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Influence of Framing Information and Disposition Effect in Decision of Investment: Experimental Study on Investor Behavior at Indonesia Stock Exchange Representative on Denpasar, Bali

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ABSTRACT

This study aims to examine framing information, disposition effect and interaction between the two on investment decisions made by investors by predicting stock prices. This study uses 2 × 2 between subject experimental design. Participants amounted to 80 individual investors listed as investors in securities companies in Denpasar, Bali. This study involved 80 individual investors of Bali local community based on nonprobability sampling method with purposive sampling technique. Participants were grouped into 4 experimental groups according to a combination of manipulations.The results showed some important findings. First, information framing is one factor that determines investor behavior in making investment decisions. Positively and negatively framed information will lead to different decision-making patterns. Investors who are given a positive information framing will predict stock prices higher than investors given negative information framing. Secondly, this study confirms that information received by investors contributes to the maximum effect of disposition, furthermore the effect of this disposition is influenced by the framing of information received. Third, the interaction between groups of participants who were given different information framing showed a real difference, except the group of participants given negative information indicating the existence of cognitive style differences which are psychological dimensions that represent the consistency of individuals in collecting and processing information and in decision making. This study also proves that there is no difference in behavior in making investment decisions based on gender and investment experience whereas there is a difference in the level of participants' education. Unique results were found in women participants who had different attitudes toward risk and benefit. Overall participants are posttraditional Balinese people who keep the wisdom of local Balinese culture but are in touch with global culture through stock investment

Keywords: Framing, Disposition Effect, Behavior Finance, Investment Decision
JEL Classification: M

1. INTRODUCTION

The theory of decision-making is one of the topics in economics that is very interesting because in every activity in the field of finance always ends with decision making. Decision-making is the application of the basic strategy, but generally decision-making has a broader interpretation. The main financial decisions are investment, determination of capital structure and determination of profit distribution or dividend policy. Running it together is important with not forgetting the application of social responsibility (Salim, 2011).

Traditional financial management theory attempts to explain quantitative decision-making techniques that assume humans always behave rationally so they are capable of maximizing their utility and can process all available information and ignore psychological factors. The exploited rationality (expected utility theory), which has been the mainstream in explaining individual

decision-making, has begun to criticize. Some empirical studies show that individuals not only use the element of ratios in making decisions but also involve emotional and behavioral elements (Kahneman and Tversky, 1979). The results of the study indicate that in addition to providing rational/cognitive responses, individuals can also provide an irrational/emotional response when making decisions. This fact encourages the development of a theory of financial behavior (behavioral finance) that attempts to analyze the under-appreciated psychological bias in standard financial management theories.

Kahneman and Tversky (1979) further introduced the prospect theory that conceptually contradicts the expected utility theory that has long been used by researchers to explain the decision-making process. Basically prospect theory emphasizes the weight of difference between gains and losses in the eyes of investors, investors will feel more depressed by the losses that may be experienced compared to a surge of pleasure on the possible benefits gained. Kahneman and Tversky (1979) research led to the emergence of various studies in behavioral finance in subsequent years.

The investment decision-making process from an irrational perspective is seen as something that can be explained through its individual behavioral and psychological side (Kahneman and Tversky, 1979; Sheffin, 1985; Hirshleifer, 2001). Research in this perspective focuses more on the aspect of irrationality, especially in the psychological biases often experienced and shown by investors when making investment decisions in the capital market.

Studies show that investors are often less rational in financial decision-making caused by certain psychological factors such as behavior Framming effect (Kirchler et al , 2005); disposition effect (Shefrin and Statman, 1985); Overconfidence (Barber and Odean, 2001); Representatives bias (Shefrin, 2005).

The phenomenon of framing describes the presentation of the information in different formats can affect an individual's decision. The concept of framing has been widely used in the fields of communication science and political science. Currently several other disciplines have also adopted this concept, including the science of financial behavior management, especially the field of investment. Framing is one of the reasons for the bias in decision making. The theory used in testing the bias due to framing is the prospect theory which suggests that the frame which a person adopts can influence his decision, when the decision maker is given an alternative decision framed in a positive manner then the decision taken will tend to risk averse and when the information is presented in a negative manner then the decision taken will tend to risk seeking.

Investor behavior has been observed by previous researchers and their findings emphasize the psychological, economic, and social impact of the environment on the resulting decisions. Preliminary findings, beginning with the discovery of fracture effect effects in Prospect Theory by Kahneman and Tversky (1979), then developed by Shefrin and Statman (1985) resulted in a disposition effect behavior (Disposition Effect). Shefrin and Statman's research (1985) was further developed by Odean (1998). His studies produced a formula for the disposition effects that are often used by other researchers.

Disposition Effects is the tendency of an investor to sell a good stock (the winner) too early, and hold stocks that do not have the prospect (the losser) too long (Shefrin and Statman, 1985). Investors tend to rush to realize the benefits of the investment and too long to withhold the losses that are facing. It can be argued that investors actually basically behave less rationally is avoiding risk (risk averse) while Indonesia Stock Exchangeng profitable and taking risks (risk taking) while facing losses (Kahneman and Tversky, 1979). Several studies in the financial dimension have proven to occur behavioral disposition effects on individual and institutional investors in some countries such as Poland (Kahneman and Tversky, 1979).

The Disposition Effect was first identified by Shefrin and Statman (1985) as a follow-up to Kahneman and Tversky (1979) research. Shefrin and Statman (1985) developed prospect theory regarding the realization of capital gains and losses, the research states that investors tend to sell winners too early and ride losers too long. The disposition effect shows the tendency of investors' behavior to sell their stocks quickly when they experience a profit, whereas if they suffer losses on stocks, investors will hold the stock (Goetzmann and Massa (2008); Frazzin (2006); Fogel and Berry (2006); Chui (2001); Yeong-Jia et al. (2010)).

Bali has a number of local wisdom that comes from the basic framework of Hindu-Balinese religious teachings and culture (Widana, 2009). The Hindu-Bali community has a variety of local values or wisdom not found in other local communities. All local wisdom is based on and based on Hindu-Balinese religion. For the Hindu-Balinese people, between religion and tradition is like two sides of a coin that can not be separated although it can be distinguished. Religion is undoubtedly rooted in the explicit and implicit truth of God's teachings in the holy books. While custom, as the meaning of the word has been clearly sourced from the habits of human behavior which, because it is considered to have the value of truth though not absolutely maintained (Widana, 2009).

Local wisdoms of Hindu-Balinese society include *Tat Twam Asi* (the view that all Indonesia Stock Exchangengs in the world are the same), *Ngayah* (volunteer work for the common good), *Asta Kosala-Kosali* (traditional architecture and building code of Bali), *Awig-awig* (tradition rules at banjar and pakraman levels), *Yadnya* (sacred offerings), *Tri Hita Karana* (three harmonious relationships that cause happiness), *Subak* (irrigation agricultural systems and organizations), and much more. Various local wisdom of Bali is a guide in everyday behavior in public life. Thus, this local wisdom is always alive and growing and able to be sustainable from generation to generation.

The main argument of this research is based on the lack of an integrated empirical explanation that links between the effect of information disclosure of dividend and the effect of disposition in shaping investor behavior especially if it is related to local culture and wisdom owned by Hindu-Bali society when making investment decision in capital market. The best financial journal

search results to date still show a separate analysis between the framing of dividend payout information and the disposition effect so that the formation of investor behavior has not been able to be explained through an integrated empirical study.

Research in the field of behavioral finance against the background of the Indonesian capital market is still very limited, including in the use of experimental methods so that it is expected to explain the behavior of investors in making investment decisions based on information received and reactions made on information received by investors.

2. LITERATURE REVIEW

2.1. Behavioral Finance Theory

The development of the theory of finance behavior basically can not be separated from the support of psychology theory applied in the field of finance. Psychology itself can be interpreted as a branch of science that studies the behavior and mental processes of humans (Atkinson et al., 2003). The various theories and models formulated by a number of financial experts are generally based on the assumption that investors are always acting rationally in the investment decision-making process. Investors are considered willing to pay attention to all the information available on the market and able to evaluate carefully and seek answers based on rational thinking. No financial expert can explain why black Monday events can occur. As described in Asri (2013) distributed questionnaires to 175 institutional investors and 125 individual investors in the United States, with questions about the reasons for selling stocks. Of the 113 replies received only 3 respondents whose answers refer to economics and financial news and rumors. The rest responded to their selling action as stock prices in the market fell and other investors also sold. Shiller concludes that investors uncontrolled action motivated by psychological factors such as fear, avarice (greed) and panic (madness).

The role of behavior and emotions also influence the investment decision-making process of investors. According to the psychographic model of Bailard, Biehl, and Kaiser (BB and K Five Way Model) explained from the aspect of personality, investors in the capital market can be grouped into five types: Adventure, celebrity, individualist, guardian and straight arrow (Pompian, 2006). These five types of investors generally show different investment decision patterns so that the use of rationality assumptions in the investment decision-making process does not always result in valid results due to behavioral and emotional factors that are not considered before. In addition to understanding the categorization of investors, it should be understood also the characteristics often expressed by investors in the process of making investment decisions such as heuristic dealing to information, overconfident and psychology of sending messages (Asri, 2013).

Heuristic dealing with information is described as an action to interpret information exactly and (expectedly) by relying on a number of experiences and intuitions owned by investors. Kahneman and Tversk (1979) stated that heuristic dealing often occurs in the first time investors face an information or event in its transactions in the capital market.

Overconfident is an excessive confidence in which an investor feels he is very good at trasing shares when only a few times get capital gains from the results of trading that may be due to chance and luck alone. If the behavior of such investors is large in the capital market then the assumption of rationality will be far from the capital market.

Psychology of sending message can be interpreted as the difference of response between the investor in translating a news. Asri (2013) provides a simple example such as the phrase "company Awill share a portion of its net income" and "company A will withhold a portion of its net profit." Both statements are very likely responded differently by the financiers although the meaning of both sentences are the same. Psychologically the first sentence is relatively nuanced more positive for shareholders who expect a dividend distribution than the second sentence. If the first sentence is published to investors then the possibility of investors will react positively, and vice versa.

There are two topics in behavioral finance: (1) Behavioral finance micro (BFMI) that examines the behavior or biases of individual investors that distinguish them from rational individuals as in classical economic theory, (2) behavioral finance macros that detect and describes anomalies in the efficient market hypothesis described in the behavioral model. The study in this study focuses on BFMI, the study of individual investor behavior in identifying the influence of psychological bias of framing effects and disposition effects and investigating investor behavior on investment decisions based on gender differences, investment experience and education level both formal and non-formal.

2.2. Framing Theory

Chong and Druckman (2007) explain that the concept of framing has been widely used in the field of communication science and political science. Based on the realm of communication science and politics, the concept of framing can be interpreted as an individual statement (mass media or politician) concerning the cause of the same issue or event but packed differently, resulting in different perceptions in other individuals (listeners and readers).

Currently the concept of framing has been used also by various fields of science, one of which is the behavior of financial management, especially the field of investment. The framing effect is one of the cognitive biases that can influence investors in behaving and making investment decisions to create anomalies in the capital market. The framing effect arises when investors are faced with the same problem in decision-making, but with different representation. This will create a bias toward investors so that the behavior and decision choices of some investors will be different. In general, the framing effect is the tendency of decision-makers to respond to different situations differently according to the context of the options presented (Pompian, 2006).

According to the perspective of the theory of financial behavior, the concept of framing shows how the same information presented differently will influence the investor in making choices. This is important because the concept of framing is against the concept of rational electoral theory. According to rational-based financial

theory, a rational investor will always take the same decision when faced with the same data or information (Thaler, 1994). Rational investors are objective investors and take into consideration the existing conditions when making decisions, so they tend to be more careful when faced with uncertain situations so they tend to avoid risk (risk averse).

Basically in decision-making it refers to the fact that one tends to be more sensitive to loss than profit (Benartzi and Thaler, 1995). A person is said to be loss averse if his caution is more focused on losses than gains (Haigh and List, 2005). This is reflected in the Prospect Theory which emperically states that the sensitivity of a person to loss is about two times greater than the sensitivity to profit (Kahneman and Tversky, 1979; Tversky and Kahneman, 1992).

Tversy and Kahneman (1981) used Prospect Theory as a framework for explaining the phenomenon of information framing. Framing information affects a person because each individual sees loss and profit with different perspectives, as depicted in Prospect Theory (Kahneman and Tversky, 1979). The value function found in Prospect Theory illustrates the major factors important for the framing effect of a perceived loss greater than the profit enjoyed although the expectation for both of them is equal. A person tends to avoid risk when information is presented with a positive frame, but tends to seek risk if the information presented is framed with a negative frame.

2.3. Prospect Theory

Tversky and Kahneman (1981) describe the framing phenomenon with Prospect Theory. Prospect Theory (Kahneman and Tversky, 1979) states when a person perceives himself to be in a domain gain then that person will tend to make risk-free decisions. Conversely when a person perceives himself to be in a loss domain then that person will tend to make a more risky decision. This shows that a person's perception of his condition at that time depends on the frame of information it receives.

Kahneman and Tversky (1979) argue that one of the basic principles in Prospect Theory is the decision makers' perception of decision issues can affect its preference. Decision issues can be defined as presenting options or options available actions, outcomes of possible actions, and the probabilities associated with outcomes. The formulation of decision problems, social norms and personal characteristics of decision makers is expected to affect framing. As a result, the decision maker framing the decision problem in domain gain or loss domain so that the framing can influence perception of decision made (pompian, 2006).

Figure 1 shows that the value function has a shape like the letter S that passes through a certain reference point. The S shape shows that the value function has an asymmetric shape. The value function is convex (concave) in the gain region (to the right of the reference point), and the concave shape (convex) in the loss region (left of the reference point). With such a curve one will feel as if the value of the loss of a certain amount of money in a bet is greater than the gain for the same amount of money.

Prospect theory states that the framing effect will cause the decision maker to choose an alternative based on the framing of the information it receives and the level of risk encountered in relation to the outcome rather than with the expected outcome utility (Kahneman and Tversky, 1979; Tversy and Kahneman, 1981). The Prospect Theory explains also when a person perceives himself to be in a domain gain then that person will tend to make risk-free decisions. Conversely, when a person perceives himself to be in a loss domain, the person will tend to make a more risky decision. This shows that a person's perception of his condition at that time depends on the frame of information it receives.

The individual's willingness to accept risk can be influenced by presenting questions or information scenarios with a particular frame. Decision makers will be affected by the frame of positive or negative information depending on individual perceptions of problems, alternatives and outcomes. A positive frame will be used if there is a perception that the outcome can increase the gain. A decision maker with a positive frame hopes to gain a gain so that they become a risk averter. They tend to choose an outcome alternative that is stated with very high certainty. On the contrary, a negative frame will be used if the perceived outcome can reduce wealth. Decision makers with negative frames expect to lose their wealth so they become risk takers. They tend to choose the stated outcome alternative with the smallest certainty, the certainty of the situation is the situation when a decision maker (investor) predicts the conditions around. Thus, investors are able to anticipate conditions that the smallest degree of certainty so that it can minimize the failure or maximize the success of the results of decisions that have been made.

2.4. Disposition Effect

One of the important factors that caused the stock price to be inconsistent with the change of fundamental value is the behavioral factor of investors in the stock exchange diseased by the disposition effect. The disposition effect was first revealed by Shefrin and Statman (1985) which is the development of Prospect Theory of Kahneman and Tversky (1979). The disposition effect is the behavior of investors who rush to realize the profits from their investments and too long to withstand the possible losses. Or in other words, investors are basically irrational, that is risk averse if faced with conditions are gaining profit and risk-taking in the face of loss conditions.

The disposition effect is part of the prospect theory. Prospect theory predicts that investors will tend to realize capital gains to avoid risking that stock prices will decline in the future. Instead, investors will tend to keep their assets when stocks are impaired. In addition, the concept of mental accounting (Thaler, 1994) assumes that investors value different stocks separately. That is, they use the purchase price of each stock as an individual reference point. Shefrin and Statman (1985) suggest that psychological factors such as avoiding regret and pride experience can be an important addition to the cause of disposition effects.

According to Weber and Camerer (1998) certain emotional responses are needed to cause disposition effects. Their argument builds on the idea that changes in risk preferences as described in Prospect Theory are not sufficient to cause disposition effects. They argue

that the investor's responsibility for wealth change causes positive/negative emotions that eventually lead to a disposition effect.

The development of further disposition effects was carried out by Odean (1998) who tested the disposition effect to investors who held the investment loss for too long and sold the investment winning too quickly. Winner realization has more preference compared to loss. This behavior does not appear to motivate the desire to balance the portfolio or to avoid high trading costs from low stock prices, nor to justify the performance of the next portfolio. The methods used by Odean (1998) are proportion of gain realized (PGR) and proportion of loss realized (PRL). The results of the Odean (1998) study show that PGR is larger than PLR, which means that investors prefer to realize gains from losses except in December when there is motivation to sell because of tax considerations. Investors realize losses at a higher rate than gains, which means investors prefer to realize gains rather than losses.

The disposition effect is an implication of the investor behavior model in capital market transactions. Implications of practice as an advocate dependent on the level of influence of prefensi, belief and psychological bias. An investor with Prospect Theory makes his preference to risk averse after experiencing gains. Instead, his preference becomes risk seeking after losses. This change in risk perception is due to the disposition effect. The Prospect Theory has a pure role to the basic preference of explanation for the disposition effect.

2.5. Behavioral Finance Theory, Framing Theory, Prospect Theory, Disposition Effect

In the context of investment, framing is the presentation of company-specific information by issuers in different ways can lead to differences in investor reactions and alternative choice differences in investment decision making. The phenomenon of information framing for investors is explained using the framing theory perspective introduced by Kahneman and Tversky (1979) and Tversky and Kahneman (1981). According to the theory of framing investors who receive information with a positive frame will show a positive reaction, otherwise investors will react negatively when investors receive information with a negative frame.

The prospect theory explains that the framing effect will cause investors to react based on information framing and the level of risk associated with outcomes rather than with the expected outcome utility. When the dividend information is given a positive frame the investor's positive reaction will be greater when perceiving himself in the loss domain. This greater positive reaction is due to investors' perceptions of domain gains with dividend payout information with a positive frame Indonesia stock exchangeng perceived to increase their wealth so investors tend to take risk-free decisions.

Some studies have proved that there is a framing effect to investors when receiving information presented with a certain frame so that it can affect investors' reaction differences and cause different choices on their decisions such as Diamond and Lerch, 1992; Kuhberger, 1995; Gudono and Hartadi, 1998; Levin et al., 2001; Simon et al.; Fox and Dayan, 2004; Yusnaini, 2005; Suartana, 2005; Kirchler et al, 2005; Glaser et al, 2007. Thus the first, second and third hypothesis proposed in this study are:

H_1: Framing dividend payment information in positive or negative form has significant effect on investor behavior in taking investation decision.z

H_2: There are few difference behavior of PGR investor groups in making investment decisions when receiving information on dividend framing in both positive and negative forms.

H_3: There are few differences behavior of PLR investor groups in making investment decisions when receiving information on dividend framing in both positive and negative forms.

Every investor who invests in the capital market will always pay attention to capital market conditions. Market condition information is indicated by stock price movements reflected in JCI that tend to fluctuate and contain elements of uncertainty. Psychologically investors are often biased in making decisions.

In the context of an investment disposition effect is the tendency of an investor to sell a good stock (the winner) too early, and hold the stock that does not have the prospect (the losser) too long (Shefrin and Statman, 1985). Investors tend to rush to realize the benefits of the investment and too long to withhold the losses that are facing. In this case it can be argued that, actually investors basically behave less rationally is avoiding risk (risk averse) when they are getting profit and taking risks (risk taking) when they are facing losses (Kahneman and Tversky, 1979).

Some researchers have proven that there is a disposition effect on the investor so that it can lead to differences in choice of decisions such as Shefrin and Statman (1985); Odean (1998); Brown et al. (2006); Kaustia (2010); Jordan and Diltz (2004); Dhar and Zhu (2006); Costa et al. (2008); Yeong-Jia Goo, *et al* (2010) and Elizabeth (2013). Therefore the fourth, fifth and sixth hypothesis are:

H4: The effect of disposition has a significant effect on investor behavior in investment decision making.

H5: There are few differences in behavior between the PGR investors group and the PLR investor group in making the investment decision when it gets the information dividend payment dividend in a positive form.

H6: The behavior of investment decision-making between PGR groups differs from that of PLR investors when they get framing the dividend payment information in negative form.

Based on the description above, the framework of this research model is as follows:

3. METHODOLOGY

3.1. Sample and Data Collection

The use of direct economic actors (investors) as participants in this experiment aims to improve the external validity of the research. Haigh and List (2005) stated that the actual use of market participants in experimental research will yield better findings than the use of student representation.

The stock objects used in this study are eight selected shares of issuers that are actually listed on the Indonesia stock exchange

(INDONESIA STOCK EXCHANGE) with the following criteria:

1. Regularly for three consecutive years of giving dividends
2. For two consecutive months is a stock recommended by thirteen securities companies in Bali to be transacted from various sectors and lines.

The sample stock in this study will be given a different code in order to eliminate the investor's introduction bias for the stock. Shares 1 for TLKM, Shares 2 for BBRI, Shares 3 for ASII, Share 4 for ADRO, 5 shares for PWON, Shares 6 for PPRO, shares 7 for AALI, and Shares 8 for KAEF.

This experimental study used an active participant investor in Denpasar Bali, using 80 investors as participants who were grouped into 4 treatment groups. This experimental research using the design model between subjects. The design between the subjects required the use of more participants, therefore the collection of participants was conducted with various approaches Figure 3.

The demographic characteristics of participants in the study consisted of five main parts: Gender, age, education level, occupation and investment experience.

Demographic characteristics by sex, participants in the study were dominated by male participants (64%) while female participants (36%). This condition resulted in a combination of participants between men and women as the experimental subjects were not balanced (Table 1).

Characteristics of participants by age can be seen in Table 2 which shows the majority of participants are in the age group of 25–34 years, this indicates that young investors dominate this experimental research although the overall dominance of investors in Bali is in the established generation with age 40 years and above. The composition of participants based on this age is in line with the efforts of Indonesia stock exchange representative office in denpasar to intensify socialization and education to students and young generation by establishing Indonesia Stock Exchanges gallery in several universities in bali.

Characteristics of respondents by education can be seen in Table shows that the final formal education level of participants is mostly S1 (bachelor degree) and dominated by male.

Characteristics of respondents by experience can be seen in Table 4. All participants in this experiment have an investment experience of at least 3 years and up to over 11 years according to the requirements of the selection of participants conducted at the beginning of the study. All participants are active investors from securities firms located in Bali and all have received dividends from invested shares. The majority of participants have an investment experience of 5–8 years, which is still dominated by male investors except in the group of experienced investors between 3 and 5 years old who are dominated by women.

4. MEASUREMENT

4.1. Check Manipulation Test

The five manipulation checks in this study were the controls of the participants 'answers that showed how far the participants' understanding of the given case or treatman was. A two-part question that measures the effectiveness of manipulation about participants' perceptions of roles and tasks during the experiment and three questions about the understanding of experimental manipulation in the form of case stories in a scenario.

Criteria for the effectiveness of experimental manipulation based on the score of participants' answers using the following categories. 1 score 1–2.75 (very ineffective), score of 2.76–5.50 (not effective), score of 5.51–8.25 (effective) and score of 8.26–10 (very effective). Participant criteria that pass the test of manipulation checks are those who are able to answer at least two of the three questions correctly.

Based on Table 5 the results of the manipulation checks indicate that investors' perception of their belief in the task of predicting stock prices on tomorrow has a mean score of 7.54 in the range of score 1 (very uncertain) to 10 (very sure). The results of these scores indicate that the manipulation in the form of case stories and accompanying information is effective.

Investors' perceptions of the importance of dividend information today (both positive and negative frames) in influencing the stock price prediction task on tomorrow have a mean score of 7.53 with

Table 1: Respondent gender

Gender	Summary
Male	51
Female	29

Table 2: Respondent age

Age (years)	Male	Female	Total
>25	17	15	32
25–34	20	14	34
35-44	13	0	13
<45	1	0	1
Total	51	29	80

Table 3: Respondent education

Education	Amount		
	Male	Female	Total
Senior high school	7	1	8
Bachelor degree	34	25	59
Master degree	7	3	10
Doctoral degree	3	0	3

Table 4: Respondent experience

Experience	Amount		
	Male	Female	Total
1 (3–5 tahun)	7	15	22
2 (>5–8 tahun)	23	13	36
3 (>8–11 tahun)	11	1	12
4 (>11 tahun)	10	0	10

a score range of 1 (very unimportant) to 10 (very important). This result can be interpreted as experimental manipulation in the form of dividend information, both in positive and negative frame is effective.

The test results of manipulation checks on the next three questions show that most participants can correctly answer at least 2 of the 3 questions available and no one is unable to answer them. These results show that 91.25% (almost 100%) of the participants were able to answer the question correctly. Thus, the findings as a whole can mean that participants are well-understood and easily for the experimental material in the form of story cases in a scenario, experimental procedures and their role assignments during an experiment from start to finish.

5. DATA ANALYSIS

5.1. Hypothesis 1 (H1) and Hypothesis 4 (H4) ANOVA Test

Hypothesis 1 and hypothesis 4 in this study were tested to see the effect of each independent variable on the dependent variable and their interaction using ANOVA. The two variables or factors are the framing of dividend payment information (X1) and disposition effect (X2). H1 test is conducted to prove the influence of framing dividend information on investment decision making by investor. Further hypothesis 4 is performed to prove the effect of the disposition effect on investment decision-making behavior when information framing dividends is framed in both positive and negative forms. To test H1 and H4, an ANOVA test is presented in Table 6.

Test results hypothesis 1 in Table 6 states the F = 220.81 and the value of significance P = 0.000. Therefore F calculated >F table (3.976) and significance value < 0.05 hence obtained conclusion there is influence of factor from framing of dividend payment information toward investment decision making done by investor. The results of this statistical test support Hypothesis 1 (H1).

Furthermore, the test results Hypothesis 4 shows F Value 24.98 and the significance value P = 0.000. Since F calculated is bigger than F table (3.976) and significance value < 0.05 then it is concluded that there is influence of disposition effect toward investment decision making behavior when dividen framing information is framed in positive and negative form. The results of this statistical test support Hypothesis 4 (H4).

5.2. Tukey's HSD Test for Hypothesis 2 (H2), Hypothesis 3 (H3), Hypothesis 5 (H5), Hypothesis 6 (H6)

This test is conducted to determine whether there is a difference in the level of treatment manipulation variable of information disclosure of positive and negative dividend payments made by the participants in making investment decisions through stock price prediction. Test results of Turkey's HSD Test are presented in Table 7.

The test results in Table 7 show the significance level has a value < 0.05, so it can be concluded that there is a difference between the average price predictions in the PGR group who received the information framing in the form of positive and negative in making investment decisions. When viewed from the average value of stock price predictions conducted by PGR investors group, the predicted price of PGR group investors who get positive information is higher than the group of PGR investors who received negative information. The results of this statistical test support hypothesis 2.

Hypothesis 3 (H3) Testing is conducted to prove whether there is a difference of investment decision made through stock price prediction done by PLR investor group receiving information of dividend framing in both positive and negative form. The results of statistical tests show a significance value of < 0.05 so it can be concluded that there is an average difference between price predictions on PLR groups of investors who get information on dividend framing in the form of positive and negative. If the average value of price prediction is predicted, the average price for the PLR investor group that gets positive information is higher than that of the PLR investors who are informed of the negative dividend framing. The results of this statistical test support hypothesis 3.

Testing of hypothesis 5 (H5) is conducted to prove whether there is a difference of investment decision through stock price prediction on PGR investor group receiving information of dividend framing in positive form (PGR +) compared to PLR investor group getting positive framing information (PLR +). The test results in Table 7 show the significance level has a value < 0.05, so it can be concluded that there is a difference between the average stock price prediction in the PGR group of investors who get the information framing in a positive form compared to the prediction of stock prices in the group of PLR investors who got positive framing information. When viewed from the average value of price predictions, the predicted PGR group prices that received positive information is higher than the PLR group who

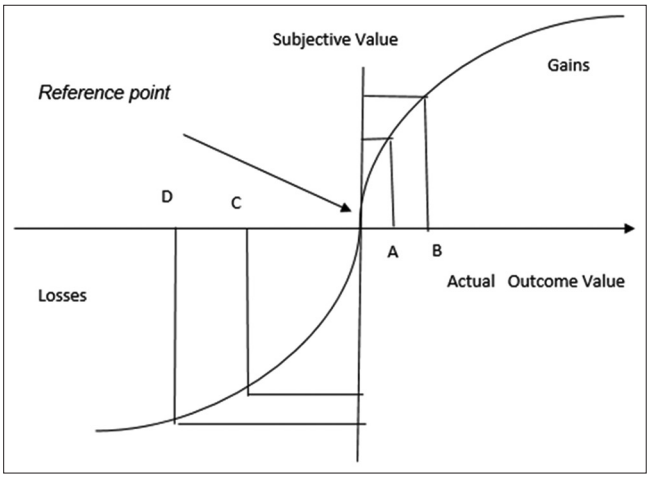
Table 5: Check manipulation test

Question (1 lowest score to 10 highest score)	Min	Max	Mean	Standard deviation
1. Investor perceptions about the level of confidence predict stock prices	1	10	7.54	1.65
2. Investors' perception of how important dividend information affects stock price predictions	1	10	7.53	1.62
Questions with multiple choice options				
Questions With Multiple Choice Options		**Right answered question**		**Total**
Number of research subjects	2	3		5
	8	72		80
Percentage	8.75	91.25		100

Table 6: ANOVA test result

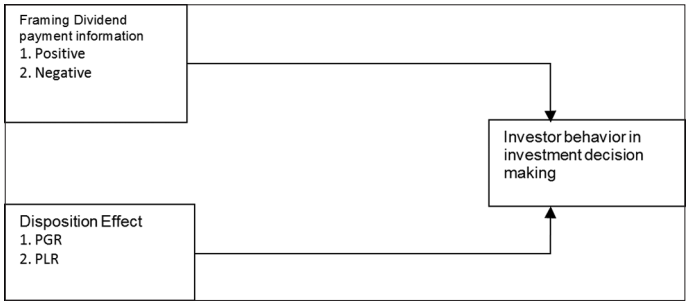
Hypothesis	F	Significant
Hypothesis 1 Information of dividend framing toward investment decision	220.81	0.000
Hypothesis 4 Disposition effect toward investment decision	24.98	0.000

Figure 1: Gain and loss value function



Source: Goldberg and Nitzsch (2001)

Figure 2: Research model



received positive information. The results of this statistical test support hypothesis 5.

Testing of hypothesis 6 (H6) statistic is conducted to prove whether there is a difference in making investment decision through stock price prediction on PGR investor group receiving negative information framing (PGR-) compared to PLR investor group receiving negative information of dividend dividend (PLR-). Should PGR investor groups given negative information have an average stock price prediction higher than the average prediction of PLR investor group stock price given negative framing information. By looking at statistical test results with a significance level of more than 0.05, it can be concluded that there is no difference in the average stock price prediction in making investment decisions both in PGR and PLR groups when given negative framing information. The results of this statistical test do not support hypothesis 6.

6. CONCLUSION

6.1. Framing Effect of Dividend Payment Information to Investment Decision Making

The results of this study proved that information framing significantly influence the behavior of investors in making investment decisions are made. The framing of information in this study uses dividend information framed in both positive and negative forms. These findings support the concept and Theory of Framing (Tversky and Kahneman, 1981) which states that an information presented with a different frame will cause a person to differ in behavior and make decisions.

The framing theory (Tversky and Kahneman, 1981) emphasizes that when information is presented in a positive frame the investor assumes that the information is good information (good news) because it is believed to reduce the investment risk and increase the stock price so that it will tend to behave positively. Conversely, when the information is presented in a negative frame, the investor assumes that the information is bad news so that the investor who gets the information with the negative frame will be more likely to behave negatively because believing the information received can increase the investment risk and lower the stock price.

6.2. Different Test Groups of PGR Investors and PLR Investors Group which Received Positive and Negative Framing Information

The test results obtained empirical evidence that hypothesis 2 (H2) and hypothesis 3 (H3) are supported. This means that there is a difference in making an investment decision when the information is delivered in both positive and negative form and it is evident that investor behavior is significantly greater if the dividend payment information is framed in a positive form both in the group of investors who tend to PGR or PLR. This indicates that when a group of investors as participants are informed of dividend payouts with a positive frame, they tend to react positively. This happens because participants interpret the positive frame as good and profitable news, consequently the participants make risk-free decisions marked by predicting stock prices tomorrow above today's real stock prices. On the contrary, when a group of participants are informed of dividends with a negative frame, they tend to react negatively by predicting stock prices on tomorrow below the real stock price today.

6.3. Disposition Effect Toward Investment Decision Making

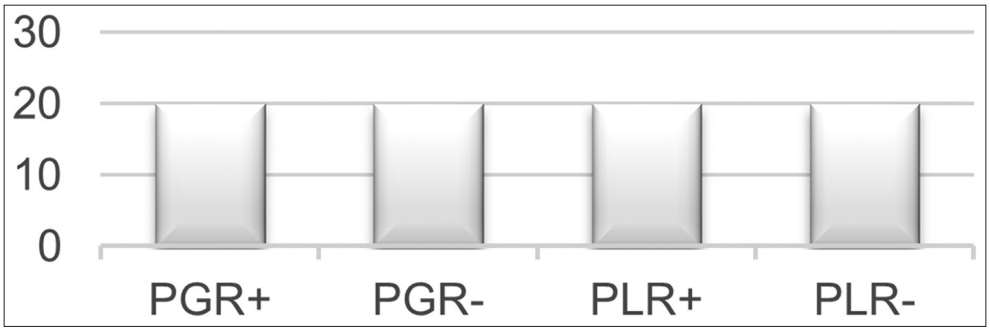
Result of research from hypothesis 4 (H4) which want to be proved in this research is disposition effect have significantly affect toward investor behavior in investment decision making marked with prediction price. Based on the proposed hypothesis and the composition of stock investment decision making for the disposition effect variable consists of proportion gain realized (PGR) and proportion loss realized (PLR). Investors who were affected by the disposition effect in this study were separated into groups of PGR and PLR found that there was a significant difference in the group that received information on dividend

Table 7: Tukey's HSD test

Hypothesis	Group	Mean difference	Standart deviation	t-value	Sig.
Hypothesis 2	PGR+PGR-	6.750	0.531	12.72	0.000
PGR+dengan PGR-					
Hypothesis 3	PLR+PLR-	4.400	0.531	8.29	0.000
PLR+dengan PLR-					
Hypothesis 5	PGR+PLR+	−3.050	0.531	−5.75	0.000
PGR+dengan PLR+					
Hypothesis 6 PGR-dengan PLR-	PGR-PLR-	−0.700	0.531	−1.32	0.554

PGR+: Proportion gain realized with positive information, PGR-: Proportion gain realized with negative information, PLR+: Proportion loss realized with positive information, PLR-: Proportion loss realized with negative information

Figure 3: Respondent treatment



framing in both positive and negative forms. This is because investors tend to more quickly realize the benefits rather than losses. Investors who have a tendency PGR will be more likely to react positively. Conversely people who have PLR tendencies will be more likely to react negatively. In other words the results of this study indicate there is a significant effect of disposition effect occurs on the behavior of investors in decision-making that is marked by stock price predictions.

The results of hypothesis 5 (H5) in this study wanted to prove the tendency of PGR group who were given positive positive dividend information more positive than people with PLR group tendency who were given positive dividend information disclosure. The results of this study indicate that people with PGR tendency who were given a positive dividend information framing did more positive reactions than people with PLR tendency who were given a positive dividend information framing.

The unique findings of this study can be seen from the frequency of stock price predictions conducted by investors when investors are given dividend payment information in a positive frame, investors who tend to PGR have average predictions higher stock prices compared with the group of investors who tend to PLR. It means that framing of information in a positive form given to investors resulted in the same behavior to perform when conducting transactions in the capital market.

The result of hypothesis 6 (H6) research which is proved in this research is that people with PLR tendency who are given negative negative dividend information react more negatively than people with PGR tendency who are given negative negative dividend information. The results of this study indicate that people with PLR tendency who are given a negative dividend information framing will react similarly to people with PGR tendency who are given a negative dividend information disclosure. So the sixth research hypothesis is not proven.

The results of this study are inconsistent with research conducted by Jordan and Diltz (2004); Dhar and Zhu (2006); Costa, Mineto and Silva (2008).

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