The Influence of Information Framing towards Investors Reaction in Bullish and Bearish Market Condition: an Experiment

Caecilia Wahyu Estining Rahayu ✉

Faculty of Economics, Sanata Dharma University, Yogyakarta, Indonesia

Abstract

This research aims to test the reaction of the investors when the investors receive a dividend information presented with positive or negative frames at the same market conditions, either bullish or bearish market conditions. In addition, it also test the reactions of investors when they are in the bullish or bearish market conditions, the investors receive a dividend information with the same frame, both positive and negative frames. The investors reaction is indicated by the magnitude of the stock price prediction on the next day with absolute value. Experimental method is used to test the hypotheses in this research by using independent sample t-test. The results showed that there is an information framing effect to the investors when receiving the information with a positive frame in the bullish market conditions and gain domain effects occur to the investors in the bullish market conditions when the investors receive the information with a positive frame. These results are expected to provide a new insight on the different reactions of investors when receiving the same information.

Pengaruh Pembingkaian Informasi terhadap Reaksi Investor pada Kondisi Pasar Bullish dan Bearish: Sebuah Eksperimen

Abstrak

Penelitian ini bertujuan untuk menguji reaksi investor ketika investor diberi informasi dividen dengan bingkai positif atau negatif pada kondisi pasar yang sama, baik pada saat kondisi pasar bullish (menguat) maupun bearish (melemah). Penelitian ini juga menguji reaksi investor ketika investor diberi informasi dividen dengan bingkai yang sama, baik bingkai positif maupun negatif pada saat kondisi pasar bullish atau bearish. Reaksi investor ditunjukkan oleh besaran prediksi harga saham pada hari berikutnya dengan nilai absolut. Metode eksperimen yang digunakan untuk menguji hipotesis dalam penelitian ini adalah independent sample t-test. Hasil penelitian menunjukkan bahwa ada bias pembingkaian informasi pada investor ketika investor diberi informasi dividen dengan bingkai positif pada saat kondisi pasar bullish dan bias gain domain terjadi ketika investor diberi informasi dengan bingkai positif pada kondisi pasar bullish . Hasil penelitian ini diharapkan mampu memberikan pemahaman baru terhadap perbedaan reaksi para investor ketika menerima informasi yang sama.

JEL Classification: C11, C12, C14

✉Correspondence Address
Jalan Affandi Tromol Pos 29, Yogyakarta
E-mail: caecilia50@gmail.com

INTRODUCTION

Framing effects is a phenomenon that describes the presentation of the same information in different formats can affect individual's decision (Tversky & Kahneman, 1981; Plous, 1993; Pompian, 2006; Panasiak & Terry, 2013; Stark et al., 2016; Baker et al., 2017). Framing is one form of bounded rationality in which a person reacts to a choice in a different way (Park, 2017). In the context of investment management, framing is a different way of presenting the same information about company-specific information by corporate issuers, which results in the different perception of the investors and lead to different investors reaction.

Various researches about the market reaction (investors) to the company-specific information up to now suggest inconsistent results. Findings showed that there was a difference in the market reaction; either in developed and developing capital markets (Otchere & Chan, 2003; Kadiyala & Rau, 2004; Docking & Koch, 2005; Bagella et al., 2007; Kaniel et al., 2008; Sharma et al., 2008). There are allegations that the difference of the market reaction is not due to the economic aspects, but to some psychological aspects, such as overreaction/ underreaction, overconfidence, loss aversion and framing bias (Tuyon et al., 2016).

The difference in the reaction of investors to the company specific information is also caused by the condition of the capital markets (bearish and bullish market) as well as market volatility. This research aimed to examine the effect of information framing, particularly dividend information, to the reaction of investors in the bullish and bearish market condition. Dividend information is one of the information that is used by all market participants to determine the expectations of the company's stock price. Positive frame is a way of delivering the same dividend information to investors but with an emphasis on positive words, while negative frame emphasizes on negative words. Bullish and bearish market condition are themarket conditions that occur when the dividend information

was given to the investors, which is indicated by the IHSG movement for about 9 days and is used as a proxy of the gain domain and loss domain.

Other empirical studies related to investors' reactions in capital markets have been undertaken by a number of parties such as those relating to political situation (Ardiansari & Saputra, 2015), company earnings announcements (Angelovska, 2017); implementation of corporate governance mechanisms (Bhutta & Shah, 2017); corporate crisis information (Yang et al., 2017); and the prospect of mandatory audit firm rotation (Reid & Carcello, 2016).

This research uses the theory of behavioral finance, in particular the framing theory (Kahneman & Tversky, 1979; Tversky & Kahneman, 1981; Bazerman,1984) and prospect theory (Tversky & Kahneman, 1981), to explain the effect of information framing to the investors reaction in bullish and bearish market condition. The above research issue becomes an interesting subject to conduct a research on.

The researcher believes that the research on the influence of information framing to the investors reaction in the bullish and bearish market conditions has never been tested in the Indonesian capital market using laboratory experiments method. In addition, empirical evidence about the effects of information framing tothe options of the investors decision is assumed to be the cause of differences in the reaction of investors, is still limited. The reaction of investors in this research is shown by the magnitude of the stock price prediction on the next day with absolute value.

Framing effect is one of the cognitive biases that can affect the investors in terms of their behavior and in making investment decisions so that it creates anomalies in the capital market (Pompian, 2006; Li & Ling, 2015). This framing effect usually happens to the investors who were given the same information but packaged in different ways so that the information will be responded differently by the investors. Differences in the information framing will form different investor perceptions of the return on their investment in the company. Various studies that

have been conducted on the information framing and options for a person's decisions give different results (Diamond & Lerch, 1992; Kuhberger, 1995; Gudono & Hartadi, 1998; Fox & Dayan, 2004; Yudianti & Lo, 2005; Suartana, 2005; Kirchler et al., 2005; Glaser et al., 2007; Pradiptyo et al., 2010; Putri, 2012).

Tversky and Kahneman (1981) uses prospect theory to explain the phenomenon of this information framing. Prospect theory declares that when a person perceives himself to be in the gain domain, then that person will tend to make risk-free decisions (risk averter). On the other hand, when a person perceives himself in the loss domain, then that person will tend to make risky decisions (risk seeker). This suggests that a person's perception of his condition at that time depends on the information frame that he receives.

Some researchers claim that investors need to consider the condition of the capital markets in making investment decisions because capital market conditions affect the relationship between risk and rate of return (Shih, 1992; Tandelilin, 2001). Market conditions can be a signal to the investors to inform when they should hold, buy, or sell their stocks so that they could get return on their investment optimally with a certain risk (Krishnan & Booker, 2002). The capital market conditions when the information is delivered to the investors may affectthe magnitude of investors reaction (Veronesi, 1999; Conrad et al., 2002; Liu, 2003; Docking & Koch, 2005; Boyd et al., 2005).

If the investors are given the same information with the same frame, then their reaction will be the same, unless the capital markets are in different conditions, bullish or bearish, when the information is received. Investors perceive bullish market condition as favorable conditions (gain domain), whereas bearish market condition is perceived as adverse conditions (loss domain).

Hypothesis Development

Bullish or bearish market condition when the information is delivered to the investors is able to make investors reaction different. The positive reaction of investors will arise when the investors receive the information in the bullish market and vice versa; investors will react negatively when the investors receive the information in the bearish market (Veronesi, 1999; Liu, 2003; Hazemira, 2010).

Positive or negative reaction of the investors will be greater or smaller depending on the market conditions at that time. The positive reaction of the investors will be greater than the negative reaction of investors if the market is in bullish condition. Information with a positive frame in a bullish market condition will form the perception of investors that the return on the investment in the company has increased so that investors tend to make risk-free decisions, as indicated by the predicted higher stock price on the next day compared to the real stock price today.

Conversely, the negative reaction of investors will be greater than the positive reaction of investors in the bearish market condition. Information with a negative frame in the bearish market condition is perceived by investors that the return on investment in the company has decreased so that investors tend to make risky decisions, which is characterized by predicted lower stock price on the next day compared to the real stock price today. The first two hypotheses proposed in this research are as follows.

H1a: When the market is in bullish condition, there will be greater investors reaction if dividend information is given a positive frame compared to the reaction of investors if the dividend information is given a negative frame.

H1b: When the market is in bearish condition, there will be greater investors reaction if dividend information is given a negative frame compared to the reaction of investors if the dividend information is given a positive frame.

In prospect theory Kahneman and Tversky (1979), Tversky and Kahneman (1981), it is stated that when the investors are informed

about bullish market condition, they will perceive themselves to be in the gain domain so that the investors will tend to make risk-free decisions. Meanwhile, investors will perceive themselves in the loss domain when the investors receive information about bearish market conditions so that investors will tend to make risky decisions..

The decisions are indicated by the stock price prediction which is higher than the real stock price today. Similarly, when the dividend information is given a negative frame, the negative reaction of investors will be greater when perceiving themselves in the loss domain compared to the negative reaction of the investors when they perceive themselves in the gain domain.

That greater negative reaction is due to their perception that the loss domain along with the dividend information in negative frames could reduce the wealth on their stocks so that investors tend to make risky decisions. This decision is marked by the prediction of the stock price which is lower than the real stock price today. The second two hypotheses proposed in this research are as follows.

H2a: When the dividend information is given a positive frame, the investors reaction is greater in a bullish market condition compared to the reaction of the investors in a bearish market condition.

H2b: When the dividend information is given a negative frame, the investors reaction is greater in a bearish market condition compared to the reaction of the investors in a bullish market condition.

METHOD

This experimental research used a between subject design. The implementation of this experiment used a full factorial design 2 x 2 (dividend information with positive frame and negative frame; information of bullish and bearish market conditions). Implemented design is shown in Table 1.

The independent variables in this research are dividend information and market conditions information, meanwhile, the dependent variable is investors reaction. Manipulation towards independent variables is two kinds of information that is illustrated in the form of story case, especially in investment context. The main information is dividend information presented in positive frame and negative frame. The support information is information of capital market condition that proxied by JSX Composite and showed in the form of graphics. Table 1 presents four cells that showed four groups of subjects, each gets a combination of different manipulation.

Participants in this research were the undergraduate students of the Faculty of Economics (FE) in some universities in Special Region of Yogyakarta (DIY), who are randomly selected with reference to certain criteria. First, participants were the students of the Faculty of Economics, Management and or Accounting Department. Second, the students have passed the Advanced Financial Management course and have passed or are taking courses in Portfolio Theory and Investment Analysis. The total number of participants involved is 85 students. These 85 students were spread across four groups of manipulation subjects with relatively the same composition for each group.

The instrument used in this research was on-line questionnaire. This experiment was conducted in a computer laboratory, where the researcher's computer was used as the server,

Table 1. Full Factorial Designs

Frame	Capital market condition	
	Bullish	**Bearish**
Positive	Bigger positive reaction (cell 1)	Smaller positive reaction (cell 2)
Negative	Smaller negative reaction (cell 3)	Bigger negative reaction (cell 4)

while the participant's computer can only be operated after the computer is connected to the server.

In order to improve the internal validity, the design of this experimental instrument has undergone a process of improvement and refinement before the actual experiment was carried out. First, there is input from a focus group discussion (representativeness of students from three universities in DIY), to improve the overall design of the instrument through the interview. Second, comments and suggestions from several brokers in DIY area to develop this experimental design. Third, some opinions and judgments of academicians regarding the form of manipulation, language framing narration and format of the presentation of information in experimental scenarios

RESULT AND DISCUSSION

The pilot research was conducted on 149 students from five universities in DIY. The purpose of the pilot research was to test the design of the research in order to know the instructions that were unclear, incomplete information and the timing which was not optimal yet in the implementation of the experiment in order to rectify the shortcomings of this experiment scenario. Based on the manipulation test, those 149 data were declared qualified to pass the manipulation test. Furthermore, those data were tested using the Kolmogorov-Smirnov test and

the results showed that only 91 out of 149 data were normally distributed. After that, these 91 data were tested by using two-way Anova and the results indicate that this model was suitable to test the frame effect, the market and both interaction on the investors reaction. After improving the research instrument and research model was declared fit, then the researcher could perform the real experiment.

This research involved 85 participants who were the students of the Faculty of Economics studying in three universities in DIY. The participants consisted of 33 students of the Faculty of Economics in USD (38.82%), 20 students of the Faculty of Economics in UKDW (23.53%) and 32 students of the Faculty of Economics in UII (37.65%). A total of 85 participants in this experiment have taken a course on Advanced Financial Management (the minimum prerequisite course) and most of them have taken courses on Portfolio Theory and Investment Analysis. The total number of the participants were 42 male participants (49.41%) and 43 female participants (50.59%). Their average age was 20.6 years, the youngest being 19 and the oldest, 24 years. of the 85 participants, there were 8 people (9.41%) who had attended a prior experiment conducted by other researcher and 6 people (7.06%) who had ever experienced real stock trading transactions on the stock exchange.

This research design should be tested before it is used to test the hypotheses of this rese-

Table 2. The Result of Two-Way Anova Testing Dependent Variable: Stock Price Prediction

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	310,806.217[a]	3	103,602.072	6.022	0.001	0.182
Intercept	4,443,542.778	1	4,443,542.778	258.303	0.000	0.761
Frame	96,209.358	1	96,209.358	5.593	0.020	0.065
Market	70,431.114	1	70,431.114	4.094	0.046	0.048
Market*Frame	126,222.710	1	126,222.710	7.337	0.008	0.083
Error	1,393,429.077	81	17,202.828			
Total	6,270,000.000	85				
Corrected Total	1,704,235.294	84				

arch. Testing on the design of this research was done using two-way Anova. The results of the two-way Anova testing are presented in Table 2.

Table 2 shows that the empirical model as a whole has shown that the research design to examine the role of the frame, the market and interaction between both of them on the stock price prediction was proved to be fit (F = 6.022; p-value = 0.001).

Hypothesis 1a stated that the investors reaction is greater if dividend information is given a positive frame compared to the reaction of investors if the dividend information is given a negative frame in bullish market condition. The results of Hypothesis 1a testing are presented in Table 3.

Table 3 shows that when the investors received dividend information with a positive frame in a bullish market condition (scenario A), the mean of stock price prediction magnitude for investors was Rp330.43. The predictions were significantly higher (t = 3.526; p-value = 0.001) compared to the mean of stock price prediction magnitude in a bullish market con-

ditions with negative frame (scenario C) which was Rp185.71. It can be concluded that the statistical test results supported Hypothesis 1a.

Hypothesis 1b stated that the investors reaction is greater if the dividend information is given a negative frame compared to the reaction of investors if the dividend information is given a positive frame in a bearish market condition. Table 4 below presents the results of the testing of Hypothesis 1b.

Table 4 shows that the mean of predicted stock price magnitude of investors was Rp205.26 when the investors receive dividend information with a negative frame in a bearish market condition (scenario D). The prediction is higher than the mean of stock price prediction magnitude in the bearish market condition with a positive frame (scenario B), which was Rp195.45. However, those differences were not statistically significant (t = 0.257; p-value = 0.799). It can be concluded that the test results do not support Hypothesis 1b.

Hypothesis 2a states that the investors reaction is greater in a bullish market conditi-

Table 3. The Result of Independent Sample t-test Testing Mean of Stock Price Prediction Magnitude in Scenario a and Scenario C

Description		N	Mean	Standard Deviation	t
Stock price Prediction_A_C	A	23	330.43	169.048	3.526***
	C	21	185.71	96.362	

Table 4. The Result of Independent Sample t-test Testing Mean of Stock Price Prediction Magnitude in Scenario D and Scenario B

Description	Scenario	N	Mean	Standard Deviation	t
Stock price Prediction_D_B	D	19	205.26	102.598	0.257
	B	22	195.45	136.198	

Table 5. The Result of Independent Sample t-test Testing Mean of Stock Price Prediction Magnitude in Scenario a and Scenario B

Description	Scenario	N	Mean	Standard Deviation	t
Stock price Prediction_A_B	A	23	330.43	166.812	3.061***
	B	22	195.45	136.198	

Table 6. The Result of Independent sample t-test Testing Mean of Stock Price Prediction Magnitude in Scenario D and Scenario C

Description	Scenario	N	Mean	Standard Deviation	t
Stock price Prediction_D_C	D	19	205.26	102.598	0.621
	C	21	185.71	96.362	

on if compared to the reaction of investors in a bearish market condition when investors were given the dividend information with a positive frame. Hypothesis 2a testing results are presented in Table 5.

Table 5 shows that when investors receive dividend information with a positive frame (scenario A) in the bullish market condition, the mean of stock price prediction magnitude by the investors is Rp330.43. The predictions were significantly higher (t = 3.061; p-value = 0.005) compared to the mean of stock price prediction magnitude when in a bearish market condition with a positive frame (scenario B) which was Rp195.45. It can be concluded that the results support Hypothesis 2a.

Hypothesis 2b stated that the investors reaction is greater in the bearish market condition compared to the reaction of investors in a bullish market condition when investors are given dividend information in a negative frame. Table 6 below presents the results of Hypothesis testing 2b.

Table 6 shows that when in the bearish market condition investors receive dividend information with a negative frame (scenario D), the mean of stock price prediction magnitude by the investor was Rp205.26. That prediction is higher than the mean of stock price prediction magnitude by the investor in a bullish market condition with negative frame (scenario C) which was Rp185.71. However, those differences were not statistically significant (t = 0.621; p-value = 0.538). It can be concluded that the test results do not support Hypothesis 2b.

CONCLUSION AND RECOMMENDATION

The first finding proves that the reaction of the participants in this research is greater

if they are given a positive frame compared to the participant's reaction if they are given a negative frame during bullish market condition. This suggests that there are reaction differences between participants due to the frame differences and this is in accordance with the framing theory. The second finding indicates that the participant's reaction is greater in the bullish market condition compared to the reaction of the participants in the bearish market condition if they are given a positive frame. This indicates that there are differences in the reaction between them because of the different market conditions and this supports the prospect theory.

An interesting finding in this study is that participants' reactions in this study differed in response to negative framed information and bearish market condition information compared to the reaction of participants in Tversky and Kahneman's research (1981). There are two things that can be expected to explain the new findings in this study. First, participants have no experience of having suffered loss so they become insensitive when receiving news presented with a negative frame by the issuer company at a time of unfavorable conditions. As a result the effects of loss domain cannot be internalized into the participants well. Second, participants are not subject to variable financial compensation if they are able to complete the experiment better than any other participant. Consequently, the effect of domain loss on prospect theory is less able to influence the emergence of the participants' negative reactions.

This research contains several implications. These results are expected to provide a new insight on the different reactions of investors when receiving the same information. The causes of the difference of investor reaction are information framing effect and the effect of

market conditions, by using a combination of framing theory and prospect theory. Empirical findings provide knowledge for investors and the companies. Investors need to understand the behavioral bias, particularly cognitive bias due to the framing effect on the information, to make an investment decision optimally. The companies need an ability to present company-specific information to avoid potential bias due to the framing effect, especially complex financial information.

REFERENCES

Angelovska, J. 2017. Investors' Behaviour in Regard to Company Earnings Announcements during the Recession Period: Evidence from the Macedonian Stock Exchange. *Economic Research-Ekonomska Istraživanja*. 30 (1): 647-660.

Ardiansari, A & Saputra, A. 2015. Capital Market's Reaction towards 2014 Working Cabinet Announcement (Indonesian Case Study). *Jurnal Dinamika Manajemen*. 6 (1): 62-72.

Bagella, M., Becchetti, L & Ciciretti, R. 2007. Market vs Analysts Reaction: the Effect of Aggregate and Firm Specific News. *Applied Financial Economics*. 17 (4): 299-312.

Baker, H. K., Filbeck, G & Ricciardi, V. 2017. How Behavioural Biases Affect Finance Professionals. *The European Financial Review*. December-January. 25 (9).

Bazerman, M. H. 1984. The Relevance of Kahneman and Tversky's Concept of Framing to Organizational Behavior. *Journal of Management*. 10 (3): 333-343.

Bhutta, N. T & Shah, S. Z. A. 2014. Investors' Reaction to the Implementation of Corporate Governance. *Open Journal of Accounting*. 3: 3-8.

Boyd, J. H., Hu, J & Jagannathan, R. 2005. The Stock Market's Reaction to Unemployment News: Why Bad News is Usually Good for Stocks. *The Journal of Finance*. 60 (2): 649-672.

Conrad, J., Cornell, B & Landsman, W. R. 2002. When is Bad News Really Bad News?. *The Journal of Finance*. 57 (6): 2507-2532.

Diamond, L & Lerch, F. J. 1992. Fading Frames: Data Presentation and Framing Effects. *Decision Sciences*. 23 (5): 1050-1071.

Docking, D. S & Koch, P. D. 2005. Sensitivity of Investor Reaction to Market Direction and Volatility: Dividend Change Announcements. *The Journal of Financial Research*. 28 (1): 21-40.

Fox, S & Dayan, K. 2004. Framing and Risky Choice as Influenced by Comparison of One's Achievements with Others: the Case of Investment in the Stock Exchange. *Journal of Business and Psychology*. 18 (3): 301-321.

Glaser, M., Langer, T., Reynders, J & Martin, W. 2007. Framing Effect in Stock Market Forecasts: the Difference between Asking for Prices and Asking for Returns. Final Version. *Review of Finance*. 11 (2): 325-357.

Gudono & Hartadi, B. 1998. Apakah Teori Prospek Tepat untuk Kasus Indonesia?: Sebuah Replikasi Penelitian Tversky dan Kahneman. *Jurnal Riset Akuntansi Indonesia*. 1 (1): 29-42.

Hazemira, N. 2010. Market Reaction to Dividend Announcements during Bear and Bull Periods. *Thesis*. Malaysia: Universiti Utara Malaysia.

Kadiyala, P & Rau, P. R. 2004. Investor Reaction to Corporate Event Announcements: Underreaction or Overreaction?. *Journal of Business*. 77 (2): 357-386.

Kahneman, D & Tversky, A. 1979. Prospect Theory: an Analysis of Decision under Risk. *Econometrica*. 47 (2): 263-292.

Kaniel, R., Saar, G & Titman, S. 2008. Individual Investor Trading and Stock Returns. *The Journal of Finance*. 63 (1): 273-310.

Kirchler, E., Maciejovsky, B & Weber, M. 2005. Framing Effects, Selective Information and Market Behavior: an Experimental Analysis. *The Journal of Behavioral Finance*. 6 (2): 90-100.

Klein, A & Rosenfeld, J. 1987. The Influence of Market Conditions on Event-Study Residuals. *Journal of Financial and Quantitative Analysis*. 22 (3): 345-351.

Krishnan, R & Booker, D. M. 2002. Investors' Use of Analysts' Recommendations. *Behavioral Research in Accounting*. 14 (1): 129-156.

Kuhberger, A. 1995. The Framing of Decisions: a New Look at Old Problems. *Organizational Behavior and Human Decision Processes*. 62 (2): 230-240.

Levin, I. P., Gaeth, G. J., Evangelista, F., Albaum, G & Schreibe, J. 2001. How Positive and Negative Frames Inluence the Decisions of Person in the United States and Australia. *Asia*

Pacific Journal of Marketing and Logistics. 13 (2): 64-71.

Levin, I. P., Schneider, S. L & Gaeth, G. J. 1998. All Frames are not Created Equal: a Typology and Critical Analysis of Framing Effects. *Organizational Behavior and Human Decision Processes.* 76 (2): 149-188.

Li, X. Y & Ling, W. Q. 2015. How Framing Effect Impact on Decision Making on Internet Shopping. *Journal of Business and Management.* 3: 96-108.

Liu, Y. 2003. An Examination of the Long-run Market Reaction to the Announcement of Dividend Omissions and Reductions. *Dissertation.* Drexel University.

Oakes, W. 1972. External Validity and the Use of Real People as Subjects. *American Psychologist.* 27: 959-962.

Otchere, I & Chan, J. 2003. Short-Term Overreaction in the Hong Kong Stock Market: Can a Contrarian Trading Strategy Beat the Market?. *The Journal of Behavioral Finance.* 4 (3): 157-171.

Panasiak, M & Terry, E. 2013. Framing Effects and Financial Decision Making. *Proceedings.* Presented at: 8th Annual London Business Research Conference Imperial College, London, UK, 8-9 July, 2013.

Park, T. J. 2017. Behavioral Economics in International Investment Law: Bounded Rationality and the Choice of Reservation List Modality Penn State. *Journal of Law & International Affairs.* 5 (2).

Pompian, M. M. 2006. *Behavioral Finance and Wealth Management.* United States of America: John Wiley and Sons, Inc.

Pradiptyo, R., Sasmitasiwi, B., Sahadewo, G. A., Rokhim, R., Ulpah, M & Faradynawati, I. A. A. 2010. *Alternatif Struktur OJK yang Optimum: Kajian Akademik.* Draft III. Tim Kerjasama Penelitian FEB UGM dan FE UI.

Putri, N. K. 2012. Pengujian Eksperimental atas Pengaruh Format Laporan Risiko dalam Kerangka Teori Probabilistic Mental Model terhadap Keputusan Analis Investasi. *Disertasi* Yogyakarta: UGM.

Reid, L. C & Carcello, J. V. 2016. Investor Reaction to the Prospect of Mandatory Audit Firm Rotation. *The Accounting Review.* 92 (1): 183-211.

Sharma, V., Hur, J & Lee, H. 2008. Glamour versus Value: Trading Behavior of Institutions and Individual Investors. *The Journal of Financial Research.* 31 (1): 65-84.

Shih, F. Y. L. 1992. Dividend Announcements Under Varying Market Conditions: The Case of Specially Designated Dividends. *Journal of Economics and Finance.* 16 (3): 143-151.

Stark, E., Baldwin, A. S., Hertel, A. W & Rothman, A. J. 2016. Understanding the Framing Effect: Do Affective Responses to Decision Options Mediate the Influence of Frame on Choice?. *Journal of Risk Research.* 20 (12): 1585-1597.

Suartana, I. W. 2005. Model Framing dan Belief Adjustment dalam Menjelaskan Bias Pengambilan Keputusan Pengauditan. *Proceedings.* Presented at: SNA VIII, Solo, 15-16 September 2005.

Tandelilin, E. 2001. Beta pada Pasar Bullish dan Bearish: Studi empiris di Bursa Efek Jakarta. *Jurnal Ekonomi dan Bisnis Indonesia.* 16 (3): 261-272.

Tuyon, J., Ahmad, Z & Matahir, H. 2016. The Roles of Investor Sentiment in Malaysian Stock Market. *Asian Academy of Management Journal of Accounting and Finance.* 12 (1): 43-75.

Tversky, A & Kahneman, D. 1981. The Framing of Decisions and the Psychology of Choice. *Science.* 211 (4481): 453-458.

Veronesi, P. 1999. Stock Market Overreaction to Bad News in Good Times: a Rational Expectations Equilibrium Model. *The Review of Financial Studies.* 12 (5): 975-1007.

Yang, Z. O., Jia Xu, J., Wei, J & Liu, Y. 2017. Information Asymmetry and Investor Reaction to Corporate Crisis: Media Reputation as a Stock Market Signal. *Journal of Media Economics.* 30 (2): 82-95.

Yudianti, N & Lo, E.W. 2005. Pengaruh Framing, Pertanggungjawaban dan Jenis Kelamin dalam Keputusan Investasi Tambahan: Keputusan Individual dan Grup. *Jurnal Akuntansi dan Manajemen STIE YKPN Yogyakarta.* 16 (2): 121-128.