Soundness and Performance Bank in Indonesia Year 2014 – 2020

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Abstract. This study examines the effect of aspects of the bank financial performance (ROE, DER, NPM and EPS) and bank soundness (NIM, GCG, NPL, CAR) on stock prices of banking companies listed on the Indonesia Stock Exchange in 2014 – 2020. The sample in This study amounted to 21 banking companies. The analytical method used in this research is panel data regression analysis. This study found that NPL, CAR, DER, ROE, NPM, and EPS had a significant effect on stock prices, while GCG and NIM had no significant effect on stock prices. On the other hand ROE have a negative significant influence on stock prices. Based on the test results, the results show that in general the performance level of banking companies is still in accordance with the standards set out in Bank Indonesia Regulation Number. 6/10/PBI/2004 and the banking soundness of all banks is still within the standard in accordance with Bank Indonesia Circular Letter Number. 15 /15/DPNP 2013.

Keyword: Bank Soundness, Bank Financial Performance, Stock Price

1. Introduction

Amid global and domestic economic conditions that are still depressed due to the COVID-19 pandemic, banking resilience in general in the fourth quarter of 2020 is still maintained, as reflected in bank capital which is quite solid with a CAR of 23.81%; this shows the bank’s adequate ability to absorb risk. The banking intermediation function declined slightly due to contracted credit growth, while deposits recorded high growth (11.11%, year on year). Banking liquidity is also adequate, as reflected in the LDR, LA/NCD, and LA/DPK ratios of 82.24%, 146.72%, and 31.67%, respectively. However, it is necessary to pay attention to the increase in credit risk and decrease in profitability in line with economic activity that has not yet recovered due to the impact of the COVID-19 pandemic [1–3]. The average stock prices of banking companies from 2020 are as follows:

Source: Bloomberg 2021

Fig 1 The price of IHSG and Finance Index in Indonesia 2014-2020
The share price is the value of a share that reflects the company's assets that issued the shares, the changes or fluctuations being determined mainly by the forces of supply and demand in the stock market (secondary market) [4]. The more investors want to buy or hold a stock, the higher the price; On the contrary, the more investors want to sell or release a share, the lower the price. [5]. Stock prices are influenced by two factors, namely external and internal factors. External factors include regulations, general level of economic activity, taxation, and stock market conditions, while internal factors include estimated earnings per share, company earnings turnover, risk of future company earnings, management's use of debt, and dividend policy [6]. The factors that affect stock prices are easy to identify. The problem is how to assign these factors into a scoring system to choose which stocks should be included in the portfolio. Several studies have stated that several variables affect stock prices, including ROE, EPS, DER, and NPM. [7–9]. Some of the fundamental factors that the researcher will discuss are NPM, ROE and EPS. The larger the Net Profit Margin, the more productive the company's performance. In addition to these four factors that could affect stock price, other factors fall into the category of bank soundness assessment, namely: NPL, NIM, CAR, and GCG.

The net income earned by the management of invested capital by the business owner is measured by ROE. The return on equity (ROE) is calculated by comparing net income to total equity. The greatest ROE figure signifies a strong return on investment to shareholders. ROE can also show how much net profit will be generated from all of the company's assets, which can affect stock prices. The level of profitability performance determined by NPM can be used to determine how much net profit the company can earn from its sales. NPM is a profitability metric that shows how significant is the percentage of net profit obtained on each sale. The higher this number, the better, since the profitability of the company is considered relatively high. If net profit after tax increases relatively faster than sales, the NPM increases [10]. The size of the NPM can also affect the size of the company's share price.

DER is a comparison between debt and equity. The DER guarantees how much the company's debt will be guaranteed with the capital used to finance it. DER will have an impact on the performance of the company and will lead to an appreciation of the stoke price. [11–13]. EPS is the company's income and is a benchmark for investors to invest their capital in the company. The high number of EPS will increase investor confidence to increase the investment which the company needs. High EPS measures the company's ability to earn net income [9,14]. A NPL compares total non-performing loans and total loans extended to debtors. If the bank has a high level of NPL, it will affect costs; in other words, the higher the NPL will disturb the company [15,16]. Research by Sasaki & Suzuki [17] explained that NPL is partially able to influence stock prices. NIM reflects the market risk that arises due to the movement of market variables, which can cause losses for the bank. Based on Bank Indonesia regulations, one of the proxies for market risk is the interest rate, measured by the difference between funding interest and loan interest or between total funding interest costs and total loan interest costs. Potential investors use the variable CAR to measure the strength of their capital compared to risk-weighted assets. If it is related to stocks, the tendency is that investors will be interested in a bank with a high CAR level [18,19]. GCG is an important mechanism that is expected to encourage healthy business practices. Good corporate governance (GCG) factor assessment assesses the quality of bank management on the implementation of GCG principles [20]. GCG variable also influences stock prices, where GCG is believed to improve company performance or value, impacting stock prices.
Hypothesis

The hypothesis used in this study is generally used to test the extent of the influence between the independent variables on the dependent variable in the model in the equation. The hypothesis used is as follows:

1. H1 : CAR Significantly Positive Effect on Stock Prices
2. H2 : DER Significantly Positive Effect on Stock Prices
3. H3 : EPS Significantly Positive Effect on Stock Prices
4. H4 : GCG Significantly Positive Effect on Stock Prices
5. H5 : NIM Significantly Positive Effect on Stock Prices
6. H6 : NPL Significantly Negative Effect on Stock Prices
7. H7 : NPM Significantly Positive Effect on Stock Prices
8. H8 : ROE Significantly Positive Effect on Stock Prices

2. Methodology

The form of this research is an associative method with a quantitative approach, which can be interpreted as a research statement asking for the relationship between two or more variables. Research in associative problems examines how a variable has a relationship and is related to other variables or whether one variable causes changes in other variables. [21]. The research sample is to be studied using the purposive sampling method. Namely, the sample is selected based on specific considerations. The criteria for taking the sample are:

2. The company not on special surveillance list in The Monetary Service Authority the research term.
3. Not liquidated or delisted in the years of research period.

Based on the purposive sampling criteria, 22 banking issuers from 44 banking issuers were listed on the Indonesia Stock Exchange. The sampling technique used in this research is purposive sampling, namely: the sampling technique with specific considerations/judgment sampling [21].

Descriptive statistic

The descriptive statistics will show the average of earnings per share (EPS), Return on Equity (ROE), Net Profit Margin (NPM), Debt to Equity Ratio (DER), and bank soundness level, namely Non-Performing Loans (NPL), Good Corporate Governance, Net Interest Margin, Capital Adequacy Ratio (CAR), and Share Prices of banking companies in Indonesia, which are classified into book 2 to book 4 classifications.

Average Health and Performance of all Banks

<table>
<thead>
<tr>
<th>Year</th>
<th>Stock Return</th>
<th>ROE</th>
<th>NPM</th>
<th>DER</th>
<th>EPS</th>
<th>NIM</th>
<th>CAR</th>
<th>NPL</th>
<th>GCG</th>
</tr>
</thead>
<tbody>
<tr>
<td>2014</td>
<td>2.01</td>
<td>12.34</td>
<td>24.71</td>
<td>51.47</td>
<td>149.42</td>
<td>5.78</td>
<td>17.38</td>
<td>1.03</td>
<td>2</td>
</tr>
<tr>
<td>2015</td>
<td>0.32</td>
<td>11.32</td>
<td>22.60</td>
<td>53.71</td>
<td>149.53</td>
<td>5.87</td>
<td>19.48</td>
<td>1.17</td>
<td>2</td>
</tr>
<tr>
<td>2016</td>
<td>43.35</td>
<td>7.01</td>
<td>12.35</td>
<td>45.95</td>
<td>140.41</td>
<td>5.90</td>
<td>21.66</td>
<td>1.58</td>
<td>2</td>
</tr>
<tr>
<td>2017</td>
<td>27.72</td>
<td>8.18</td>
<td>16.89</td>
<td>51.05</td>
<td>179.03</td>
<td>5.43</td>
<td>23.67</td>
<td>1.70</td>
<td>2</td>
</tr>
<tr>
<td>2018</td>
<td>-0.28</td>
<td>8.95</td>
<td>22.09</td>
<td>54.20</td>
<td>204.32</td>
<td>5.21</td>
<td>23.21</td>
<td>1.68</td>
<td>2</td>
</tr>
<tr>
<td>2019</td>
<td>6.59</td>
<td>7.63</td>
<td>19.14</td>
<td>64.89</td>
<td>205.19</td>
<td>4.71</td>
<td>21.85</td>
<td>1.97</td>
<td>2</td>
</tr>
<tr>
<td>2020</td>
<td>21.12</td>
<td>3.8</td>
<td>1.19</td>
<td>72.18</td>
<td>139.99</td>
<td>4.01</td>
<td>23.70</td>
<td>1.25</td>
<td>2</td>
</tr>
</tbody>
</table>
The table above depicts the current state of the company, which has experienced variations, beginning with the drop in ROE from 2014 to 2020 and the movement reflected by the NPM, followed by improvements from 2017 to 2018 and a gain in the 2017 stock price, and finally in 2019. The State of Banking Health All banks are still in good shape, with NIMs averaging above 5% (very healthy), however this will drop to 4% in 2020, still in the healthy category. The NPL is remained at, and the 2.5 percent is still in good shape. The CAR of banking firms is still able to retain a part of core capital based on risk over 14 percent, indicating that it is still very excellent. Finally, corporate governance receives a value of 2, indicating that it is a good composite value. All of these factors influence the company’s brand image, which influences investors' decisions to invest.

The analytical methods in this study is a panel data regression analysis. The regression equation model used in this study adopts the theory of Gujarati and Porter (2009) [22] Sasaki and Suzuki (2019) [17] where the models used is:

\[ SP_{it} = a + \beta_1 \text{ROE}_{it} + \beta_2 \text{NPM}_{it} + \beta_3 \text{EPS}_{it} + \beta_4 \text{DER}_{it} + \beta_5 \text{NPL}_{it} + \beta_6 \text{GCG}_{it} + \beta_7 \text{NIM}_{it} + \beta_8 \text{CAR}_{it} + \varepsilon_{it} \]

Where : \( SP_{it} \) (stock price); \( a_i \) (constant); \( \varepsilon_{it} \) (Regression Error)

### Table 2

<table>
<thead>
<tr>
<th>Variabel Dependent</th>
<th>Variabel Independent</th>
</tr>
</thead>
<tbody>
<tr>
<td>( SP_{it} = \text{Stock Price} )</td>
<td>( \text{CAR}_{it} = \text{capital adequacy ratio} )</td>
</tr>
<tr>
<td></td>
<td>( \text{ROE}_{it} = \text{return on equity} )</td>
</tr>
<tr>
<td></td>
<td>( \text{NPM}_{it} = \text{net profit margin} )</td>
</tr>
<tr>
<td></td>
<td>( \text{EPS}_{it} = \text{earning per share} )</td>
</tr>
<tr>
<td></td>
<td>( \text{DER}_{it} = \text{debt equity ratio} )</td>
</tr>
<tr>
<td></td>
<td>( \text{NPL}_{it} = \text{non performing loan} )</td>
</tr>
<tr>
<td></td>
<td>( \text{GCG}_{it} = \text{good corporate governance} )</td>
</tr>
<tr>
<td></td>
<td>( \text{NIM}_{it} = \text{net interest margin} )</td>
</tr>
</tbody>
</table>

3. Results & Discussion

In panel data regression analysis, the best model was chosen based on the Chow test, Hausman test and Lagrange test. Three alternative approaches to processing methods are common effect (CE) / Pooled Least Square (PLS), fixed effect (FE) and random effect (RE).

### Table 2

<table>
<thead>
<tr>
<th>Chow Test Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Effects Test</td>
</tr>
<tr>
<td>Cross-section F</td>
</tr>
</tbody>
</table>

Based on the results of the Chow test, the result is that the probability value is 0.0000 < 0.05, so it can be concluded that the most suitable model to be used in this equation is the FEM. Furthermore, to test the selection of the FEM and the REM.
Based on the results of the Hausman test, the result is that the probability value is $0.004 < 0.05$, so it can be concluded that the most suitable model to be used in this equation is the FEM.

Based on Fig.1, it is known that the probability value (0.062802) > 0.05, so it can be concluded that the assumption of normality in the research equation is accepted.

Multicollinearity Test, The data can be stated that there is no violation of the multicollinearity assumption if the tolerance value is $> 0.1$ and the Variance Inflation Factor value is $< 10$, and vice versa. Based on the results of the multicollinearity test, the tolerance value of each variable is $> 0.1$ and the VIF value of each variable is $< 10$. The mean VIF obtained is 3.22. Based on the results shown in the table below, it can be concluded that there is no violation of the multicollinearity assumption.

In this study, the Durbin Watson (DW) test was used to assess the presence or absence of autocorrelation. The test statistics varied from 0 to 4, with a value of 2 indicating uncorrelated residues. Durbin-Watson Stat shows a value of 1.509323 which is close to 2 which means there is no autocorrelation.

From determining the panel data regression model above, it is found that the best model is the Random Effect. At the same time, this research has fulfilled all of classical assumption tests which are normality test, multicollinearity test and autocorrelation test.
In the F test, the calculated F value in the second equation is 176.56, and the probability value is 0.000. The F table value in the second equation is 2.07 at a significant level of 0.05 so that it can be obtained that the calculated F value (176.56) > F table (2.07) and the probability value (0.000) < significant level (0.05), so it can be concluded that EPS, ROE, NPM, DER, NPL, GCG, NIM, and CAR simultaneously to the price of banking shares. Furthermore, based on the results of the coefficient of determination, the results show that the effect of EPS, ROE, NPM, DER, NPL, GCG, NIM, and CAR to stock price is 0.976 (97.6%) to share price.

Table 7

<table>
<thead>
<tr>
<th>F Test and Coefficient of Determination Results</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>R-squared</td>
<td>0.976355</td>
</tr>
<tr>
<td>F-statistic</td>
<td>176.56</td>
</tr>
<tr>
<td>Prob(F-statistic)</td>
<td>0.000000</td>
</tr>
</tbody>
</table>

Table 8

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>Std. Error</th>
<th>t-Statistic</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>6.468276</td>
<td>0.322936</td>
<td>20.02962</td>
<td>0.00000</td>
</tr>
<tr>
<td>CAR</td>
<td>0.013414</td>
<td>0.003958</td>
<td>3.389012</td>
<td>0.00090**</td>
</tr>
<tr>
<td>DER</td>
<td>0.002216</td>
<td>0.000748</td>
<td>2.964034</td>
<td>0.00360**</td>
</tr>
<tr>
<td>EPS</td>
<td>0.001529</td>
<td>0.000226</td>
<td>6.770353</td>
<td>0.00000**</td>
</tr>
<tr>
<td>GCG</td>
<td>0.001618</td>
<td>0.065356</td>
<td>0.024759</td>
<td>0.98030</td>
</tr>
<tr>
<td>NIM</td>
<td>0.039104</td>
<td>0.027991</td>
<td>1.397038</td>
<td>0.16490</td>
</tr>
<tr>
<td>NPL</td>
<td>-0.045518</td>
<td>0.021252</td>
<td>-2.141831</td>
<td>0.03420**</td>
</tr>
<tr>
<td>NPM</td>
<td>0.007682</td>
<td>0.001044</td>
<td>7.356455</td>
<td>0.00000**</td>
</tr>
<tr>
<td>ROE</td>
<td>-0.036188</td>
<td>0.007556</td>
<td>-4.789348</td>
<td>0.00000**</td>
</tr>
</tbody>
</table>

Description: **) significant alpha 5%

Based on Table 8 above, the following equation can be obtained:

\[ SP_{it} = 6.468276 + 0.013414 \text{CAR}_{it} + 0.0022 \text{DER}_{it} + 0.0015 \text{EPS}_{it} + 0.0016 \text{GCG}_{it} + 0.0391 \text{NIM}_{it} - 0.0455 \text{NPL}_{it} + 0.0076 \text{NPM}_{it} - 0.0361 \text{ROE}_{it} \]

The t statistic test shows how far the influence of one independent variable (CAR, DER, EPS, GCG, NIM, NPL, NPM, ROE) partially or individually has a significant effect on the dependent variable (stock Price).

1. Effect of CAR to the Stock Prices (H1). Based on the result of the t test, it is known that CAR has a significance value of 0.00090 smaller than 0.05 (or t-count = 3.389012 is greater than the t-table value = 2.03738), which means that CAR has an effect on stock prices. This is consistent with various studies in Indonesia related to higher the CAR value obtained by the company, it will attract investors to invest. Basically, investors will seek fundamental information from companies that are able to provide a large level of welfare to shareholders. The results of this study are also in line with research conducted by Toby and Danjuma (2021) [23].
2. **Effect of DER to the Stock Prices (H2).** From the results of the t-test it is known that DER has a significance value of 0.00360 less than 0.05 (or t-count = 2.9640 greater than the t-table value 2.03738), which means that DER has an effect on stock prices. The results of this study are in line with research conducted by Hui (2005) and Bongsu (2015) [24,25] which states that DER have a significant and positive effect on stock price. This makes the researcher assume the greater the amount of accumulated leverage equals to higher number of projects by strengthening the company's operations, thus company can allocate those funds to purchase productive assets or construct any opportunities to invest in various sort of portfolios to increase company's productivity to restore equity.

3. **Effect Of EPS to the Stock Prices (H3).** Referring to the results of the t test, it is known that EPS (Earning Per Share) has a significance value of 0.0000 less than 0.05 (or t-count = 6.770353 is greater than the t-table value = 2.03738) which means that EPS has effect on Stock Prices. This is consistent with various studies Indonesia related to EPS where the greater the profit, the higher the company probability to share the benefit to shareholder. Ther results of this study are also in line with research conducted by Farooq and Chetioui (2012) [26], where stock price performance of firms in the MENA region has positive effect depend on Earning Per Share ratio. Muhammad and Scrimgeour (2014) [27]. where EPS has significant effect to Australian Market in major industries. Stockholders may appreciate higher EPS in some years but in other years it may not be fully reflected in stock rate of return.

4. **Effect Of GCG to the Stock Prices (H4).** Referring to the results of the t test, it is known that GCG has a significance value 0.98030 greater than 0.05 (or t-count = 0.02475 smaller than the t-table value = 2.03738) which means that GCG has no effect on stock price. The results of this study are in line with other research in Indonesia which states that GCG has no significant effect to stock price Yosia (2019) [28] that the value of GCG applied and published in the CGPI (Corporate Governance Perception Index) does not affect stock prices or stock returns. This study indicates that the results of management decisions and policies have been closely guarded by laws and government authorities, so that there are no trust issues that become the concentration of investors in the banking industry.

5. **Effect Of NIM to the Stock Prices (H5).** Based on the results of the t test it is known that NIM has a significance value of 0.16490 greater than 0.05 (or t-count = 1.39703 which is absolutely smaller than the t-table value 2.03738) means that NIM has no effect on stock prices. The results of this study are in line with previous research Nitish and Pooja Gupta (2020) [29], which states NIM does not add value to stock prices, the Information NIM on banking every year is not able to provide a signal for investors to make stock investment decisions that affect the increase in the company's stock price.

6. **Effect Of NPL to the Stock Prices (H6).** From the results of the t test it is known that NPL has a significance value of 0.03420 less than 0.05 (or t count = -2.141831 smaller or negative than the t-table value = 2.03738) which means that NPL has significance negative to stock price, if the company's NPL has increased by 1 time then the stock price will decrease by 0.045518 time. The results of this study are in accordance with the results of research conducted by Haq, M.F.A (2020) investors will decide to leave the company with an increasing NPL value. The increasing value of NPL’s is the main factor in the banking industry that causes profits to fall, such as bank QNB Indonesia (BKSW) which lost up to 1.2 trillion rupiah in 2016 due to being responsible for credit defaults. Based on the composite assessment of the authority, the limit for the worst NPL ratio is 5%.
7. **Effect Of NPM to the Stock Prices (H7).** Based on the results of the t test it is known that NPM significance value of 0.0000 less than 0.05 (or t count = 7.356455 greater than the t-table value = 2.03738) which means that NPM has an effect on Stock Price. This is consistent with various studies in Indonesia related to stock price where the greater the profit, the higher the stock price. Özen and Ergun, (2012) [10]. In this study, the more significant the NPM ratio, the more productive the performance of banking companies. This will increase investor confidence to invest their capital in the company, the amount of profitability is a reflection of the company's ability to distribute profits or dividends in the future. It can be recalled that net profit margin is a ratio that shows the achievement of profit on sales, each Rupiah which is calculated by comparing the profit earned with the sales proceeds.

8. **Effect Of ROE to the Stock Prices (H8).** From the results of the t test it is known that ROE has a significance value 0.0000 0.05 (or t count = -4.7893 more than 2.037 but in negative side) which means that ROE has significance negative to stock prices. The results of this study are in line with research conducted by Harisma (2020) [31] which states that ROE have a significant and negative effect on stock prices. The findings of this study also corroborate the signaling theory, according to which information on negative consequences is used as a signal by investors when determining where to invest, hence affecting the amount of stock trading. The return on equity (ROE) evaluates profit from the perspective of the shareholder, but it does not account for dividends or capital gains, therefore it is not a real measure of share prices (Munte 2009)[32]. Researchers believe that the high value of Return On Equity achieved is a measurement to ensure the return on capital provided, but not all companies have a high ROE aimed at sharing profits to shareholders; instead, the company must first fulfill its commitments, as evaluated by DER.

Besides that, there are also several factors that can affect the level of performance and soundness of banks, namely the economic slowdown in 2014 - 2015 which caused many banks to write off and carry out asset sales (one example is Bank CIMB Niaga which sold its assets in 2015. which reached Rp 3 trillion), was also influenced by the non-significant accelerated rate of credit distribution, especially in 2020. Besides that, the conservative strategy chosen by many banking companies to reduce the risk level of the non-performing loan ratio had an insignificant impact on the growth of net profit of banking companies. Meanwhile, in 2018 again, banking companies in book 2-4 faced challenges in the form of increasing interest rates, the weakening of the rupiah exchange rate and also the trade war between the US and China causing violence which caused the growth of credit distribution to stagnate from 2017. In 2019 banking companies returned, have to face challenges that affect the level of stock prices, performance and soundness of banks caused by weak global commodity demand and have a direct impact on credit growth which only reached 6.08%. in 2020, especially in the second quarter of 2020, the growth of the financial services and insurance sectors reached a trend of -10.3% from 2019, in addition to that, the level of CAR, ROE and NPM also decreased significantly from 2019.

4. **Conclusion**

The results show that in general, the performance level of banking companies is still in accordance with the standards set out in Bank Indonesia Regulation No. 6/10/PBI/2004, and the banking soundness of all banks is still within the standard in accordance with Bank Indonesia Circular Letter Number 15 /15/DPNP 2013. Based on the results of panel data regression testing, it was found that there were differences in the effect of the variables of banking performance and banking health on stock prices in banking companies. Based on the results of research on 7 factors that affect stock prices which are CAR, DER, EPS, GCG NIM, NPL, NPM and ROE, it turns out that only 2 factors have no influence on stock prices and on the other hand ROE have a negative significant influence on stock prices.
Managerial implications can be formulated for companies, investors, and the government. Banking companies must maintain the level of banking performance because the test results found that the variables of performance measurement have a more significant effect than the variables related to the bank's soundness. Investors must see and pay attention to in detail the level of performance and health as a fundamental basis for investing so that the returns obtained from investment results can be optimal. The government must formulate policies that can assist the recovery of banking performance, especially during a pandemic because conditions in the banking sector can have a systemic effect on other business sectors.

In further research, it is recommended to use external variables as moderating variables such as inflation rate, economic growth, geopolitical conditions, credit interest rates, etc. In addition, to assess the performance of banking companies, it can also be applied to other business sectors such as companies engaged in manufacturing, real estate, accretion, and so on so that the results of other studies can show the level of influence of banking performance on stock prices in sectors other than banking.

Reference