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MARKET INTEGRATION IN ASEAN: SUSTAINABLE GROWTH AND CROSS - CULTURAL ISSUES

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MARKET INTEGRATION IN ASEAN:
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FRAMING EFFECT ON INVESTOR REACTION BASED ON GENDER PERSPECTIVE: AN EXPERIMENT STUDY

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Abstract

This research investigates the framing effect on investor reaction in acquiring dividend information that is similar in content but displayed differently in bullish and bearish market condition based on gender perspective. Investor reaction is proxied by predicted stock price in future days. Theories assigned in this research are framing theory and prospect theory. Participants in this experimental study are senior students from a university in Yogyakarta. This research uses full factorial design 2 x 2 between-subject design in the form of information with positive and negative frames and bullish and bearish market condition. Test results show finding that does not support different reaction between male investor and female investor to dividend information presented in either positive or negative frame. Next, the result leads to conclusion of framing effect on male investor in both bullish and bearish market condition. On the other hand, the results of female investor test show framing effect on female investor in bullish market condition. Nonetheless, the examination results in no effect of framing on female investors in bearish market condition.

Keywords: *framing effect, prospect theory, gender perspective*

JEL Classification: G11

1. RESEARCH BACKGROUND

Framing bias is one of cognitive biases that can mean tendency of someone in responding various situations based on available choice context. This unique phenomenon is also known as framing effect (Tversky and Kahneman, 1981; Pompian, 2006). In investment context, framing constitutes different presentation ofthe same information or event or problem by one party (namely issuer) to other certainparty (namely investor). When a company presents the same information to investors, for instance the same dividend information but it is presented differently (in positive and negative frames), this will be responded differently by investors.

Interestingly, framing phenomenon shows that someone will not always make rational decisions. Some empirical researches result in findings that when most market makers

show behavioral biases in doing their trading transaction, they will tend to predict stock market price inaccurately (stock mispricing). Consequently, investors predict the stock price higher or lower compared to the real stock price, hence investors experience profit decline or even loss (Kirchler et al., 2005). The issue of this framing effect still attracts researchers' attention.

On the other hand, some empirical studies such as Lee et al. (2013) and Lei Wang (2010) identify that gender constitutes one factor influencing the formation and pattern of framing effect. Nonetheless, some studies on gender difference related to framing effect result in inconclusive finding results. Controversy of empirical finding results on investor framing phenomenon based on gender perspective becomes interesting debate material in finance literature among academics until today.

Study on behavioral finance in female and male investors' perspective attracts not only researchers in stock market in developed countries but also researches of stock market in developing countries including Indonesian stock market. Some previous empirical studies show that proportion of number of investors, both female and male, who behave in bias way, is relatively still high in Indonesian stock market (e.g. Asri, 2003; Hartono, 2005; Yusnaini, 2005; Suartana, 2006, Kufepaksi, 2007). However, empiricalevidence of investor reaction difference resulted from framing effect has not been identified by previous studies, especially framing effect on investors' reaction basedon gender perspective in Indonesian stock market setting. This motivates researcher to examine the effect of framing on investors' reaction in acquiring dividend information that is presented to investors in different framing in bullish and bearish market conditions based on gender perspective.

This research is done with the intention to examine empirically: (1) reaction difference between female and male investors in responding the same dividend information but it is presented in both positive and negative frames in bullish and bearish market conditions, (2) reaction difference among female investors in responding the same dividend information but it is presented in both positive and negative frames in bullish and bearish market conditions, and (3) reaction difference among male investors in responding the same dividend information but it is presented in both positive and negative frames in bullish and bearish market conditions. The finding of this research is expected to be able to contribute in behavioral finance theory, especially framing theory and prospect theory, and contribute in the making of appropriate strategy for financial practitioners.

2. LITERATURE REVIEW

In his article, Ritter (2003) explains that behavioral finance is based on two foundations, namely cognitive psychology and limits to arbitrage. Cognitive

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psychology pays attention to how people think while limits to arbitrage look in what environment the arbitrage power becomes ineffective. Framing emphasizes that a concept presented to an individual may cause difference. The concept of framingeffect shows how the same information that is presented differently will influence human beings in making a choice. This becomes important since the concept is againstthe concept of rational choice theory.

According to Thaler (1992) rational investors are the ones with objective attitude and consider the prevailing condition while making decision. Hence, they tend to be more careful when facing risky situation so that they tend to be risk averse. Investors tend to concern more on the loss they suffer than the profit they earn related to the information presentation, even though the amount of the money being offered for both is the same (Tversky and Kahneman, 1981). This framing phenomenon in investors shows that someone does not always make rational decisions.

Levin et al. (1998) divides three types of framing effect, namely: (1) risky-choice framing effect, (2) attribute framing effect, and (3) goal framing effect. Risky-choice framing effect happens when willingness to take risk (for example choosing a risky medical program, which is supposed to reduce cholesterol in the blood) depends on whether the positive outcomes are framed positively (related to the success level of the program) or framed negatively (related to the failure level of the program). Attribute framing effect occurs when evaluation on the object is more beneficial when the key attribute is framed positively than negatively because positive label tends to create positive associations. Goal framing effect happens when persuasive news has different attraction depending on whether the news emphasizes on positive consequence upon execution of an action to achieve specific goals or negative consequence of not doing the action.

Tversky and Kahneman (1981) start framing study, which is a research from behavioral finance theory, namely prospect theory as the frame to explain the framing phenomenon. Tversky and Kahneman study explains empirical results of their researchin relation to United States program to handle disease epidemics in Asia (life-death domain). The result of Tversky and Kahneman study shows when subjects are given the program option that is presented in positive frame, majority of the subject (72%) prefer no-risk program compared to the option of risky program. On the other hand, if the option is presented in negative frame, majority of the subjects (78%) prefer risky program with certain probability than program option that is surely risky. This is what is called framing effect namely when the same problem with different frame can result in different choices.

Nowadays, financial research on framing phenomenon related to gender difference has resulted in interest for researchers in behavioral finance area (for example: Charness

and Gneezy, 2007; Heijden et al., 2012; Lee et al., 2013). This gender difference is related to habit, value, culture and other social provisions that grow and develop in the society so that it can change at any time in accordance with time development. In this research, gender limitation leads more to role differences of female and male investors since they have different behavior and character that is expected to bring performance difference when they do activities in the field of investment.

Canary and Sommers (1977) (quoted in Kufepaksi, 2010) explains behavior differences between men and women resulted from their natural characters or character differences of the two. Female behavior tends to be connected with mildness,and hospitality; while male behavior tends to be related with violence and aggressiveness. These different gender roles can be explained by social role theory (Kufepaksi, 2010). That theory predicts that women and men will show their stereotype gender specifically when they are doing their daily activities bringing the implication that they adapt their behavior based on their social roles. When their socialrole in their community increases, the difference between both stereotype genders will become wider (Lei Wang, 2010).

Researches on gender role show that people tend to find agreement between their gender roles and the environment, while disagreement will influence them to give bad evaluation about their roles (Eagly and Karau, 2002; quoted in Lei Wang, 2010). For example, when women are facing situations that describe negative frame in life-death domain, they will feel that the situation is not appropriate with their role as women who emphasize their sympathy and morality. Besides, when there are bigger differences between positive frame and negative frame women will show stronger framing effect than men will do. However, when men are facing situation describing negative frame of monetary domain they will show stronger framing effect than women will do.

As quoted by Lei Wang (2010), Fagley and Miller (1997) it shows that women tend to be more susceptible to framing effect than men, but Cullis et al. (2006) claims the other way around, that men are more susceptible to framing effect. Jianakoplos and Bernasek (1998) find out that women tend to be risk averter (more conservative) and they are less confident than men when they make a decision in monetary area. Women tend to invest in fixed income financial asset than men will do (Pompian and Longo, 2004). This finding confirms the research done by Felton et al. (2003) showing that men have higher courage to take investment risk compared to women because men aremore optimistic to face the future events.

According to Kahneman and Tversky (1979) and Tversky and Kahneman (1981), if investors acquire company specific information that is presented in positive frame, they will perceive the information as good information. This will result in investor

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positive reaction. On the other hand, investors will perceive information in negative frame as bad information so that this will create investor negative reaction. This is assumed to be resulted from the framing effect of the information.

Study finding by Eagly and Karau (2002) (quoted in Lei Wang, 2010) indicates that when women are given information with negative frame in life-death domain, they will react negatively because it is not in line with their gender role. If this is related to monetary domain (in investment context) female investors will react negatively as well to the information in negative frame compared to positive frame. This negative reaction of female investors is resulted from their interpretation about information in negative frame as bad news. That will create perception of female investors that return on their investment in the company is decreasing so that it tends to influence investors to make prediction of their stock price in the future is lower than the stock market price at this moment.

In contrast, however, if men are facing negative frame situation in monetary domain they will show stronger framing effect than women (Eagly and Karau, 2002; quoted in Lei Wang, 2010). If this is related to investment context then male investors will react positively and strongly to information that is presented in negative frame. This bigger positive reaction is resulted from the information that challenge men who have brave character to take investment risk compared to women because men are more optimistic upon loss condition compared to positive frame. That will create male investors' perception that return on their investment in the company experiences temporarydecline so that it tends to influence male investors to make prediction of the price of their stock in the future to be higher than the price of current stock market. This supports framing theory that reaction of both male and female investors (proxied by prediction of the stock price) depends on framed information they acquire and their gender role. In other words, reaction of both female and male investors will be different in responding the same information due to framing effect and gender characteristic. Based on this elaboration, we propose the following hypothesis.

H_{1a}: There is different reaction between male and female investors to dividend information that is presented in positive frame in the bullish and bearish market condition.

H_{1b}: There is different reaction between male and female investors to dividend information that is presented in negative frame in the bullish and bearish market condition.

Study of Eagly and Karau (2002) (quoted in Lei Wang, 2010) results in finding that when men are facing a situation describing negative frame in monetary domain they will show stronger framing effect than women, which is shown by bigger positive reaction. This male investors' reaction is resulted from their interpretation of thenegative frame as temporary loss condition so that it tends to influence investors to

make prediction of their stock price in the future to be higher than the price of current stock market. Felton et al. (2003) also shows his finding that men have higher bravery to take investment risk than women because men are more optimistic when they are facing events that will happen in the future.

However, study finding of Eagly and Karau (2002) (quoted in Lei Wang, 2010) shows that women will feel that situation describing negative frame in life-death domain is not appropriate with their gender role. This will create negative reaction to women. If this is connected with monetary domain (investment context), female investors will react negatively to specific company information with negative frame compared to positive frame. This female investors' negative reaction is resulted from their interpretation of information in negative frame as bad news. In contrast, when women are facing information presented in positive frame, women will choose free-risk decision compared to men (Braun, Gaeth and Levin, 1996; quoted in Lei Wang, 2010).That is in accordance with female characteristic that women tend to involve more emotional aspect when they are facing any situation, which is in line with her expectation or not, moreover in investment context, women are more careful in making a decision compared to men. In addition, Jianakoplos and Bernasek (1998) show their finding that women tend to be risk averter (more conservative) and less confident when they make decision in financial affairs compared to men. Women tend to do investment in fixed income monetary assets compared to men (Pompian and Longo, 2004). This is in line with prospect theory that investor reaction (proxied with investor prediction of stock price) depends on the frame they enjoy, either negative frame or positive frame, and investors characteristic. In other words, each investor both female and male will see loss and profit in different perspective, as it is described in value function, in the form of bigger loss than profit even though in the same nominal amount. Based on this elaboration we propose the following hypothesis.

H_2: There is different reaction between male investors, when they acquire dividend information that is presented in positive frame compared to negative frame in bullish and bearish market condition.

H_2 hypothesis focuses on reaction that happens in male investors. This is differentiated from the following H_3 hypothesis that focuses on female investors.

H_3: There is different reaction between female investors, when they acquire dividend information that is presented in negative frame compared to positive frame in bullish and bearish market condition.

3. RESEARCH METHODS

This research makes use of experimental method by using between-subject design. In particular, between-subject design in this research is done by comparing investor

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reaction (proxied by estimation of stock price) between two different investor groups after getting the same treatment. Subject and treatment used in this research is done randomly. Factorial design used in this experimental research is full factorial design.

Participants involved in this research are under graduate students of a university in Yogyakarta of Management and Accounting study program who are taking or have been taking subjects of Advanced Finance Management, Portfolio Theory and Investment Analysis, and Finance Management Seminar. The rationale of choosing thestudents as participants is at least they are considered capable of responding manipulation and experimental tasks assigned. This presumes that the students have had enough academic provision in following the issue and context of this research.

Stock sample used in this research is one kind of company stock that has been go public that belongs to a pharmacy company with years of good reputation. Design of this experiment consists of four treatment combinations. The four treatment is combination of factor (1) namely dividend information, and factor (2) namely market condition, of which factor has two levels namely positive frame and negative frame (factor 1) and bullish market and bearish market (factor 2). In accordance with the available four treatment combination there are four scenarios used to support this experimental design, namely scenario A, B, C, and D.

Reaction of both female and male investors (both positive and negative reactions) constitutes dependent variables used in this research. Reaction of each participant will be reflected from estimated stock price (t +1). This research is aimed at knowing whether framing affects the differences of investor reactions to dividend information that is presented in different frames in bullish and bearish market condition based on gender perspective. Magnitude of estimated stock price for each reaction can be different depending on investor perception on investment risk that is reflected from dividend information in specific frame in bullish and bearish market condition based on gender perspective. Investor reaction magnitude is measured in absolute value.

There are two independent variables in this research namely (1) dividend information that is presented in different frames, positive frame and negative frame, and (2)different market condition, bullish and bearish. Framing effect usually happens to investors that are given the same information but wrapped in different ways that willbe responded by investors in different ways as well. In this sense, company presentsthe same dividend information, which is presented in positive or negative frame.Positive frame is a way of presenting dividend information by using composition of positive words, while negative frame emphasizes on composition of negative words. Inthis case, when investors acquire dividend information in negative frame, investorswill tend to interpret the information as bad news. In contrast, good news is resulted from investors' interpretation on dividend information in positive frame. That will create different perception on risk and return of their investment in the company.

Empirical model used in this research is Two-way Anova and Independent sample t-test. Two-way Anova is used to examine model that is used in this research. Independent sample t-test is done to test the hypothesis in this research. Test ofhypothesis 1 is done to prove whether there is difference of reaction magnitude between female and male investors in responding dividend information in positive and negative frames in bullish and bearish market condition. Hypothesis 2 is done to test whether there is difference of reaction magnitude between female investors in responding dividend information in positive frame compared to negative frame in bullish and bearish market condition. Examination of hypothesis 3 is done to prove whether there is difference of reaction magnitude between male investors in responding dividend information in positive frame compared to negative frame in bullish and bearish market condition.

4. RESULTS AND DISCUSSION

Hypothesis 1a states that there is reaction difference between male investors and female investors to dividend information that is presented in positive frame in bullish and bearish market condition. Meanwhile, hypothesis 1b states there is reaction difference between female investors and male investors to dividend information that is presented in negative frame in the bullish and bearish market condition. Experiment is done to participants by dividing into 4 scenarios, namely: scenario A (positive frame in bullish market condition), scenario B (positive frame in bearish market condition), scenario C (negative frame in bullish market condition), and scenario D (negative frame in bearish market condition). Test results of hypothesis 1a and 1b are presented in Table 1.

Table 1. *The Result of Independent Sample t-test Testing Mean of Stock Price Prediction Magnitude of Male and Female in the Scenario A, B, C, and D*

Scenario	Gender	N	Mean	Standard Deviation	p-value
A	Male	11	318.18	204.050	0.748
	Female	12	341.67	137.895	
B	Male	11	163.64	80.904	0.284
	Female	11	227.27	173.729	
C	Male	10	190.00	99.443	0.852
	Female	11	181.82	98.165	
D	Male	10	230.00	67.495	0.280
	Female	9	177.78	130.171	

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Table 1 shows when investors acquire dividend information in positive or negative frame, mean of predicted stock price magnitude of male and female investors in each scenario is as follows.

a. Scenario A

The mean of predicted stock price magnitude of male investors is 318.18 while mean of predicted stock price magnitude of female investors is 341.67. Based on the result of t-test for equality of means we can see that the value of t calculation is -0.326 with p-value of 0.748 bigger than α = 10%. This result shows that mean of predicted stock price magnitude by male investors and female investors in scenario A are not different.

b. Scenario B

The mean of predicted stock price magnitude of male investors is 163.64 and mean of predicted stock price magnitude of female investors is 227.27. Based on the result of t-test for equality of means we can see that the value of t calculation is -1.101 with p-value of 0.284 bigger than α = 10%. This can mean that there is no difference of mean of predicted stock price magnitude between male and female investors in scenario B.

c. Scenario C

The mean of predicted stock price magnitude of male investors is 190.00 while mean of predicted stock price magnitude of female investors is 181.82. Based on the result of t-test for equality of means we can see that the value of t calculation is 0.190 with p-value of 0.852 bigger than α = 10%. This finding shows that mean of predicted stock price magnitude by male investors and female investors in scenario C are not different.

d. Scenario D

The mean of predicted stock price magnitude of male investors is 230.00 and mean of predicted stock price magnitude of female investors is 177.78. Based on the result of t-test for equality of means we can see that the value of t calculation is 1.115 with p- value of 0.280 bigger than α = 10%. This result can mean that there is no difference of mean of predicted stock price magnitude between male and female investors in scenario D.

Table 1 shows that the mean of stock price magnitude predicted by female investors is bigger than male investors, in both scenario A and B. This can mean that women tend to be risk averter in doing investment activity. In other words, women have thecharacter of preferring small risk investment. By contrast, scenarios C and D show the mean of stock price magnitude predicted by male investors is bigger than female investors. This can mean that men tend to be risk seeker in investment. In other words,

men have the character of choosing risky investment when facing less profitable situation (representation of scenarios C and D).

Nevertheless the test result of hypotheses 1a and 1b in Table 1 is not supported by the result of its statistic test so that the conclusion of this test result is that the difference of reactions between male and female investors in scenarios A, B, C, and D is not significant. Thus, hypothesis H_{1a}, that there is difference of reaction between male investors and female investors to dividend information that is presented in positive frame in bullish and bearish market condition is not supported. In this way, hypothesis H_{1b}, that there is difference of reaction between female investors and male investors to dividend information that is presented in negative frame in bullish and bearish market condition, is not supported. Thus, the framing effect in bullish and bearish market condition may happen in both male and female investors in the same way.

Test of hypothesis H_2 is done to prove whether there is difference of reaction among male investors to dividend information that is presented in different frames, in bullish and bearish market condition. Test is focused on comparison of prediction result between one scenarion and other scenarios, namely comparison between scenario A (positive frame in bullish market condition) and scenario C (negative frame in bulish market condition), and between scenario B (positive frame in bearish market condition) and scenario D (negative frame in bearish market condition). Test result of hypothesis H3 is presented in Table 2.

Table 2. *The Result of Independent Sample t-test Testing Mean of Stock Price Prediction Magnitude of Male in the Scenario A, B, C and D*

Description	Scenario	N	Mean	Standard Deviation	p-value
Stock price prediction_A_C	A	11	318.18	204.050	0.084**
	C	10	190.00	99.443	
Stock price prediction_B_D	B	11	163.64	80.904	0.057**
	D	10	230.00	67.495	

Notes: * = significant at α = 5%

** = significant at α = 10%

Statistic description in the above Tabel 2 shows that the mean of stock price magnitude predicted by male investors inter different scenarios is as follows.

a. Comparison between scenario A and scenario C (in bullish condition, information with positive frame compared to information with negative frame)

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Mean of stock price magnitude predicted by male investors in scenario A is 318.18 while in scenario C is 190. Based on result of t-test for equality of means it can be seenthat the value of t calculated = 1.855 with p-value of 0.084 (smaller than α = 10%). This result shows that mean of stock price magnitude predicted by male investors in scenario A is significantly different from the mean of stock price magnitude predicted by male investors in scenario C. In other words, there is difference of stock price prediction among male investors in scenario A and scenario C. Thus, there framing effect in male investors in bull market condition.

b. Comparison between scenario B and scenario D (in bearish condition, information with positive frame compared to information with negative frame)

The mean of stock price magnitude predicted by male investors in scenario B is 163.64 while in scenario D is 230.00. Based on the test result of t-test for equality of means it can be seen that the value of t calculated is -2.029 with p-value of 0.057 that is smaller than α = 10%. This result shows that the mean of stock price magnitude predicted by male investors in scenario B is significantly different from the mean of stock price magnitude predicted by male investors in scenario D. In other words, there is difference of stock price prediction between male investors in two scenarios, B and D. Thus, there is framing effect in male investors in bear market condition.

Hence, the test result leads to difference of stock price prediction by male investors in scenario A and scenario C (positive frame vs negative frame in bull market condition). This result shows the framing effect on male investors in bull market condition.Besides, test result also leads to the difference of stock price prediction by male investors in scenario B and scenario D (positive frame vs negative frame in bearmarket condition). This result shows framing effect on male investors in bear market condition. For the reason, this research result implies that men experience framing effect in making his investment decision.

Test of hypothesis H_3 is then done to prove whether there is difference of reaction among female investors to dividend information that is presented with different frame in bullish and bearish market condition. This test is focused on the result comparison of stock price prediction between one scenario and other scenario, namely comparison between scenario A (positive frame in bullish market condition) and scenario C (negative frame in bullish market condition), and between scenario B (positive frame in bearish market condition) and scenario D (negative frame in bearish market condition). Test result of hypothesis H_3 is presented in Table 3.

Table 3. *The Result of Independent Sample t-test Testing Mean of Stock Price Prediction Magnitude of Female in the Scenario A, B, C and D*

Description	Scenario	N	Mean	Standard	p-value

				Deviation	
Stock price Prediction_A_C	A	12	341.67	137.895	0.005*
	C	11	181.82	98.165	
Stock price Prediction_B_D	B	11	227.27	173.729	0.489
	D	9	177.78	130.171	

Notes : * = significant at α = 5%

** = significant at α = 10%

Statistic description in Table 3 shows that mean of comparison of stock price magnitude predicted by female investors between different scenarios is as follows.

a. Comparsion between scenario A and scenario C (in bullish condition, information with positive frame compared to information with negative frame)

Mean of stock price magnitude predicted by female investors in scenario A is 341.67 while in scenario C is 181.82. Based on test result of t-test for equality of means we can see that the value of t calculated is 3.175 with p-value of 0.005 that is smaller than α = 10%. This result shows that the mean of stock price magnitude predicted by female investors in scenario A is significantly different from the mean of stock price magnitude predicted by female investors in scenario C. In other words, there is difference of stock price predicted by female investors in scenario A and scenario C. Thus, there is framing effect on female investors in bullish condition.

b. Comparison between scenario B and scenario D (in bearish condition, information with positive frame compared to information with negative frame)

The mean of stock price magnitude predicted by female investors in scenario B is 227.27 while in scenario D is 177.78. Test result of t-test for equality of means shows that the value of t calculated = 0.706 with p-value of 0.489 (smaller than α = 10%). This result shows that there is difference of stock price predicted by female investors in scenario B and scenario D. So, there is no framing effect on female investors in bear market condition.

Thus, test result shows difference of stock price prediction among female investors in two scenarios, A and C. This result can mean that there is framing effect on female investors in bullish condition. However, the next test result leads to no difference of stock price prediction between female investors in two scenarios, B and D. This result shows no framing effect on female investors in bearish condition. For the reason, this test result implies that women also experience framing bias in making their investment decision but its effect is less strong compared to male investors.

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The results are consistent that women appear to be more financially risk averse than men (Charness and Gneezy, 2007). Lee et al. (2013) adds finding that men and womenexhibit different behavioral biases and these behavioral biases can affect investment performance. They support previous research showing that men are more risk tolerant than women. Besides, Ritter states that men tend to be more over confident than women. As Barber and Odean (2001) find out, the higher frequency of trading in male portfolios could be attributed to overconfidence bias, which is predominant in men. Thus, some characteristics of women that are more risk-averter and less over confidentcompared to men may explain the difference of this research result.

CONCLUSION

This research examines framing effect on investor reaction in getting dividend information in bullish and bearish market condition. This research also takes gender perspective between male investors and female investors in its interaction with framing effect in making investment decision. The assigned study design is experiment. Hypothesis test is done by manipulating several different market conditionin between-subject experimental design.

The test shows results that do not support difference of reaction between male investors and female investors to dividend information that presented with both positive and negative frames in bullish and bearish condition. In this case, both male and female investors experience framing effect in not different way. The next testresult leads to conclusion the presence of framing effect on male investors in both bull and bear market condition. This implies that men experience framing effect in making his investment decision. On the other hand, in the female investors test, the result also shows the framing effect on female investors in bull market condition. However, the test leads to no framing effect on female investors in bear market condition. Thus, women also experience framing bias in making her investment decision but not as strong influence compared to male investors. Various female characters that are more risk-averter and less over confident may explain this difference.

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