CAPITAL ADEQUACY, CREDIT DISTRIBUTION AND BANKING STOCK RETURN: EVIDENCE FROM LQ45 INDEX

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Abstract. Banking is one of the financial industry types in the Indonesian capital market. This industry comprises the banks that must comply with the regulations. The compliance will determine the stock price movement, reflecting public investor wealth. Hence, this study aims to verify and analyze the effect of capital adequacy and credit distribution on stock return. Besides, it intends to check and evaluate the impact of capital adequacy on credit distribution. The samples are all banks consistently selected to be the LQ45 index from 2019 to 2023. Then, this study uses the path analysis model to test the coefficients. By mentioning the statistical output, this study concludes that the more capital adequacy and credit distribution the banks have, the higher the stock return. Conversely, the more credit distribution, the less the stock return. Therefore, public investors should purchase banking stocks by considering the increasing tendency of capital adequacy and loan-to-deposit ratios to get positive returns.
Keywords: *banks capital adequacy, credit distribution, stock return, loan-to-deposit ratio*

Introduction

Banks get numerous regulations from a government representative (Bleck, 2018). This situation happens because banks manage the funds from society and distribute them in loans. Therefore, they must manage their liquidity to anticipate deposit withdrawal from society. At least, their loan-to-deposit ratio must not be higher than 92% and lower than 78% (Laras, 2022). Besides, banks must provide capital to cover the lending risk, reflected by the capital adequacy ratio (CAR) (Gharaibeh, 2023; Naoaj, 2023; Rahadian and Permana, 2021). If CAR is below the required condition of 8%, banks can fix it by issuing and selling stock for the first time in the capital market (Sholichah and Filianti, 2019). After that, the stock transaction exists in the secondary market, where the formed price results from supply and demand. Ideally, the tendency of relative return should be positive. However, the LQ45 index stocks have a reducing inclination in this return, as in *Figure* 1. This evidence needs further investigation, at least on the stock return determinants. According to research evidence, the factors of banking stock return (BSR) are capital adequacy (CA) and credit distribution (CD). Inappropriately, varying proofs exist for the relationship between CA and BSR, both a positive mark (Wardyaningrum and Murti, 2024; Sharma et al., 2023; Wulandari, 2022; Hutabarat and Riwayati, 2021; Jati and Fachrurrozie, 2021; Iskandar, 2020) and a negative sign (Sandora and Saleh, 2023), as well as the association between CD and BSR: positive mark (Iskandar, 2020), negative sign (Enjela and Wahyudi, 2022; Wulandari, 2022), and pointless spot (Hutabarat and Riwayati, 2021; Jati and Fachrurrozie, 2021). The contradiction also exists when some scholars investigate the relationship between credit distribution and capital adequacy. Their research confirms a positive sign (Gharaibeh, 2023; Naoaj, 2023; Rahadian and Permana, 2021) and an insignificant mark (El-Ansary et al., 2019).

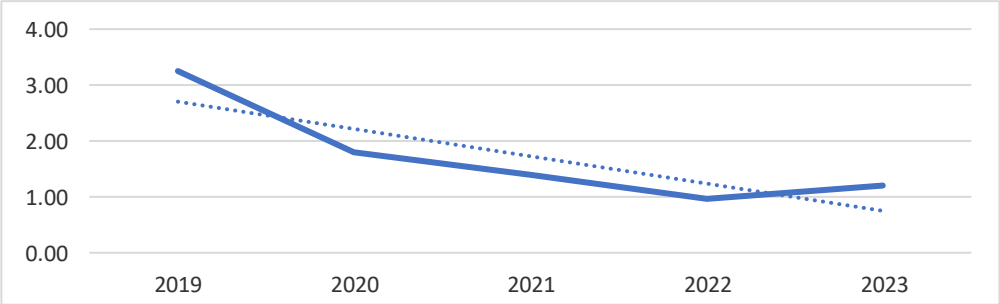


Figure 1. *Average relative return of the LQ45 banking stocks from 2019 to 2023.*

Based on this gap, this investigation appears to reinvestigate (1) the influence of capital adequacy and credit distribution on banking stock return and (2) the impact of credit distribution on capital adequacy using banking shares of LQ45 from 2019 to 2023. As per the notes, Diatmika et al. (2020) state that this index consists of aggressively traded shares that dominate 75% of the Indonesian capital market capitalization.

Literature review and hypothesis development

Capital adequacy intends to evaluate the capability to receive the risk of productive loans. The higher this ratio, the more the bank can bear the risk (Fauzan et al., 2023). The banking ability to cover risk makes the public investors buy the stocks, increasing their price (Wardyaningrum and Murti, 2024; Sharma et al., 2023; Hutabarat and Riwayati, 2021; Jati and Fachrurrozie, 2021; Iskandar, 2020). Utilizing the banks listed on the Bombay Stock Exchange, Sharma et al. (2023) locate that banks with high capital adequacy tend to have high stock returns and vice versa. Equally, Wardyaningrum and Murti (2024), Wulandari (2022), Hutabarat and Riwayati (2021), Jati and Fachrurrozie (2021) as well as Iskandar (2020), and confirm it after investigating the banking industry in the Indonesian capital market. After mentioning this explanation, hypothesis one is:

H1. Capital adequacy positively affects stock return.

Credit distribution is the banking intermediary function measured by the loan-to-deposit ratio (LDR) (Atmawidjaya and Nuryakin, 2023). If a bank effectively performs this intermediary function, its capability to bear the risk of productive loans will be high (Gharaibeh, 2023; Naoaj, 2023; Rahadian and Permana, 2021). Therefore, the banks must provide additional capital to cover this risk. In their research using a fixed-effect regression model, Rahadian and Permana (2021) obtained a positive tendency of LDR toward banking capital adequacy (BAC) in Indonesia. Using an autoregressive distributed lag, Gharaibeh (2023) finds that the distributed credit-to-deposit ratio positively affects the BAC in Jordan. Based on pooling data and a fixed-and-random effect regression model estimation, Naoaj (2023) confirms a positive association between LDR and BAC in Bangladesh. After mentioning this explanation, hypothesis two is:

H2: The credit distribution negatively affects stock return.

Credit distributed by banks leads to lower banking liquidity. If the bank cannot solve this liquidity issue, its risk of providing funds for the depositors will increase. As a result, they cannot take their funds in the worst situation (Pracoyo and Ladjadjawa, 2022). Hence, public investors in the capital market sell their stocks, decreasing the share price. In their research, Enjela and Wahyudi (2022) as well as Wulandari (2022) confirm the negative tendency of the loan-to-deposit ratio toward share return. After mentioning this explanation, hypothesis three is:

H3. Credit distribution positively affects capital adequacy.

From the three hypotheses formulated above, the research model is seeable in *Figure 2*, where the shape is utilized for each manifest variable, as Ghozali (2017) explains.

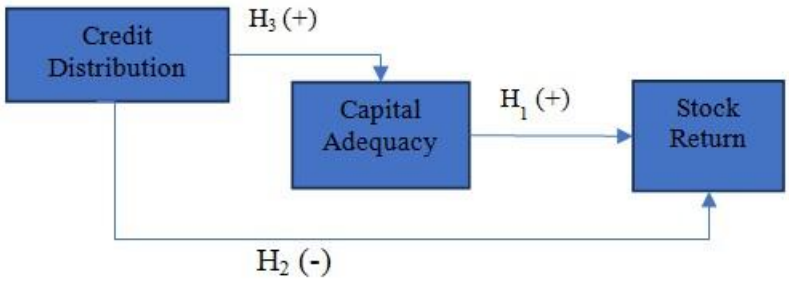


Figure 2. *Research model.*

Materials and Methods

Based on *Figure 1*, stock return and capital adequacy are endogenous, but credit distribution is exogenous. Furthermore, the indicators to measure them are in *Table 1*. Because of the small number of banks in the LQ4 index constituents from 2019 to 2023, this study uses all banks as the population. Moreover, this study utilizes a saturated sampling technique based on this circumstance, as Sugiyono (2022) explains. Thus, the names of the banks used are (1) Bank Jago (ARTO), (2) Bank Central Asia (BBCA), (3) Bank Negara Indonesia (BBNI), (4) Bank Rakyat Indonesia (BBRI), (5) BBTN (Bank Tabungan Negara), (6) BMRI (Bank Mandiri), and (7) Bank Syariah Indonesia (BRIS).

Table 1*. The indicators to measure stock return, capital adequacy, credit distribution, and problematic loans.*

Variable	Indicator	Source
Stock Return	Relative return (RR)	Hartono (2017)
Capital Adequacy	Capital adequacy ratio (CAR)	Wardyaningrum and Murti (2024), Wulandari (2022), Hutabarat and Riwayati (2021), Jati and Fachrurrozie (2021), Iskandar (2020)
Credit Distribution	Loan-to-deposit ratio (LDR)	Gharaibeh (2023), Naoaj (2023), Rahadian and Permana (2021), Iskandar (2020)

This study uses path analysis of the data. According to Ghozali (2018), this analysis adopts some sub-structures based on the hypotheses formulated. After considering the total hypotheses, this study proposes two models, as Eq. (1) and Eq. (2) exhibit.

$$RR = \beta_1 CA + \varepsilon_1 \qquad \text{Eq. (1)}$$

$$CA = \gamma_1 CD + \gamma_2 PL + \varepsilon_2 \qquad \text{Eq. (2)}$$

Moreover, this study applies IBM SPSS 25 to process the data, estimate the path model, and use the probability of t-statistic to examine the hypotheses. If this probability is lower than a 5% significance level, the hypothesis is acceptable with the sign of the estimated coefficient. The hypothesis is rejectable if it is similar to or greater than 5%.

Results and Discussion

Table 2 illustrates the descriptive statistics for stock return, capital adequacy, credit distribution, and problematic loans of banks from 2019 to 2023: (1) The smallest, largest, and average values for the relative return are 0.18, 16.85, and 1.7211, with a standard deviation of 2.85100; (2) The smallest, largest, and average values for the capital adequacy ratio are 16.80%, 169.92%, and 34.2117%, with a standard deviation as high as 35.54364; (3) The smallest, largest, and average values for the loan-to-deposit ratio are 47.54%,145.86%, 86.1289%, with a standard deviation of 17.51692; (4) The smallest, largest, and average values for the gross non-performing loans are 0.00, 4.78%, and 2.5177%, with a standard deviation of 2.5177. *Figure 3* exhibits the estimation result of the path coefficient based on the regression model: (1) The path coefficient and its probability for the impact of capital adequacy on stock return are 0.828 and 0.000, respectively. This probability is lower α of 5%; hence, this investigation accepts the first hypothesis. (2) The path coefficient and its probability for the impact of credit distribution on capital adequacy are 0.295 and 0.047 singly. This probability is lower α of 5%; hence, this investigation accepts the second hypothesis. (3) The path coefficient and its probability for the impact of credit distribution on capital adequacy are -0.489 and 0.002 partially. This probability is lower α of 5%; hence, this investigation accepts the third hypothesis.

Table 2*. Descriptive statistics with 35 observations.*

Variable	Indicator	Smallest	Largest	Average	Standard deviation
Stock Return	Relative return	0.18	16.85	1.7211	2.85100
Capital Adequacy	Capital adequacy ratio	16.80	169.92	34.2117	35.54364
Credit Distribution	Loan-to-deposit ratio	47.54	145.86	86.1289	17.51692
Bad Loans	Gross non-performing loans	0.00	4.78	2.5177	1.05524

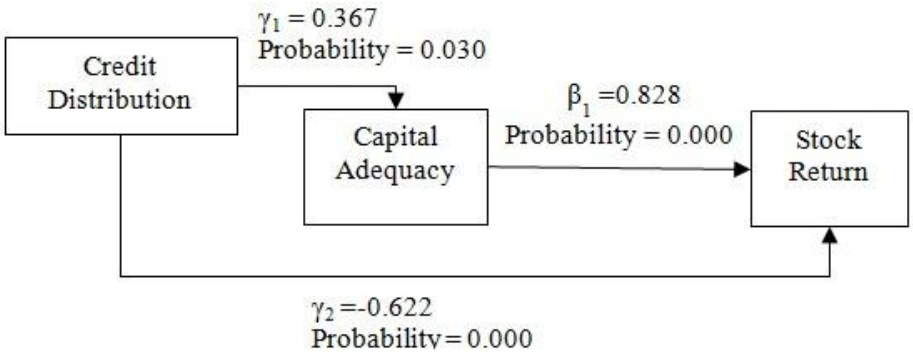


Figure 3. *The estimation result of the path coefficient.*

This study receives hypothesis one, declaring a positive effect of capital adequacy on stock return. Banks with greater capital adequacy can cover the risk based on lending activities. This situation raises investor confidence when buying stocks. Thus, this evidence supports Sharma et al. (2023) from India; Wardyaningrum and Murti (2024), Wulandari (2022), Hutabarat and Riwayati (2021), Jati and Fachrurrozie (2021), as well as Iskandar (2020) from Indonesia. This study acknowledges hypothesis two, announcing a negative impact of credit distribution on stock return. This proof means that credit expansion without concern for liquidity will harm the bank. Investors with this information will sell their stocks; therefore, a negative return happens, which supports the researchers from Indonesia, i.e., Enjela and Wahyudi (2022) and Wulandari (2022), investigating 24 banks from 2017-2021 and 16 banks between 2017 and 2019 in the Indonesia capital market, correspondingly. This study admits hypothesis three, declaring a positive effect of credit distribution on capital adequacy. This proof indicates that this banking intermediary needs to cover additional capital. Therefore, this fact supports the positive tendency demonstrated by Rahadian and Permana (2021), learning about commercial banks at the lowest level based on the business activities in Indonesia from 2015 to 2020; Gharaibeh (2023), learning about all banks in Jordan between 2003 and 2021; and Naoaj (2023), investigating 28 commercial banks in Bangladesh from 2013 to 2019.

Conclusion

As financial sectors in the capital market, the shares of banks attract investors to buy and sell the shares to get returns. Indeed, they must consider the financial position of the bank. Thus, this study aims to determine the determinants, such as capital adequacy and credit distribution, by investigating three impacts. The first and second aim is to check the effect of capital adequacy and credit distribution on stock return. The third test is the impact of capital adequacy and credit distribution. As a result, this study demonstrates three positive effects by applying seven banks of the LQ45 index listed on the Indonesian Stock Exchange from 2019 to 2023. This study is helpful for public investors, especially when getting a return on banking stocks, by observing the positive propensity of capital adequacy and loan-to-deposit ratio. The next scholars can add the other factors of stock return and capital adequacy, like non-performing loans, non-interest revenue, total asset turnover, bank size, profitability, money supply, inflation, and economic growth.

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Conflict of interest

The authors confirm no conflict of interest involving any parties in this research.

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