RISK TAKING INVESTMENT AS THE INTERACTION EFFECT OF LOSS AVERSION AND INFORMATION (PILOT TEST)

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Abstract

The purpose of pilot test of this research is to test the interaction of loss aversion and information to the decision of risk taking investment. The information obtained by investor was positive or negative determined by the low or high level of risk taking investment. Furthermore, the method of pilot test of this research was experimental laboratory within subject design 2[2] factorial design. The hypothesis test employed alpha index was meant to determine the low or high risk on the participants taking part. Interaction test employed post hoc with Bonferroni model. The test result of hypothesis from pilot test showed that the participants in the gain domain tended to have lower risk taking than that of in the loss domain. Test result of interaction showed that there were some differences of all treatment groups and there was a significant effect between information in gain domain and loss domain to risk taking. Meanwhile, the other result from the interaction of loss aversion and information in both gain and loss domain had significant effect to the risk taking. Moreover, the loss aversion both in gain domain and the loss one did not have a significant effect to the risk taking. The limitation of research pool test was dealing with the number of participants that was only eleven. This number was then divided into two groups are gain and loss. However, this research provided some value to investor that in decision making of investment, he had to be capable of managing and controlling some psychological factors dealing with knowledge improvement. The novelty of this research was that decision making of investment was not only influenced by external factor but also the internal one, especially dealing with somebody's psychology.

Keywords: risk taking, gain domain, loss domain, pilot test

1. Introduction

The return and risk level of investment determines the courageous level of someone to the risk taking level of investment.[1] said that risk taking could be classified into two, namely less risk taking and greater risk taking. Some one classified as risk averse is the one who does not have a courage in risk taking. On the other hand, risk seeking is the one who has a courage in risk taking.

The courageous level of someone in risk taking of investment is influenced by many factors. [2] said that personally some one tended to behave reflective that might lead him to make a systematic mistake in decision making. This statement was confirmed by [3]. He said that the decision making for investment was controlled by eagerness, purpose, prejudice bias, and emotion.

Decision making of investment is influenced by many factors. Therefore, the researcher limits on two factors only, namely loss aversion and information. According to[4], loss aversion in prospect theory showed that a person/someone would hold loss longer and sell stock more quickly in the gain time. When someone encounters loss he will tend to be more cautious and sensitive rather than to face gain although nominally they are the same [5] and [6].

Furthermore, the research conducted by [7] was found that individual investor tended to have loss aversion in decision making of investment. Meanwhile, the research result of [8] was found that investor in gain domain showed that there was a risk averse. On the other hand, when he was in a position of loss domain, he would tend to show risk seeking. [1], their research result showed that in loss position a participant tended to be courageous to take a risk but on the other hand, in gain position it did not show the significance of risk taking [1].

The other factor which influenced the courage level or the level of risk taking in decision making is information. The research conducted by [9] showed that information was performed through a picture or a story at first either exciting or not. Meanwhile the research conducted by [10] and [11] showed that positive information influenced someone to make a decision more quickly due to the system of intuitive and heuristic decision making. On the other hand, with negative information someone tended to make his decision later due to the system of decision making that seems to be more rational and analytic. Moreover [12] [13] said that information influenced the risk taking of investor, there was a tendency of negative information influencing risk seeking and positive information influencing risk averse. On the other hand, the research result conducted by [1] showed that the pleasing or positive information and unpleasing or negative one did not significantly affect to the risk taking.

Based on the research gap which was used as research base, that was to raise the phenomena on how investor takes a decision on risk taking in his investment affected by loss aversion or information.

Moreover, this paper was written as the following steps. At first, literature review and hypothesis was presented as the supporting theory of this paper. Then, methodology included experimental design, number of participants, treatment and measure. The next was research result, discussion, research limitation and conclusion. However, this paper writing was used to explain the steps how this research was conducted in this post test.

2 Literature Review and Hypothesis

Traditional finance has a basic assumption that all participants both financial participants, institution and market agent that has rational behavior. The other assumption is that all participants or market agent know that all information is still available. One of the traditional finance theories is efficient market theory (EMH) by [14]. This theory was said that basically a person always conducts rationally [15]. The reason is that the assets value, for example the price of stock is usually connected with the best information about its fundamental value. Furthermore, the traditional finance trend explained that it was in a definite condition.

However, the definite condition in traditional finance was not capable of explaining when it was encountered with indefinite/uncertainty condition. Many factors could influence this uncertainty condition, one of them was psychological aspect. Furthermore, the uncertainty condition could be explained in behavioral finance [16]. Behavioral finance was a science discussing about financial behavior which was affected by psychology[17].The support of behavioral finance believed that a person as an individual in investment market does not always behave/conduct rationally and he is not always in a definite market due to the psychological bias. [18],[19]. Furthermore, [2] said that investor had a tendency of biased behavior by making systematic mistakes in investment decision. [18] said that one of the factors of behavioral finance: [17]someone did investing was affected by his behavior and mood. [4] said a person / a man was in uncertainty condition that might cause his decision change from that of predicted to the theory of fundamental economy.

In line with the explanation above, it could be concluded that based on [20], there was a difference principal between traditional finance and behavioral finance. They said that traditional finance was based on economic theory. Meanwhile, behavioral finance was focused on psychological aspect combined with economic theory.

One of the theories belonged to behavioral finance was prospect theory [4][21]. This theory said that everybody had a different tendency when he had to make a decision between the two prospects, gain and loss. The basic principal of prospect theory might cause someone have a tendency not to behave rationally. He was unwilling to work hard to obtain gains rather than losses. This basic principal was explained by [22] in a hypothetical value function. As it was stated by [23] that individual person tended to make some consideration when he was in a loss position rather than gain. This might encourage him to have risk seeking when he was in a loss domain and risk averse when he was in gains domain. Different risk caused by different domain could determine the risk taking level of investor especially dealing with investment [22], [24].

Moreover, [3] also said that some factors that often used to influence and change a process in decision making of investment such as overconfidence, framing effect, reference dependence, loss aversion, overreaction, under reaction, etc. Those of some others could be seen from its demography, such as education, gender, age, income, environment, etc.

Some factors that often used to influence the risk taking level were such as loss aversion and information. [22] said that loss aversion happened if someone could hold loss longer but he would sell his stock sooner when the price rose or he had got some profit. This statement was also supported by some other opinions such as [16], [5], [6]. Their opinions basically stated that loss aversion was a kind of deep regret. This would make somebody be more cautious when he had a loss rather than a pleasure when he got some gain/profit although its value was about the same. [25] said that loss aversion might be caused by the two factors of income, gain and loss. In detail, this statement could be explained in "A Hypothetical Value Function" by [22].

When someone gets some information, she or he is usually influenced by his or her own psychology especially from affective dealing with emotion and cognitive dealing with intellectual knowledge. As it was stated by [26]; [27] perspective taking was explaining how someone processed the information in decision making which was influenced how someone comprehended, reacted, and received some perspective from one situation encountered. Furthermore, information could be positive or exciting, and negative or not exciting. [9] The kind of information could influence the level of risk taking. Unexciting information encouraged someone to make a decision longer because it required rational and analytical thought ([11],[10]). On the other hand, exciting information might influence the decision making more quickly because it was affected by intuitive and heuristic thought ([11], [10]).

Loss Aversion determined much on the level of risk taking investment [22]. In determining the courage of risk taking, investor was influenced by domain problem. When investor was in gain domain he tended to have low risk taking. On the other hand, when he was in loss position, he tended to have high risk taking. As it was stated in a hypothetical Value [22]. The low risk taking when it was in gain domain, the investor tended to sell his stock soon. On the other hand, when it was in loss domain with high risk taking, the investor would tend to hold his stock longer. This was as the research result conducted by [22]; [24]; [1]. Therefore, this explanation became the reference of the research hypothesis.

H1: Participant in gain condition had lower risk taking rather than that of loss condition.

Information either positive or negative has a significant effect on the level of risk taking. The research result conducted by [11]; [12]; [10] showed that positive information influenced someone's decision to be low risk taking. On the other hand, negative information could influence someone's decision to be high risk taking. Basically, the research results conducted by [13]; [28]; [29]; [30] showed that negative or unexciting information might cause participant's behavior to have high risk taking or risk seeking. Meanwhile, the research results conducted by [28], [31], [30], [10] basically stated that positive or unexciting information affected to the low risk taking or risk averse.

H2: Participants provided with positive information would have lower risk taking rather than those of negative one.

Loss aversion of gain domain as it was shown in security price could increase significantly. This condition encouraged someone to do decision making with low risk taking [4], [24]. This might be aimed at finding a safe position by selling stock sooner to get some gain or profit. Furthermore, positive information affected to the low risk taking ([11], [12]; [10]). If that gain is supported by obtaining positive information, it will encourage to do low risk taking or getting more risk averse.

On the other hand, if loss position is due to the fall price, it may cause financial loss. If this happens, someone will tend to do high risk taking [22], [24]. The act of high risk taking is done to hold up longer security because it is expected that the price will rise again. Furthermore, negative information will affect to high risk taking ([11], [12],[10]). Then participant in loss position, he will get negative information about the movement decrease of stock price so that he will tend to take a courageous risk or risk seeking.

Based on the explanation above, the research hypothesis is as follows:

H3: The participants in gain condition and provided with positive information have lower risk taking than those in loss condition and negative information.

3. Methodology

Experiment Design

[2]This research employed experiment procedure: within subject design and matrix 2x2 factorial design. Meanwhile the independent variable was risk taking. The two factors to be manipulated to determine whether the risk taking was low or high were Loss Aversion and Information. Each factor had two levels. The two levels of loss aversion were gain and loss [4]; [23];[16]; [25]. Furthermore, information consisted of positive and negative level [1]; [9]. This research was divided into two groups, namely gain and loss.

Participant

The participants of pilot test consisted of 11 (eleven) students of S.1 (5 boys and 6 girls) majoring in financial management who had already taken some subjects like financial management and portfolio investment at University Muhammadiyah Malang. Those students were classified into two groups. Six participants belonged to gain group (consisting of 3 boys and 3 girls) and the five other belonged to loss group (consisting of 2 boys and 3 girls). Their average ages were about 21 years old.

Treatment

The research treatment employed 4 (four) combinations of treatment. The manipulation of loss aversion and level gain was situated with the price presentation of stock that was higher than that of buying and in reverse, the level loss with the price presentation of stock that was lower than that of buying [32]; [33]. Furthermore, information manipulation with positive level was situated with the movement increase of previous stock price and in reverse, the negative level with the movement decrease of previous stock price [1].

Measures

Before conducting ANOVA test, the first step of that we had to do the T-test was to find the gender difference, then we determined alpha index [34]. Alpha index was used to determine the level of risk taking from each gain and loss group. Furthermore, the positive alpha index showed in the low risk position and in reverse, the negative alpha index showed in the high risk position. Meanwhile, the formula of Alpha index used by [34] was as follows:

$$\text{Alpha Index, I} = \frac{(G.I - S.I)}{TA} \qquad (1)$$

Note:
G.I = The total number of sold stocks when gain/profit or winner
S.I = The total number of held stocks when loss or loser
TA = The total number of stocks owned by every participant

After alpha index was found the next analysis was to do variant analysis test by using ANOVA. ANOVA test was used to know whether there was a difference between the four groups of treatment from the two participant groups, gain and loss. The difference among the four groups of treatment could happen if the significance with p-value < 0.05 was the significance limit used in pilot test of this research. After ANOVA test, the next step was conducting the mean treatment by employing the descriptive statistic test. Then, we conducted hypothesis interaction test by using post hoc with Bonferroni model to determine the effect of independent variable to dependent variable.

4. Result And Discussion

T-test Based on Its Gender

T-test based on its gender was used to test the equality or to know whether there were some differences or not based on its gender among the four groups or treatment combination. Furthermore, the result of t-test could be performed on Table 1 below.

Table 1 : The t-test based on its Gender

Information	Levene's Test for Equality of Variances		T test for Equality of Means						
	F	Sig	t	df	Sig (2-tailed)	Mean Diff	Std Error Diff	95%Confidence Interval	
								Lower	Upper
RiskT-1-EqualVariance Assumed	.16	.71	1.88	4	.13	.24	.13	-.11	.58
RiskT-2Equal Variance Assumed	81	.42	-.1	4	93	-.01	.07	-.19	.18
RiskT-3-Equal Variance Assumed	17.13	.03	-.62	4	.58	-.10	0.16	-.62	.42
RiskT-4Equal Variance Assumed	.69	.47	1.34	4	.27	.75	.56	-1.03	2.52

Source : data processed

Table 1 above showed that the homogeneity by employing the Levene's test from treatment group 1, 2 and 4 excluded treatment group 3 showed its significance with p-value > 0.05 of significant limit. This in general might mean the homogeneity of participants. The t-test of treatment group 1 up to treatment group 4 showed the significant value with p-value > 0.05 of significant limit. This result showed that there was equality or no difference between boy and girl participants. The highest standard error of treatment group 4 was 55,8%. Meanwhile, the treatment group 1,2 and 3 was still below 17%. This meant that the homogeneity based on gender had already fulfilled the requirement and criteria of laboratory experiment research.

ANOVA Test

The variant analysis test of ANOVA as pilot test was conducted to determine whether there was a risk taking difference between those treatment groups or not. Furthermore, the variant test result of ANOVA could be seen in Table 2 below:

TABLE 2 : Risk Taking ANOVA Variant Analysis

Risk Taking	Sum of Squares	df	Mean Square	F	Sig
Between Group	4.934	3	1.645	14.081	.000
Within Group	2.102	18	.117		
Total	7.036	21			

Source : data processed

Table 2 above showed that the result of ANOVA with total df 21 consisted of between group with df = 3 and within group with df = 18. Based on the variant analysis of ANOVA, it could be found that F value was 14.081 with its significance of 0.000 smaller/lower than its significant limit used in pilot test, that was 0.05. This result could be concluded that there was a difference of risk taking among the four treatment groups. Therefore, this had already fulfilled some requirements required to do the following/next test.

Mean Contrast

Mean contrast was undertaken to do testing each hypothesis of the research. Mean contrast consisted of risk taking test that was based on alpha index [34] and hypothesis interaction test. This alpha index showed the level of risk taking of each participant group, that was gain and loss group.

Furthermore, this interaction test showed whether or not there was a significant effect of each hypotheses. Meanwhile, the result of mean contrast of this research was presented in Table 3 below.

Table 3 : Mean contrast Interaction of Loss Aversion, Information and Risk Taking

Mean kontrain	hypothesis	Risk Taking	Mean diff	Std Error	Sig
Gain Vs Loss	H1	.072 Vs -.586	.560	.207	.087
PositiveInf Vs negativeInf	H2	.0389 Vs -.877	1.155	.207	.000
Gain_PositiveInf Vs Loss_NegativeInf	H3	.055 Vs -1.099	1.155	.207	.000

Source : data processed

The test result of hypothesis 1 based on alpha index of gain group with gain manipulation showed a positive score, that was .0721. This score was considered to have the low risk taking. Meanwhile, the loss group with loss manipulation showed a negative score, that was -.586. This score was considered to have a high risk taking. Furthermore, the result of post hoc with Bonferroni model of hypothesis 1 showed that the loss aversion both its gain and loss domains did not have any effect on its risk taking because its significance of 0.087 > 0.05 was a significant limit of this research.

Furthermore, the test result of hypothesis alpha index 2 of gain group with positive information manipulation showed a positive score, that was .0389 and this score was classified to have a low risk taking. Meanwhile, the loss group with loss manipulation showed a negative score, that was -.586 and this score was classified to have a high risk taking. Furthermore, the result of post hoc with Bonferroni model of hypothesis 1 showed that the loss aversion both in gain and loss domain did not have any effect on risk taking because its significance of 0.087 > 0.05 was a significant limit of the research.

The test result of hypothesis alpha index 2 to gain group with positive information manipulation showed that the positive score of .0389 was classified as a low risk taking. Meanwhile, the loss group with negative information manipulation showed that the negative alpha index of -.877 was classified as a high risk taking. Furthermore, the test result of hypothesis alpha index 3 to gain group with gain manipulation and positive information showed that the positive score of .055 was classified as a low risk taking. Meanwhile, the test result of hypothesis alpha index 3 to loss group with loss manipulation and negative information showed that the negative score of -1.099 was classified as a high risk taking. The result of post hoc with Bonferroni model to hypothesis 2 and 3 both to gain group and loss one had a significant effect to the risk taking with its significance of 0.000 < 0.05 as its significant limit used in pilot test of this research.

The test result of hypothesis 1, 2 and 3 based on the result of alpha index above supported the prospect theory stated by [21] [4]. This theory stated that an investor in gain domain tended to have low risk taking but when it was in loss domain, it tended to have high risk taking.

Based on table 3 above, it could be explained that the level of risk taking from hypothesis 1 showed that when an investor was in gain domain with the manipulation of stock price which tended to increase, the risk taking would tend to be low. This low risk taking could be seen from its positive alpha index. On the other hand, when an investor was in loss domain with the manipulation of stock price which tended to decrease, the risk taking would tend to be high. This high risk taking could be seen from its negative alpha index. As it was stated by [16] that a person/someone would tend to be more sensitive to something decrease than the increase of his wealth or riches. Furthermore, this research result also supported the other researches conducted by [24] [1], [5].

Moreover, [23],[4] said that risk averse at gain domain, it would remove to be risk seeking choice. This result was appropriate with the prospect theory as it was explained in "A Hypothetical

Value stated by [4][21]. Meanwhile [24] also said that when an investor was in gain domain position, he would tend to avoid the risk. Furthermore,[1], their research result showed that when an investor was in a loss domain, he would tend to have a courage to take a risk or high risk taking. This result also supported the research result conducted by [5]. However, this research result was not supported with the hypothesis interaction test showing that all loss aversion manipulated with gain or loss domain in fact did not have significant effect in the risk taking. This showed that in decision making a participant was not only influenced by the gain or loss but also some other factors out of this condition, such as psychological aspect. Furthermore, the result of hypothesis test and interaction test of this research did not support the research result conducted by [21],[4]; [24], [1].

The level of risk taking from hypothesis 2 showed that during the treatment when it was provided with manipulation and positive information showed that investor tended to have low risk taking. Moreover, the low risk taking was shown from the positive alpha index. On the other hand, when it was manipulated with negative information, investor would tend to have high risk taking. This high risk taking could be seen from the negative alpha index. This had already been appropriate with the theory of hypothetical value stated by [22]. They said that at the gain or positive position, investor would tend to have low risk taking rather than he was provided with negative information or un delightful / unexciting information. The result of alpha index was supported with the test result of hypothetical interaction where both positive and negative information had a significant effect to the risk taking. Furthermore, [10] in his research said that negative information would influence the participant to make his decision longer. Meanwhile, the research result conducted by [10] supported the research conducted by [11] stated that the participant obtaining the information in the form of negative framing would show his analytical tendency. Therefore, he would tend to consider with more rational thought before doing something. Moreover, the research result conducted by [25] showed that negative framing tended to have risk seeking rather than positive one. These three statements showed that negative information could influence someone to keep holding his stock longer because he was afraid of getting loss and expecting to wait a positive information that would provide him some gain or profit.

The level of risk taking from hypothesis 3 showed that when the treatment was manipulated with gain domain (the stock price tended to increase and positive information), it was found that investor tended to have low risk taking. The low risk taking could be seen from its positive alpha index. On the other hand, when the treatment was manipulated with loss domain (the stock price tended to decrease and negative information), it was found that investor tended to have high risk taking. The high risk taking could be seen from its negative alpha index. This result finding was appropriate with the theory of a hypothetical value stated by [4]. This theory said that the position which tended to be positive, it would tend to have low risk taking rather than in a negative position. This alpha index was supported with the test result of hypothetical interaction because although the treatment was either in a gain condition and was provided with positive information or in a loss condition and was provided with negative information, had a significant effect to the level of risk taking. This theory in fact supported the research result conducted by [11], [12], [10].

5. Conclusion

Based on the research result, it could be concluded that in line with loss or negative information, it would have a significant effect to the risk. Based on the research result, it could be concluded that in line with the risk taking decision in investment, it could be explained in loss aversion and information. In general, Risk Taking was affected by loss aversion and information. Loss Aversion during manipulation with gain or loss did not have an effect to risk taking. However, participants in gain condition tended to have low risk taking rather than in loss condition. Both positive and negative information had an effect to the risk taking.

Participants in positive information condition tended to have lower risk taking or risk averse rather than participants being provided with negative information who had a tendency of high risk taking or risk seeking. When loss aversion manipulated with gain and information manipulated with either positive information or manipulated taking. Participants who were in gain position and positive information would tend to have low risk taking (risk averse). On the other hand, participants manipulated with loss and negative information would tend to have high risk taking (risk seeking).

Limitation And Future Research

The pilot test limitation of this research was dealing with the total number of participants. There were only 11 (eleven) students of S.1 program of management majoring in finance. This experiment was conducted in the day time (in the afternoon) so that there was some maturation effect due to the tiredness from their prior activities that had to be done in the morning.

In the future, the research on the risk taking is expected to be capable of involving some other psychological aspect especially dealing with emotion aspect as a treatment variable besides loss aversion and information. This might make us know the level of somebody's emotion that might affect the courage level of investment risk taking.

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REFERENCES

[1] M.-G. Seo, B. Goldfarb, and L. F. Barrett, 'Affect and the framing effect within individuals over time: Risk taking in a dynamic investment simulation', *Acad. Manag. J.*, vol. 53, no. 2, pp. 411–431, 2010.

[2] P. Pavabutr, 'Investor Behavior and Asset Prices', in *Sangyan Conference*, 2002.

[3] M. Mittal, 'Study of differences in behavioral biases in investment decision-making between the salaried and business class investors', *IUP J. Behav. Financ.*, vol. 7, no. 4, p. 20, 2010.

[4] D. Kahneman, 'Prospect theory: An analysis of decisions under risk', *Econometrica*, vol. 47, p. 278, 1979.

[5] D. Kahneman, J. L. Knetsch, and R. H. Thaler, 'Experimental tests of the endowment effect and the Coase theorem', *J. Polit. Econ.*, vol. 98, no. 6, pp. 1325–1348, 1990.

[6] M. S. Haigh and J. A. List, 'Do professional traders exhibit myopic loss aversion? An experimental analysis', *J. Finance*, vol. 60, no. 1, pp. 523–534, 2005.

[7] P. Mbaluka, C. Muthama, and E. Kalunda, 'Prospect Theory: Test on Framing and Loss Aversion Effects on Investors Decision-Making Process At the Nairobi Securities Exchange, Kenya', 2012.

[8] R. Schubert, M. Brown, M. Gysler, and H. W. Brachinger, 'Financial decision-making: are women really more risk-averse?', *Am. Econ. Rev.*, vol. 89, no. 2, pp. 381–385, 1999.

[9] M. Cassotti, M. Habib, N. Poirel, A. Aïte, O. Houdé, and S. Moutier, 'Positive emotional context eliminates the framing effect in decision-making.', *Emotion*, vol. 12, no. 5, p. 926, 2012.

[10] G. Huangfu and L. Zhu, 'A reexamination of the robustness of the framing effect in cognitive processing', *Soc. Behav. Personal. an Int. J.*, vol. 42, no. 1, pp. 37–43, 2014.

[11] K. J. Dunegan, 'Framing, cognitive modes, and image theory: Toward an understanding of a glass half full.', *J. Appl. Psychol.*, vol. 78, no. 3, p. 491, 1993.

[12] C. Kaufmann and M. Weber, 'Sometimes less is more–The influence of information aggregation on investment decisions', *J. Econ. Behav. Organ.*, vol. 95, pp. 20–33, 2013.

[13] V. Mittal and W. T. Ross, 'The impact of positive and negative affect and issue framing on issue interpretation and risk taking', *Organ. Behav. Hum. Decis. Process.*, vol. 76, no. 3, pp. 298–324, 1998.

[14] B. G. Malkiel and E. F. Fama, 'Efficient capital markets: A review of theory and empirical work', *J. Finance*, vol. 25, no. 2, pp. 383–417, 1970.

[15] R. J. Shiller, 'From efficient markets theory to behavioral finance', *J. Econ. Perspect.*, vol. 17, no. 1, pp. 83–104, 2003.

[16] R. H. Thaler, A. Tversky, D. Kahneman, and A. Schwartz, 'The effect of myopia and loss aversion on risk taking: An experimental test', *Q. J. Econ.*, vol. 112, no. 2, pp. 647–661, 1997.

[17] H. Shefrin, *Behavioral finance*. Edward Elgar Publishing, 2001.

[18] M. Kiyilar and O. Acar, 'Behavioural finance and the study of the irrational financial choices of credit card users', 2013.

[19] C. A. Hoffman, 'The venture capital investment process: A particular aspect of regional economic development', University of Texas at Austin, 1972.

[20] H. K. Baker and J. R. Nofsinger, *Behavioral finance: investors, corporations, and markets*, vol. 6. John Wiley & Sons, 2010.

[21] D. Kahneman and A. Tversky, 'Prospect theory: An analysis of decision under risk', in *Handbook of the fundamentals of financial decision making: Part I*, World Scientific, 2013, pp. 99–127.

[22] D. Kahneman and A. Tversky, 'An analysis of decision under risk [J]', *Econom. J. Econom. Soc.*, vol. 47, no. 2, 1979.

[23] J. S. Levy, 'An introduction to prospect theory', *Polit. Psychol.*, pp. 171–186, 1992.

[24] M. A. Neale, G. B. NORTHCRAFT, M. H. BAZERMAN, and C. Alperson, 'CHOICE SHIFT EFFECTS IN GROUP DECISIONS-A DECISION BIAS PERSPECTIVE', *Int. J. Small Gr. Res.*, vol. 2, no. 1, pp. 33–42, 1986.

[25] F. M. Vieider, 'The effect of accountability on loss aversion', *Acta Psychol. (Amst).*, vol. 132, no. 1, pp. 96–101, 2009.

[26] D. W. Johnson, 'Cooperativeness and social perspective taking.', *J. Pers. Soc. Psychol.*, vol. 31, no. 2, p. 241, 1975.

[27] D. W. Gorenflo and W. D. Crano, 'The multiple perspectives inventory: A measure of perspective-taking', *Swiss J. Psychol.*, vol. 57, no. 3, pp. 163–177, 1998.

[28] A. Kühberger, 'The influence of framing on risky decisions: A meta-analysis', *Organ. Behav. Hum. Decis. Process.*, vol. 75, no. 1, pp. 23–55, 1998.

[29] S. Mishra, M. Gregson, and M. L. Lalumiere, 'Framing effects and risk-sensitive decision making', *Br. J. Psychol.*, vol. 103, no. 1, pp. 83–97, 2012.

[30] P. Fischer, E. Jonas, D. Frey, and A. Kastenmüller, 'Selective exposure and decision framing: The impact of gain and loss framing on confirmatory information search after decisions', *J. Exp. Soc. Psychol.*, vol. 44, no. 2, pp. 312–320, 2008.

[31] C. J. Chang, S.-H. Yen, and R.-R. Duh, 'An empirical examination of competing theories to explain the framing effect in accounting-related decisions', *Behav. Res. Account.*, vol. 14, no. 1, pp. 35–64, 2002.

[32] R. Thaler, 'Toward a positive theory of consumer choice', *J. Econ. Behav. Organ.*, vol. 1, no. 1, pp. 39–60, 1980.

[33] N. Novemsky and D. Kahneman, 'The boundaries of loss aversion', *J. Mark. Res.*, vol. 42, no. 2, pp. 119–128, 2005.

[34] M. Weber and C. F. Camerer, 'The disposition effect in securities trading: An experimental analysis', *J. Econ. Behav. Organ.*, vol. 33, no. 2, pp. 167–184, 1998.

RISK TAKING INVESTMENT AS THE INTERACTION EFFECT OF LOSS AVERSION AND INFORMATION (PILOT TEST)

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