion. Difference in increase in PT. Bank Bukopin's capital expenditure was IDR 155 billion. The increase in capital expenditure affected a decrease in operating expenses.



**PT. Bank BCA Syariah.** PT. BCA Syariah's Capital Expenditure in 2021 has decreased from the previous year, namely 2020. In 2021 the capital expenditure of PT. Bank BCA Syariah is IDR 7.2 billion while in 2020 it is IDR 13 billion. Difference in decrease in PT. BCA Syariah capital expenditure was IDR 5.8 billion. The decrease in capital expenditure affected increase in operating expenses.

**PT. Bank BTPN Syariah.** Bank BTPN Syariah's Capital Expenditure in 2021 has increased from the previous year, namely 2020. In 2021, PT. Bank BTPN Syariah's capital expenditure is IDR 179 billion, while in 2020 it is IDR 131 billion. Difference in the decrease in PT. BTPN Syariah capital expenditure is IDR 48 billion. Increase in capital expenditure affected a decrease in operating expenses.

## 5 Results

Results show the health of Conventional Banks (PT. BCA and PT. Bukopin) and Islamic Banks (PT. BCA Syariah and PT. BTPN Syariah) from 2020 to 2022 is measured using the RGEC method approach. For Conventional Banks in a healthy condition for BCA Banks and less healthy for BUKOPIN Banks and Islamic Banks in a healthy condition. The Risk Profile factor is seen from credit risk by calculating the Non Performing Load (NPL) and liquidity risk by calculating the Load to Deposit Ratio (LDR) for Conventional Banks in good health and Islamic Banks in good health.

Based on GCG self-assessment 3 aspects of GCG at Convention Banks to be good and Islamic Banks for BCA Syariah Banks are said to be very good and BTPN Syariah Banks are said to be good because bank management has implemented GCG principles so that Indonesian banks are considered capable of supporting Green Banking. Calculations use earnings, Conventional Banks with ROA and NIM in 2020–2022 for PT. BCA have a very healthy level of soundness, while PT. Bukopin has an unhealthy level of soundness. Calculations use Islamic Bank earnings with ROA and NOM in 2020–2022 for PT. BCA Syariah having an unhealthy level of health can be said to be worrying, while PT. BTPN Syariah has a very healthy. With the calculation of capital, in 2020–2022 CAR in Conventional Banks will have a good level of soundness and Islamic Banks are said to be good and very healthy because banks have sufficient capital to overcome risks that occur at any time.

The assessment of Capital Expenditure, Conventional Banks in 2020–2021 for PT. Bank BCA has decreased while PT. Bukopin has experienced an increase in its Capital Expenditure. In Islamic Banks, BCA Syariah Banks experienced a decrease while BTPN Syariah Banks experienced an increase.

So to support Green Banking, Indonesian banks are already capable of implementing it. It can be seen from the health of conventional banks, for example at PT. BCA and BUKOPIN, then Islamic banks at PT. BCA Syariah and PT. BTPN Syariah.

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