Banking Intermediation, Asset Quality, Price Earning Ratio and Stock Prices and their Impact on Corporate Value - Study at the Regional Development Bank of West Java and Banten Provinces in Indonesia

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This research was conducted in order to determine the influence of Banking Intermediation, Assets Quality, Price Earning Ratio to Stock Prices and its impact on Corporate Value. The indicator of banking intermediation with Loans to Deposits Ratio (LDR), indicator of asset quality with Non-Performing Loan (NPL), stock price with closing price and corporate value measured by Price Book Value (PBV). The descriptive and verification methods with the quantitative approach will be used in this research. Secondary data sources are from the quarterly published financial statements of the Regional Development Banks of West Java and Banten Provinces for the period of 2012 – 2019 and multiple linear regression is used to analyse data. The study results state that LDR and PER had a partially positive and significant influence, except NPL which had a negative and significant influence on stock prices. Simultaneously LDR, NPL, and PER significantly influence stock prices, while stock prices have a significant impact on PBV.

Keywords: Banking intermediation, asset quality, price earning ratio, stock price, corporate value.
Introduction

According to Titman (2018:41), three important functions of the financial activities of a firm's management are capital budgeting and capital structure decisions as well as working capital management. One financial decision to increase the capital of the company is to sell some shares to the capital markets. The capital market plays a very important role in facilitating business development as well as investors. For companies, the capital market is a source of funding, while for investors the capital market is a profitable investment alternative.

Additional capital is very important for banks as a support mechanism in carrying out banking intermediation. In short, the role of capital for banks is to support business expansion, cover risks and meet regulation (Buchory, 2019). Capital plays several vital roles in supporting daily operation and ensuring the long-run viability of a financial firm (Rose & Hudgins, 2014). In the context of Indonesian banking, the bank's obligation to increase capital is consistent with Bank Indonesia regulations Regulation Number 14/26 / PBI / 2012 dated 27 December 2012 concerning Business Activities and Office Network based on Core Capital.

The decision to sell part of the shares to the capital market was made in 2010 by the Regional Development Bank (RDB) of West Java and Banten Province or called Bank BJB to increase bank capital through an Initial Public Offering (IPO) program. The price stock of Bank BJB during the 2012-2019 periods fluctuated, influenced by fundamental and technical factors. The lowest price occurred in Q3/2015 of IDR 615.00. Although in 2016, the stock price reached IDR 3,390.00 and was the highest price in Q4/2018, it dropped to IDR 2,090.00. Even in Q2/2019 it only amounted to IDR 1,690.00. The development of stock prices and the factors that influence it are the main considerations for investors to make investment decisions. Through analysis, stock price investors can predict if investment will be profitable or vice versa. Stock prices will also affect corporate value.

There have been many studies about factors affecting stock prices with various results. In this study, I will further examine whether bank intermediation, asset quality and price earning ratios influence stock prices of banks and whether they have an impact on corporate value. The indicator of banking intermediation with Loan to Deposit Ratio (LDR), and the indicator of asset quality with Non-Performing Loan (NPL), stock price with closing price and corporate value measured by Price Book Value (PBV).

The results of this research are expected to provide benefits for companies, investors and further research.
Literature Review

Banks are institutions that collect and distribute funds to the public. From a traditional perspective, they act as intermediaries in the allocation of financial resources. Traditional banking functions deal with two processes or contracts: (1) gathering deposits, and (2) making loans (Sinkey, 2002). The process of collecting and distributing funds is called intermediation. Financial intermediation theory was first developed by Gurley and Shaw in 1960. It is based on the theory of informational asymmetry and agency theory that distinguishes between financial intermediary functions: (i) reduction of transaction costs, (ii) reduction of liquidity risk, (iii) provision of information, (iv) debt negotiation (Faruk, 2018:16). Intermediation in banking is the process of collecting public funds and channelling them back to the public, especially in the form of credit or loans.

The Influence of Banking Intermediation on Stock Price

One of the most important functions of a bank is intermediation. If the bank can carry out its intermediation function optimally, it will generate large revenues from the credit that can increase profitability and ultimately will give a positive signal to investors so that the bank's stock price will increase. The indicator commonly used to measure the extent of the implementation of intermediation by the banking system is the ratio of loans to deposits (LDR) (Buchory, 2016).

Previous studies on the effect of LDR on stock prices have shown different results. (Rosyid & Irawan Noor, 2018). Setiawan & Tjun (2011), state that the Loan to Deposit Ratio has a significant influence on Stock Price. However, research conducted by Suryaman and Limankrisna (2017) maintains that LDR had no significant effect on the stock price of banking companies. According to the same research, by Harahap & Hairunnisah, (2017) there is no significant effect between Loan to Deposit Ratio on Share Prices. Likewise, the results of Catriwati (2017) state that Loan Deposit Ratio (LDR) does not affect stock prices. Furthermore, the results of research by Fahlevi, Asmapane, & Oktavianti (2018) found that LDR has a negative and significant impact on stock price. At the same time, Riyani, Mardiah, & Suherma (2019) maintain that the influence of LDR to levels did not significantly change stock price.

The Influence of Non-Performing Loans on Stock Price

Credit business is the largest allocation of bank funds. Income from credit interest is the main source of bank income which ultimately affects the profitability of banks. Therefore, the quality of bank assets, particularly credit, will directly affect revenue and profitability and ultimately the bank's stock price and company value. If asset quality is good, bank profitability will increase and vice versa. A bank’s credit quality can be seen from the number of non-performing
financing activities owned by banks. Measuring the In Islamic banking, quality of assets are measured by non-performing financing (NPF) (Buchory, 2017).

The higher the NPL level, the greater the credit risk faced by banks, and vice versa. As the quality of these assets is important, the bank will always maintain it appropriately. NPL reflects the health of the bank’s financial performance which will affect profitability and stock prices.

Several previous studies conducted by Rjoub, Civcir, & Resatoglu (2017) found that asset quality was related significantly to stock prices. Subsequently, research by Tayal, (2019) states that increase in Non-Performing Assets has a significant effect on stock prices. The stock market considers various factors, but NPA still has a big influence. Likewise, the research results of Dubey, (2019) suggest that NPA (through Net NPA, or Provision) influences bank market capitalisation. Furthermore, (Mousavi & Karshenasan (2017) state that bank credit risk has an impact on the market value of bank shares. Similarly, research by Hashem, et. al. (2017) concludes that there is a statistically significant impact for non-performing loans on stock prices in Jordanian commercial banks at the significance level of (a = 0.05). Meanwhile, according to the results of a study by Oraby, (2018) the results of the Saudi case indicate that neither NPL % nor PLL% has a statistically significant relationship with share prices, which can be interpreted as investors in Saudi Arabia ignoring both NPL and PLL regarding pricing shares of banks. Likewise, the results of a study by Harahap & Hairunnisah, (2017) there is a positive and significant effect between Non-Performing Loans and Stock Prices. Subsequently, Catriwati (2017) maintains that Non-Performing Loans (NPL) do not affect stock prices. According to Riyani, Mardiah and Suherma, (2019) the influence of NPL’s does not significantly change stock price.

The Influence of Price Earning Ratio on Stock Price

Price Earning ratio is the ratio between market price per share with earnings per share. The smaller the value of the price earning ratio, the cheaper the stock to buy and the better the performance per share in generating profits for the company (Tandelilin, 2010). This ratio relates to the market value of shares and earnings per share of a company. This ratio is calculated as market value per share divided by earnings per share.

Previous studies such as Ghimire & Mishra (2018) have found that P-E ratio is a significant determinant of stock price which has a direct impact on it. Similarly, Tandon & Malhotra (2013) maintain that the price-earnings ratio has a significant positive association with the firm’s stock price. Mondal & Imran (2017) state that price/earnings ratio affects stock price. (Results by Nathani et al., (2014) reveal that price-earnings ratio has a significant and positive relationship with stock prices. Furthermore, Enow & Brijlal (2016) have found that price-earnings are significantly and positively correlated with share prices. Almumani (2014),
maintains that there is a positive relationship between Price Earning and Market Price. Meanwhile, Singh (2018) states that Price Earning ratio is insignificant variable determinant of stock prices. Similarly, Arshad, et. al. (2015) believe that the price-earning ratio has no relationship with share prices. The research result conducted by Iyappan & Ganesamoorthy (2017), has found that Price Earnings Ratio (PER) influences share price movements either positively or negatively in various countries such as India, Sri Lanka, Nepal, Pakistan, Bangladesh, Nigeria and so on.

**The Influence of Stock Price on Price Book Value (PBV)**

The value of a company is very important due to the high value of the company which will be followed by a high prosperity shareholder (Brigham & Houston, 2014). Higher stock prices mean higher company value, which is the desire of company owners as high value shows that the prosperity of shareholders is also high. The wealth of shareholders and companies is represented by the market price of shares which is a reflection of investment decisions, financing (financing), and asset management. One measurement of the value of the company or corporate value is the price-book value (PBV) (Weston & Copeland, 2012). PBV is the ratio of share price to the book value of a company. That is, the ratio used to compare the market value of a stock with the book value. The P/B ratio also indicates whether you're paying too much for what would remain if the company went bankrupt immediately. The P/B ratio reflects the value that market participants attach to a company's equity, relative to its book value of equity (Hayes, 2019). Multiple studies have shown that price to book value (PBV) is the most effective valuation measure in determining a stock’s performance. Although the price-earnings ratio (P/E) is considerably more popular, buying at low price-to-book multiples leads to better returns. Book value is the theoretical value of what a company’s net assets are worth. It is also referred to as equity (Rotblut, 2010).

Previous studies conducted by Shittu, Ahmad, & Ishak (2016a, 2016b) found a significant positive relationship between price to book value and the stock price of Nigerian listed firms. Other studies about the relationship between shares and corporate value emphasise stock liquidity, including research conducted by Fang, Noe, & Tice (2009) which states that increase in liquidity around decimalisation improves firm performance. Subsequently, Cheung, Chung, & Fung (2015) state that the result of the difference-in-differences test show that stock liquidity has a significant causal impact on improving firm value.

**Hypothesis**

The hypotheses in this study include the below:

H1: LDR has a positive and significant influence on stock price
H2: NPL has a negative and significant influence on stock price
H3: PER has a positive and significant influence on stock price  
H4: LDR, NPL, and PER have a significant influence on stock price  
H5: Stock price has an impact on corporate value (PBV).

**Methodology**

descriptive and verificative methods are used in this research. Secondary data is sourced from published financial statements of the Regional Development Bank of West Java and Banten Province between 2012-2019.

Multiple linear regression is used to analyse data, while t-test and f-test statistic is used for hypotheses test. The regression equation is as follows:

\[
Y = a + \beta X_1 + \beta X_2 + \beta X_3 + e \\
Z = a + \beta Y + e 
\]  

Y = Stock Price; Z = PBV; a = A constant which is the value of the variable Y or Z when the variable X or Y is 0 (zero); \( \beta \) = Co-efficient of the regression line; \( X_1 \) = LDR; \( X_2 \) = NPL; \( X_3 \) = PER; and, \( e \) = Residual

**Findings**

Data from Table 1 below can be described as follows:

The average value of LDR achieved by Bank BJB for the period 2012 - 2019 is 88.10% and in June 2019 it was 87.10% lower than the average LDR of national banking (94.66%), but for Indonesian banking the average LDR of Bank BJB is satisfactory. The lowest value of LDR achieved in 2012 is 74.09%, while the highest LDR in 2013 is 96.47%.

The average value of NPL achieved by Bank BJB for the period 2012 - 2019 is 2.82% and in June 2019, it was 1.74% smaller than the average NPL of Indonesian banking (2.50%). The lowest value of NPL achieved in 2017 was 1.51%, while the highest NPL in 2014 was 4.15%. The NPL achieved is satisfactory.

The price-earnings ratio (P/E ratio) relates a company's share price to its earnings per share. The average value of PER achieved by Bank BJB for the period 2012 - 2019 is 16.8X and in June 2019 was 47.14X. The lowest value of PER achieved in 2013 was 5.32X, while in June 2019, the highest was PER 47.14X.
The average stock price of Bank BJB for the period 2012 - 2018 was 1,621 rupiah. The lowest market price attained in 2014 is 730 rupiahs, while the highest market price reached in 2016 was 3,390. From 2012, stock prices continued to decline until 2015. In 2016 it increased once more, even becoming the highest share price during the period 2012-2018. However, it declined again until it was closed in June 2019 for 1,690 rupiahs. Many factors, both fundamental and technical, affect a bank's stock price.

The average price-book value (PBV) of Bank BJB for the period 2012 - 2019 was 1.75X. The lowest PBV achieved in 2015 was 0.95X, while the highest PBV attained in 2016 reached 3.41X. PBV for the period between 2012 - 2019 fluctuated, influenced by various factors both fundamental and technical impact stock market conditions. However, since 2016, PBV has continued to decline until 2019. This indicates that the company value continues to decline. Bank management needs to be aware of the decline in PBV as it can cause negative signals for investors.

Table 2: The Development of LDR, NPL, PER, Stock Price and PBV of Regional Development Bank of West Java and Banten Province, Tbk. Period 2012 – 2019.

<table>
<thead>
<tr>
<th>Years</th>
<th>LDR (%)</th>
<th>NPL (%)</th>
<th>PER (X)</th>
<th>Stock Price (IDR)</th>
<th>PBV (X)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012</td>
<td>74.09%</td>
<td>2.07%</td>
<td>8.62</td>
<td>1,060</td>
<td>1.72</td>
</tr>
<tr>
<td>2013</td>
<td>96.47%</td>
<td>2.83%</td>
<td>6.26</td>
<td>890</td>
<td>1.29</td>
</tr>
<tr>
<td>2014</td>
<td>93.18%</td>
<td>4.15%</td>
<td>6.34</td>
<td>730</td>
<td>1.00</td>
</tr>
<tr>
<td>2015</td>
<td>88.13%</td>
<td>2.91%</td>
<td>5.32</td>
<td>755</td>
<td>0.95</td>
</tr>
<tr>
<td>2016</td>
<td>86.70%</td>
<td>1.69%</td>
<td>28.47</td>
<td>3,390</td>
<td>3.41</td>
</tr>
<tr>
<td>2017</td>
<td>87.27%</td>
<td>1.51%</td>
<td>19.20</td>
<td>2,400</td>
<td>2.31</td>
</tr>
<tr>
<td>2018</td>
<td>91.89%</td>
<td>1.65%</td>
<td>13.03</td>
<td>2,050</td>
<td>1.72</td>
</tr>
<tr>
<td>2019*</td>
<td>87.10%</td>
<td>1.74%</td>
<td>47.14</td>
<td>1,690</td>
<td>1.58</td>
</tr>
<tr>
<td>Maximum</td>
<td>96.47%</td>
<td>4.15%</td>
<td>47.14</td>
<td>3,390</td>
<td>3.41</td>
</tr>
<tr>
<td>Minimum</td>
<td>74.09%</td>
<td>1.51%</td>
<td>5.32</td>
<td>730</td>
<td>0.95</td>
</tr>
<tr>
<td>Average</td>
<td>88.10%</td>
<td>2.82%</td>
<td>16.80</td>
<td>1,621</td>
<td>1.75</td>
</tr>
</tbody>
</table>

*)until June, 2019

Source: Quarterly financial statements years of publication 2012-2019; www.bankbjb.co.id

From the processing statistical data in Table 2 (below), the equation can be formulated as follows:

\[
\text{Stock Price} = -2.573 + 0.867\text{LDR} - 11.803\text{NPL} + 0.006\text{PER} \quad [3]
\]

\[
\text{PBV} = 15.179 + 2.204 \text{Stock price} \quad [4]
\]
Explanation for the equation:

- The value of constant is -2.573 negative. This means that if LDR, NPL, and PER have zero values, then the Stock Price will decrease by 2.573. LDR regression co-efficient .867 means that if the LDR increases one unit, the Stock Price increases .867. The regression co-efficient NPL is -11.803 which means that if the NPL increases by one unit, the Stock Price decreases 11.803. PER regression co-efficient is .006 which means that if the PER increases by one unit, the Stock Price increases .600.

- Co-efficient of Correlation (R) of LDR, NPL, PER to Stock Price is .870, which refers to having a strong correlation (Sugiyono, 2013). The determination co-efficient (R-Square) is .758 meaning the Stock Price is influenced by LDR, NPL and PER of 75.8% while the remaining 24.2% is influenced by other factors.

- The partial test of the influence of LDR on the stock price obtained a t-test value of 4.073, which is higher than t-table (2.056) with a significant value of .000 lower .05. Thus, H1 hypothesis is accepted. This study supports research by Rosyid & Irawan Noor (2018). Setiawan & Tjun (2011) stat that the Loan to Deposit Ratio has a significant influence on Stock Price. However, this contrasts with Suryaman and Limankrisna, (2017). Harahap & Hairunnisah (2017); (Catriwati, 2017); (Fahlevi et al., 2018), and (Riyani et al., 2019) state that LDR had no significant effect on stock prices.

- The partial test of the influence of NPL on stock price shows that the t-test value -5.550 is higher than t-table (2.056) with a significant value of .000 lower .05. Thus, H2 hypothesis is accepted. This study supports research by Rjoub et al., (2017) which found that asset quality was significantly related to stock prices. Research by Tayal (2019) maintains that the increase in Non-Performing Assets has a significant effect on stock prices. The stock market considers various factors, but NPA still has a big influence. Likewise, the research results of Dubey (2019) state that NPA (through Net NPA, OR Provision) is a factor influencing bank market capitalisation. Furthermore, Mousavi & Karshenasan (2017) believe that bank credit risk has an impact on the market value of bank shares. Research by Hashem et al. (2017) concludes that there is a statistically significant impact for non-performing loans on stock prices in Jordanian commercial banks at the significance level of (a = 0.05). However, this research contradicts the research results obtained by Oraby (2018) which states that the results of the Saudi case indicate that neither NPL% nor PLL% has a statistically significant relationship with share prices, which can be interpreted as saying that investors in Saudi Arabia ignores both NPL and PLL when pricing bank shares. At the same time, the results of a study by Harahap & Hairunnisah (2017) state that there is a positive and significant effect between Non-Performing Loans and Stock Prices. Subsequently, Catriwati (2017) states that Non-Performing Loans (NPL) do not affect stock prices, while according to Riyani et al. (2019) the influence of NPL to levels did not significantly change stock price.
• The partial test results of the influence of PER on stock price show that t-test value 3.490 is higher than t-table (2.056) with a significant value of .002 lower .05. Thus, H3 hypothesis is accepted. The results of this study support previous research by Ghimire & Mishra (2018), P-E ratio is the significant determinant of stock price which directly affects it. Likewise Tandon & Malhotra (2013) found the price-earnings ratio as having a significant positive association with the firm’s stock price. Mondal & Imran (2017) state that the price/earnings ratio affects stock price. Results by Nathani et al., (2014) reveal that the price-earnings ratio has a significant and positive relationship with stock prices. Subsequently, Enow & Brijlal (2016) have found that price-earnings are significantly and positively correlated with share prices. Almumani (2014), found a positive relationship between Price Earning and Market Price. However contrary to results by Singh (2018), Price Earning ratio is an insignificant variable determinant of stock prices. In the same vein, Arshad et al. (2015) maintain that the price-earnings ratio has no relationship with share prices. The research result conducted by Iyappan & Ganesamoorthy (2017), found that the Price Earnings Ratio (PER) influences share price movements either positively or negatively in various countries such as India, Sri Lanka, Nepal, Pakistan, Bangladesh, Nigeria and so on.

F-count was 27.096 higher than the F-table (3.370) with a significant value of .000. Thus, H4 hypothesis is accepted, which means that LDR, NPL, and PER have a positive and significant effect on stock price.

• The partial test results of the Stock Price effect on PBV show that the t-test value of -5.179 is higher than t-table (2.056) with a significant value of 0.000 lower 0.05. Thus, H5 is accepted. This research result supports research by Shittu et al. (2016b) according to which there is significant positive relationship between price to book value and the stock price of Nigerian listed firms. Other studies regarding the relationship between shares and corporate value emphasise stock liquidity, including research conducted by Fang et al. (2009), which states that the increase in liquidity around decimalisation improves firm performance. Furthermore, Cheung et al. (2015) maintain that the result of the difference-in-differences test shows that stock liquidity has a significant causal impact on improving firm value.

The correlation co-efficient (R) between Stock Price and PBV is .812, which is very strong. The determination coefficient (R-Square) was .659 so that the PBV is influenced by Stock Price of 65.9% while the remaining 34.1% is influenced by other factors.
Table 2: The Result Summary of Statistical Data Processing Using SPSS Software Ver. 25

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
<th>LDR</th>
<th>NPL</th>
<th>PER</th>
<th>Stock Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>Influence LDR, NPL and PER On Stock Price</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Regression Co-efficients</td>
<td>-2.573</td>
<td>0.867</td>
<td>-11.803</td>
<td>.006</td>
<td></td>
</tr>
<tr>
<td>(Constant)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>R</td>
<td>.870</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>R-Square</td>
<td>.758</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Constant)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sig.</td>
<td>.000</td>
<td></td>
<td></td>
<td></td>
<td>.000</td>
</tr>
<tr>
<td>F-test</td>
<td>27.096</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sig.</td>
<td>.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Impact on Stock Price on PBV</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Regression Co-efficients</td>
<td>-5.179</td>
<td></td>
<td></td>
<td></td>
<td>2,204</td>
</tr>
<tr>
<td>(Constant)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>R</td>
<td>.812</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>R-Square</td>
<td>.659</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>T-test</td>
<td>5.529</td>
<td></td>
<td></td>
<td></td>
<td>7.352</td>
</tr>
<tr>
<td>(Constant)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sig.</td>
<td>.000</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

Source: Output SPSS 25.0

Conclusion

The conclusion of this study partially reveals that LDR has a positive and significant effect, NPL has a negative and significant effect, and PER has a positive and significant effect on stock price. Simultaneously, LDR, NPL, and PER have a significant effect on stock price while which has a positive and significant effect on PBV.

LDR, NPL and PER has a 75.8% influence on Share Price while the remaining 24.2% is influenced by other factors which not examined in this study. The degree of influence of the stock price on PBV is 65.9% while the remaining 34.1% is influenced by other factors not examined in this study.

Therefore, the author recommends that bank management increase banking intermediation to an optimal level, maintain non-performing loans so that asset quality remains healthy and increase financial performance.
Effective performance of LDR, NPL and PER will give a positive signal to investors so that the stock price will increase, ultimately increasing company value.

Limitation

The limitation of this research is only analysing the influence of banking intermediation, asset quality, price earning ratio to stock prices and its impact on corporate value. Another limitation is the sole use of the observation unit in the RDB of West Java and Banten Province. Therefore, future researchers who will further examine bank stock prices should add other variables including the observation unit.
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