Available *online* at: https://intropublicia.org/index.php/jabma

Journal of Applied

in Business Management and Accounting

ISSN : 2964-5360

The Effect of Stock Price And Return With The Value Investing Method During The Covid-19 Pandemic In The Banking Sector

Frans Spin 1, Muhammad Dhafi Iskandar 2

1 Universitas Esa Unggul, Jl. Arjuna Utara, No. 9, Kebon Jeruk, Jakarta Barat 11519, Indonesia

2 Universitas Esa Unggul, Jl. Arjuna Utara, No. 9, Kebon Jeruk, Jakarta Barat 11519, Indonesia

Corresponding Author: fransspin@gmail.com

ARTICLE INFORMATION

Received: 01 Februari 2023
Revised: 03 Februari 2023
Accepted: 01 Maret 2023
Available online:

KEYWORDS

Value Investing, Stock Investment, Banking Stocks, Investment Methods, Fundamental Analysis

ABSTRACT

The value investing method is a method of analyzing stocks based on fundamental analysis that measures the company's performance as presented in the financial statements so that investors who apply the value investing method are required to be familiar with the business in the company so that the funds invested can provide benefits for investors in the long term. The purpose of this research is to find out the application of the value investing method during the Covid-19 pandemic, which is proxied by measuring the price earning ratio, price book value, return of equity, and net profit margin on returns and stock prices. This research is a quantitative study using panel data using a purposive sampling method involving 21 banks listed on the Jakarta Stock Exchange from the 1st quarter of 2020 to the 4th quarter of 2021. This research uses the Random Effect Model regression method with the help of the STATA application. The results obtained from this analysis are that PER & ROE do not affect stock returns and prices, while PBV & NPM affect stock returns and prices. This research is expected to contribute to novice investors as additional knowledge in analyzing stocks so that decisions are made based on thorough analysis.

1. Introduction

At the beginning of 2020, it was a difficult start because the global economy was affected by the Covid-19 pandemic, including the capital market/stock exchange. Covid-19 has harmed stock investment returns worldwide (Chiang, 2022; Tchatoka et al., 2022). Throughout 2020 the JCI (Jakarta Stock Exchange Composite Index) experienced a significant decline during the Covid-19 pandemic (Lina et al., 2022). Karim & Saba (2021) concluded that yields/returns on shares in the banking sector harm each additional case of Covid-19. At the same time, the banking sector has an important role in regulating the economy due to the Covid-19 pandemic (Elnahass et al., 2021; Riadi et al., 2022). Based on data from KSEI.CO.ID, the increase in the number of investors in Indonesia has increased by 103.6% with a total number of 3,451,513 in 2021. With such a significant increase in the number of investors, proper education is needed so that investors don't just go along with investing with existing trends but based on mature analytical decisions so the use of appropriate analytical methods is important to get stock returns.

The value investing method recommends buying stocks that have good profitability at undervalued prices to provide maximum profit for investors (Graham & Dodd, 2009). In the study by Doblas et al. (2020); Dananjaya & Magdalena (2021) stated that the lower the P/E and PB ratio than the average, the

stock can be said to be undervalued. The profitability of the company can be measured using the ROE and NPM ratios to find out how much the company generates profits for owners (Yuliani et al., 2021). Previous studies have shown that the price/earnings ratio has a positive effect on stock returns (Doblas et al., 2020) and stock prices (Jallow et al., 2022), while in Akhtar (2021); Dananjaya & Magdalena (2021); Mudzakar & Wardanny (2021) show that the price/earnings ratio has a negative effect on stock returns and in the research of Wijaya et al. (2020); The et al. (2022) shows that the price/earnings ratio has no effect on stock returns. On the other hand, it shows that PER does not affect stock prices (Saputra, 2022a). Price book value has a positive relationship with stock returns (Doblas et al., 2020; Akhtar, 2021; Arsita & Sihombing, 2021) and stock prices (Jallow et al., 2022; Suroso, 2022). On the other hand, it shows that the price book value does not affect stock returns (Shrestha & Lamichhane, 2022). Return on equity has a positive relationship with stock returns (Arsita & Sihombing, 2021; Mudzakar & Wardanny, 2021) and stock prices (Hutasoit et al., 2022; Jallow et al., 2022; Widjaja & Ariefianto, 2022). Meanwhile, research by Wijaya et al. (2020); Atukalp (2021); The et al. (2022) showed different results Return on equity has no effect on stock returns and in research by Krisdayanti (2021); Yuliani et al. (2021); Saputra (2022) shows that Return on Equity does not affect stock prices. The net profit margin shows that it has a positive effect on stock returns (Tikasari & Surjandari, 2020) and stock prices (Hidayat et al., 2021; Saputra, 2022). Meanwhile, in Yuliani et al. (2021) show different results net profit margin has no relationship to stock prices. However, in previous studies, there were inconsistencies in the results for each variable so that in this study it was carried out in a single unit for each variable on price and stock returns so that it could show that overall stock prices were undervalued/overvalued and this research focused on the banking sector listed on the IDX.

The purpose of this research was to determine whether during the Covid-19 pandemic, the value investing method could generate profits in the banking sector. And the general purpose is to provide additional insight for investors in analyzing stocks, especially for new investors so they don't participate in buying stocks but based on a mature decision based on existing analysis and as reference material for students in subsequent research so that they become one of the input sources.

2. Literature Review

Stock Investment & Value Investing

Stock investment is an activity of purchasing assets in the form of shares aimed at obtaining future profits (Hermanto, 2017; Wijaya & Sedana, 2020). Stock investment is not gambling based on speculation that prices will rise or fall, therefore basic investment knowledge is needed (Hermanto, 2017) in value investing to be taught to get to know each company that will be invested because there is a business being run behind the shares of stock to be purchased (Srivastava & Kulshrestha, 2020). Value investing is a stock investment approach that focuses on finding undervalued (mispriced) stocks on the stock exchange, namely stocks whose market price is less than their intrinsic value as determined by fundamental analysis (GRAHAM & DODD, 2009; Srivastava & Kulshrestha, 2020).

Price Book Value (PBV)

Intrinsic value is the fair price of a stock which can be calculated by multiplying earnings per share with the percentage of twice growth plus eight or usually earnings per share with fifteen assumptions of 3% growth in the next 10 years (GRAHAM & DODD, 2009; Srivastava & Kulshrestha, 2020). Book value is the division of the total equity of the issuer/company by the number of shares outstanding which can be seen in the equity in the financial statements presented by each issuer or can also be seen through IDX.CO.ID on the listed company profile. Book value can also be said to be the real value of a share in the issuer/company because it divides all capital by the number of outstanding shares so that the book value becomes a source of information about how much equity value investors have for the shares they own (Doblas et al., 2020). Price Book Value (PBV) is the value of the comparison of stock prices with the company's book value (Brigham & Houston, 2009; Arsita & Sihombing, 2021). PBV has a value of 1, meaning that the share value is equal to the company's book value, and if the PBV is above 1, the stock price exceeds the company's book value (overvalue) and vice versa if the PBV is less than 1, the stock price is less than the company's book value (undervalue) (Arsita & Sihombing, 2021; Doblas et al., 2020).

Price Earning Ratio (PER)

Earning Per Share (EPS) is the ratio obtained from the distribution of the company's net profit and the number of outstanding shares so that it can be seen that every 1 share purchased is capable of producing how much profit for shareholders (Brigham & Houston, 2009; Mudzakar & Wardanny, 2021). Price Earning Ratio (PER) is a comparison ratio between stock prices and earnings per share (EPS) (Brigham & Houston, 2009; The et al., 2022). This ratio shows how much profit is made so that investors can find out how much the rate of return on 1 share purchased is (Saputra, 2022).

Return of Equity (ROE)

Return on Equity (ROE) is a financial ratio by dividing the company's net profit by equity. ROE shows how effective the company's management is in generating profits for the company from each fund invested by investors (Brigham & Houston, 2009; The et al., 2022). According to Munandar & Kusdianto (2021); Mawarti et al. (2022); Saputra (2022) ROE shows how much the company's ability can provide returns to investors from the equity it owns so that the greater the ROE, the greater the company's capacity to generate profits from the equity it owns.

Net Profit Margin (NPM) & Stock Returns

Net Profit Margin (NPM) is a financial ratio by dividing net profit and sales in the financial statements (Brigham & Houston, 2009; Hidayat et al., 2021). According to Brigham & Houston (2009); Hermanto & Tjahjadi (2021); Hidayat et al. (2021) NPM is an indicator to measure a company's capacity to generate profits for the effectiveness of company operational activities. Stock returns are the value of profits received by investors from investment results (Brigham & Houston, 2009; Tikasari & Surjandari, 2020). In the capital market, stock returns are received from capital gains (profit from selling shares) and dividends distributed by the company (Tikasari & Surjandari, 2020). The realization of capital gains is the difference in buying shares that occurs due to increased stock movements (Brigham & Houston, 2009).

3. Hypotheses Development

The Relationship Between Price To Earnings Ratio On Prices And Stock Returns

In the value investing method, the lower the price-to-earnings ratio on intrinsic value, the lower the stock price will be, which will provide large profits in the long term (Doblas et al., 2020; Yuliani et al., 2021). A high PER indicates that the company's growth rate is getting better, but a high PER also indicates that the stock price is overvalued. Therefore, investors will avoid buying a high PER because it will provide little return (Mudzakar & Wardanny, 2021). According to research by Doblas et al. (2020), the price/earnings ratio has a positive effect on stock returns and stock prices (Jallow et al., 2022). This is in contrast to the value investing method, in which a smaller price to earnings ratio will provide greater stock returns (Akhtar, 2021; Mudzakar & Wardanny, 2021). Unlike the research by Wijaya et al. (2020); The et al. (2022) concluded that PER does not affect stock returns and stock prices (Saputra, 2022). From this explanation, the following hypothesis is taken:
H1 = PER has a negative effect on stock returns
H2 = PER has a positive effect on stock prices

The Relationship Between Price Book Ratio On Prices And Stock Returns

The PBV ratio equal to 1 states that the price is the same as the book value of the equity owned, the lower the PBV value, the the investor has received the initial benefit from the book value gap (Doblas et al., 2020). The smaller PBV indicates an undervalued price (Arsita & Sihombing, 2021) so when there is an increase in PBV it will have an impact on increasing stock prices with this increase in stock returns also increasing (Suroso, 2022). According to research by Doblas et al. (2020); Akhtar (2021); Arsita & Sihombing (2021) price to book ratio has a positive influence on stock returns and stock prices (Jallow et al., 2022; Suroso, 2022). From this explanation, the following hypothesis is taken:
H3 = PBV has a positive effect on stock returns
H4 = PBV has a positive effect on stock prices

The Relationship Of Return Of Equity On Prices And Stock Returns

Company profitability has a good correlation with stock returns and is a factor that drives stock price movements (Dananjaya & Magdalena, 2021). Good company performance will attract investors to invest (Saputra, 2022) and increase ROE which will increase stock prices and stock returns. According to research by Arsita & Sihombing (2021); Mudzakar & Wardanny (2021) return on equity has a positive effect on stock returns and stock prices (Asikin et al., 2020; Hutasoit et al., 2022; Jallow et al., 2022; Widjaja & Ariefianto, 2022). Unlike the research by Wijaya et al. (2020); The et al. (2022) which states that return on equity has no effect on stock returns and stock prices (Krisdayanti, 2021; Yuliani et al., 2021; Saputra, 2022). From this explanation, the following hypothesis is taken:
H5 = ROE has a positive effect on stock returns
H6 = ROE has a positive effect on stock prices

The Relationship Between Net Profit Margin Ratio On Price And Stock Returns

Profit is the goal of carrying out company activities that will be reused for company operations (Saputra, 2022). The higher the NPM, the more profit the company generates (Tikasari & Surjandari, 2020). The increase in NPM will be an attraction for investors so it will increase stock prices and returns (Hidayat et al., 2021; Tikasari & Surjandari, 2020). According to research by Tikasari & Surjandari (2020) net profit margin has a positive effect on stock returns and stock prices (Hidayat et al., 2021; Saputra, 2022). These results are different from the research by Yuliani et al. (2021) which states that net profit margin does not affect stock prices. Based on this explanation, the following hypothesis is taken:
H7 = NPM has a positive effect on stock returns
H8 = NPM has a positive effect on stock prices
Based on this research hypothesis, the research conceptual framework can be described as follows:

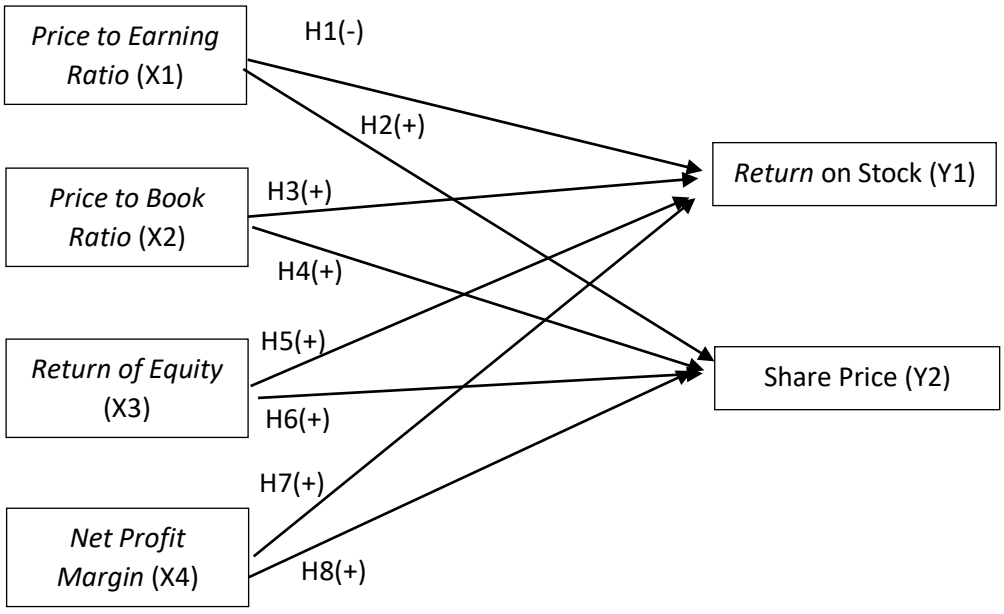

Figure 1. Conceptual Framework

4. Method, Data, and Analysis

This research is a quantitative research that uses numbers as a tool for analysis (Kasiram, 2008; Samsu, 2017). Measurement of each variable in this study in the table below:

Table 1. Variable measurement

No	Variable	Measurement	Ref
1	*Earning per share* (EPS)	Net Profit / Number of outstanding shares	(Brigham & Houston, 2009)
2	*Price earning ratio* (PER)	Share Price / *Earning per Share*	(Brigham & Houston, 2009)
3	*Book Value* (BV)	Total Equity / Number of outstanding shares	(Brigham & Houston, 2009)
4	*Price Book Value* (PBV)	Share Price / *Book Value*	(Brigham & Houston, 2009)
5	*Return of Equitu* (ROE)	Net Profit / Total equity	(Brigham & Houston, 2009)
6	*Net Profit Margin* (NPM)	Laba Bersih / Penjualan	(Brigham & Houston, 2009)
7	Share Price	Quarterly closing price	Financial report sample data
8	Share purchase price	Quarterly closing price	Financial report sample data
9	Selling price of shares	Closing price Q4 2021	Financial report sample data
10	*Return* on stock	$\frac{\text{(Selling price of share – Share purchase price)}}{\text{Share purchase price}}$	(Brigham & Houston, 2009)

source: processed sample data

The data in this study is panel data consisting of cross-sectional data and time series data with a population taken from the banking sector that has been registered on the stock exchange with a total population of 47 banks and sampling by purposive sampling through a screening application provided by stockbit .com by selecting companies that have increased revenue over the last 3 years so that there are 21 banks and the timeframe taken starts from the 1st quarter of 2020 to the 4th quarter of 2021. The data collection technique is secondary data which retrieves financial reports per quarter for each sample via idx .co.id and the publication of each issuer.

Based on the data obtained, testing secondary data into the research model is as follows (Fadli et al., 2021):

$$RSit = \alpha it + \beta 1PERit + \beta 2PBVit + \beta 3ROEit + \beta 4NPM + \varepsilon it \quad \text{.....(1)}$$
$$HSit = \alpha it + \beta 1PERit + \beta 2PBVit + \beta 3ROEit + \beta 4NPM + \varepsilon it \quad \text{.....(2)}$$

RS = Return on stock / Rate of return
HS = Share price
α, β = Constants
it = Cross section and time series
PER = Price to revenue ratio
PBV = Price to book value
ROE = Return on equity
NPM = Net profit margin
ε = error factor

By the mathematic equation above in this study, the effect of PER as a variable X1, PBV as a variable X2, ROE as a variable X3, NPM as a variable X4 on stock returns (1), and stock price (2) as a variable Y.

5. Results

This study uses the STATA application to process sample data. The first test in this study is descriptive statistical analysis of the sample data that has been obtained. The following are the results of the descriptive statistical analysis test in the image below:

Table 2. Descriptive Statistical Analysis

Variable	Obs	Mean	Std. dev	Min	Max
RS	147	2,763	11,323	-0,511	88,557
HS	147	2.268,921	2.629,581	50,000	15.100,000
PER	147	370,112	2.626,737	-6.417,095	25.145,430
PBV	147	3,554	5,950	0,369	38,174
ROE	147	0,040	0,054	-0,239	0,165
NPM	147	0,081	0,286	-1,646	0,381

source: processed sample data by STATA

From the table above it is known that the average stock return of the 147 samples was 2.76% with the smallest value at Bank Permata in Q4 2020 of -51.1% which indicated that the purchase of Bank Permata shares in the 4th quarter of 2020 experienced the biggest loss among other banks until 2021 while the highest value was owned by Allo Bank Indonesia in Q1 and Q2 2020 of 8855.7% which indicates that purchasing Allo Bank Indonesia shares in quarters 1 and 2 2020 will provide the greatest profit until the end of 2021. The average share price of the 147 samples is 2,268 .9 per share with the smallest value in Panin Dubai Syariah Bank in Q1 to Q3 2020 of 50 per share which indicates the share price of Bank Panin Dubai Syariah in the 3rd quarter of 2020 is the cheapest in the banking sector and the highest value is owned by Bank Jago in Q3 2021 of 15,100 per sheet indicating the most expensive share price for Bank Jago in the third quarter of 2021 in the banking sector. The average PER of 147 samples is 370.12 times the stock price with the smallest value at Bank Jago in Q3 2021 of -6,417 times the stock price with a standard PER of 15 times, so it can be said that Bank Jago's stock price for the third quarter of 2021 is undervalued and the highest value owned by Bank Panin Dubai Syariah in Q4 2020 of 25,145 times the share price with a PER standard of 15 times, it can be said that the share price for Bank Panin Dubai Syariah in the 4th quarter of 2020 is overvalued. The average PBV of 147 samples is 3.55 times the book value with the smallest value at Bank Syariah Indonesia in Q1 2020 of 0.36 times the book value. the highest was owned by Allo Bank Indonesia in Q2 2021 of 38.17 times its book value, which indicated that Allo Bank Indonesia's share price in the 2nd quarter of 2021 was overvalued from its book value. The average ROE of 147 samples is 4% with the smallest value in Neo Commerce Bank in Q3 2021 of -23.9% which indicates the largest loss in return on equity during 2020-2021 by Neo Commerce Bank in quarter 3 2021 and the highest value is owned by Bank BTPN Syariah in Q3 2021 was 16.5% which signifies the highest gain in return on equity during 2020-2021 by Bank BTPN Syariah in quarter 3 2021. The average NPM of 147 samples is 8.1% with the smallest value at Bank Jago in Q4 2020 of -164.6%, this indicates that Bank Jago in the 4th quarter of 2020 has high operational costs which cause the income level to not be able to cover it and the highest value owned by Bank BTPN Syariah in Q1 2020 of 38.1%, this indicates that Bank BTPN Syariah in the first quarter of 2020 had good management of operational costs.

After analyzing the descriptive statistics, the next test is by selecting the existing regression estimation model. There are three regression estimation models in the STATA Pooled Least Square (PLS), Fixed Effect (FE), and Random Effect (RE) applications. In testing the selection of the three models using the Chow test for selecting the PLS model with the FE model, the Breusch Pagan LM test for selecting the PLS model with the RE model, and the Hausman test for selecting the RE model with FE with decision making reject H0, if probability > F is less than alpha is 5%. From the test results in the table 3, it can be

seen that the Random Effect (RE) regression model was selected from the Pooled Least Square (PLS) regression model and the Fixed Effect (FE) regression model so that in using the Random Effect (RE) regression model, autocorrelation testing and testing heteroscedasticity was not carried out because the regression model used the Generalized Least Square (GLS) technique which was free from heteroscedasticity and autocorrelation (Gujarati, 2004).

Table 3. Selection Result of Regression Model Estimation

Test	Prob>F	RS	HS
Chow Test (PLS VS FE)	0,000	Model FE	Model FE
Breusch Pagan LM Test (PLS VS RE)	0,000	Model RE	Model RE
Hausman Test (RE vs FE)	0,000	Model RE	Model RE

source: processed sample data by STATA

The next test is the classic assumption test, there are three classic assumption tests on panel data, namely (Gujarati, 2004): multicollinearity test, heteroscedasticity test, and autocorrelation test. Multicollinearity testing to find out whether each variable used has symptoms of multicollinearity. The multicollinearity test is carried out using two methods of partial correlation and variance inflation factor (VIF).

Table 4. correlation test & multicollinearity test

Correlation Test Model 1

	RS	PER	PBV	ROE	NPM
RS	1,0000				
PER	-0,0142	1,0000			
PBV	-0,0387	-0,1674	1,0000		
ROE	0,0106	-0,0804	-0,2975	1,0000	
NPM	-0,0508	0,0217	-0,5168	0,6818	1,0000

Correlation Test Model 2

	HS	PER	PBV	ROE	NPM
HS	1,0000				
PER	-0,2615	1,0000			
PBV	0,4443	-0,1674	1,0000		
ROE	0,2171	-0,0804	-0,2975	1,0000	
NPM	0,0334	0,0217	-0,5168	0,6818	1,0000

Multicollinearity Test

Variable	VIF	1/VIF
PER	1,01	0,99337
PBV	1,34	0,743547
ROE	2,35	0,426317
NPM	2,53	0,395661
Mean VIF	1,81	

source: processed sample data by STATA

In the correlation test table 4 the value of each variable is not more than 0.8 which indicates there are no symptoms of multicollinearity in each variable and then the multicollinearity test in appendix 5 the average value of the independent variables is 1.81 and the value of each independent variable does not exceed 10 which indicates that each independent variable does not show symptoms of multicollinearity. In the next stage, regression testing uses a random effect model to determine the relationship between PER, PBV, ROE, and NPM on returns and stock prices with the results in table 5.

Table 5. Results of Random Effect Regression Model Testing

Hypothesis	Hypothesis Statement	Coefficient	P>[Z]	Result
H1	PER has a negative effect on stock Return	- 0,000	0,605	H1 rejected
H2	PER has a positive effect on stock price	- 0,031	0,288	H2 rejected
H3	PBV has a positive effect on stock return	- 0,927	0,000	H3 rejected
H4	PBV has a positive effect on stock price	179,494	0,000	H4 accepted
H5	ROE has a positive effect on stock return	4,221	0,849	H5 rejected
H6	ROE has a positive effect on stock price	- 3.706,281	0,113	H6 rejected
H7	NPM has a positive effect on stock return	- 10,481	0,031	H7 rejected
H8	NPM has a positive effect on stock price	7.356,981	0,000	H8 accepted

source: processed sample data by STATA

6. Discussion

The effect of PER on stock returns

This study discusses the effect of stock prices and stock returns using the value investing method during the Covid-19 pandemic by looking at the relationship between PER, PBV, ROE, and NPM on stock returns and stock prices. In the value investing method, PER is an indicator for buying undervalued stocks, the lower the PER, the greater the stock return (Doblas et al., 2020; Yuliani et al., 2021). A high PER also indicates a good company growth rate (Brigham & Houston, 2009) so value investors believe that if a company with good growth has a low PER it indicates that there has been a wrong price on the market. This study, it shows that PER has no relationship with stock returns at 21 banks listed on the IDX, these results are similar to research (Wijaya et al., 2020). This is contrary to the value investing method which states that the lower the PER, the higher the return on shares (Doblas et al., 2020; Yuliani et al., 2021). If you look at the researcher's data in attachment 4 based on the highest stock returns, it was found that Bank Jago and Allo Bank Indonesia had profit rates of 2612% and 8856% in quarter 1 2020 with PER values of -28 and 676 respectively, this stated that during the pandemic covid-19 PER values below the average for similar sectors cannot be used as a reference for other factors that affect stock returns.

The effect of PER on stock prices

Companies that have good growth prospects have a PER above the JCI average (Brigham & Houston, 2009) because investors believe that with good growth the company will remain strong. A PER above average also indicates an overvalued price, therefore value investors look for stocks that have a good business growth rate and a PER below the average in the sector because value investors believe that a below average PER indicates an undervalued stock price and will be corrected again. to the actual price so that PER and stock prices will move in the same direction. In this study, PER stated that there was no relationship with stock prices in a sample of 21 banks listed on the IDX which was similar to research (Saputra, 2022). These results do not support the value investing method which believes that PER moves in the direction of stock prices. If you look at the researcher's data in appendix 4 for the period Q1 2020 to Q4 2021, there are many PERs with minus values, this causes the PER in this study to have no relationship with stock prices.

The effect of PBV on stock returns

In Value Investing a PBV below 1 indicates an undervalued price (Doblas et al., 2020; Yuliani et al., 2021) because a PBV of 1 reflects the book value of the company so that a lower PBV will increase stock returns when the market returns to assessing them according to their book value. This study, it states that there is a negative relationship to stock returns in a sample of 21 banks listed on the IDX. This indicates that the smaller the PBV, the greater the stock return to be obtained. then the stock returns obtained will be even greater (Doblas et al., 2020; Yuliani et al., 2021) so purchasing shares below an undervalued price will be attractive to investors because it will provide greater stock returns.

The effect of PBV on stock prices

Undervalue shows that the stock price has been corrected downwards so that shares are cheap for value investors (Doblas et al., 2020; Yuliani et al., 2021). PBV shows how the market values the issuer so that PBV price movements will always follow the stock price. When the market values PBV above 1, the price will rise and become overvalued. This study, it states that it has a positive effect on stock prices in a sample of 21 banks listed on the IDX. This indicates that the greater the PBV, the greater the direction of stock price movement the results are similar to research (Jallow et al., 2022; Suroso, 2022) because good companies can create a high PBV for investors so that it can attract investors' interest and high interest will increase stock prices (Brigham & Houston, 2009). When viewed from the value investing method, investors who buy undervalued stocks at a low PBV believe that when the PBV returns to an increase at its fair price, the share price will also be corrected to rise/overvalue.

The effect of ROE on stock returns

The company's good growth is shown by ROE above the average in the sector. Investor ROE is above average because ROE indicates the return on profits from the company's equity. This study states that ROE has no significance on stock returns in a sample of 21 banks listed on the IDX which are similar to those in research (Wijaya et al., 2020; Atukalp, 2021; The et al., 2022). Based on the results of this study, it is stated that in the period Q1 2020 to Q4 2021, investors do not use ROE as an indicator in determining the stock returns to be received because ROE is a picture of profits/profits from existing company equity so that stock returns are not directly felt.

The effect of ROE on stock prices

High ROE will be attractive to investors so it will have an impact on increasing stock prices (Brigham & Houston, 2009) because the picture of the return on company equity can be measured through ROE. This study, it states that ROE does not affect stock prices in a sample of 21 banks listed on the IDX. These results are similar to research (Krisdayanti, 2021; Yuliani et al., 2021; Saputra, 2022). This shows that the ability to provide returns to investors is not illustrated by rising stock prices but by other company factors such as dividend distribution to investors.

The effect of NPM on stock returns

NPM shows the effectiveness of management in managing operational costs (Brigham & Houston, 2009). Companies that excel in management can be shown by an above-average NPM. In this study, NPM has a negative correlation with stock returns in a sample of 21 banks listed on the IDX, this indicates that the greater the NPM, the smaller the stock returns. The research results do not support the hypothesis and the results of research by Tikasari & Surjandari (2020) which state a positive relationship with stock returns. If based on the NPM Value Investing method, a company has a competitive advantage above the average in its sector. In the research data binding 4 Allo Bank Indonesia in Q2 2020 has an NPM value of 36% with a stock return of 8855.7% and in Q3 2020 the NPM value is 38% with a stock return of 5027%, this concludes that the above average NPM attracts investor interest, the more investors are interested, the stock price will be overvalued which causes fewer stock returns.

The effect of NPM on stock prices

A decrease in NPM is an indication of a decrease in company performance, this ratio can be an indicator of company performance so that investors can make investment decisions. In this study, it states that NPM has a positive correlation with stock prices in a sample of 21 banks listed on the IDX, this indicates that the greater the NPM, the price will move up similar to research (Hidayat et al., 2021; Saputra, 2022) because an increased NPM indicates performance companies are getting better so that the interest of investors to invest is increasing and has an impact on increasing stock prices.

7. Conclusion, Limitations, and Suggestions

Conclusion

The results of this study conclude that PER and ROE do not have a significant relationship with returns and stock prices, while PBV and NPM have a significant relationship with returns and stock prices so it can be concluded that although PER and ROE do not have a significant relationship if the value investing method is applied then Allo Bank Indonesia shares will be obtained in the second quarter of 2020 which can provide big profits.

Limitation and suggestions

In this study, there are still limitations, namely the period taken by researchers from the 1st quarter of 2020 to the 4th quarter of 2021 so future research is expected to able to take a longer period of at least 5 years and be able to take a wider population so that the results obtained will be more accurate because of the purpose of applying the value investing method for long-term investments. In this research, it is hoped that it can provide additional knowledge to novice investors who are exploring stock investment or looking for the best method of investing, decisions made based on the best analysis rather than just joining in or buying trading/investment signals because every profit and loss from an investment will be investors' own risk.

References

Akhtar, T. (2021). Market multiples and stock returns among emerging and developed financial markets. *Borsa Istanbul Review*, *21*(1), 44–56. https://doi.org/10.1016/j.bir.2020.07.001

Arsita, Y., & Sihombing, P. (2021). Analysis of the Effect of Financial Ratio on Stock Returns of Non Cyclicals Consumer Companies Listed on IDX 2015-2020. *International Journal of Innovative Science and Research Technology*, *6*(9).

Asikin, B., Saudi, M. H., & Roespinoedji, R. (2020). Influence of Return on Assets (ROA), Return on Equity (ROE), and Earning Per Share (EPS) of Stock Price(Survey on Corporate Advertising, Printing, and the Media listed on the Indonesia stock exchange Period 2015-2019). *Solid State Technology*, *63*(3). https://www.researchgate.net/publication/348588771

Atukalp, M. E. (2021). Determining the relationship between stock return and financial performance. *Journal of Applied Statistics*, *48*(13–15), 2643–2657. https://doi.org/10.1080/02664763.2020.1849056

Brigham, E. F., & Houston, J. F. (2009). *Fundamentals of Financial Management :12th Edition*. South-Western Cengage Learning.

Chiang, T. C. (2022). Evidence of Economic Policy Uncertainty and COVID-19 Pandemic on Global Stock Returns. *Journal of Risk and Financial Management*, *15*(1). https://doi.org/10.3390/jrfm15010028

Dananjaya, Y., & Magdalena, R. (2021). Quality Investing: the Role of Profitability to Separate Good From Bad Stock in Value Investing. *International Journal of Scientific Research and Management*, *9*(1), 2011–2116. https://doi.org/10.18535/ijsrm/v9i1.em03

Doblas, M. P., Lagaras, Ma. C. P., & Enriquez, J. A. (2020). Price to Earnings and Price to Book Ratios as Determinants of Stock Return: The Case of Financial Institutions Listed in Bahrain Bourse. *Journal of Applied Economic Sciences (JAES)*, *69*, 532–539. https://www.ceeol.com/search/article-detail?id=909715

Elnahass, M., Trinh, V. Q., & Li, T. (2021). Global banking stability in the shadow of Covid-19 outbreak. *Journal of International Financial Markets, Institutions and Money*, *72*. https://doi.org/10.1016/j.intfin.2021.101322

Fadli, J. A., Sakti, I. M., & Jumono, S. (2021). Market Power and Bank Liquidity Risk: Implementations of Basel III using Net Stable Funding Ratio Approach. *Jurnal Keuangan Dan Perbankan*, *25*(2). https://doi.org/10.26905/jkdp.v25i2.5525

GRAHAM, B., & DODD, D. L. (2009). *Security Analysis - Sixth Edition* (Sixth Edition). The McGraw-Hill Companies, Inc.

Gujarati, D. N. (2004). *Basic Econometrics: fourth edition*. The McGraw–Hill Companies.

Hermanto. (2017). Perilaku Mahasiswa Ekonomi Di Universitas Esa Unggul Dalam Melakukan Investasi Di Pasar Modal. *Jurnal of Economic*, *8*(1).

Hermanto, & Tjahjadi, E. (2021). Analisis Rasio Profitabilitas, Solvabilitas Terhadap Stock Price Perusahaan Perbankan. *Jurnal Ilmiah MEA (Manajemen, Ekonomi, Dan Akuntansi)*, *5*(1).

Hidayat, R., Roespinoedji, D., & Saudi, M. H. (2021). Effect of Return On Assets , Net Profit Margin and Earning Per Share on Stock Prices. *Turkish Journal of Computer and Mathematics Education*, *12*(8), 1388–1403.

Hutasoit, D. T. M., Toni, N., & Ariesa, Y. (2022). Effect of Loan to Deposit Ratio, Capital Adequacy Ratio, Return On Equity, and Dividend Payout Ratio on stock prices with Bank Indonesia Interest Rates as Moderating Variables in Banking Companies on the Indonesia Stock Exchange. *INTERNATIONAL JOURNAL OF SOCIAL AND MANAGEMENT STUDIES (IJOSMAS)* , *3*(3).

Jallow, M. A., Abiodun, N. L., Weke, P., & Aidara, C. A. T. (2022). Efficiency of Financial Ratios in Predicting Stock Price Trends of Listed Banks at Nairobi Securities Exchange. *European Journal of Statistics*, *2*(9). https://doi.org/10.28924/ada/stat.2.9

Karim, Md. R., & Saba, S. A. (2021). COVID-19 and Stock Return: Empirical Evidence from Developing Economy. *International Journal of Management, Accounting and Economics*, *8*(6), 368–400. https://doi.org/10.5281/zenodo.5108094

Kasiram, Moh. Idris. (2008). *Metodologi Penelitian Kualitatif - Kuantitatif*. UIN - Malang Press.

Krisdayanti, S. (2021). ROA, ROE, and EPS on The Stock Prices in The Basic & Chemical Industry Sector Listed on The Jakarta Composite Indeks. *Indonesian Financial Review*, *1*(1), 46–62.

Lina, Hesniati, & Robin. (2022). Stock Return Effect During Covid-19: Evidence From Indonesia. *JABE (Journal of Applied Business and Economic)*, *8*(3), 290. https://doi.org/10.30998/jabe.v8i3.12074

Mawarti, W., Negoro, D. A., & Syah, T. Y. R. (2022). The Effect of Financial Ratio in Determining Company Value: (Empirical Study on Banking Companies Listed on the Indonesia Stock Exchange for the 2015-2019 Period). *Budapest International Research and Critics Institute-Journal (BIRCI-Journal)*, *5*(1), 3001–3013. https://doi.org/10.33258/birci.v5i1.3942

Mudzakar, M. K., & Wardanny, I. P. (2021). The Effect Of Return On Asset, Return On Equity, Earning Per Share, And Price Earning Ratio Toward Stock Return (Empirical Study Of Transportation). *Turkish Journal of Computer and Mathematics Education*, *12*(8), 387–392.

Munandar, A., & Kusdianto, K. D. (2021). Pengaruh Ukuran Perusahaan Dan Leverage Terhadap Harga Saham Dengan Return On Owners Equity Sebagai Variabel Mediasi Dengan Pemanfaatan Software Akuntansi Sebagai Variabel Moderasi. *NUSANTARA : Jurnal Ilmu Pengetahuan Sosial*, *8*(7), 2287–2294. https://doi.org/10.31604/jips.v8i7.2021.2287-2294

Riadi, S. S., Hadjaat, M., & Yudaruddin, R. (2022). Bank Concentration and Bank Stability during the COVID-19 Pandemic. *Emerging Science Journal*, *6*(Special Issue), 262–274. https://doi.org/10.28991/esj-2022-sper-018

Samsu. (2017). *Metode Penelitian: Teori dan Aplikasi Penelitian Kualitatif, Kuantitatif, Mixed Methods, serta Research Development* (Rusmini, Ed.). Pusat Studi Agama dan Kemasyarakatan (PUSAKA).

Saputra, F. (2022a). Analysis Effect Return on Assets (ROA), Return on Equity (ROE) and Price Earning Ratio (PER) on Stock Prices of Coal Companies in the Indonesia Stock Exchange (IDX) Period 2018-2021. *DINASTI INTERNATIONAL JOUNAL OF ECONOMIC, FINANCE AND ACCOUNTING*, *3*(1). https://doi.org/10.38035/dijefa.v3i1

Saputra, F. (2022b). Analysis of Total Debt, Revenue and Net Profit on Stock Prices of Foods And Beverages Companies on the Indonesia Stock Exchange (IDX) Period 2018-2021. *Journal of Accounting and Finance Management*, *3*(1). https://doi.org/10.38035/jafm.v3i1

Shrestha, P. M., & Lamichhane, P. (2022). Effect of Firm-Specific Variables on Stock Returns: Evidence from Nepal. *Quest Journal of Management and Social Sciences*, *4*(2), 249–259. https://doi.org/10.3126/qjmss.v4i2.50320

Srivastava, V. K., & Kulshrestha, N. (2020). Portfolio Selection and Performance Evaluation Through Benjamin Graham's Value Investing. *Indian Journal of Finance and Banking*, *4*(2), 11–16. https://doi.org/10.46281/ijfb.v4i2.688

Suroso, S. (2022). Can Financial Ratios Improve Stock Returns in Manufacturing Companies? *ATESTASI: JURNAL ILMIAH AKUNTANSI*, *5*(1), 137–151. https://doi.org/10.33096/atestasi.v5i1.1190

Tchatoka, F. D., Puellbeck, J., & Masson, V. (2022). Stock returns in the time of COVID-19 pandemic. *Applied Economics*, *54*(9), 1071–1092. https://doi.org/10.1080/00036846.2021.1975028

The, O., Wijaya, D. A., & Muljo, H. H. (2022). The Effect Analysis of Solvency Ratio, Profitability Ratio and Inflation on Stock Return. *Business Economic, Communication, and Social Sciences (BECOSS) Journal*, *4*(1), 65–73. https://doi.org/10.21512/becossjournal.v4i1.7833

Tikasari, N., & Surjandari, D. A. (2020). The Effect of Economic Value Added and Financial Performance on Stock Return. *Saudi Journal of Business and Management Studies*, *5*(6), 343–352. https://doi.org/10.36348/sjbms.2020.v05i06.005

Widjaja, H., & Ariefianto, M. D. (2022). The dynamic of bank stock price and its fundamentals: Evidence from Indonesia. *Cogent Economics and Finance*, *10*(1). https://doi.org/10.1080/23322039.2022.2107766

Wijaya, D. P., & Sedana, I. B. P. (2020). Effects of Quick Ratio, Return on Assets and Exchange Rates on Stock Returns. *American Journal of Humanities and Social Sciences Research*, *4*(1), 323–329. www.ajhssr.com

Wijaya, W. K., Sembel, H. M. R., & Dwitanto, A. R. (2020). Analyzing The Impact of Fundamental Factors on Stock Returns: Evidence From Consumer Goods Companies Listed on Indonesia Stock Exchange From 2014-2018. *South East Asia Journal of Contemporary Business, Economics and Law*, *22*(1).

Yuliani, R., Saudi, M. H., & Sinaga, O. (2021a). Analysis Of Intrinsic Value Relative Valuation Techniques: SpecificGeographical Review on Listed Companies (Overvalued, Undervalued orFairvalued) In Indonesia Stock Exchange-30. *Review of International Geographical Education*. https://doi.org/10.48047/rigeo.11.1.65

Yuliani, R., Saudi, M. H., & Sinaga, O. (2021b). The Fundamental Impact On Mining Share Price On Indonesia Stock Exchange. *Turkish Journal of Computer and Mathematics Education*, *12*(8), 805–810.