Impact Financial Performance to Stock Price: Evidence from Jordan

تأثير الأداء المالي على سعر السهم: بينة من الأردن

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Abstract:

This study examined the effect of market price to book value ratio, Net Profit Margin (NPM), on stock prices of Jordanian banks listed in Amman stock exchange for the period (2018-2020). This research was tested using a T-test tool and Linear-regression and ANOVA methods to prove the proposed hypothesis. The results showed that both market price to book value and net profit margin (NPM) have a significant positive effect on stock prices.

The value of financial performance at the Jordanian stock exchange listed banks cost amounts to 73.8 percent, while other unlisted factors in this study represent 26.2 percent.

Key words: Market price to book value, net profit margin, stock prices, Amman stock exchange, Financial Performance, Jordanian banks.

ملخص:

تناولت هذه الدراسة تأثير نسبة سعر السوق إلى القيمة الدفترية، صافي هامش الربح (NPM)، على أسعار أسهم البنوك الأردنية المدرجة في بورصة عمان للفترة (2018-2020). تم اختبار هذا البحث باستخدام أداة اختبار T و طريقة الانحدار الخطي وطريقة ANOVA لإثبات الفرضيات المقترحة. أظهرت النتائج أن كل من سعر السوق إلى القيمة الدفترية وهامش الربح الصافي لهما تأثير إيجابي ومعنوي على أسعار الأسهم.

بلغت قيمة الأداء المالي للبنوك الأردنية المدرجة في البورصة 73.8 في المائة، بينما تمثل العوامل الأخرى غير المدرجة في هذه الدراسة 26.2 في المائة.

الكلمات المفتاحية: سعر السوق إلى القيمة الدفترية، هامش الربح الصافي، أسعار الأسهم، بورصة عمان، الأداء المالي، البنوك الأردنية.

1. INTRODUCTION

The banking sector is an important pillar in the economy of any country, as the success of any economy, it depends to a large extent on the effectiveness and efficiency of its banking and financial system, and the banking system is one of the most important basic pillars for any economic and social development, as it is the main and basic center to collect savings

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from people, institutions and companies and guide them towards granting loans Credit facilities of all kinds and terms.

Evaluating the financial performance of banks is of particular importance in all societies and economic systems, due to the scarcity of economic and financial resources compared to their great needs. Therefore, one of the most important challenges faced by bank managers is how to use financial resources.

Financial performance (FP) can be defined as a measure of a bank's overall financial health over a given period of time. Financial performance is a subjective measure of the accountability of an entity for the results of its policies, operations and activities quantified for an identified period in financial terms. Financial performance reveals the ability of the firm to create profit in excess of actual uses from assets. It is a tool to measure the achievements of the company through its capital structure **(1)**. It depends on many other factors, some of which are difficult to quantify, including the quality of its management, organizational structure and systems and controls in place **(2)**.

The objective of analyzing and evaluating the financial performance of the various companies and institutions is to provide financial information to all parties interested in the bank's activity in order to identify its strengths and weaknesses.

Financial indicators are also one of the most common and used analysis tools in evaluating the total and partial performance of all organizations, and this can be done by making a comparison between the financial indicators of a single organization during a specified period of time, or comparing the average financial indicators of a group of organizations with the industry standard for similar organizations in the same activity or sector **(3)**.

2. Importance of the study

The business goal of banks is to maximize the value of the shareholders. Therefore, it is important for banks to evaluate the performance so they can make adjustments to operate the risk control and sustainable profitability. The efficiency of banking is crucial. In order to ensure the health of the financial system and the efficiency of economy, we must set a careful assessment and analysis of the banks.

3. Objective of the study

The aim of the study is to find normal distribution of stock prices and performance of banks listed in Amman stock exchange and to find the relationship between price to book value and stock prices on the one hand and the relationship between net profit margin and stock prices in Jordanian banks listed in Amman stock exchange on the other hand.

4. Problem of the study

This study also focuses on the following research questions in addition to the above objectives.

These questions will guide us to have a comprehensive understanding of the research context.

What are the effects of market price to book value and net profit margin on the financial performance of Jordanian banks measured by the stock prices?

5. Hypothesis of the study

H1: There is no significant relationship between the market value to book value and the stock prices of Jordanian banks.

H2: There is no significant relationship between the net profit margin and the stock prices of Jordanian banks.

6. Literature review

Study **(4)**The current empirical study investigated the 7 Indian chemical companies in terms of financial aspect using 12 financial ratios analysis (current assets to current liabilities, quick assets to current liabilities, liquid assets to current liabilities, net credit sale to average trade debtors, total sales to total assets, cost of goods sold to average inventory, shareholder funds to total assets, total debts to total equity, total debts to total assets, fixed assets to net worth, earnings after tax to net sales, earnings before interest and tax to net capital), Technique for Order of Preference by Similarity to Ideal Solution (TOPSIS), Complex Proportional Assessment (COPRAS) and Data Envelopment Analysis (DEA) along with weighing systems of equal weighing, Entropy Shannon and Friedman test as the objective of research during the period of (2010 to 2018).

The obtained results for the efficiency of industries were approached to full efficiency of industries in most cases. The statistical analysis revealed significant differences among the data of industries. The Friedman test has provided valuable weights for raw values. The Entropy Shannon weighting system has provided the positive and negative weights for existing values and also sought the highest consistency with the COPRAS ranking system. By the way, the COPRAS ranking system had classified industries based on negative and positive criteria (expenses and revenues). The TOPSIS procedure ranked the industries based on the available ratio analysis and it has emerged a fine agreement among the industries ratio values. The profit and loss analysis made clear the output incomes and input expenses. Also, it resulted in output and input criteria for introducing into the DEA model. The findings based on the COPRAS model predict the situation of industries for the further financial statement concept. With regard to a rise in the expenses, the ranking system for the income will be taken lots of fluctuations.

Study **(5)**This study investigates the financial performance of Erbil Bank for Investment and Finance, Kurdistan Region of Iraq during the period of 2009-2013. Several financial performance parameters are (1) used such as financial ratios analysis which is used to measure the financial position for the bank and on broader range statistical tools also have been used for analysis purpose of several variables which would affect the banking system in general in order to know whether these variables are significantly correlated with the financial performance of the bank. To achieve this purpose, nine financial ratios are calculated (ROA, ROE, ROD, Total revenue to total assets, provisions to loan, provisions to assets, deposits to assets, net profit margin). The findings of the study convey the positive behaviour of the financial position for Erbil Bank and some of their financial factors variables influence the financial performance of the bank. Moreover, it is found that the overall financial performance of Erbil Bank is improving in terms of liquidity ratios, assets quality ratios or credit performance, profitability ratios (NPM, ROA, ROE). This study examines the impact on the financial performance of Erbil Bank, which was taken as a sample for the purpose of analysis of financial performance. Returns on asset, return on equity and return on deposit were taken as dependent variables while bank size, asset management and operational efficiency were taken as independent variables. Results showed that the ROA of the banks were strongly and negatively influenced by the bank size. Operational efficiency is negatively related with the ROA and results also showed that it was statistically significant. One more dependent variable which is the interest income of the banks was strongly influenced by the bank size which led to a remarkable statistical significance. Interest income showed negative relation with the operational efficiency and results were also statistically significant. On the practical dimension, this study is helpful for bankers and managers in their decision making to improve the financial performance and formulate policies that will promote effective financial system. This study suggests a set of recommendations regarding the development of some banking operations which will boost the bank's profitability and improve the financial performance of the bank.

Study **(6)** this study aims to evaluate the comparative financial performance of Islamic and conventional banks. To measure the financial performance we have used profitability and liquidity ratios as (Return on asset, Return on equity, earning per share, loan to asset ratio, loan to deposit ratio, cash and portfolio investment ratio) of six Pakistani banks three of them are Islamic banks like (Mezan bank, bank Islamic, and AL Baraka bank) and three are conventional banks like (Faysal bank, KASB bank and bank of Khyber) they are selected on the basis of almost having equal weight of invested capital and number of branches, the consolidated financial statements of both Islamic and conventional banks during the period of 2007 to 2009 were used, the yearly profitability and liquidity ratios of Islamic banks are compared with yearly profitability and liquidity ratios of conventional banks. Moreover, the combined mean of profitability and liquidity ratios are compared with combined mean of conventional banks. To get the notable differences among the calculated results the paired sample t-test is used.

The calculated results revealed that the profitability of the Islamic banks is more worthwhile than conventional banks. The analysis makes it clear that Islamic banks are booming rapidly than conventional banks, except year 2007 the mean profitability of conventional banks was much better than Islamic banks but later on 2008 and 2009 the profitability of Islamic banks became better than conventional banks. In conclusion the liquidity measures indicated that the Islamic banks are more liquid than conventional banks. It provides clear evidence that Islamic banks are in a growing stage and trying to get more benefits from the commitment of the funds.

7. Definition of variables:

7.1. Definition of Stock prices:

The price of a stock is the present value of cash flows that accrue to its owner. This simple yet fundamental principle of finance indicates that what matters for stock valuation is bottom line earnings that eventually result in cash payouts, either in the form of dividends or in sharing repurchases. Cash flows from operations provide a key metric in assessing a bank's ability to generate cash from internal operations and remain viable **(7)**.

7.2. Definition of Banks Financial performance:

Financial Performance in broader sense refers to the degree to which financial objectives are being or has been accomplished and it is an important aspect of finance risk management. It is the process of measuring the results of a bank's policies and operations in monetary terms. It is used to measure firm's overall financial health over a given period of time and can also be used to compare similar banks across the same field or to compare industries or sectors in aggregation **(8)**.

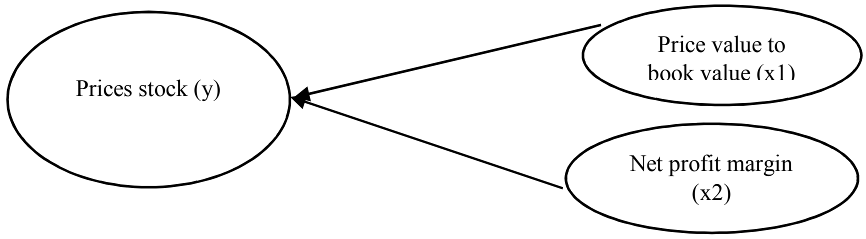
Financial performance analysis includes analysis and interpretation of financial statements in such a way that it undertakes a full diagnosis of the profitability and financial soundness of the business. The financial analyst program provides vital methodologies of financial analysis.

A Financial Performance Report is a summary of the Financial Performance of a Company or bank that reports the financial health of a company or bank assisting various investors and stakeholders to take their investment decision.

The interest of various related groups is affected by the financial performance of a bank. The type of analysis varies according to the specific interest of the party Involved:

- Trade creditors: interested in the liquidity of the bank (appraisal of bank's liquidity),
- Bond holders: interested in the cash-flow ability of the bank (appraisal of bank's capital structure, the major sources and uses of funds, profitability over time, and projection of future profitability),
- Investors: interested in present and expected future earnings as well as stability of these earnings (appraisal of firm's profitability and financial condition),
- Management: interested in internal control, better financial condition and better performance (appraisal of bank's present financial condition, evaluation of opportunities in relation to this current position, return on investment provided by various assets of the bank etc.),

Fig.1. Research Framework



7.3. The Financial Performance Effect on Stock prices

Stock returns are used to measure the performance of a bank stock. The financial objective of the bank is maximizing investment returns, which are reflected by the change in the bank stock prices. Financial performance of a company is measured using stock returns **(7)**.

8. Methodology of the study

The research used all banks listed in Amman stock exchange for the period (2018-2020) which are 15 Jordanian banks (2 of them Islamic banks) and (13 commercial banks) to be analysed.

8.1. Variable of the study

Theoretically, the operational definition of a variable is an element of research that provides a clarification or an explanation of the operational variables to make them observable or measurable.

8.1.1. Independent variable (X):

- ✓ **Price value to book value (x1)**

The Market to Book Ratio (also called the Price to Book Ratio), is a financial valuation metric used to evaluate a bank's current market value relative to its book value. The market value is the current stock price of all outstanding shares (i.e. the price that the market believes the bank is worth). The book value is the amount that would be left if the bank liquidated all of its assets and repaid all of its liabilities. The formula to calculate the price value to book value is as follow:

$$\text{Price value to book value} = \frac{\text{Market value per share}}{\text{Book value per share}}$$

- ✓ **Net profit margin (x2)**

The net profit margin measures how much net income or profit is generated as a percentage of revenue. It is the ratio of net profits to revenues for a company or business segment. The net profit margin illustrates how much of each dollar in revenue collected by a bank translates into profit. A higher (NPM) means that a bank or company is more efficient at converting sales into actual profit. Increased corporate profits expand investors' trust to invest in the bank or company, thereby increasing stock prices.

$$\text{Net profit margin}=\frac{net\ income\ after\ tax}{total\ sale}$$

8.1.2. Dependent variable (Y):

Stock price is the dependent variable in this research, Stock price maximization is one of the significant factors for value maximization objectives. Stock prices are the most observable of all measures which can be used to judge the performance of a listed bank or company. Stock prices are constantly updated to reflect new information about a bank. Thus managers are constantly judged about their actions with the benchmark being the stock price performance. Stock prices reflect the long term effects of a firm's or bank business decisions. When banks maximize their stock prices, investors can realize capital gains immediately by selling their shares in the bank. An increase in stock prices is often automatically attributed to management's value creation performance. At the same time, the stock price might have increased due to macro-economic factors **(9)**.

8.2. Data Analysis method

This study's analysis method is used to determine the effects of the independent single variables, depending variable by multiple linear regression analyses. Furthermore, to detect how much influence the independent variable has and to predict its value. Two or more multilinear regression separate variables entered within model are used. The linear regression multiple equations with three separate variables are as follows: in this study, the method of analysing the effect of the two or more separate variables on each dependent variable is determined by means of a Multilinear regression analysis. Besides, it is proposed to determine how much the value of independent variables affects and predicts it. To achieve this, we had used SPSS (25.0) program. The linear regression multiple equation with five different variables is as follows:

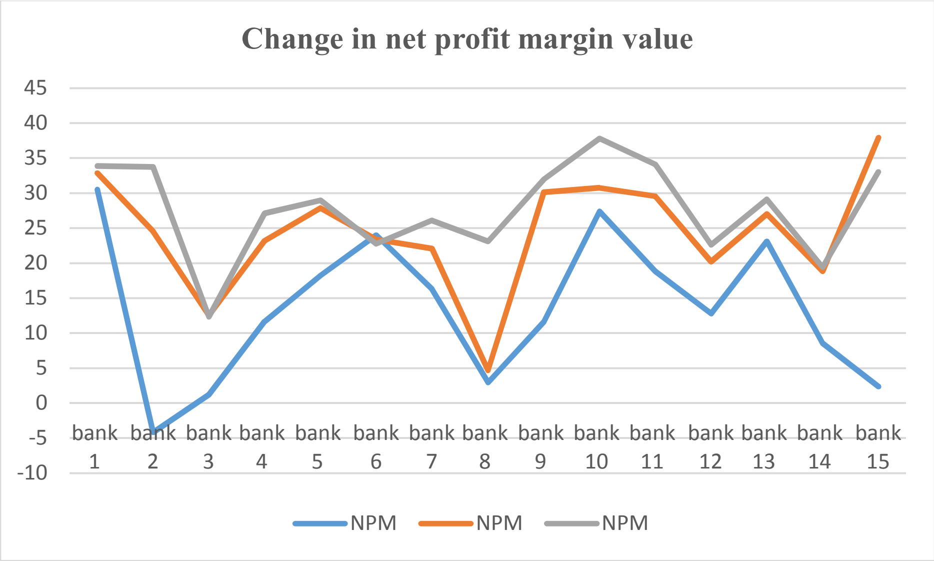
$$\text{Stock prices} = \beta0 + \beta1\text{Price value to book value} + \beta2\text{Net profit margin} + \varepsilon1$$

9. Results and discussion

9.1. Data graphic representation

In this part, the market value to the book value of the stock, the net profit margin, and the stock price were represented in the form of graphic curves to track their changes during the study period, which witnessed a decline during the year 2020, which may be attributed to the emergence of the Corona pandemic that the world witnessed in the year 2020. We will address each form separately:

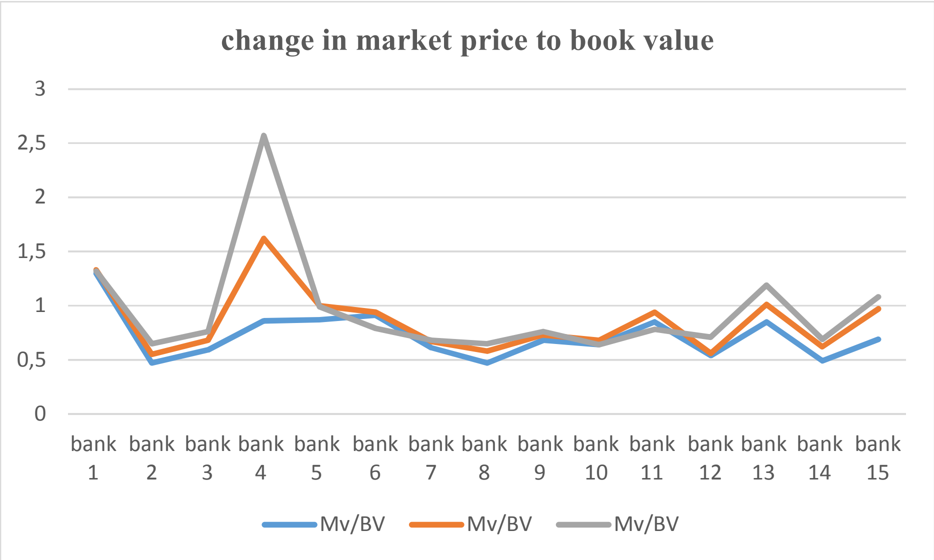
Figure.2. Change in net profit margin



Source: *financial reports of Jordanian banks (2018-2020)*

From the above curve, we note that the net profit margin value had decreased in 2020 compared to both 2018 and 2019 in all banks which embodies the negative effects of corona virus. We also show that the highest value was achieved in bank one (Jordanian Islamic bank) followed by the bank six (Safwa bank) and Almal bank and Jordanian bank successively, these banks are considered as the best banks in term of net profit margin (NPM).

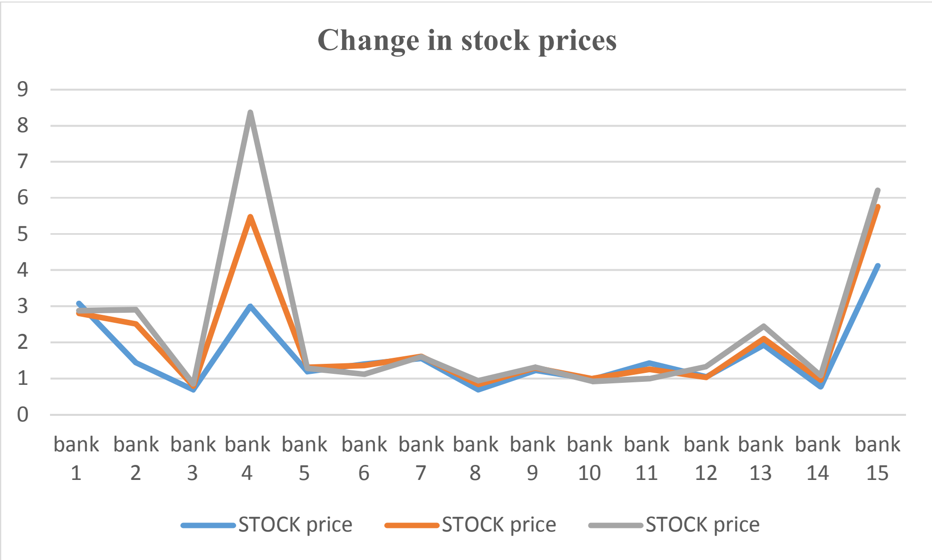
Fig.3. Change in market price to book value



Source*: financial reports of Jordanian banks (2018-2020)*

The above curve presents the market price to book value ratios extracted from the financial reports of Jordanian banks which means that this ratio also knew a decreased value in 2020 while the best value is achieved in 2018 in all banks which reflects the high bank value in this year in the side of market value of the share outstanding by this bank, while the best values achieved in 2020 by the Jordanian Islamic bank in the first place followed by Safwa bank and SOCIETE GENERALE DE BANQUE – JORDANIE successively.

Fig.4. Change in stock prices



***Source**: financial reports of Jordanian banks (2018-2020)*

From the previous figure, we note that the stock price experienced a noticeable decline in the year 2020 compared to 2018, which witnessed the highest levels, and this in turn is a good indicator of the bank's efficiency, which the stock price is the current price of the share listed/ traded on the stock exchange determined by market participants and by the demand and supply of the relevant shares in the capital market. The rise in the stock price of banks reflects the value of the bank for the investors so that high stock prices attract the attention of investors to invest capitals in the company. In this figure the best value is achieved by the Housing bank for Trade and Finance in 2018 while in 2019 and 2020 the best value is achieved by Arab bank for both years.

9.2. Test result

Table 1. Descriptive statistics

Description	Minimum	Maximum	Mean	Std. deviation
Price book value	0.47	1.300	0.721333	0.22305882
Net profit margin	-4.169	30.500	13.67	10.2557666
Stock prices	0.690	4.120	1.636666	1.00107561

***Source:** Output of SPSS result*

The chart above shows that the value of the standard deviation of the net profit margin and stock prices is greater than the average value compared to price book variable.

This confirms that net profit margin is unsatisfactory. Net profit margin data has an average value of 13.67, with a minimum value of -4.169 which is realised by Kuwait Jordanian bank while the maximum value is 30.500 located at Jordanian Islamic bank, while the standard deviation of 10.2557666, shows relatively large data deviations, due to the average value excess.

Price to book value data has average value 0.721333, with a minimum value of 0.47 realised by Kuwait Jordanian bank, while the maximum value is 1.300 at Jordanian Islamic bank. While the standard deviation is 0.22305882 which indicates a relatively smaller data deviation, therefore this data is sufficient.

Stock prices data has an average value 1.636666, with a minimum value of 0.690 located at Commercial Jordanian bank, when the maximum value is 4.120 at Arab bank, at the time that the standard deviation is 1.00107561 which indicates a relatively smaller data deviation, therefore this data is satisfactory.

9.3. Result of Multilinear Regression Analysis

- **Result of the Multilinear regression**

Table 2. Result of Multilinear Regression Analysis

Variable	β	Std.error	Sig t
Constant	0.349	0.074	0.001
Price book value	0.104	0.033	0.009
Net profit margin	0.015	0.003	0.001

Source: Output of SPSS result

The results of the above analysis show that the independent variables price book value and net profit margin on stock price have the effect with the mathematical equation as follows:

$$Y= 0.349 + 0.104X1 +0.015X2 + \varepsilon$$

The first hypothesis (H1) test results showed the price book value had significant and positive impact on the stock prices of the bank. The first hypothesis (H1) was rejected, which indicated that it had neither a significant nor a positive impact on the stock prices banks. The second hypothesis (H2) testing results show that net profit margin affects stock prices bank positively and significantly, so the second hypothesis (H2) is rejected as well.

- **Determination Coefficient Test Results (R2)**

Table 3. Determination coefficient value

Model	R	R square	Adjusted R square	Std.error of the Estimate
1	0.859	0.738	0.694	0.1234167960

Source: *Output of SPSS result*

Based on determination coefficient value table in the R column, the values are obtained (R) of 0.859. This value indicates that the percentage of the relationship between the influence of independent variables (independent price value to book value and net profit margin on stock price is 85.9%. Or the variation of the independent variables used in the independent price value to book value and net profit margin) can explain 85.9% of the variation in the stock price, when we use the value of (R) but if we utilize the value of (R^2) this means that the variation of the independent variables used in the independent price value to book value and net profit margin) can explain 73.8% of the variation in the stock price, while the remaining 26.2% is influenced or stated by other variables not included in this model of research.

Table 4. F-test result (ANOVA)

Model	Sum of squares	DF	Mean square	F	sig
Regression	0.514	2	0.257	16.866	0.000
Residual	0.183	12	0.015		
Total	0.697	14			

***Source**: Output of SPSS result*

F-test results obtained results that the value of F=16.866 with the value of significant=0.000<0.05, which means that the price value to book value and net profit margin affect significantly on stock price.

Table 5. Result of statistical T-test

Variable	t	sig
Price value to book value	6.332	0.000
Net profit margin	5.166	0.000

***Source:** Output of SPSS result*

The result of the above table shows that the value of t=6.332 with a value of significance 0.000<0.05, denoting that the price value to book value has a positive and significant impact on the stock price. Thus the first hypothesis (H1) is rejected. The result also shows that the value of t=5.166 with a value of significance 0.000<0.05, which means that the net profit margin affects positively and significantly the bank's profitability. Thus the second hypothesis (H2) is rejected.

9.4. Discussion

- **The effects of price value to book value on stock price:**

From the result of statistical T-test obtained a significant level of t-test = 0.000 <α = 0.050 (level of significance). Thus the effect of price value to book value on stock price is partially significant. Because the regression results indicate a value of significance of 0.009 is smaller than α = 0.05. It can be concluded that the price value to book value affects the stock price.

- **The effects of net profit margin on stock price:**

From the result of statistical T-test obtained a significant level of t-test = 0.000 <α = 0.050 (level of significance). Thus the effect of net profit margin on stock price is partially significant. Because the regression results indicate a value of significance of 0.001 is smaller than α = 0.05. It can be concluded that the net profit margin value affects the stock price.

10. CONCLUSION

The value of financial indicator represented in market value to book value and net profit margin which express the performance of banks through the stock price witnessed a noticeable decline in the year 2020 with the emergence of the Corona crisis, this result is confirmed by the figures 2, 3 4 successively which represents the change variation in the variables of study (market value to book value, net profit margin and stock prices).

The effect of price value to book value has an impact on stock price at a probability value of 0.000 less than $\alpha = 0.05$, the effect of price value to book value has an influence on stock price with a probability value of 0,000 less than $\alpha = 0.05$. The results of the F test analysis showed that the value of F = 16.866 with a significance value = 0.000 with a value of $p < 0.05$), this means that the independent price value to book value and net profit margin have an impact on stock price. The influence of independent price value to book value and net profit margin can explain 73.8% of the stock price, while the remaining 26.2% is influenced by other variables that have not been included in this study.

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