

The Effect of Efficient Market Hypothesis, Gambler's Fallacy, Familiarity Effect, Risk Perception, and Economic Factors on Investment Decisions (Studies on Capital Market Investors in Medan City)

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Abstract:- This study aims to examine the effect of the efficient market hypothesis, gambler's fallacy, familiarity effect, risk perception, and economic factors on investment decisions. This research is quantitative research with a descriptive approach. The population in this study were all capital market investors in Medan City. Determination of the research sample carries out by using judgment sampling technique and Malhotra theory so that 270 samples obtain. Data analysis using multiple linear regression analysis. The results of the multiple linear regression analysis showed that the efficient market hypothesis, gambler's fallacy, familiarity effect, risk perception, and economic factors partially had a positive and significant impact on investment decision making. Other results, the efficient market hypothesis, gambler's fallacy, familiarity effect, risk perception, and economic factors simultaneously have a positive and significant impact on investment decision making.

Keywords:- *Efficient Market Hypothesis, Gambler's Fallacy, Familiarity Effect, Risk Perception, Economic Factors, Investment Decisions*

I. INTRODUCTION

In this rapid development era, investment becomes an activity that is familiar in society. Where someone who is at a productive age tends to want and fulfil needs through the selection of assets or products that can be stored to obtain returns in the future. This income will be used to meet future needs. Therefore, investment defines as financial preparation by sacrificing present sources of funds in the hope of generating future profits. In general, sector assets that can use as investment advice divided into two, namely the real sector and the financial sector. Investment in the real industry is investing or buying productive assets to produce a specific product through the production process. Types of investments intangible assets are houses, land and gold. Meanwhile, investment in the financial sector is an activity of buying and selling financial assets or valuable documents in the hope of making a profit. Types of investment in financial assets include savings, deposits, mutual funds, bonds, stocks, gold, property, and others.

Based on data released by PT Kustodian Sentral Efek Indonesia (KSEI), the total capital market investors in Indonesia as of December 27, 2019, reached 2.47 million investors. This number has significantly increased from 1.61 million in the full year 2018 period. According to the same data, the distribution of investors is still concentrated in Java with an investor composition of 71.75% and controlling 95.31% of Indonesia's capital market assets. Followed then by the island of Sumatra with a total of 15.36% of the total SID and having assets of 1.28%. Furthermore, Kalimantan Island, which contributed 4.94% of capital market investors with a more significant amount of assets, namely 2.98% of total capital market assets. Sulawesi contributed 3.57% to the number of investors in the capital market with only 0.19% assets. The next region in Bali, NTT, NTB, Maluku and Papua which each accounted for 3.13% and 1.24% of investors with a composition of assets of 0.17% and 0.07% of total capital market assets.

Based on the availability of information, the capital market can be said to be an efficient capital market if new information from both the government of a country and the issuer or company concerned will spread widely, quickly and easily and be obtained cheaply by market players or investors, (Dwipayana and Wiksuana, 2017). Based on the rationality and ability investors in analyzing the available information for decision making, the efficiency of the capital market can be viewed in terms of the availability of information and also from the perspective of the sophistication market players in making decisions. Market efficiency seen for information calls information market efficiency, while market efficiency viewed from the sophistication of market players in making decisions based on available information is called market efficiency by decision. In this thesis, a review of the effectiveness of the capital market places more emphasis on ability in terms of market efficiency by decision (Tjandra, 2006).

Apart from observing market efficiency, investors in their decision making are influenced by a behavioural bias which can prevent investors from making rational decisions. Behavioural bias defines as a pattern of variation in decision making that occurs in certain situations. It sometimes causes changes in perceptions, inaccurate judgments, logical interpretations, or often called irrationality (Verma, 2016). Behavioural bias can

characterize by the emergence of various behaviours, including the gambler's fallacy and the familiarity effect (Djojopranoto and Mahadwartha, 2016). According to Shefrin and Statman (1985) and Odean (1998), investors will experience gambler's fallacy in investing, such as when gambling. Gambler's fallacy arises from renewing negative experiences where investors have a logical concept that stocks that in previous periods experienced a price decrease and even stayed at the same price will have a high probability of experiencing the different event in the future (Ayton and Fischer, 2004).

According to Heath and Tversky (1991), people tend to be more willing to speculate when they feel they understand the situation. In this situation of ambiguity aversion, people tend to choose risks that know with certainty over those that are uncertain. People prefer familiar things to new things. It triggered the familiarity effect. This phenomenon shows that the investment decisions of individual investors not purely based on company fundamentals as suggested by traditional financial theory, but there may be an influence from the positive or negative attitudes they have towards certain company products and brands, (Vries et al., 2017). Another factor that influences the investment decision is risk perception. Perception is the process by which individuals regulate and interpret investor censorship impressions to give meaning to the investor's environment (Robbins and Judge, 2008: 175). Williamson and Weyman (2005) define risk perception as the result of many factors that become the basis of differences in decision making on possible losses. Investor behaviour in making decisions influenced by the subjective attitude they have towards the risk and investment income itself. Investors who have a high-risk perception ability will more often rethink their investment decisions.

Apart from behavioural bias actions carried out by an individual, economic factors also cause a person to make a decision. Economic factors are the circumstances or financial conditions of a person/institution in making investment decisions. The economic factor seen is from the company side. Examples of economic factors studied by Aregbeyen (2011) are dividend payments, company financial performance, daily activity reports, stock value predictions, and bonuses. Financial performance shows how effective and efficient an organization is in achieving its goals.

II. LITERATURE REVIEW

A. Investment Decision-Making Theory

In the theory of decision making, there are several supporting theories, namely Decision Usefulness Approach, Single-Person Decision Theory, The Rational Risk-Averse Investor, The Optimal Investment Decision. This single-person theory of decision provides a reasonable basis for individuals who begin to make rational decisions under uncertainty. This theory allows us to appreciate the concept of information that makes it easier for decision-makers to sharpen their subjective beliefs about future returns on

decisions. Regarding the risk-aversion model, decision theory uses a tool, namely a utility function that connects the amount of payment with the utility of the decision-maker on that amount. Sometimes there is an assumption that the decision-maker is risk-neutral; that is, the decision-maker will carefully analyze the risky investment with the expected payment. Risk-averse will equalize (trade-off) between the return and the expected risk of an investment. Scott (2009) states that when transaction costs ignored, the optimal decision of a risk-averse investor is to buy a combination of the market portfolio and risk-free assets that results in the best trade-off between expected return and risk. Investing in a portfolio generates less risk than investing in a single company for the same rate of return.

B. Behaviour-based Financial Theory

The behaviour-based financial theory was coined by G.C. Selden in 1912, based on classical and neoclassical economic theory, (Wijayanti, 2015). Financial behaviour (behavioural finance) is a study that aims to understand investor behaviour in making investment decisions (Puspitaningtyas, 2014).

C. Efficient Market Hypothesis Theory

Efficient market hypothesis theory refers to information circulating in the market that can influence investment decisions.

D. Modern Portfolio Theory

Modern Portfolio Theory (MPT) also called portfolio theory or portfolio management theory, is a sophisticated investment approach/strategy and is a philosophical opposite of traditional stock theory taking. Theory economists were trying to understand the market as a whole, not business analysts looking for what makes each investment opportunity unique. Investments describe statistically to consider the expected long-term rate of return and the expected short-term volatility rate.

E. Relevant Dividend Theory

This theory states that dividends are more satisfied than the "thousand" capital gains in the air. Profits are more predictable. Meanwhile, capital gains are considered likely to be obtained from speculation because stock prices can change at any time.

F. Investment Decision

Decision making is one of the underlying cognitive processes of human behaviour in which choices or actions selected from a set of alternatives based on specific criteria (Wang and Ruhe, 2007). Rational investors in decision-making theory mean that in decision making, the action chosen is the one that produces the highest expected utility (Puspitaningtyas, 2012). However, the concept of financial behaviour explained that investors in investing not only use estimates of the prospects of investment instruments, but psychological factors also have a significant role in determining decision making.

G. Efficient Market Hypothesis

Capital market efficiency (Efficient Market) is a condition in which a stock price adjusts quickly with additional information, and therefore the stock price includes all available information (Relly & Brown, 2012). From the information circulating in the market, this information can influence investment decision making.

H. Gambler's Fallacy

Gambler's fallacy is a false representation of events that occurred in the past in decision making. Gambler's fallacy is an inaccurate representation of events that happened in the past in decision making.

I. Familiarity Effect

In the context of the capital market, the familiarity effect often described as the tendency of investors to buy individual shares. It then will form a portfolio that is not diversified because of the selection based on geographical proximity, professional closeness and cultural patriotism. Especially if an investor knows the risk and return of a specific form of investment, usually, the investor is more confident and follows this type of investment (Lestari and Iramani, 2013).

J. Risk Perception

Risk Perception is a process where someone interprets information about the risk that obtained. Williamson and Weyman (2005) define risk perception as the result of many factors that form the basis of differences in decision making regarding possible losses. Perceptual problems and tendencies then impact an individual's readiness to take risks. Such availability may depend either on the uncertainty the results due to imperfect knowledge or the scale of potential losses or gains.

K. Economic factors

Economic factors are things that affect financial or business activities in meeting the daily needs of life to achieve prosperity. Economic considerations associated with making investment decisions that investors will first see the economic condition of a company that will be a place to invest. Indicators that can explain economic factors in investment decision making are (Aregbeyen, 2011): dividends paid annually, the latest financial performance of the company, IHSG daily activity report on profit/loss, predictions of a reputation for future stock price increases, and bonuses.

L. Framework

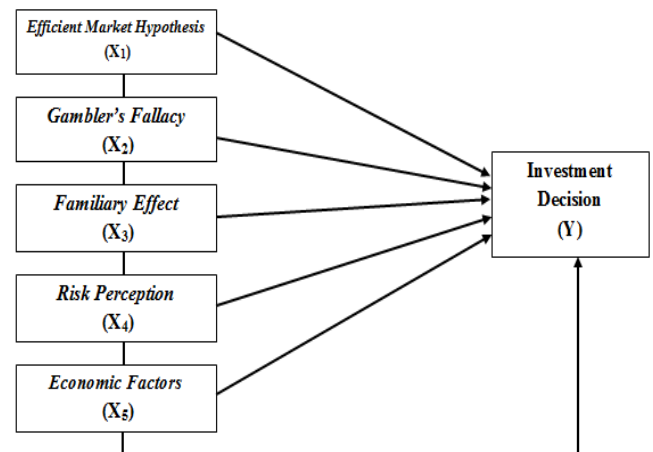


Fig 1

M. Hypothesis

- H1: Efficient market hypothesis affects investment decisions.
- H2: Gambler's fallacy affects investment decisions.
- H3: Familiarity effect influences investment decisions.
- H4: Risk Perception affects investment decisions.
- H5: Economic factors influence investment decisions.
- H6: Efficient market hypothesis, gambler's fallacy, familiarity effect, risk perception and economic factors influence investment decisions.

III. RESEARCH METHODOLOGY

A. Research Approach

This type of research is associative explanatory research, namely research that aims to determine the relationship between two or more variables (Kurniawan, 2012: 21).

B. Data Analysis Methods

The data analysis method used in this study is a statistical analysis method using Amos25 software—data analysis performed by testing standard assumptions and testing hypotheses.

IV. RESULT

A. Analysis of Structural Equation Modelling

Structural equation modeling analysis used to determine the fundamental relationship between the variables studied. The essential link between variables tested for conformity with the goodness of fit index. The results of the Structural Equation Modeling (SEM) analysis in this study can see in the following figure:

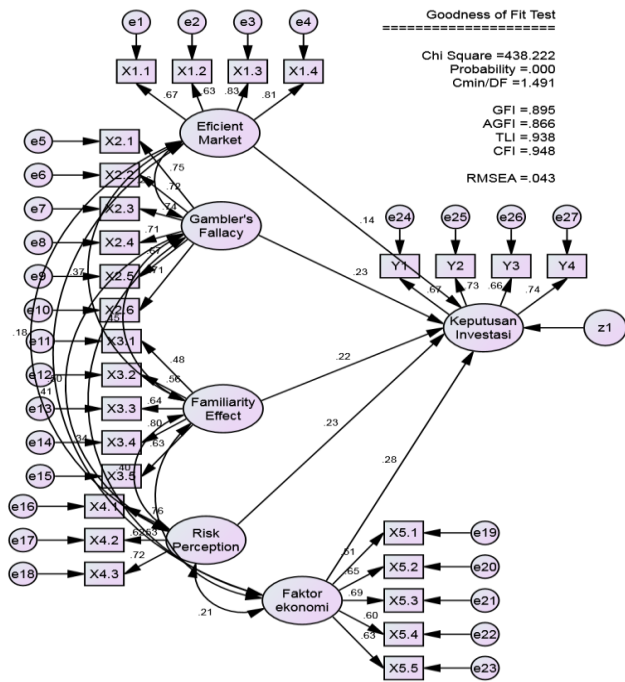


Fig 2

The results of the model feasibility test (Goodness Fit Model) from the image above are as follows:

Feasibility Testing Index Measurement (Goodness of Fit)

Goodness of fit	Cut – off Value	Model Results	Information
X ² – Chi-Square	Expected to be of small value With DF=294 the table value = 334.98	438.222	Not good
Probability	≥ 0,05	0,000	Not good
Cmin/DF	≤ 2	1,491	Good
GFI	≥ 0,90	0,895	Marginal
RMSEA	≤ 0,079	0,043	Good
AGFI	≥ 0,90	0,866	Marginal
TLI	≥ 0,90	0,938	Good
CFI	> 0,90	0,948	Good

Table 1

Overall this model shows a good model. Regarding the opinion expressed by Hair et al. (2011), the path model proposed in this study has met the assumption of Goodness of Fit (a good fit model).

B. Direct Influence

Hypothesis testing conducted to determine the effect or absence of the independent variable on the dependent variable. The hypothesis is accepted if the prob (P) value <0.05. The partial results of hypothesis testing can see in the table below:

Standardized Regression Weight Structural Equation Modelling

	Standard Estimate	C.R.	P	P
Y ←- X1	0.141	2.142	0.032	Significant (H1 accepted)
Y ←- X2	0.230	3.083	0.002	Significant (H2 accepted)
Y ←- X3	0.222	2.683	0.007	Significant (H3 accepted)
Y ←- X4	0.233	3.054	0.002	Significant (H4 accepted)
Y ←- X5	0.280	3.366	0.000	Significant (H5 accepted)

Table 2

Based on the results of the table above, it obtained the results of hypothesis testing that the efficient market hypothesis, gambler’s fallacy, familiarity effect, risk perception, and economic factors have a partial effect on investment decisions.

C. Simultaneous Influence

The simultaneous influence hypothesis test carried out to find out whether or not the independent variable simultaneously influences the dependent variable. The hypothesis is accepted if the prob (P) value <0.005. The following table shows the results of the simultaneous influence:

Simultaneous Influence

	Estimate	C.R.	P	P
Investment Decisions ←- Independent	0.922	7.145	0.000	Significant (H6 accepted)

Table 3

Based on the table above, the results of the hypothesis test from AMOS data processing show a probability of 0.000 <0.005, which means that H6, namely the efficient market hypothesis, gambler's fallacy, familiarity effect, risk perception, and economic factors simultaneously influence investment decisions.

V. CONCLUSION AND RECOMMENDATION

A. Conclusions

Based on the results of research and discussion in the previous chapter, several findings are Efficient market hypothesis, gambler's fallacy, familiarity effect, risk perception, and economic factors partially and simultaneous have a positive and significant impact on investment decisions.

B. Suggestions

Based on the results of the analysis, discussion and conclusions, the implications of the research that have carried out stated in the form of suggestions provided through research results to get better results, namely: (1) Investors advised considering the results of this study as a reference intake investment decisions and illustrated that in decision making there are rational and irrational factors that influence, (3) For further researchers, it can clarify the sample criteria and take samples from mature investors. Mature in question is an investor who has more than three years experience, (4) This research expected to be a useful reference material for conducting further research related to the effect of efficient market hypothesis, gambler's fallacy, familiarity effects, risk perception and economic factors have a positive influence and significant to investment decisions (study on the capital market in Medan City).

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