

Analysis of the Health of Islamic Banking in Indonesia

Sandi Nasrudin Wibowo¹, Yodi Rudiantono²

Faculty of Economics, Management, University Swadaya Gunung Jati, Cirebon, Indonesia^{1,2} sandi.nwibowo@ugj.ac.id¹

Abstract

This study aims to determine the soundness of Islamic Commercial Banks using the measurement method regulated in Bank Indonesia Regulation PBI No.13/1/PBI/2011, concerning Assessment of Bank Soundness Levels using the RGEC method. The assessment factors in the RGEC method are the risk profile factor (bank risk), the Good Corporate Governance (GCG) factor, the earnings factor (profitability) and the capital factor (capital). The object of this research isFinancial Statements of Bank Muamalat Indonesia and Bank BJB Syariah from 2015 to 2018. The analysis technique in this study is quantitative descriptive by calculating financial ratios using the RGEC method. The results of this study indicate that Bank Muamalat and Bank BJB Syariah, show the period from 2015 to 2018 in the fairly healthy category.

Keywords: Risk Profile; Good Corporate Gavernance; Earnings; Capital



ISSN : 2686-2239 (online) INTRODUCTION

The current banking competition is getting sharper by encouraging the emergence of various types of products and business systems in Islamic banking. This complexity has created a system and competitors in the banking world, not only competition between banks but also between banks and financial institutions. Bank finance managers must be more anticipatory to changes that occur in the banking world which are marked by the growth of financial institutions with the sharia system.

There are several methods that can be used to assess the health of a bank and one of them is the Bank Indonesia Regulation(2011)No.13/1/PBI/2011 which in its assessment uses the RGEC (Risk Profile, Good Corporate Governance, Earnings, Capital) approach. This regulation also replaces the previous Bank Indonesia Regulation, namely PBI No. 6/10/PBI/2004 with the assessment factors classified into 6 (six) factors called CAMELS (Capital, Asset Quality, Management, Earnings, Liquidity, and Sensitivity to Market risks). To assess a bank's soundness level, it can be seen from various aspects of assessment, this aims to determine whether the bank is in a very healthy, healthy, fairly healthy, unhealthy or unhealthy condition. The health of a bank has a very large influence on the economy of a country, because if a bank is included in the unhealthy category, the economy of a country will be disrupted, especially in its financial system.(Stella & Puspitasari, 2019). The health of the bank's financial and non-financial conditions is in the interest of all related parties, both owners, management, the government (through Bank Indonesia) and bank service users to evaluate the bank's performance in applying prudential principles, compliance with applicable regulations and risk management (Fitriana, Nur Rosyid, Ahmad Fakhrina, 2015).

The definition of a bank is stated in Law Number 10 of 1998 concerning Amendments to Law Number 7 of 1992 concerning Banking that a bank is a business entity that collects funds from the public in the form of deposits and distributes them to the public in the form of credit and or other forms in order to create a standard of living for many people. To be a competent financial institution, banks must be able to perform their functions in accordance with existing regulations. This competency is very useful to increase the level of public confidence in the banking sector itself(Darmayanti, 2017). Banks function as fund collectors and distributors of funds for the community. Every bank in Indonesia aims to support the performance of national development to increase equity and economic growth, as well as national stability to improve welfare (Gunawan & Maynora Arvianda, 2019). Pratikto & Afiq (2021)explained that in carrying out its role as an intermediary institution, banks must pay attention to risk aspects resulting from operational activities in managing their funds. Especially because banks manage public funds that are deposited with banks. The Financial Services Authority requires banks at least every semester to be assessed for their soundness. Kawengian, Pelleng & Manoppo(2018) explained in the regulation requiring all commercial banks to conduct a self-assessment of the Bank's Soundness Level using a risk approach (Risk-based Bank Rating/RBBR) either individually or in a consolidated manner. According to the Circular Letter of Bank Indonesia(2011b)Number: 13/24/DPNP 2011, the assessment of the soundness of a bank is an assessment of various aspects that affect the condition or performance of a bank through an assessment of the level of soundness, Risk profile, Good Corporate Governance, Earnings, Capital.

Bank health can be defined as the bank's ability to carry out normal banking operations and be able to fulfill all its obligations properly in a manner that is in accordance with applicable banking regulations. where(2012)states that a healthy bank is a bank that can carry out its functions properly, in other words, a healthy bank is a bank that can maintain and maintain public trust, can carry out the intermediation function, can help smooth payment traffic and can be used by the government in implementing various policies, especially monetary policy. Pratikto,



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M, Qanita, & Maghfiroh (2019) state Bank health is the ability of a bank to carry out its operational activities normally and to fulfill its obligations properly. Daryanto, Utami & Rakhmawati (2019)stated that one of the health controls of banks can be done while maintaining liquidity so that banks can continue to fulfill their obligations and maintain their performance.

Islamic bank is a bank that operates in accordance with the principles contained in Islamic teachings, functions as a business entity that distributes funds to and from the public or as a financial intermediary institution. (Amilia Paramita Sari, 2018). The health or financial and non-financial condition of a bank based on sharia principles is in the interest of all related parties, including the owner, manager (management) of the bank, the public using bank services, Bank Indonesia (BI) and OJK as the bank supervisory authority and other parties. To find out the overall health of Islamic banks can be seen from the characteristics of the bank. The hallmark of a healthy bank is to see if the bank is able to carry out the usual business activities and functions that banks can do properly (Wahasusmiah & Watie, 2018). The soundness of a bank is a bank's financial condition and management is measured by calculating ratios. The soundness of a bank is in the interest of all relevant parties, namely bank owners and managers, the public using bank services, and Bank Indonesia as the supervisor and supervisor of banks in Indonesia (Sunarti, 2011). The soundness of banking must always be considered to maintain the trust of its customers because bank health is the ability to carry out normal banking operations and be able to fulfill all of its obligations properly in a manner that is in accordance with applicable regulations (Agustina, 2018).

The complete calculation guideline is regulated in Bank Indonesia Circular Letter (SE) No/13/24/DPNP dated October 25, 2011 concerning Assessment of Commercial Bank Soundness Level. The assessment stages in the RGEC method can be called a bank soundness assessment model with full risk management. The factors for assessing the health of the bank used are as follows:

- 1. NPF (Non-Performing Financing) ratio, namely financing provided to third parties. The NPF ratio can be calculated by comparing the total financing with non-performing financing.
- 2. The FDR ratio (Financing to Deposit Ratio) is the ratio of financing provided to third parties in rupiah and foreign currencies, excluding loans to other banks, but to third party funds which include demand deposits, savings and time deposits. The FDR ratio can be calculated by comparing the size of the loan with the amount of third party funds.
- 3. The ROA (Return on Asset) ratio is a ratio to assess the company's ability to seek profit. ROA ratio can be calculated by comparing operating profit with total assets.
- 4. The NIM (Net Income Margin) ratio is the ratio used to measure a bank's ability to earn a net profit associated with its productive assets. The NIM ratio is calculated by comparing net income with earning assets.
- 5. The CAR (Capital Adequacy Ratio) ratio is an assessment of the capital factor based on a comparison of the amount of capital to total risk-weighted assets.

RESEARCH METHODS

The type of research in this research is descriptive research with a quantitative approach, explaining the object under study by providing a description or description of the problems that have been identified and carried out intensively and in detail on a company. The population in this study is at Bank Muamalat and Bank BJB Syariah. Sources of data used in this study is secondary data. Secondary data is the type of data that has been processed and indirectly from the source.



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In this study, we will use financial statement data from Bank Muamalat and Bank BJB Syariah in the 2015-2018 period which have been published by each of these banks. The financial reports or annual reports of Islamic Commercial Banks are obtained from the website of each Islamic Commercial Bank.

In conducting financial research research on Islamic Banks, the data required is in the form of financial ratios obtained from Islamic Commercial Banks. The data analysis technique used is quantitative descriptive which explains the data in the form of numbers and then explains using words to clarify the data. The data analysis technique used is the RGEC method. The RGEC method in Bank Indonesia Regulation Number 13/1/PBI/2011 concerning the Assessment of the Soundness of Commercial Banks explains that commercial banks are required to conduct a self-assessment of the soundness of banks using a risk-based approach (Risk-Based Bank Rating/RBBR). individually or on a consolidated basis.

RESULTS AND DISCUSSION

In accordance with Bank Indonesia Regulation No. 13/1/PBI/2011 dated January 5, 2011 concerning Assessment of Soundness of Commercial Banks¹, Banks are required to conduct an individual or consolidated soundness assessment using the RGEC method. Health level assessment factors are as follows:

1. Risk Profile Assessment

a. Credit Risk

Credit Risk is the risk due to the failure of the debtor or other party to fulfill obligations to the Bank. Risk Profile Rating (NPF) criteria based onBank Indonesia Circular Letter No.13/24/DPNP of 2011 which is said to be very healthy <2%, healthy 2% - 5%, and quite healthy 5% - 8%. While the NPF criteria for unhealthy ones are at 8% - 12% and unhealthy ones 12%. The higher the NPF value, the lower the credit quality of the bank, because the bank is unable to collect the credit provided. Non-performing loans include substandard loans, doubtful loans and bad loans. These three aspects if accumulated are referred to as net non-performing loans. The following is the NPF data of Bank Muamalat Indonesia, Tbk and Bank BJB Syariah, Tbk:

Period	NPF
2015	6.42%
2016	3.89%
2017	5.19%
2018	4.64%

Source: Bank Muamalat Indonesia Financial Report

In 2015 it received the title quite healthy, 2016 was healthy, 2017 was quite healthy and 2018 was healthy. The most significant increase occurred in 2017 which reached 5.19%. This is because non-performing financing has increased even though the total financing in 2017 decreased. The higher non-performing loans came from bad loans, followed by doubtful loans.

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 Table 2. Non-Performing Financial(NPF) Bank BJB Syariah, Tbk

 Period
 NPF

Period	NPF	
2015	7.32%	
2016	7.62%	
2017	11.56%	
2018	3.51%	

Source: Bank BJB Syariah Financial Report

BJB Syariah bank NPF can be said to fluctuate in a downward direction. This can be seen from 2015 - 2017 which continues to increase. The years 2015-2016 received the title quite healthy, in 2016 it got the title less healthy and 2018 was healthy. The significant increase in NPF in 2017 was due to bad loans increasing by 30% while financing decreased from the previous year. The increase in non-performing loans was due to high non-performing loans, even reaching 6% of total financing.

b. Liquidity Risk

Liquidity risk is the risk due to the bank's inability to meet maturing obligations from cash flow funding sources and from high quality liquid assets that can be used, without disrupting the activities of the bank's financial condition. FDR criteria based on Bank Indonesia Circular No. 6/23/DPNP(2004) (Financial Services Authority, 2013)which is said to be very healthy <75% healthy 75% - 85%, and quite healthy that is 85% - 100%. Meanwhile, those who are not healthy are at 100% - 120% and those who are not healthy are >120%.

This study was conducted to calculate the ability of banks to repay withdrawals made by depositors by relying on the financing provided as liquidity. This liquidity risk is calculated by comparing the amount of financing provided by the bank and third party funds, the financing provided does not include financing to other banks. Third party funds include demand deposits, savings, periodic deposits and certificates of deposit. The following is the FDR data of Bank Muamalat and Bank BJB Syariah:

Period	FDR
2015	68.64%
2016	69.59%
 2017	43.03%
2018	37.14%

Table 3. Financing to Deposit ratioBank Muamalat Indonesia, Tbk

Source: Bank Muamalat Indonesia Financial Statements, Tbk

The level of banking liquidity using this ratio illustrates that bank muamalat is able to reduce the number of financing ratios. The years 2015 - 2018 received a very healthy predicate. In 2016 bank muamalat experienced the highest FDR this was due to low total third party funds while total financing reached almost 70% of total third party funds.

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Table 4. <i>I</i>	Financing to	Deposit rat	ioBank BJB Syariah
	Period	FDR	
	2015	21.42%	
	2016	15.53%	
	2017	13.01%	
	2018	24.85%	

Source: Bank BJB Syariah Financial Report

In 2018 the performance of BJB sharia decreased due to the decline in third party funds. The years 2015 - 2018 received a very healthy predicate. The increase in FDR in 2018 which reached 54% from the previous year was due to BJB bank not being able to suppress its financing so that the total loans disbursed reached 25% of total third party funds.

2. Good Corporate Governance (GCG)

GCG factor assessment is an assessment of the quality of bank management on the implementation of GCG principles. The principles of GCG and the focus of the assessment on the implementation of the principles of GCG refer to the applicable Bank Indonesia regulations regarding Commercial Banks by taking into account the characteristics and complexity of the bank's business. Parameters for implementing GCG principles used in assessing GCG factors include:

- a. Implementation of the duties and responsibilities of the Board of Commissioners
- b. Implementation of the duties and responsibilities of the Board of Directors
- c. Completeness and implementation of the committees' duties
- d. Handling conflicts of interest
- e. Implementation of bank compliance function
- f. Implementation of the internal audit function
- g. Application of external audit function
- h. Determination of risk management and internal control functions
- i. Provision of funds to related parties and large debtors (large exposures)
- j. Transparency of financial and non-financial conditions, GCG implementation reports and internal reports
- k. Bank's strategic plan.

3. Profitability (Earnings)

Profitability ratio is a tool to analyze or measure the level of business efficiency and profitability achieved by the bank concerned. Assessment of bank profitability factors can use parameters including the following:

a. ROA (Return On Assets)

Return On Asset merupakan rasio untuk mengukur manajemen bank dalam memperoleh keuntungan secara keseluruhan. Kriteria penetapan peringkat rentabilitas berdasarkan Surat Edaran Bank Indonesia No.13/24/DPNP tahun 2011 yang dikatakan sangat sehat yaitu pada angka ROA < 1,5%, sehat1,25% \leq ROA < 1,5%, cukup sehat 0,5% \leq ROA < 1,25%. Sedangkan yang kurang sehat berada pada angka 0% \leq ROA < 0,5% dan tidak sehat ROA \geq 0%.



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Tabel 5. Return O	n Asset (RO	A) Bank Mu	iamalat Indonesia, Tl	эk
	Periode	ROA		
	2015	0,19%		

2015	0,19%
 2016	0,21%
 2017	0,10%
 2018	0,08%

Sumber : Bank Muamalat Indonesia, Tbk Financial Report

Based on the ROA table above, it can be seen that in 2016 - 2018 all of them received the title of being less healthy. In 2016 there was an increase in ROA due to an increase in profit while total assets decreased from the previous year. Then in 2017 and 2018, the ROA of muamalat continued to decline. This is because profits continue to decline.

able 6. Return On Assets (ROA)Sharia				
	Period	ROA		
	2015	0.25%		
	2016	-7.34%		
	2017	-5.48%		
	2018	0.55%		

Table 6. Return On Assets (ROA)Sharia BJB

Source: BJB Syariah Financial Report

BJB Syariah ROA during the research year tends to decrease. In 2015 it was predicated as unhealthy and in 2016 - 2017 it was predicated as unhealthy. This means that BJB Syariah Banks suffer losses which are the impact of being unable to optimize their assets to generate high income. However, in 2018 BJB Syariah was able to reap profits and again obtained ROA at the 0.55% point. This is because BJB Syariah is able to reduce the allowance for losses on productive assets.

b. NIM (Net Income Margin)

Net Income margin is a ratio to measure a bank's ability to earn net profits associated with dividend payments. The criteria for determining the profitability component rating (NIM) based on the Circular Letter of Bank Indonesia No.13/24/DPNP in 2011 which is said to be very healthyNIM ratio >3%, healthy 2% - 3%, quite healthy 1.5 - 2%. While those who are said to be unhealthy, the NIM leads to a negative ratio ranging from 1% to 1.5% and unhealthy, the negative NIM ratio is below 1%.

Net income margin is calculated by comparing net profit sharing with total productive assets. Earning assets consist of credit, marketable securities, determination of interbank funds, investments including commitments and contingencies in off-balance sheet transactions. The following is the NIM for Bank Muamalat and BJB Syariah:



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Table 7. Net Income Margin (NIM) of Bank Muamalat Indonesia, Tbk

Period	NIM
2015	4.10%
2016	3.11%
2017	2.89%
2018	2.53%

Source: Bank Muamalat Indonesia Financial Report

The NIM of Bank Muamalat Indonesia has decreased every year, in 2015 and 2016 it received the very healthy predicate while in 2017 and 2018 it received the healthy predicate. The decrease in 2016 was due to a significant decrease in net revenue sharing.

Table 8. Net Income Margin (NIM)Bank BJB Syariah			
	Period	NIM	
	2015	5.08%	
	2016	4.65%	
	2017	4.58%	
	2018	5.43%	

Source: BJB Syariah Financial Report

Bank BJB Syariah's Net Income Margin fluctuated in a downward direction. However, in 2018 the BJB Syariah bank was able to increase its NIM again due to an increase in income from net profit sharing every year. Meanwhile, its productive assets continued to soar until 2017. It's just that in 2018 there was a decrease in net equity participation which resulted in a decrease in the Net Asset Value (NAV) of the portfolio.

4. Capital

Capital Adequacy Ratio (CAR) is a ratio used to measure the adequacy of capital owned by a bank that contains or generates risk, for example credit or financing provided. The criteria for determining the rating of capital (CAR) which is said to be very healthy, namely > 12%, healthy 9% CAR < 12%, quite healthy 8% CAR < 9%. Meanwhile, those who are less healthy are 6% CAR < 8% and those who are not healthy CAR 6%.

RWA includes credit risk, market risk and operational risk. RWA is taken into account in measuring CAR because banks must also consider credit risk factors that can reduce the value of bank equity and assets. The higher this ratio, the better the capital capacity of a bank. The following is the CAR data for Bank Muamalat Indonesia and BJB Syariah:

Table 9. Capital Adequacy Ratio (CAR)Bank Muamalat Indonesia, Tbk

1	Period	CAR
	2015	8.45%
	2016	8.83%
	2017	12.33%
	2018	11.38%

Source: Financial Statements of Bank Muamalat Indonesia, Tbk

Based on the CAR table, Bank Muamalat Indonesia, Tbk received the predicate quite healthy in 2015 and 2016, while in 2017 it received the predicate quite healthy and 2018 very healthy. In 2018 Bank Muamalat experienced a decrease in CAR of around 1%. This was due



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to a significant decrease in capital as a result of the loss of changes in the market price of securities.

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	Period	CAR
	2015	22.42%
	2016	21.56%
	2017	24.80%
	2018	20.42%

Table 10. Capital Adequacy Ratio (CAR)Bank BJB Syariah

Source: BJB Syariah Financial Report

Based on the Bank BJB Syariah CAR table, this ratio has fluctuated in a downward direction. However, for the whole of 2015 - 2018, Bank BJB Syariah's CAR received a very healthy predicate.

After calculating the soundness of the bank, the next step is to rank each analysis of NPF, FDR, GCG, ROA, NIM and CAR. Where the ranking of each of these ratios will produce a composite rating for assessing the soundness of banks from 2015 to 2018. The composite value for the financial ratios of each component that occupies a composite rating will be worth as follows:

- a. Rank 1 = every time the check is multiplied by 5
- b. Rank = every time the check is multiplied by 4
- c. Rank 3 = every time the check is multiplied by 3
- d. Rank 4 = every time the check is multiplied by 2
- e. Rank 5 = every time a check is multiplied by 1

The composite value that has been obtained by multiplying each checklist is then determined by its weight by presenting it. The composite rating weights are as follows:

		0 0	
Weight	t % Compos rating		L
86 – 1	00 PK 1	Very healthy	
71-8	5 PK 2	Healthy	
61-7	0 PK 3	Healthy enough	
41-6	0 PK 4	Unwell	
<40	PK 5	Not healthy	

Table 11. Composite Rating Weight

CONCLUSIONS

Bank Muamalat Indonesia, Tbk . Soundness Rating Assessment

- In 2015 it received a healthy predicate, the highest ratio was in the FDR Ratio with Very Healthy criteria, while the worst analysis was in the ROA Ratio with Unhealthy Criteria



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- In 2016 it received a Healthy predicate, the highest ratio was in the FDR and NIM Ratios with Very Healthy criteria, but the worst analysis was in the ROA Ratio with Unhealthy Criteria
- in 2017 it received the Healthy Predicate, the best was in the FDR and CAR ratios with the Very Healthy criteria, while the worst was in the ROA ratio with the Unhealthy predicate
- in 2018 it received the Healthy Predicate, the best was the FDR ratio with the Very Healthy criteria, while the worst was the ROA ratio with the Unhealthy predicate

BJB Syariah Bank Soundness Level Assessment

- 2015 received the title of Healthy. The very healthy predicate is in the FDR and CAR ratios, but the ROA of BJB sharia is in the unhealthy predicate
- In 2016 it received the title of "Sufficiently Healthy". The very healthy predicate is in the FDR and CAR ratios, but the ROA of BJB sharia is in the unhealthy predicate
- The year 2017 received a healthy predicate. The very healthy predicate is in the FDR, ROA and CAR ratios, but the BJB sharia NIM is in the unhealthy predicate
- In 2018 it received the title quite healthy. The very healthy predicate is in the FDR and CAR ratios, but the earning component is in the unhealthy predicate

REFERENCES

- Agustina, R. (2018). Assessment of the Soundness of Islamic Banking in Indonesia Using the RGEC Method. Indonesian Central Bureau of Statistics, 1(2), 212–223. https://doi.org/10.22236/alurban
- Amilia Paramita Sari. (2018). ECONOMICS: Journal of Economics and Business Vol.2 No.1 March 2018. 2(1), 13–28.
- Bank Indonesia. (2004). Bank Indonesia Circular Letter Number 6/23/DPNP Regarding Bank Soundness Rating System. www.bi.go.id
- Bank Indonesia. (2011a). Bank Indonesia Regulation Number 13/1/PBI/2011 concerning Assessment of Commercial Bank Soundness Level. www.bi.go.id
- Bank Indonesia. (2011b). Bank Indonesia Circular Letter Number 13/24/DPNP Regarding Rating of Commercial Bank Soundness. www.bi.go.id
- Darmayanti, IMP and NPA (2017). Assessment of Bank Soundness Level with RGEC Method at PT Bank Mandiri, Tbk. E-journal of Unud Management Vol 6. 6(2), 948–974.
- Daryanto, WM, Utami, AS, & Rakhmawati, TS (2019). Banking Health Assessment of Commercial Banks in Indonesia Using RGEC Methods: A Comparative Study. International Journal of Business Studies, 2(3), 122–132. https://doi.org/10.32924/ijbs.v2i3.76
- Fitriana, Nur Rosyid, Ahmad Fakhrina, A. (2015). Comparative Analysis of the Soundness of Islamic and Conventional Banks Using the Rgec Method (Risk Profile, Good Corporate Governance, Earnings, and Capital). Journal of Economics and Business, 17(2), 1–12. https://jurnal.unikal.ac.id/index.php/jebi/article/view/332
- Gunawan, B., & Maynora Arvianda, K. (2019). Bank Health Level Analysis Using CAMELS and RGEC Methods on PT Bank Panin Dubai Syariah Ltd. 102(Icaf), 20–26. https://doi.org/10.2991/icaf-19.2019.4
- Kawengian, FP, Pelleng, FAO, & Manoppo, WS (2018). Bank Soundness Level Analysis Using the RGEC Method. Manager : Journal of Management Science, 1(1), 114. https://doi.org/10.32832/manager.v1i1.1769
- Financial Fervices Authority. (2013). Bank Indonesia Circular Letter Number 15/41/DKMP. Ojk. Go. Id. https://ojk.go.id/id/kanal/perbankan/regulation/surat-edaran-bankindonesia/Pages/surat-edaran-bank-indonesia-nomor-15-41-dkmp.aspx
- Permana, BA (2012). Bank Soundness Level Analysis Based on Camels Method and Rgec



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Method. AKUNESA Journal of Accounting, 1(1), 1–21.

Pratikto, MIS, & Afiq, MK (2021). Analysis of Bank Soundness Level and Potential Financial Distress Using Rgec and Zmijewski Methods at BNI Syariah Banks in 2015-2019. Journal of Theoretical and Applied Islamic Economics, 8(5), 570. https://doi.org/10.20473/vol8iss20215pp570-581

Pratikto, MIS, Qanita, A., & Maghfiroh, RU (2019). Vol. 3(1), April 2019. 3(April), 65-88.

Stella, LA, & Puspitasari, R. (2019). Analysis of Bank Rating with RGEC Method. Atlantis Press, 143(Isbest 2019), 240–245.

Sunarti. (2011). Indonesian banking management system. NN Press.

Wahasusmiah, R., & Watie, KR (2018). Rgec Method: Health Level Assessment. I-Finance, 04(02), 170–184.