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Determinants of Novice Investors in Deciding to Use Fundamental or Technical Analysis when Buying Shares

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Abstract

Introduction/Main Objectives: *This study aims to see what factors decide novice investors in using fundamental and technical analysis when buying shares, that no one has researched novice investors and also what are the determinants of novice investors in deciding to use the analysis used by them, so this needs to be examined in order to prove what become a determinant of novice investors regarding the analysis used when buying shares.* ***Background Problems:*** *One of the things that makes young people interested in investing in financial markets (such as shares and bonds) is because of the return they receive as a return on the investment they make. In buying shares, novice investors should use analysis that is suitable for use, such as fundamental and technical.* ***Novelty:*** *This research provides an overview of starting to invest in shares so that they use an appropriate analysis for the shares of the company they want to buy, this research also provides an overview of evidence of how novice investors buy shares so that this can be used as a lesson for other people who want to invest in stocks, and this research give an overview related to fundamental and technical analysis in financial markets.* ***Research Method:*** *Data analysis use mean comparison to see each indicator's average score and significance in the decision to use fundamental or technical analysis when buying shares.* ***Finding/Results:*** *The research findings show that the main determinants of novice investors in deciding to use fundamental analysis when buying shares are liability, total equity, debt-to-equity ratio (DER), return on investment (ROI), and dividends, while the main determinants of novice investors in deciding to use technical analysis when buying shares namely price, moving average convergence divergence (MACD), and trading volume.* ***Conclusion:*** *The practical implications, namely research findings are useful for understanding novice investors who buy shares in the money market and also for people who want to get involved in the money market so as to help make the decisions they make.*

Keywords: fundamental; investors; shares; technical
JEL Classification: G11

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INTRODUCTION

The development of the times at this time is getting faster and so many changes are happening. One of the activities nowadays that is often discussed is investment. Investment is a financial activity that involves a risk (Suresh, 2013). Investment as an investment made by an investor from the assets they own or in other words investment is the transfer of assets

owned to securities (such as shares, bonds, mutual funds). In an investment, of course there is an investor, where the investor is the main actor in investment activities, of course, without the involvement of investors, the investment will not work. Investment and investors are two things that are interrelated with one another. Investors are people who invest or transfer their assets into securities in the capital market (in this research, novice investors are the subject of research).

Novice investors are investors who are just starting to invest in the capital market. The author is of the opinion that novice investors are categorized as people who have just entered the world of investment (just started investing for less than 3 years) and also those who only have a relatively small number of lots (less than 50 lots). In determining the shares to buy, of course, high-class investors (big-class investors) must have careful planning regarding the analysis used and there is also a determinant why they (big-class investors) choose that analysis. This also cannot be separated from novice investors, they need to be questioned regarding the analysis they use (whether they use analysis or just go along with buying shares) and also what determines their use of that analysis. If they don't use analysis and some just go along with it (seduced by some news or from friends' invitations), then this will certainly have a negative impact on them and can result in a lot of losses for them if there is not a good plan implemented to do so. investment activity in the financial market.

In investing, there is an analysis that is used to determine which assets the investor wants to invest in (because this research focuses on shares). The analysis available for use by investors is technical analysis and fundamental analysis (Park and Irwin, 2007; Nguyen *et al*., 2015; Sharpe *et al*., 1995). In order to invest in shares and earn high returns with low risk, investors use these two main methods to make decisions in the financial markets (Arévalo *et al*., 2017). Lui and Mole (1998), more than 85% of Hong Kong Forex traders rely on fundamental and technical analysis to predict future price movements in different time frames.

Technical analysis is a sophisticated method for predicting asset price trends. This analysis is based on the idea that prices move in patterns that investors can identify and recognize, and that these patterns persist long enough to offset transaction costs and possible losses from false signals (Stanković *et al*., 2015). Technical analysts are usually short-term traders interested in capital gains (Waworuntu and Suryanto, 2010). Technical analysis is often used by investors to make profits in a short time, because basically technical analysis focuses on the ups and downs of a shares price (Coe and Laosethakul, 2010). If the shares price falls, investors will buy and if the price rises, investors will sell their shares. Implementing an investment strategy through technical analysis requires the use of mathematical and statistical indicator models, which are calculated from historical data on shares prices and trading volumes (Escobar *et al*., 2013).

Fundamental analysis focuses on how the fundamentals are owned by companies that are targeted by investors. Fundamental analysis is based on the assumption that the value of the shares is a discount stream of the company's future earnings (Contreras *et al*., 2012). One of the main goals of fundamental analysis is to predict future returns, dividends and risks in order to calculate the true value of a shares (Baresa *et al*., 2013). Investors use this analysis because they want to get dividends and equity returns (Wang *et al*., 2018) and also want the

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stocks they buy to be in safe condition, in the sense that the shares they buy are not shares that are not financially good.

There have been many studies related to fundamental analysis and technical analysis in the investment sphere (Petrusheva and Jordanoski, 2016; Dechow *et al*., 2001; Levy, 1966; Waworuntu and Suryanto, 2010; Bettman *et al*., 2009), as well as there is research that discusses investors (Al-Ajmi, 2008; Bondia *et al*., 2019; Tooranloo *et al*., 2020). However, from previous research it appears that no one has researched novice investors and also what are the determinants of novice investors in deciding to use the analysis used by them (fundamental or technical), so this is a *research gap* that needs to be examined in order to prove what become a determinant of novice investors regarding the analysis used when buying shares.

This research provides several contributions to people who want to invest in the capital market such as shares. First, it provides an overview of starting to invest in shares so that they use an appropriate analysis for the shares of the company they want to buy (here they are investing, not just joining in). Second, it provides an overview of evidence of how novice investors buy shares so that this can be used as a lesson for other people who want to invest in stocks. Third, novice investors can get an overview related to fundamental and technical analysis in financial markets. Differences in individual backgrounds determine how they perceive their confidence in making investment decisions.

The purpose of this study is to see how novice investors in Indonesia decide on the shares they will buy. What analysis do novice investors use when they want to buy shares of a company, do they use fundamental or technical analysis and what determines novice investors to use the analysis used (fundamental or technical) when buying shares. This study's remaining sections in section 2 present the research method. In section 3, the authors present the statistical results and discussion. The last section discusses the conclusion, limitations, suggestions, and practical implications.

RESEARCH METHOD

This research is quantitative research and uses a survey method using a web questionnaire to collect data. First, the survey was sent to every respondent in Indonesia via google forms. Then, data for two months were collected to give respondents time to answer the questionnaire. Before distributing the questionnaires, the authors first conducted a pilot study to see whether the questionnaire content could be understood or not and there were no errors (Lowe, 2019; In, 2017). A pilot study is the first step in an overall research protocol, usually a smaller study that helps to plan and revise the main study (Arnold *et al*., 2009; Thabane *et al*., 2010). The results of the pilot study proved that the questionnaire content was understandable and ready to be distributed to respondents. This study identified that respondents are novice investors in Indonesia. As a result, the authors collected 200 respondents (78% male and 22% female) who were novice investors. In addition, the author determines the category for novice investors, while the categories are said to be novice investors, namely those who make investments that are spanning less than 3 years and those who have a lot of shares of less than 50 lots of shares. Here the author presents a tabulation of the distribution of respondents:

Table 1. Tabulation of the distribution of respondents

Province	Frequency (*f*)	Province	Frequency (*f*)
North Sumatera	31	Central Java	13
South Sumatera	9	Riau	11
South Java	10	West Sumatera	6
West Java	14	Yogyakarta	19
Jakarta	17	South Sulawesi	7
Banten	10	Lampung	8
Bengkulu	8	Jambi	12
East Nusa Tenggara	9	Bali	16

After collecting data from respondents, data processing will be carried out and then it will be interpreted according to the results of the data processing. The authors use the statistical test the mean comparisons test by comparing the average values between indicators. The mean is calculated by the following formula:

$$\bar{x} = \frac{1}{n}\sum_{i=1}^{n} x_i$$

Before carrying out statistical tests, the authors first tested the validity and reliability of the questionnaires distributed to respondents to see the accuracy, reliability, and consistency of the questionnaire as a research instrument (Heale and Twycross, 2015). Here the author presents a concise design of the research model:

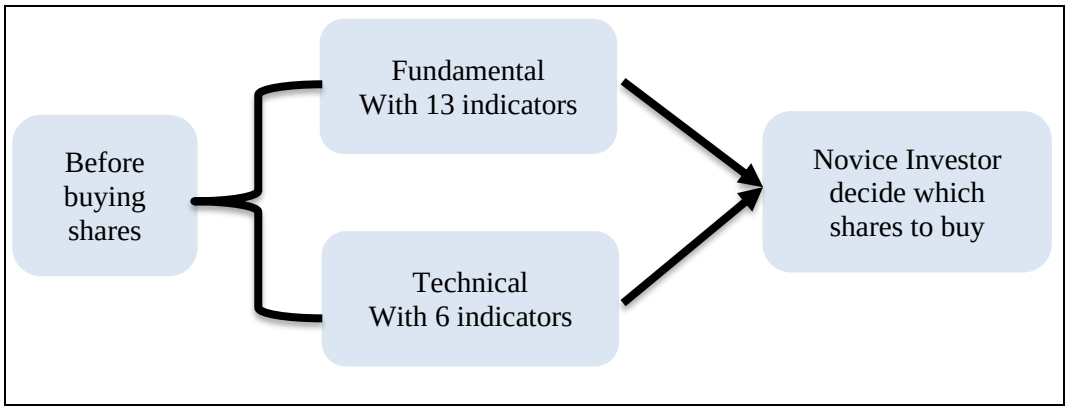

Figure 1. Research Model

RESULTS AND DISCUSSION

Descriptive statistics is categorized into measures of central tendency and measures of spread (Ullah and Ameen, 2022). Analyze data using descriptive statistics including frequency distribution, mean, minimum, maximum, and standard deviation (Fisher and Marshall, 2009). Descriptive statistics provide an overview of the sample being examined without drawing any inferences based on probability theory (Kaliyadan and Kulkarni, 2019). The purpose of descriptive statistical analysis is to find an overview of the variables used in the study.

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From table 2 it can be seen that there are 6 indicators that have a minimum value of 1 (this means that there are respondents who strongly disagree with these indicators as a factor that influences them as novice investors in deciding to use fundamental or technical analysis when buying shares), while 7 indicators have a minimum value of 2 (this means that there are respondents who disagree with these indicators as a factor that influences them as novice investors in deciding to use fundamental or technical analysis when buying shares). Then for the maximum value, it can be seen that overall it has the same maximum value of 4 (this means that there are respondents who strongly agree with this indicator as a factor that influences them as novice investors in deciding to use fundamental or technical analysis when buying shares). From the standard deviation value, it can be seen that the moving average indicator has the highest value compared to the other indicators with a value of .773. Meanwhile, the earning per share variable has the lowest standard deviation value compared to the other indicators (.503). In the following, the author presents a descriptive statistics table.

Table 2. Descriptive Statistics

Variable/Indicators	N	Minimum	Maximum	Mean	Std. Deviation
Dividend	200	2	4	3.30	.642
Net Profit	200	2	4	3.21	.572
Liability	200	2	4	3.39	.600
Return on Investment	200	1	4	3.31	.645
Return on Asset	200	2	4	3.11	.616
Price to Book Value	200	2	4	3.15	.556
Capital Market	200	2	4	3.18	.624
Total Asset	200	2	4	3.09	.603
Total Equity	200	2	4	3.38	.507
Total Cash	200	1	4	3.05	.624
Cash Flow	200	2	4	3.27	.565
Earning per Share	200	2	4	3.22	.503
Debt to Equity Ratio	200	2	4	3.36	.562
Price	200	2	4	3.33	.568
Stock Movement Chart	200	1	4	2.82	.727
Trading Volume	200	1	4	2.86	.764
Moving Average	200	1	4	2.69	.773
Support Resistance	200	1	4	2.81	.719
Moving Average Convergence Divergence	200	2	4	3.05	.685
Valid N (listwise)	200				

Source: data processed (2023)

Validity refers to the level of accuracy of the research instrument (questionnaire) performing its measurement function. The validity test in this study was carried out using the Pearson Correlation technique on the score of each item related to the total score. Based on the research results, the significance value is less than 0.05 and the value of r count > r table. This means that the questionnaire used in this study was declared valid and suitable for use as a data collector. Here the author presents the results of the data validity test in a table.

Table 3. Validity test

Fundamental	Pearson Correlation	Technical	Pearson Correlation
Q1	.473	Q1	.420
Q2	.611	Q2	.749
Q3	.665	Q3	.814
Q4	.473	Q4	.643
Q5	.583	Q5	.697
Q6	.684	Q6	.579
Q7	.735	Q7	.814
Q8	.693		
Q9	.606		
Q10	.656		
Q11	.646		
Q12	.667		
Q13	.616		
Q14	.632		

Note: Q = "Questions" in the questionnaire
Significant at the 0.05 level

Source: data processed (2023)

For data reliability, the test results show that all variables have a Cronbach alpha value > 0.70, so it can be said that all measurement variable concepts used in this study have high consistency and reliability (Hair *et al*., 2019). Here the author presents the results of the reliability test.

Table 4. Reliability test

Variable	Cronbach's Alpha	Information
Fundamental	.877	Reliable
Technical	.807	Reliable

Source: data processed (2023)

Here the authors perform mean comparisons to see the differences in each indicator in the research instrument. From the mean comparisons, it will be seen what factors make novice investors decide to buy shares. Here the author presents the average results of the respondents' answers in each indicator of the research instrument.

Table 5. Mean and significance of respondent's answer for each indicator

Fundamental	Mean ($\bar{x}$)	Sig.	Technical	Mean ($\bar{x}$)	Sig.
Dividend	3.30	.000	Price	3.33	.000
Net Profit	3.21	.000	Stock movement chart	2.82	.000
Liability	3.39	.000	Trading volume	2.86	.000
ROI	3.31	.000	Moving average	2.69	.000
ROA	3.11	.000	Support resistance	2.81	.000
PBV	3.15	.000	MACD	3.05	.000
Capital Market	3.18	.000			
Total Asset	3.09	.000			
Total Equity	3.38	.000			
Total Cash	3.05	.000			
Cash Flow	3.27	.000			

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Fundamental	Mean ($\bar{x}$)	Sig.	Technical	Mean ($\bar{x}$)	Sig.
EPS	3.22	.000			
DER	3.36	.000			
Significance at the level 0.05 (5%)					

Source: data processed (2023)

Here the authors do not only focus on the discussion regarding whether there is an influence or not between the Fundamentals on the decisions of novice investors when buying shares, but the authors focus on the comparison of all the indicators used in this Fundamental analysis (there are 13 indicators). From the results of data analysis that has been displayed in the results section. We can see that all the indicators in Fundamental analysis influence the decisions of novice investors when buying shares. This can be seen in the significance value which is below 0.05 which means that there is an influence. Furthermore, we can see in table 4. Of the 13 indicators used in the Fundamental analysis, it can be seen that the average for each indicator is above 3.00. The liability indicator has the highest average score of all indicators (ie 3.39), this indicates that liability is the first thing that novice investors pay attention to when they want to buy shares. It cannot be denied that the level of liability is indeed one of the important aspects that needs to be seen in a company and liability can basically also be seen how the companies' performances (Lachmann *et al*., 2011; Solaiman, 2006). As we know when there is a high level of liability, it can lead to the bankruptcy of a company in the future if it is not supported by high capital or good cash flow turnover.

Then the Total Equity indicator has the second highest average score after Liability (3.38). From these results it can be seen that novice investors believe that total equity is an important thing to consider when buying shares. Here the author believes that total equity is very important for a company, this is because total equity can be a support for the company's sustainability process and also as a protector in times of crises on a national and international scale which could have an impact on the company (French and Naka, 2013). Furthermore, the Debt to Equity Ratio (DER) indicator has the third highest average score (3.36). From these results it can be seen that novice investors feel that it is important to see how big the percentage ratio is between the company's total debt and the capital they have. If the percentage of DER gets lower, then the proportion of the company's ability to pay all its debts/obligations by using all the assets owned by the company will be low and vice versa.

Then the Return on Investment (ROI) indicator has the fourth highest average score (3.31). From these results it can be seen that novice investors feel it is important to see the condition of a company's ability to generate profits from the use of capital. When the company can generate profits from the use of capital, the revenue turnover will run smoothly and the company's performance will also run well (McNulty *et al*., 2013). This indicates that ROI influences the decision of novice investors when buying shares. Furthermore, the Dividend indicator has the fifth highest average score (3.30). These results indicate that dividends are one of the important things that novice investors pay attention to. It is undeniable that dominantly investors certainly want dividends from the investments they make. The percentage of dividends received by investors is an aspect that is seen when choosing the shares to buy. It is certain that novice investors want reciprocity from their investment so that this dividend is an alternative that novice investors pay attention to

when buying a company's shares (Alzahrani and Lasfer, 2012; Deng *et al*., 2017; Barraclough *et al*., 2012).

Then the highest average is followed by the cash flow indicator (3.27), earnings per share (EPS) (3.22), net profit (3.21), capital market (3.18), price to book value (PBV) (3.15), return on assets (ROA) (3.11), total assets (3.09), and lastly, total cash (3.05). From this discussion, the main determinants of novice investors in deciding to use Fundamental analysis when buying shares are liability, total equity, debt-to-equity ratio, return on investment, and dividend.

As with the discussion in the Fundamentals section, here the authors do not only focus on the discussion regarding whether or not there is an influence between the Technical on the decisions of novice investors when buying shares, but the authors focus on the comparison of all the indicators used in this Technical analysis (there are 6 indicators). From the results of data analysis that has been displayed in the results section. We can see that all the indicators in the Technical analysis influence the decisions of novice investors when buying shares. This can be seen in the significance value which is below 0.05 which means that there is an influence. Then we can see in table 4. Of the 6 indicators used in the Technical analysis, it can be seen that there is an average of 2 indicators above 3.00 and 4 indicators with an average of below 3.00. The price indicator is the highest on average with a score of 3.33 compared to other indicators. This indicates that novice investors pay attention to the price of the shares they decide to buy. When the shares price is high, it can be assumed that novice investors have no intention of choosing the company's shares. When the stock price is low, it can be assumed that novice investors will be interested in deciding to buy the shares. The author believes of course there are still many novice investors who look at the shares price when they want to buy a shares. This could have been influenced by the thought that there is an opportunity to make a profit when buying shares at a low price (buy at a low price, sell at a high price) (Huang *et al*., 2019; de La Bruslerie and Deffains-Crapsky, 2005; Cheng *et al*., 2019).

Then the Moving Average Convergence Divergence (MACD) indicator has the highest average score after price with a score of 3.05. This indicates that novice investors feel it is important to see shares price trend movements on the charts available in the broker's application. This stock movement will provide information to novice investors, where they will be assisted in making decisions in determining which stocks to buy. MACD focuses on charting the movement of stock prices over time. Most MACD is seen by investors as aiming to be able to make a profit from the investment they make (but it can also make a loss), and usually this MACD is dominantly used by traders with risks that are ready to be borne (Anghel, 2015). Furthermore, the trading volume indicator has the third highest average score with a score of 2.86. This indicates that novice investors pay attention to how the movement of shares trading volume activity in the capital market. High or low trading volume in general can be caused by liquidity requests and market reactions to information that is happening at that time (bad news and good news) (Wright and Swidler, 2023; Teplova and Tomtosov, 2021; Naik and Sethy, 2022; Hsieh, 2014). When trading volume is low, it is assumed that novice investors do not choose the shares to buy, whereas when trading volume is high, it is assumed that novice investors choose the shares as an alternative to buy.

According to the authors, low volume trading usually occurs in shares that have a market capitalization of under 1 trillion.

Then the highest average is followed by the stock movement chart indicator (2.82), support resistance (2.81), and finally the moving average (2.69). From this discussion, the main determinants of novice investors in deciding to use technical analysis when buying shares are price, moving average convergence divergence (MACD), and trading volume.

CONCLUSION

This study provides an analysis of the factors that influence the decisions of novice investors in using fundamental and technical analysis when deciding to buy shares. The research findings show that the main determinants of novice investors in deciding to use fundamental analysis when buying shares are liability, total equity, debt to equity ratio, return on investment, and dividends, while the main determinants of novice investors in deciding to use technical analysis when buying shares namely price, moving average convergence divergence (MACD), and trading volume.

This research certainly has some limitations. First, this study compares the averages of each indicator to see what are the main factors that influence the decisions of novice investors. Second, the author feels that the discussion is still lacking in depth, so it is necessary to expand the discussion further. Third, the sample used is only from Indonesia. From the existing limitations, the authors suggest future researchers to use other tests to strengthen the research results (such as the regression test). Then for the research sample it is better to expand (for example covering Southeast Asia) in order to provide more accurate results.

This research has practical implications, namely research findings are useful for understanding novice investors who buy shares in the money market and also for people who want to get involved in the money market so as to help make the decisions they make. In addition, this paper shows the potential benefits and introduces the factors that influence the use of fundamental and technical analysis when purchasing shares.

AUTHORSHIP CONTRIBUTION STATEMENT

Conceptualisation and Research Design, Data Collection, Methodology, Supervision, Writing Entire Paper, Conceptualisation, Data Collection and Analysis, Editing and Layouting. All Authors have read the final version of the paper.

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