THE EFFECT OF THE IMPLEMENTATION OF GREEN BANKING, CAPITAL ADEQUACY RATIO (CAR), BI 7-DAYS (REVERS) REPO RATE AND EXCHANGE RATE ON THE PROFITABILITY OF BANKS LISTED ON THE INDONESIA STOCK EXCHANGE IN THE PERIOD 2019-2023

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***Abstract*—This study aims to examine the influence of green banking implementation, capital adequacy ratio, BI 7-day (reverse) repo rate, and exchange rate on the profitability of banks listed on the Indonesian Stock Exchange. The research utilizes quantitative data derived from the annual financial reports of 19 purposefully selected banking companies, covering the period from 2019 to 2023. Through a specific sampling technique, a total of 95 observations were obtained. To analyse the relationship among variables, the study employed multiple linear regression analysis using SPSS version 22.**

The results reveal that both the capital adequacy ratio and the exchange rate have a significant effect on bank profitability. In contrast, the variables of green banking implementation and the BI 7-day reverse repo rate do not have a statistically significant impact on the profitability of the sampled banks during the observed period.

Keywords— ***Green Banking; Capital Adequacy Ratio; BI 7-Days (Reverse) Repo Rate; Exchange Rate; Profitability***

I. INTRODUCTION

Banking companies use profitability indicators to measure their performance. Profitability is the ability to make a profit which is determined by its ability to maximize profits based on the return on assets (ROA) metric [1]. Profitability is an important indicator to assess the health of a bank and its ability to make a profit. Profitability considers management performance in increasing profits and overall management efficiency compared to the bank's total assets [2].

There was a significant decline in bank ROA from 2019 to 2020. This was due to external factors such as banking competition and financial technology that increased bank reserve costs. The COVID-19 pandemic had a negative impact on bank profitability in 2020, but there was a recovery in 2021, 2022, and 2023. The increase in 2023 was driven by improving economic conditions and increasing demand for credit. Low interest rates and the COVID-19 pandemic have had a negative impact on bank profitability, especially due to the weakening economy and decreasing public income. This resulted in a decline in bank financial performance [3].

Capital Adequacy Ratio is an important tool to maintain bank health, protect customers, and promote financial system stability. BI's 7-day (reverse) repo interest rate policy is an

important instrument of Bank Indonesia in managing monetary stability, inflation, and national economic growth. BI's interest rate is an important instrument in managing economic stability, encouraging healthy monetary activity, and maintaining banking profitability [4]. A stable and strong exchange rate is an important indicator of economic health and international trade. The exchange rate is an important factor that banking institutions need to consider in managing risk and increasing profitability [5].

The concept of a green economy is fundamentally integrated into all economic activities that aim to minimize environmental impact. The banking sector has also embraced this principle through the adoption of the green banking concept. Although banks are not directly recognized as major sources of environmental pollution—unlike industries such as mining or manufacturing—they still utilize energy, water, and other natural resources in their operations, albeit at a lower intensity.

One of the ongoing debates in the implementation of green banking is the question of responsibility for environmental impacts: should it lie with the bank or the borrower? In response, some banks have taken proactive steps by implementing environmental screening during the initial financing selection process. In this approach, banks evaluate whether the proposed project to be financed will pose significant environmental risks. Based on this assessment, the bank retains full authority to approve, limit, or reject financing depending on the environmental implications of the borrower's activities. This reflects an important shift in banking practices, where environmental considerations are gradually becoming an integral part of credit risk assessment and loan approval procedures.

Companies need capital to operate and can be divided into two types, namely primary capital and supplementary capital. Primary capital comes from the company's personal funds (equity), while supplementary capital comes from loans, asset revaluation reserves, or provisions for writing off productive assets [6].

II. METHOD

The population in this study includes all banking companies listed on the Indonesia Stock Exchange (IDX) during the period 2019–2023. From this population, a sample of 47 banking companies was selected for analysis. This indicates that the researcher did not examine all banks in Indonesia, but rather a subset considered representative of the broader population. The sampling process employed a purposive sampling technique, wherein the selected companies met specific criteria deemed relevant to the research objectives.

To obtain relevant information, the study utilized a combination of secondary data sources. These included annual financial reports and sustainability reports collected through documentation methods. Additional data were also sourced from the Indonesia Stock Exchange. For data analysis, the study used SPSS (Statistical Package for the Social Sciences), a widely used statistical software for processing and analyzing research data [7].

III. RESULTS AND DISCUSSION

The descriptive analysis of the variables in this study provides insight into the distribution characteristics of the data. For the Profitability variable, the minimum value is recorded at -0.18, while the maximum is 2.83. The mean is 0.0718 with a standard deviation of 0.33293, indicating that the data distribution for this variable is not normal. In contrast, the Green Banking variable shows a minimum of 0.00 and a maximum of 1.00, with an average value of 0.8421 and a standard deviation of 0.36658, suggesting a normal distribution. The Capital Adequacy Ratio (CAR) variable displays a wide range, with a minimum of 0.16 and a maximum of 84.56. The mean value is 1.4706, accompanied by a high standard deviation of 8.99289, which implies that the data is not normally distributed. Regarding the BI 7-Days (Reverse) Repo Rate, the analysis reveals a minimum of 0.00, a maximum of 1.00, a mean of 0.7368, and a standard deviation of 0.44288, indicating a normal distribution. Lastly, the Exchange Rate variable ranges from 13,652.36 to 21,439.18, with an average of 19,721.9490 and a standard deviation of 3,057.73651, also indicating that the data is normally distributed.

TABLE I. TEST NORMALITY TEST

		Unstandardized Residual
N		84
Normal Parameters[a,b]	Mean	.0000000
	Std. Deviation	.01052965
Most Extreme Differences	Absolute	.078
	Positive	.078
	Negative	-.045
Test Statistic		.078
Asymp. Sig. (2-tailed)		.200[c,d]

The data has been normally distributed with a significance value of 0.20>0.05, so it can be used for testing with a multiple regression model.

Multicollinearity Test

Tolerance and VIF values range between 0.928 to 0.946. Likewise, VIF values range between 1.061 to 1.078 so it can be concluded that there is no multicollinearity problem.

TABLE II. AUTOCORRELATION TEST

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.994[a]	.988	.987	.01079	2.104

The Durbin-Watson (DW) test was conducted to detect the presence of autocorrelation in the regression model. The DW value obtained was 2.104, with a sample size (N) of 84 and four independent variables (k = 4). Based on the Durbin-Watson table, the upper bound (Du) is 1.7462, and the

corresponding 4 - Du value is 2.2538. Since the DW value lies between these two bounds (1.7462 < 2.104 < 2.2538), it can be concluded that there is no indication of autocorrelation in the regression model.

TABLE III. PARTIAL SIGNIFICANCE TEST (T-TEST)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.041	.009		4.792	.000
	Green banking	-.010	.003	-.038	-2.973	.004
	CAR	.010	.000	.987	78.137	.000
	BI7RR	.001	.003	.003	.233	.817
	Nilai Tukar	-9.730E-7	.000	-.031	-2.454	.016

IV. CONCLUSIONS

The results of this study indicate that the implementation of Green Banking does not have a significant influence on the profitability of banks listed on the Indonesia Stock Exchange during the period 2019–2023. In contrast, the Capital Adequacy Ratio (CAR) is found to have a positive and significant effect on bank profitability within the same period. Meanwhile, the BI 7-Days (Reverse) Repo Rate does not show a significant impact on profitability, suggesting that fluctuations in the central bank's policy rate did not directly influence the earnings of the sampled banks. Additionally, the Exchange Rate is observed to have a negative effect on bank profitability, implying that currency fluctuations may pose risks that reduce financial performance. Overall, the four independent variables—Green Banking, Capital Adequacy Ratio, BI 7-Days (Reverse) Repo Rate, and Exchange Rate—collectively explain 98.7% of the variation in bank profitability, while the remaining 1.3% is influenced by other factors not examined in this study.

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