Immediate And Expected Emotions Toward Stock Returns Through Overconfidence And Cognitive Dissonance, The Study Of Indonesian Investor Behavior -

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IMMEDIATE AND EXPECTED EMOTIONS TOWARD STOCK RETURNS THROUGH OVERCONFIDENCE AND COGNITIVE DISSONANCE: THE STUDY OF INDONESIAN INVESTOR BEHAVIOR

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ABSTRACT

The behavior of investors, either in trading or investment, was often biased. This study focused on the emotional actions of overconfidence and cognitive dissonance caused by immediate and expected emotions, affecting stock returns. This study analyzed the effect of immediate and expected emotions towards stock returns through the overconfidence and cognitive dissonance. By adhering to quantitative research using SEM-PLS analysis, the data were collected from questionnaires using a purposive sampling method. The findings reveal that (1) Expected emotion affected stock returns with the overconfidence as a mediation variable. However, expected emotion had no direct effect on stock returns itself. (2) Expected emotion had no significant impact on stock returns, directly or indirectly, through the cognitive dissonance. (3) Immediate emotion had a significant effect on stock returns through overconfidence. However, immediate emotion had no significant effect directly on stock returns. (4) Immediate emotion had a significant impact on stock returns through cognitive dissonance. However, the direct impact of immediate emotion towards stock returns was not substantial. The Originality of this study was provided additional knowledge in the field of behavioral finance about the role of expected emotion and immediate emotion that affect stock returns through overconfidence and cognitive dissonance, which until now have never been analyzed. This study's findings implied that investors had to be more rational and minimize the biased behaviors of overconfidence and cognitive dissonance.

INTRODUCTION

The capital market is a forum for unifying some parties with excess funds and a lack of funds. All capital market players will urgently need an effective, efficient, and stable capital market. The government as a regulator, with the

various agencies involved in it, including the Indonesia Stock Exchange, The Financial Services Autority (OJK), Clearing and Guarantee Institution (KPEI), and Depository Settlement Institution (KSEI), has any authority to create regular, fair, and the efficient trading system as well as protecting the interest of investors and society (Keriahenta & Sayidah, 2014). Regular means ensuring all capital market players are obliged to follow the applicable regulations according to their respective fields and implement them consistently. Fair means that all capital market players carry out their activities based on the relevant standards and ethics in the business field and prioritize society's interest (Ady, 2014). For companies, it is also important to take into account risks when proposing a project for investment, both short and long term risks, (Ady, Borovitskaya, Nguen, Marantika, et al., 2020), especially when the project will be financed by a loan.(Sulastri et al., 2019)

In the study field, the phenomenon shows that trading done by capital market players (investors) more fulfilled by psychological aspects (Ady et al., 2013). Transaction done by an investor is more likely the same as the others even they tend to follow the behavior of foreign investors (herding) (Ouarda et al.,2013); (Hwang and Salmon, 2004). Transaction based on rumors (noise trading), due to their lack of confidence in market analysis skills, makes them running overtrading (too many trades) to their detriment. So the increase of stock prices that occurred is not based on substantial fundamental aspects, but it is more because of the market's psychological elements. It ends up causing a lot of speculative behaviors that are detrimental to the capital market as a whole (Ady et al., 2013). These behaviors can lead to a prolonged economic recession.

The economic crisis in 1998 was a clear example of how Indonesia fought for the situation, especially in its capital markets, due to most investors' behavior. Investors only tend to follow foreign investors (herding behavior) without any self-confidence and in-depth analysis, resulting in a massive sale of stocks from its local investors. This phenomenon still happened, although many companies in Indonesia were fundamentally in perfect condition. It might happen because investors are more likely to run trading or investment in the capital markets based on psychological or emotional / feeling (Jannah & Ady, 2017); (Ady, 2018a);(Sulastri et al., 2019); (Ady & Hidayat, 2019).

(Rick & Loewenstein, 2008) divide emotions into two types, namely expected emotion and immediate emotion. Expected emotion is the expected emotion/feeling that occurs after realizing the final decision, but it has not happened when making decisions. For example, there is a potential investor who wants to buy stocks. The potential one has already imagined how he/she will feel regret if the stocks experience a declining price and how he/she will feel excited if the stocks experience an increasing cost. The emotion he/she will regret if he/she does not buy supplies, and it turns out at higher prices, becomes a dilemma (Rick & Loewenstein, 2008).

Expected emotion / anticipated emotion can be prepared before making decisions such as building mental readiness for a trader to lose his / her assets in the capital market if there is a decline in stock prices. This phenomenon is related to their preferences for decision making under risk. Many factors are influencing the selections for decision making under risk of an investor or a

trader. Including demographic factors; (age, gender, and personality/character, education, experience, and wealth/income) (Hagstrom, 2010; Alanko, 2009; Donkers et al., 2001; Grable & Joo, 1997 ; Grable & Lytton, 1998; Riley & Chow, 1992). Besides the demographic factor, the rumor is another predicted variable that can affect decision-making preferences under investors' risk (Peterson, 2002). The effect of friends/brokers (Liu et al., 2017); (Sadiq Sohail & Al-Otaibi, 2017), the changing of market condition (Masoud, 2013), the political situation (Sadiq et al., 2019; Maqbool et al., 2018; Sadiq & Othman, 2017), macroeconomics (Rjoub et al., 2009), and foreign investors (Ozge Bolaman Avci, 2015); (Reis et al., 2010).

Immediate emotion/direct emotion are the emotions experienced by investors/traders when making decisions. Immediate emotion, is divided into two categories, namely integral emotion and incidental emotion. Integral emotion, as well as expected emotion comes from thoughts based on the consequences of a decision. Still, it coincides with decision-making (company actions such as dividend announcements, stock repurchase announcements, other company actions, market conditions, and issues). Incidental emotion is also experienced at the time of decision making. Still, it comes from an objective situation which is not related to the final decision (Rick & Loewenstein, 2008), it is also known as mood misattribution. Mood misattribution often becomes the cause of incidental emotion. Mood misattribution itself is a type of mood which tends to inform decisions. (Body conditions (Cohen et al., 1992; Cao & Wei, 2005), office worker, social needs (Shiller & Fielding, 1984; Shiller, 2000; Hong et al., 2001), internal family problems, sadness/depressions (Lucey & Dowling, 2005), lunar phases and weather (Dichev dan Janes, 2001; Yuan et al., 2006; Hirshleifer & Shumway, 2003; Kamstra et al., 2003).

Unstable emotional conditions, either because of the expected emotion or immediate emotion, can affect investors' behavior, such as overconfidence. Overconfidence is an investor's overconfident behavior in trading/investing stocks, which causes him to risk without realizing it. (Pompian, 2006) defines overconfidence as a belief that doesn't base on one's intuition, adjustment, or cognitive abilities. The cause of why investors overestimate their ability to evaluate companies as potential investments because they tend to believe in overtrading and underestimate the risks. (Kyle & Wang, 1997); (Odean, 1998); (Barber & Odean, 2001); (Odean, 1999); (Ady et al., 2013); (Jannah & Ady, 2017); (Ady, 2018); (Ady, 2015);(Ady, Mulyaningtyas, et al., 2020); (Zandi et al., 2020); Ady & Hidayat, 2019). It results in an un-optimal return generated by investors from trading or investment.

On the other hand, emotions can lead to cognitive dissonance behavior. Cognitive dissonance is the type of mental/psychological discomfort experienced by investors when there is a mismatch between new information and what has believed so far. Cognitive dissonance can also lead investors to lose aversion, average down, and herding behavior (Pompian, 2006; Ady, 2015; Ady et al., 2013; Ady, 2018; Ady & Hidayat, 2019). So it could reduce the returns of the investors.

This study analyzes the effect of immediate and expected emotions variables on stock returns and the overconfidence and cognitive dissonance as the intervening variables based on investors' behavior in Indonesia as a country with a developing capital market. This study's results follow the findings from the previous research field last year using the qualitative method.

THEORETICAL FRAMEWORK

Definition of Behavior

Behavior aimed to achieve goals. Specific goals are not always consciously known by an individual. The stimuli that motivate specific individual behavior patterns (personality) are subconscious, so it is not easily assessed (Sobur, 2011). (Leavitt, 1978) provides three critical assumptions in human behavior: (1) The view of cause and effect (causality) means that every social action has a reason as well as natural objects behavior caused by moving forces on them. (2) The view of direction or purpose (directedness) means that every human behavior is not only caused by something but also leads to something, leads to a goal, or essentially wants to something. (3) The concept of motivation underlying behavior is also known as pressure or desire (want), the requirement (need), or encouragement (drive).

Investment vs. Speculation

The notion of gambling and speculation oven equated, but there is a fundamental difference between them, which lies in the mastery of techniques and someone's knowledge regarding an action (Nafik HR, 2009). The comparison between them can be seen from the following table, (Nafik HR, 2009):

Table 1: The Comparison between Investor and Speculator

Investor	Speculator
- Being rational in making decisions - Making careful analysis - Collecting complete information as many as possible - Expecting a relatively long term returns - Taking more moderate risks in general - Expecting to gain returns based on its risks - Wanting security prices as a reflection of information and actual economic conditions, both micro and macro - Giving impact to a volatile yet fixed market (reasonable fluctuation)	- Sometimes, being irrational in making decisions - Making careful analysis but sometimes also manipulative - Depending on unreliable information and creating rumors which will give benefit to them - Expecting a relatively short term returns - Utilizing high risks conditions - Expecting high returns but rejecting low returns - Having no business in the micro and macro economy, prefers to act in volatile economic conditions - Giving impact on a volatile market with high fluctuation

Whether stock trading includes investing or gambling, depends on how investors carry out analysis when trading stocks (Ady, Mulyaningtyas, et al., 2020)

Theory of Behavioral Finance

Behavioral finance is a famous field of finance that suggests theories based on human psychology. It has become a scorching topic since the tech-stock bubble in March 2000 (Pompian, 2006). There are two behavioral finance topics: (1) Behavioral Micro Finance (BFMI) is an area that examines behaviors or biases of investors individually that distinguish them from the rational ones envisioned in classical economic theory. (2) Behavioral Macro-Finance (BFMA) is an area that detects and describes anomalies in the efficient market hypothesis explained by behavioral models. This present study focuses more on BFMI, a survey of individual investors' behavior, to identify psychological biases and conduct a behavioral investigation on asset allocation decisions to reduce the tendency over the process of investment.

Rational Economic Man (REM) vs. Behaviorally Biased Man (BBM)

According to neoclassical economics, homo economicus is a simple human economic behavior model portraying humans as agents who are consistently rational and narrowly self-interested in pursuing their financial decisions. Other economists point out the weak form of homo economicus, which deals with the behavior, but it is not stable.

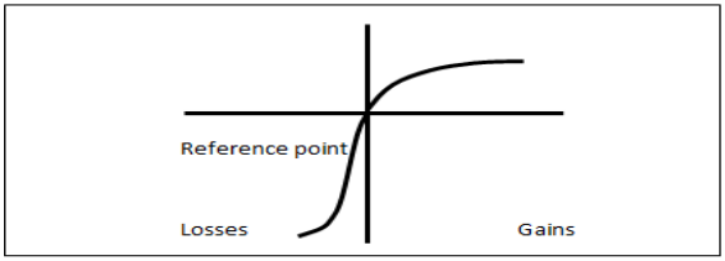
Economists employ the REM concept for two reasons: (1) homo economicus makes relatively natural and straightforward economic analysis, (2) homo economicus allows economists to quantify their findings and makes work more elegant, easy to be understood. The REM concept points out the utility function theory based on REM as an individual who attempts to achieve goals against the most comprehensive possibility at minimal costs. The choice of REM will have appeared in the utility function. REM raises a complex trade-off such as chasing wages versus pleasure. REM tends to ignore the social values attached to them in causing pleasure.

Most criticism against homo economicus is a challenging process based on the following three assumptions (Pompian, 2006; Nitsch, 1982): (1) Perfect rationality; when humans are rational, they can explain and make a favorable adjustment. But rationality itself is not the only one determinant in human behavior. (2) Perfect personal interests, many studies indicate that people do not have such ideal personal interests. If it happens, generosity will not exist. (3) Perfect information, some people have perfect or nearly perfect information on particular subjects.

Criticism against REM results in what we called "bounded rationality." Bounded rationality assumes which more flexible to the standard utility theory to be more realistic in representing human decision making. The indifference curve is an individual choice model to assess the validity of rational economic theory to improve the utility function.

The Allais paradox, proposed by Maurice Allais, violates the transitivity assumption on the indifference curve. The Allais paradox points out that somebody cannot apply maximization of the expected satisfaction agreed upon decades to individual empirical realistic decisions under risks and uncertainty.

The prospect theory describes how individuals evaluate their victory and defeats. This theory employs two processes of specific thinking, namely editing and evaluation.



Source: (Pompian, 2006:32)

Psychology of Investment

Psychology of investment is the study of psychological factors that affects investment decisions. In the efficient market hypothesis and modern portfolio theory, market efficiency occurs because of investors due to the complete information, so the prices are quickly and rationally set (Hagstrom, 2010). The idea of an efficient market cannot be defended according to Buffett (Hagstrom, 2010): (1) Investors are not always rational. According to the efficient market theory, investors set reasonable prices in markets by having all the available information. However, extensive research in behavioral psychology points out that investors do not have rational expectations. (2) Investors do not process information correctly. They do not determine the stock prices from fundamental analysis, which can reveal a company's intrinsic value. Performance measuring instrument only emphasizes short-term performance, which is supposed to be effective in the short term but cannot beat the market for a long time. Developing investors' attitude is a matter of preparation, both financially and psychologically against the market fluctuation. Besides, having emotional readiness is needed by investors to react adequately when it occurs. The psychology of investment or behavioral bias towards investors (Pompian, 2006) includes:

Over Confidence Bias

Overconfidence bias is a belief that doesn't base on one's intuition, adjustment, or cognitive ability. Someone tends to hardly estimate the possibility of what will be happening, less than 100%. It means that people think they are smarter and have better information than they are (Pompian, 2006; Daniel et al., in Thaler, 2005).

Several psychological studies pointed out that critical errors occur because people are overconfident to affect investment decisions. Overconfident investors do make not only wrong decisions for themselves, but also cause strong effects on markets as a whole.

According to the theory of an efficient market, the number of trading has increased over the last few years because investors and financial managers believe that they have better information to make profits by deceiving others. It is evidence of how investors become overconfident (De Bondt, 1998); (Campbell et al., 2004); (Yates, 1991).

The consequence of overconfidence is that investors will overestimate their ability to evaluate companies as a potential investment, so they will be blind to the negative information, indicating somebody must sell a warning of the wrong purchased stocks immediately.

Overconfidence investors tend to overtrading due to their beliefs that their knowledge is better than (Kyle & Wang, 1997); (Odean, 1998); (Brad M. Barber & Terrance Odean, 2001); (Odean, 1999). Overconfidence investors often feel ignorance of the performance of the company's historical investment, underestimating the risks. Consequently, it can result in an undiversified portfolio, which tends to be more than just tolerance to the risks.

Cognitive Dissonance Bias

Cognitive dissonance bias is the mental/psychological discomfort experienced by a person when there is a mismatch between new information and what has believed so far. Cognition itself in psychology represents attitudes, emotions, values, and beliefs. Meanwhile, cognitive dissonance is a kind of imbalance that occurs when there is a mental contradiction. Psychologists conclude that people always look for the most analytical performance to synchronize cognition with psychological stability even though the modification is sometimes irrational.

Cognitive dissonance can lead investors to hold loss-stocks, which should have sold. They want to avoid getting hurt at the end and acknowledge that they have made a wrong decision. However, cognitive dissonance can lead investors to continue investing in their securities even though the price decreases (average down), it can also lead investors to "behave as ducks" (herding behavior) (Pompian, 2006).

Individual Investment Behavior

Besides the cognitive role, investors' investment risk and uncertainty also give a significant emotional role. According to Loewenstein, (2000), there are two kinds of emotions which affect investment decision making:

Expected Emotion

Expected emotion is the expected emotion/feeling that occurs after realizing the final decision, but it has not happened when making decisions. The keyword of

expected emotion is experienced when the results of decision making accomplished. They only used cognition of future emotions (Rick & Loewenstein, 2008). Somebody can prepare Expected emotion/anticipated emotion before making decisions, such as building mental readiness for a trader to lose his / her assets in the capital market if there is a decline in stock prices. This phenomenon is related to their preferences for decision making under risk. The importance of decision making under threat of an investor or a trader influenced by many factors including age, gender, and personality/character, education, experience, and wealth/income (Hagstrom, 2010); (Alanko, 2009); (Donkers et al., 2001); (Grable & Joo, 1997); (Grable & Lytton, 1998); (Riley & Chow, 1992); (Subramaniam & Athiyaman, 2016).

Immediate Emotion

Immediate emotion or direct emotion is the emotions experienced by investors/traders when making decisions. Immediate emotion, occurred when making decisions, is divided into two categories, namely integral emotion and incidental emotion. Integral emotion and expected emotion come from thoughts based on the consequences of a decision, but it occurs simultaneously with decision making. Incidental feeling is also experienced at the time of making decisions, but it comes from objective situations that are not related to the final decisions. For example, today's unpleasant incident will affect the purchased stock decisions (Rick & Loewenstein, 2008). Mood misattribution often becomes the cause of incidental emotion. As a hypothesis, mood can affect to inform decisions. Mood misattribution itself is a type of attitude which tends to inform decisions even when the cause of the mood is not related to the final choices (Hirshleifer & Shumway, 2003; Kamstra et al., 2003; Lucey & Dowling, 2005).

METHODS OF THE STUDY

The present study employs a quantitative method using SEM-PLS analysis. The data of this study were typically primary data collected from questionnaires distribution. In this case, questionnaires distribute via Google Form due to the pandemic condition, making it impossible for the author to distribute them physically. The location used by the author to conduct this study is at the Indonesia Stock Exchange. Besides, somebody also obtains individual investors from six securities companies in Surabaya (Danareksa securities, Panin Securities, Daewoo Securities, Pintraco Securities, Reliance Securities, and IPOT). The number of respondents who successfully obtained according to the criteria was 53 respondents. The SEM-PLS analysis uses to analyze small samples (under 100 pieces). Therefore, the author tends to use this type of research to generate the findings.

Variables

In the third year, using a quantitative method, the writer attempted to apply the previous year's findings into a model. The variables used in this study are:

Independent variables:

X1 = Expected emotion, a type of emotion which expected to appear on investors using indicators, as follows:
X1.1 = Rumors
X1.2 = Influence of friends / brokers
X1.3 = Change in market conditions
X1.4 = Political Situations
X1.5 = Macroeconomics
X1.6 = Foreign Investors

X2 = Immediate Emotion, a type of direct emotion which is experienced by investors in stocks transaction
X2.1 = Unhealthy body conditions
X2.2 = Office work
X2.3. = Social conditions
X2.4 = Internal family problems
X2.5 = Sadness / depression
X2.6 = Lunar phase
X2.7 = Weather

Intervening variables:

Z1 = Overconfidence, the following indicators are:
Z1.1 = investment without appropriate information
Z1.2 = The fault in making decisions which causes a loss
Z1.3 = Overtrading/stocks transaction in every day (more than once)
Z1.4 = confidence beats the market

Z2 = Cognitive dissonance
Z2.1 = transaction by having insider information (insider trading)
Z2.2 = Short sale transaction
Z2.3 = Loss aversion, holding the loss-stocks
Z2.4 = average down, stocks-buying whose prices are lower
Z2.5 = Keeping the loss-stocks for a long time because it considers as useless funds

Dependent variables:

Y = Stock returns
Y1.1 = Attractive and competitive profit compared to banks or other investments
Y1.2. = High profit is the main consideration
Y1.3. = knowledge of stock trading for beginners
Y1.4 = High profit from Capital Gain
Y1.5 = profit from dividends

Equation

$$Z1 = \beta 1\ X1 + \beta 2\ X2 + \beta 3\ X3 + e1$$
$$Z2 = \beta 4\ X1 + \beta 5\ X2 + \beta 6\ X3 + e2$$
$$Y = \beta 7\ Z1*X4 + \beta 8\ Z1*X5 + \beta 9\ Z1*X6 + \beta 10\ Z2*X7 + \beta 11\ Z2*X8 + \beta 12\ Z2*X9 + e3$$

From which:

Y = Stock returns
Z1 = Overconfidence
Z2 = Cognitive dissonance
X1 = Expected emotion
X2 = Immediate emotion
X3 = Macroeconomics
X4 = Interaction of expected emotion with overconfidence
X5 = Interaction of immediate emotion with overconfidence
X6 = Interaction of macroeconomics with overconfidence
X7 = Interaction of expected emotion with cognitive dissonance
X8 = Interaction of immediate emotion with cognitive dissonance
X9 = Interaction of macroeconomics with cognitive dissonance
β1… β12 = Parameters
e1, e2, e3 = Errors Standard

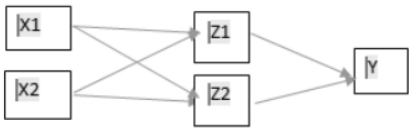


Figure. 1. The Model Relationship of Variables

RESULTS AND FINDINGS

The present study tends to use PLS because (1) PLS (Partial Least Square) is a data analysis method which based on a small sample, i.e., the number of pieces is less than 100 and it is residual distribution, (2) PLS (Partial Least Square) can be used to analyze weak theories because PLS (Partial Least Square) can also use for prediction, (3) PLS (Partial Least Square) allows the algorithm using a series of ordinary least square (OLS) analysis which results in the efficiency of algorithm calculations (Ghozali, 2013). (4) In PLS approach, it assumed that all variance measures could explain. The data analysis method in this study divided into two, namely:

DESCRIPTIVE STATISTICS

Descriptive analysis is an empirical analysis consisting of information to provide description/elaboration of an event (who / what, when, where, how, how much) collected in the study (Supranto, 2002). The following tables will point out the respondent's profile according to gender, age, educational background, and monthly income.

Table 1: Respondents' Profile Based on Gender

No.	**Gender**	**Percentage**
1	Male	62.3%
2	Female	37.7%
	Total	**100%**
Source: (The author, 2020)		

Based on **Table 1,** the number of male respondents (62.3%) is higher than female respondents (37.7%).

Table 2: Respondents' Profile Based on Age

No.	Age	Percentage
1	Under 20 years old	1.8%
2	20 - 30 years old	34%
3	30 - 40 years old	20.8%
4	40 - 50 years old	34%
5	Above 50 years old	9.4%
	Total	**100%**
Source: (The author, 2020)		

Based on **Table 2,** we can see that respondents at the age of 20 – 30 years old and 40 – 50 years old hold the highest percentage (34%). Meanwhile, respondents at the age of 30 – 40 years old save the second-highest rate (20.8%). The third-highest percentage (9.4%) obtained from respondents at the age of 50 years old and above. Respondents under 20 years old only hold the lowest rate (1.8%) in total.

Table 3: Respondents' Profile Based on Educational Background

No.	Educational Background	Percentage
1	Senior High Graduates and Lower	11.3%
2	Diploma Degree	9.4%
3	Bachelor Degree	41.5%
4	Master Degree	17%
5	Doctoral Degree	20.8%
	Total	**100%**
Source**:** (The author, 2020)		

Based on **Table 3**, we can see that respondents with bachelor's degrees hold the highest percentage (41.5%). The second-highest percentage (20.8%) was obtained from those who have a doctoral degree. Besides, respondents at a master's degree hold the third-highest rate (17%). Respondents who graduate from senior high and lower hold the fourth-highest percentage (11.3%). The rest percentage (9.4%) was obtained from those who have a diploma degree

Table 4: Respondents' Profile Based on Income

No.	Income	Percentage
1	≤ Rp 5.000.000	36.2%
2	Rp 5.000.000 - Rp 10.000.000	25.5%
3	Rp 10.000.000 - Rp 15.000.000	27.7%
4	Rp 15.000.000 - Rp 20.000.000	6%
5	≥ Rp 20.000.000	4.6%
	Total	**100%**
Source: (The author, 2020)		

Based on **Table 4**, we can see that respondents whose income is ≤ IDR 5,000,000 hold the highest percentage (36.2%). Respondents whose income is IDR 10,000,000 - IDR 15,000,000 hold the second-highest percentage (27.7%). The third-highest percentage (25.5%) was obtained from those who have income as much as IDR 5,000,000 - 10,000,000. Meanwhile, the second-lowest percentage (6%) was obtained from respondents with income as much as IDR 15,000,000 - IDR 20,000,000. Finally, respondents whose income is ≥ IDR 20,000,000 hold the lowest percentage (4.6%) in total.

Inferential Statistical Analysis

Table 5: Construct Reliability and Validity

	Cronbach's Alpha	rho A	Composite Reliability	Average Variance Extracted (AVE)
COGNITIVE DISSONANCE	0.686	0.715	0.796	0.442
EXPECTED EMOTION	0.658	0.673	0.773	0.373
IMMITIATE EMOTION	0.671	0.759	0.776	0.387
OVER CONVIVENCE	0.620	0.630	0.776	0.466
RETURN SAHAM	0.891	0.971	0.912	0.677

The Results of Initial Validity Test

Table 6: Validity Test Results

Measurement Model	**Results**		**Critical Value**	**Model Evaluation**
Outer Model				
Convergent Validity	**Variables**	***AVE***		
	CD	0,442		Invalid
	EE	0,373		Invalid
	IE	0,387	>0.5	Invalid
	OC	0,466		Invalid
;	RS	0,677		Valid
Discriminant Validity	**Indicators**	***Cross Loading***		
	x1.1	0,448		Invalid
	x1.2	0,621		Valid
	x1.3	0,597		Valid
	x1.4	0,426		Invalid
	x1.5	0,744		Valid
	x1.6	0,746		Valid

	x2.1	0,591		Valid
	x2.2	0,588		Valid
	x2.3	0,676		Valid
	x2.4	0,818		Valid
	x2.5	0,710	>0.5	Valid
	x2.6	-0,131		Invalid
	x2.7	0,606		Valid
	z1.1	0,603		Valid
	z1.2	0,755		Valid
	z1.3	0,690		Valid
	z1.4	0,674		Valid
	z2.1	0,524		Valid
	z2.2	0,685		Valid
	z2.3	0,786		Valid
	z2.4	0,602		Valid
	z2.5	0,698		Valid
	y1.1	0,925		Valid
	y1.2	0,890		Valid
	y1.3	0,809		Valid
	y1.4	0,740		Valid
	y1.5	0,731		Valid

Based on **Table 6**, we can see from the measurement (outer model) that there are a few indicators that do not meet the criteria, so it can conclude that not all indicators are valid. Therefore, the weak hands must be eliminated to become a fit model for the next stage, called the inner model test. Even though most indicators are valid, they can still eliminated because the Cronbach Alpha and Composite Reliability values must be above the standard to be feasible for the inner model test.

The results of fitting model conducted on 53 respondents by providing 27 statement items in questionnaires will be presented in a table, as follows:

Table 7: Validity Test Results

Measurement Model	**Results**		**Critical Value**	**Model Evaluation**
Outer Model				
Convergent Validity	**Variables**	**AVE**		
	CD	1,000		Valid
	EE	0,529		Valid
	IE	0,560	>0,5	Valid
	OC	1,000		Valid
	RS	0,648		Valid
Discriminant Validity	**Indicators**	**Cross Loading**		
	x1.2	0,577		Valid
	x1.3	0,704		Valid
	x1.5	0,810		Valid
	x1.6	0,795		Valid

	x2.3	0,820		Valid
	x2.4	0,857		Valid
	x2.5	0,685		Valid
	x2.7	0,604		Valid
	z1.2	1,000		Valid
	z2.5	1,000	>0,5	Valid
	y1.1	0,910		Valid
	y1.2	0,889		Valid
	y1.3	0,847		Valid
	y1.4	0,668		Valid
	y1.5	0,678		Valid

Based on the Table above, we can see that there are 7 indicators out of 27 indicators which must be eliminated in order to reach the fit model stage. Furthermore, the reliability test can be seen from the Cronbach's alpha value and the composite reliability value ($\boldsymbol{\rho c}$). To be considered as reliable statement items, the Cronbach's alpha value and the composite reliability value must be >0.7. By employing the output which is generated by the SmartPLS software, we can calculate the composite reliability value ($\boldsymbol{\rho c}$) with the following formula:

$$\tilde{\rho}\mathbf{c} = \frac{(\Sigma\lambda)^2}{(\Sigma\lambda_i)^2 + \lambda_i var(\varepsilon_i)} \quad \text{.....(1)}$$

λ_i is a component loading to the indicator $\mathrm{var}(\varepsilon_i) = 1 - \lambda_i^2$

The Results of Reliability Test with Cronbach's Alpha

Table 8: Cronbach's Alpha

Variables	Cronbach's Alpha	Critical Value	Model Evaluation
CA	1,000	>0,7	Reliable
EE	0,707		
IE	0,732		
OC	1,000		
RS	0,891		

Based on the reliability test with Cronbach's alpha, the critical value of all variables is more than 0.7. It means that all variables used in this study are reliable.

The Results of Reliability Test with Composite Reliability

Table 9: Composite Reliability

Variables	Composite Reliability	Critical Value	Model Evaluation
CA	1,000	>0,7	Reliable
EE	0,815		
IE	0,833		
OC	1,000		
RS	0,901		

Based on the reliability test with composite reliability, the critical value of all variables is more than 0.7. It means that all variables used in this study are reliable.

Hypothesis Test

In this study, for a confidence level of 95 percent (alpha = 95 %), the T-table value for one-tailed hypothesis was >1.675. If you consider the P value, then the P value is smaller than 0.05 or <5%, so the hypothesis is accepted. On the other hand, if the P value is greater than 0.05 or >5%, so the hypothesis is rejected. In this study, PLS (Partial Least Square) analysis conduct using the SmartPLS 3 program, which possesses a bootstrapping feature.

Table 10: Path Coefficients

Path Coefficients

Mean, STDEV, T-Values, P-Val... | Confidence Intervals | Confidence Intervals Bias Co... | Samples | Copy to Clipboard: | Excel Format | R Format

	Original Sample (O)	Sample Mean (...	Standard Deviation (STDEV)	T Statistics (|O/STDEV|)	P Values
OVER_CONVIDENCE -> RETURN_SAHAM	-0.261	-0.205	0.262	0.996	0.320
IMMEDIATE_EMOTION -> RETURN_SAHAM	-0.049	0.005	0.217	0.224	0.823
IMMEDIATE_EMOTION -> OVER_CONVIDENCE	0.555	0.563	0.106	5.236	0.000
IMMEDIATE_EMOTION -> COGNITIVE_DISSONANCE	0.397	0.399	0.121	3.284	0.001
EXPECTED_EMOTION -> RETURN_SAHAM	-0.091	-0.133	0.198	0.462	0.644
EXPECTED_EMOTION -> OVER_CONVIDENCE	0.248	0.246	0.135	1.837	0.067
EXPECTED_EMOTION -> COGNITIVE_DISSONANCE	0.035	0.037	0.152	0.228	0.819
COGNITIVE_DISSONANCE -> RETURN_SAHAM	0.301	0.235	0.182	1.651	0.099

Table 11: Hypothesis Test

Hypothesis	T-Statistics	T-Table	Hypothesis Status (T-test)
OC -> RS	0,996	<1,675	Rejected
IE -> RS	0,224	<1,675	Rejected
IE -> OC	5,236	>1,675	Accepted
IE -> CD	3,284	>1,675	Accepted
EE -> RS	0,462	<1,675	Rejected
EE -> OC	1,837	>1,675	Accepted
EE -> CD	0,228	<1,675	Rejected
CD -> RS	1,651	<1,675	Rejected

Direct Effect Evaluation

Overconfidence towards Stock Returns

The effect of overconfidence on stock returns is not significant. It is because of the P value = 0.320, which is greater than 0.05. Besides, the T-Statistics value = 0,996 which is smaller than the T-Table value = 1,675. Therefore, the hypothesis rejects.

Immediate Emotion towards Stock Returns

The effect of immediate emotion towards stock returns is not significant. It is because of the P value = 0.823, which is greater than 0.05. Besides, the T-Statistics value = 0.224, which is smaller than the T-Table value = 1.675. Therefore, the hypothesis rejects.

Immediate Emotion towards Overconfidence

The effect of immediate emotion towards overconfidence is significant. It is because of the P value = 0.000, which is smaller than 0.05. Besides, the T-Statistics value = 5.236, which is greater than the T-Table value = 1.675. Therefore, the hypothesis is accepted.

Immediate Emotion towards Cognitive Dissonance

The effect of immediate emotion towards cognitive dissonance is significant.It is because of the P value = 0.001 which is smaller than 0.05. Besides, the T-Statistics value = 3.284 which is greater than the T-Table value = 1.675. Therefore, the hypothesis is accepted.

Expected Emotion towards Stock Returns

The effect of expected emotion towards stock returns is not significant. It is because of the P value = 0.644 which is greater than 0.05. Besides, the T-Statistics value = 0,462 which is smaller than the T-Table value = 1,675. Therefore, the hypothesis rejects.

Expected Emotion towards Overconfidence

The effect of expected emotion towards overconfidence is significant. It is because of the P value = 0.067 which is smaller than 0.05. Besides, the T-Statistics value = 1.837, which is greater than the T-Table value = 1.675. Therefore, the hypothesis is accepted.

Expected Emotion towards Cognitive Dissonance

The effect of expected emotion towards cognitive dissonance is not significant. It is because of the P value = 0.819, which is greater than 0.05. Besides, the T-Statistics value = 0.228, which is smaller than the T-Table value = 1.675. Therefore, the hypothesis reject.

Cognitive Dissonance towards Stock Returns

The effect of cognitive dissonance towards stock returns is not significant. It is because of the P value = 0.099, which is greater than 0.05. Besides, the T-Statistics value = 1.651, which is smaller than the T-Table = 1.675. Therefore, the hypothesis reject.

Indirect Effect Evaluation

Table 14: Indirect Effect

(a x b) Notation	***Indirect Effect* (a x b T-statistics)**	***Direct Effect* (c Value)**	**Mediation Effect Status**
(EE to OC)(OC to SR) (1,837)(0,996)	1,830 (Significant)	(EE -> SR) 0,462 (Not significant)	*Indirect Only (Full Mediation)*
(EE to CD)(CD to SR) (0,228)(1,651)	0,376 (Not significant)	(EE -> SR) 0,462 (Not significant)	*No Effect (No Mediation)*
(IE to OC)(OC to SR) (5,236)(0,996)	5,215 (Significant)	(IE -> SR) 0,224 (Not significant)	*Indirect Only (Full Mediation)*
(IE to CD)(CD to SR) (3,284)(1,651)	5,422 (Significant)	(IE -> SR) 0,224 (Not significant)	*Indirect Only (Full Mediation)*

Expected Emotion towards Stock Returns through Overconfidence

Based on the data above, we can see that the direct effect of expected emotion towards stock returns has no significant effect. On the other hand, the indirect effect of expected emotion towards stock returns through overconfidence has significant effect. It means that overconfidence can mediate the effect of expected emotion towards stock returns. Therefore, expected emotion can only affect stock returns through overconfidence (Full Mediation).

Expected Emotion towards Stock Returns through Cognitive Dissonance

Based on the data above, we can see that the direct influence of expected emotion towards stock returns has no significant effect. Likewise, the effect of expected emotion towards stock returns through cognitive dissonance does not have significant effect either. Therefore, it means that cognitive dissonance cannot mediate the effect of expected emotion on stock returns (No Mediation).

Immediate Emotion towards Stock Returns through Overconfidence

Based on the data above, we can see that immediate emotion's direct effect on stock returns has no significant effect. On the other hand, the effect of immediate emotion towards stock returns through overconfidence has a significant influence. It means that overconfidence can mediate the impact of immediate emotion towards stock returns. Therefore, immediate emotion can only affect stock returns through overconfidence (Full Mediation).

Immediate Emotion towards Stock Returns through Cognitive Dissonance

Based on the data above, we can see that immediate emotion's direct effect on stock returns has no significant impact. On the other hand, the effect of immediate emotion towards stock returns through cognitive dissonance has a

significant effect. It means that cognitive dissonance can mediate the effect of immediate emotion towards stock returns. Therefore, immediate emotion can only affect stock returns through cognitive dissonance (Full Mediation).

in addition, the effect of immediate emotion through cognitive dissonance is significant when there is a natural emotion due to the drastic change in market conditions, including investors' internal needs, which can lead them to commit Loss Aversion by holding loss-stocks (cognitive dissonance type 1), the average down (cognitive dissonance type 2), and also the change of mindset (cognitive dissonance type 3) which affects stock returns.

DISCUSSION

In trading or investment, emotion still becomes a crucial thing instead of investors' actions, which results in no significant direct effect of expected emotion towards stock returns. So, in other words, emotion will not affect the high or low returns received by investors. The impact of expected emotion towards stock returns can only be applied in action through overconfidence when investors run trading based on this kind of behavior. In general, the higher overconfidence behavior, the lower stock returns investors will get and vice versa. In this case, overconfidence only mediates the effect of expected emotion towards stock returns.

The insignificant effect of expected emotion towards overconfidence points out that not all investors' emotions will cause overconfidence behavior. Based on the independent variables, we can see that investors will not be affected by rumors and friends/brokers. These results are different from the finding of Peterson (2002) which points out that anticipatory and investor behavior positively affects decision-making. Besides, Liu et al. (2017) and Sadiq Sohail & Al-Otaibi (2017) also found that brokers are critical for investors' satisfaction in the stock market. However, this behavior is also strongly influenced by the drastic changes in the market, political, and macroeconomics conditions. It is in line with Masoud (2013) finding that economic growth can affect the stock market. Besides, Maqbool et al. (2018) then found a significant relationship between political influences and stock returns. The finding of Rjoub et al. (2009) also points out a meaningful relationship between macroeconomics conditions and stock returns.

On the other hand, we have also known that foreign investors are quite influential. This result supports Ozge Bolaman Avci, (2015) findings and Reis et al. (2010) that there is a proven unidirectional relationship between foreign investors and local investors in terms of playing a role in the behavior towards stock returns. It means that not all indicators of expected emotion can cause investors to behave overconfidence.

By looking at the descriptive statistics, 62.3% of respondents were male, and 34% were those at the age of 20-30 years old and 40-50 years old. In this range of age, investors generally have high enthusiasm, entirely rational yet low-risk preferences.

Overconfidence behavior towards stock return has an insignificant effect indicating that it does not always determine the level of stock returns. It means that overconfidence is a kind of speculative behavior that can also produce high returns. Based on the descriptive statistical calculations, it found that respondents do not have overconfidence behavior. They are not daily stock traders but rather Swing or Position Investors who run weekly even monthly trading. Therefore, they do not experience too much overconfidence.

This study's results are following Lucky et al. (2019) and Cheng (2007) which point out that the more overconfidence an investor is, the lower rate of return he receives. On the other hand, Kourtidis et al. (2015) points out a positive relationship between overconfidence and stock returns (stock performance, stock frequency, and stock volume).

In trading or investment, emotion still becomes a crucial thing instead of investors' actions, which results in no significant direct effect of expected emotion towards stock returns. So, in other words, emotion will not affect the high or low returns received by investors. The impact of expected emotion towards stock returns can only be applied in the form of action through cognitive dissonance when investors run trading based on their attitudes and emotions they convinced. In general, the higher cognitive dissonance, the lower stock returns investors will get, and vice versa. In this case, cognitive dissonance cannot mediate the effect of expected emotion towards stock returns.

The insignificant effect of expected emotion towards overconfidence points out that not all investors' emotions will cause cognitive dissonance. Based on the independent variables, we can see that investors will not be affected by rumors and friends/brokers. These results are different from the finding of Peterson (2002) which points out that anticipatory and investor behavior have positive effects on decision making. In addition, Liu et al. (2017) and Sadiq Sohail & Al-Otaibi (2017)also found that brokers are very important for investors satisfaction in the stock market. Cognitive dissonance is also greatly influenced by the drastic changes in market, political, and macroeconomics conditions. It is in line with the finding of Masoud (2013) that economic growth can affect the stock market. Meanwhile, Sadiq et al. (2019) and Maqbool et al. (2018) found that there is a significant relationship between political influences and stock returns because political conditions somehow affect investors' emotions to be panic-buyers or panic-sellers. The finding of Rjoub et al. (2009) also points out a significant relationship between macroeconomics conditions and stock returns.

On the other hand, we have also known that foreign investors are quite influential. This result supports the findings of Ozge Bolaman Avci (2015) and Reis et al. (2010) that there is a proven unidirectional relationship between foreign investors and local investors in terms of playing a friend/brokers or towards stock returns. It means that not all indicators of expected emotion can cause investors to behave cognitive dissonance positively affects.

On the decision-making questionnaires, we can see that only some investors (11 essentials Loinvestors' on (Cognitive Dissonance type 1), (6%) did Average

Down (Cognitive Dissonance type 2), and (16%) changed the mindset (Cognitive Dissonance type 3).

The insignificant cognitive dissonance towards stock returns points out that investors, either exit al.e cognitive dissonance, do not affect their returns because only a few them experience this kind of behavior. The statement above is not in line with the finding of Afreen Fatima (2019), which states that cognitive dissonance has a positive effect on decision making in India and also the discovery of Kumar Sharma (2014) and Powers & Eric P. Jack (2013) which states that cognitive dissonance has a positive effect on returns.

Immediate emotion is still a kind of feeling, not an action, experienced by investors in trading or investment, which has no significant direct effect on stock returns. So this emotion will not affect the high or low returns received by investors. The impact of immediate emotion towards stock returns can only be applied in the form of action through overconfidence when investors run trading based on this kind of behavior. In general, the higher overconfidence behavior, the lower stock returns investors will get and vice versa. In this case, overconfidence only mediates the effect of immediate emotion towards stock returns.

The effect of immediate emotion towards overconfidence is significant, indicating that investors' direct emotions will have an impact on overconfidence behavior. We can see it from the results of descriptive statistics that investors who experience immediate feeling due to an extreme social condition (17.6%), office works (14%), body conditions (17.6%), family influence (11.8%), sadness (9.8%), lunar phase (12%), and weather (21.6%) (on a Likert scale 1). Investors' panic selling condition due to the Covid-19 Pandemic and trade war is also a reflection of overconfidence behavior because they believe that market conditions will worsen, resulting in an intense fall of the IHSG (Widjanarko et al., 2020).

The insignificant effect of immediate emotion towards stock returns means that investors' natural emotion does not affect the number of stock returns. Still, if it manifested in the form of overconfidence behavior by daily stock trading, it would affect the stock returns. This study's results are under Brahmana et al. (2015) finding that mood induced by air temperature (one of the causes of immediate emotion) has no significant relationship with market returns and trading volume. While the cloud cover has a negative and statistically significant association with market returns and trading volume, there is no such substantial effect of Indonesia's seasons (dry and wet season) towards stock market behavior. Dowling & Lucey (2011) point out that wind has a negative relationship with equity prices, but the high temperature positively correlates with equity prices. On the other hand, it is different from Cao & Wei (2005) finding that temperature affects decision making and the level of temperature itself tends to cause aggression on decision making.

The direct effect between immediate emotion and stock returns is not significant because immediate emotion is still a kind of emotion, not an action, experienced by investors in trading or investment. So this emotion will not affect the high or

low returns received by investors. The effect of immediate emotion towards stock returns can only be applied in the form of action through cognitive dissonance when investors run trading based on their attitudes and emotions they convinced of. In general, the higher cognitive dissonance, the lower stock returns investors will get, and vice versa. In this case, cognitive dissonance also cannot mediate the effect of immediate emotion towards stock returns.

The effect of immediate emotion towards cognitive dissonance is significant. It means that direct feeling due to a drastic change in market conditions can cause them to commit Loss Aversion. By holding loss-stocks (Cognitive Dissonance type 1), Average Down (Cognitive Dissonance type 2), and also the change of mindset (Cognitive Dissonance type 3), which affects the stock returns.

The statements mentioned above are in line with Afreen Fatima (2019), finding that cognitive dissonance positively affects India's decision-making. Shahani (2019) also found that cognitive dissonance can affect investors in India. Besides, Powers & Eric P. Jack (2013) found a positive relationship between cognitive dissonance and retail product returns.

CONCLUSION

Based on the analysis above, we can conclude that:
Expected emotion affects the stock returns, which overconfidence used as a mediating variable. However, expected emotion has no direct effect on stock returns.

Expected emotion has no significant effect on stock returns, either directly or indirectly, through cognitive dissonance.

Immediate emotion has a significant effect on stock returns through overconfidence. However, immediate emotion has no significant direct impact on stock returns.
Immediate emotion has a significant effect on stock returns through cognitive dissonance. However, the impact of immediate emotion towards stock returns is not substantial.

SUGGESTIONS AND LIMITATIONS

Suggestions:

Investors have to be more rational and minimize overconfidence and cognitive dissonance behaviors. This study points out that both expected and immediate emotions will not affect the returns if it does not go through little behavior overconfidence and cognitive dissonance.
Investors should buy good fundamental stocks and not become panic-seller or panic-buyers if the market condition is suddenly changed.
Issuers expect always to provide complementary information to the market condition to create positive emotions for investors.
Next, researchers can use a more significant sample and different methods to obtain more in-depth results.

Limitations:

1. The Covid-19 pandemic becomes the biggest obstacle for researchers to collect the data in the study's object.
2. Indonesia Stock Exchange (IDX) had to stop trading due to the Covid-19 pandemic, which caused unstable market conditions. Thus, investors could not run transaction or trading optimally.

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