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THE IMPACT OF RISK REPORT FORMATS ON INVESTMENT ANALYST DECISIONS: AN EXPERIMENTAL CASE FROM INDONESIA

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ABSTRACT

This study aims to examine the impact on investment decisions of risk information reported by banking companies in Indonesia pursuant to Indonesia SFAS 60, adopted from IFRS 7. The standard requires banking companies in Indonesia to prepare a complete report (qualitative and quantitative) either in the format of a risk-sensitivity analysis, as a value at risk, or in a tabular format. This study was conducted utilising an on-line field experimental method with 3 × 2 mixed designs that involved 54 investment analysts as participants. The experiment was conducted to test whether different formats of risk information influence the investment decision-making process. The results showed that participants have confidence in making investments when the risk information presented is in a complete risk format. This is shown by a positive and significant increase in confidence when participants analyse the complete risk information compared to risk information that is presented in a qualitative form only. The findings also showed a difference when risk information is presented in a tabular format compared to risk information presented in a sensitivity analysis or a value at risk format. Most participants chose the tabular format because it is considered more informative and thought to improve the reasoning of the investment analysis.

Keywords: Indonesia SFAS 60, risk information, sensitivity analysis, value at risk, tabular format

INTRODUCTION

Information in financial statements is useful in decision-making processes (Smith & Reiter, 1996; Maines & McDaniel, 2000; Barth, Clinch, & Shibano, 2003), and financial statements typically include information about risk. In Indonesia, the Financial Accounting Standards Board of the Indonesian Institute of Accountants in 2010 published the Indonesia Statement of Financial Accounting Standards (SFAS) 60: Financial Instruments: Disclosures. The standard began being applied

to banking entities on 1 January 2012. Indonesia SFAS 60 was adopted from International Financial Reporting Standards (IFRS) 7: Financial Instruments: Disclosures. The standard requires banking entities to evaluate the nature and extent of risk arising from financial instruments, both qualitative and quantitative.

The standard states that quantitative market-risk disclosures in financial statements may be presented as a sensitivity analysis, as a value at risk, or in a tabular format. Previous research has shown that the tabular format is the format of risk information that is more informative and that can improve the analysis of financial statements (Linsmeier & Pearson, 1997; Hodder & McAnally, 2001; Linsmeier, Pearson, Thornton, Venkatachalam, & Welker, 2002).

This study aims to examine the impact of risk information presented in the three alternative risk information formats (sensitivity analysis, value at risk, and the tabular format) on the investment decision-making process. It is necessary to test the three formats of risk information to know which format offers the best value in analysing and processing risk information. This study also offers preliminary evidence about the effects on investment analyses of the different qualitative and quantitative risk disclosure formats required by Indonesia SFAS 60. The disclosure of risk is expected to reduce uncertainty about the risk implications of various factors that will affect the value of the firm. Preliminary evidence from studies on the effects of the implementation of risk reports can also be used by standard makers in Indonesia as a basis to evaluate the mandatory standards.

This research was conducted through an on-line field experimental method that involved investment analysts as participants. Investment analysts were selected as the participants to enhance external validity and to examine the practical impact of the accounting policy. Decisions made by investment analysts are often followed by both institutional and individual investors in making final investment decisions. The experimental method was chosen because it combines the strengths of external validity with the representativeness of a public opinion survey and the power of internal validity in the decision-making process. The combination is expected to generate more precise conclusions relating to decisions about real conditions, and it should be able to provide a comprehensive understanding related to public behaviour in the face of regulation (Sniderman & Grob, 1996; Harrison & List, 2004).

LITERATURE REVIEW

On 1 July 2009, Bank Indonesia issued Bank Indonesia Regulation No. 11/25/PBI/2009 that governed the application of risk management for

commercial banks. It introduced the obligation to draw up a series of risk management procedures and methodologies that were used to identify, measure, monitor, and control risks arising from the operations of a commercial bank.

A risk report was to be released in one of three reporting formats, i.e., as a sensitivity analysis, a value at risk, or in a tabular format. A sensitivity analysis attempts to quantify the potential near-term loss (one year) arising from hypothetical changes in the market rating of a company. Conversely, value at risk is a method of risk disclosure that shows how the company's largest loss may be experienced in terms of probability utilising the company's market-risk sensitivity instruments. The tabular format presents risk in terms of the company's assets and liabilities.

Research results have shown that the risks presented in a full report will affect the sensitivity of trading volume based on the level of stock market prices (Rajgopal, 1999; Roulstone, 1999; Linsmeier et al., 2002; Schrand, 1997). The format of the risk report has been shown to have value for investors because it is the best estimator of uncertainty in the market and is able to reduce the bias in security prices (Hodder & McAnally, 2001; Linsmeier et al., 2002; Dietrich, Kachelmeier, Kleinmuntz, & Linsmeier, 2001). In addition, companies that implement an informative disclosure policy will be followed by more analysts, which will lead to more precise analyst forecasts. Informative disclosures will also reduce differences between forecasts and forecast revisions of individual analysts, on the one hand, and will decrease volatility predictions made by analysts, on the other hand (Lang & Lundolm, 1996; Wong, 2000).

This conclusion is consistent with the results of the research conducted by Linsmeier and Pearson (1997) that tested the effects of quantitative market-risk disclosures on stock prices in accordance with Financial Reporting Report (FRR) 48/1997, issued by the Securities and Exchange Commision (SEC). The results showed that companies that publish a risk report in a complete format will have higher stock price sensitivity than companies that do not publish a risk report. Based on this description, the first hypothesis in this study is:

> Investment analysts will have a better evaluation for companies that disclose a full risk report—both qualitatively and quantitatively—compared to companies that only disclose risk in a qualitative report.

This study provides preliminary evidence about the impact of the format of qualitative and quantitative risk disclosure under Indonesia SFAS 60—which is the adoption of IFRS 7—on analyst investment decisions in Indonesia. The decisions of investment analysts are important because these are often followed by investors and affect the market value of the firm.

Simplifying Decision-Process Problems

Tversky and Kahneman (1981) identify the effects of trying to simplify human behaviour (human heuristics) problems in decision-making processes. Heuristics is defined as a strategy that can be applied to various problems that usually—but not always—result in a more appropriate solution. Heuristic strategy is often used to reduce the complexity in solving a problem so that the process can be much simpler. In the process of decision making, an investment analyst will utilise information he has obtained, which often comes in large quantities and varieties. Thus, simplifying information received is an important element in simplifying the investment decision-making process.

In this experiment, the investment decisions in question encompass the decision to make recommendations to buy or sell shares, and they also measure the level of participant confidence in formulating investment decisions. Investment decisions are based on information from the three formats of risk reports presented in a hypothetical case.

The Impact of the Format of the Risk Report to the Investment Analyst Decision-Making Process

In comparing the three risk reporting formats (sensitivity analysis, value at risk, and tabular format), Linsmeier and Pearson (1997), Hodder and McAnally (2001), Linsmeier et al. (2002), and Putri, Supriyadi, and Nahartyo (2012) have shown that the tabular format is the format most widely used by financial analysts because it displays data in a simple form that is understandable and flexible; analysts can create a sensitivity analysis or a value at risk from the data presented in a tabular format, but not vice versa. The tabular format is also considered more informative than the other two risk reporting formats because it contains fundamental data sets that are separate from one another.

Hirshleifer and Teoh (2002) suggest that investors have limited attention and abilities to process vast amounts of information. Consequently, disclosures that contain equivalent information and are presented in different formats will have different effects on investors. At the research model proficiency level, under an assumption that investors are paying limited attention to the disclosure and/or the information, the information submitted in a format that is easier to process is easier to absorb by investors compared to sifting through irrelevant or public information. This assumption is consistent with the results of Dietrich et al. (2001), which states that disclosures made by management may be the best estimators for uncertainty in the market and permit bias to be reduced in securities pricing, even though the information may overlap with information disclosed in financial statements.

Putri et al. (2012) showed that there are no differences in decisions made by participants if the information is presented in the form of value at risk or a sensitivity analysis. This suggests that participants do not give different weight to the format of risk reports that are presented, and these authors concluded that the format of risk reports in this study did not affect the investment decisions. The study also provides additional evidence that individual decisions may be influenced by framing and proves that the framework of Prospect Theory plays a role in investment decision making.

In general, investors realise that they have cognitive limitations that cannot solve all the problems they face. They often simplify (or use heuristics to simplify) an issue into alternative solutions. Heuristic models built by Tversky and Kahneman (1981) are denoted adjustment and anchoring heuristics. The decision-making process begins by determining the initial value and then makes necessary adjustments to obtain a final result, which is used as a basic argument by investment analysts to make an investment decision. With cognitive limitations or the heuristic model, analysts often choose to use information sets that are simple in the process of investment analysis. Simple formatting of information with the flexibility to be converted into other formats would thus be preferred by investors compared to a rigidly formatted information set. In addition, compared to hypothetical data, the fundamental data that are presented in a set of information would be preferred by analysts (Hodder & McAnnaly, 2001).

In this experiment, the three formats of risk reports became anchors or reference points for investment analysts in making investment decisions. Based on the theory of the anchoring heuristic model, participants were expected to prefer a simpler risk reporting format, i.e., the tabular format. Based on this explanation, the second hypothesis in this study is:

> Investment analysts will give a better evaluation of companies that disclose the risk report in a simpler and more comprehensive tabular format compared to firms that disclose the risk report as a sensitivity analysis or value at risk.

METHODOLOGY

Design of Experiments

This study used an on-line field experimental method that utilised a 3×2 mixed design (between-within subject) that was completely randomised (Table 1). The variable that is being manipulated in this experiment is called the independent

variable. Two independent variables are manipulated, the risk report format (sensitivity analysis, value at risk and tabular format) and the type of risk reporting (qualitative reporting only, on the one hand, and complete reporting of qualitative and quantitative information, on the other hand). The dependent variable is the change in behaviour measured. The dependent variable is represented by the investment decision to buy or sell stock.

Table 1
Design of experiments

Information Risk Format	Risk Format Reporting	
	Qualitative risk information	Qualitative and quantitative risk information
Value at Risk Format (VAR)	1	2
Sensitivity Analysis Format (SA)	3	4
Tabular Format (TbF)	5	6

Our experiment asks participants to make investment decisions with several choices of risk found in risk reports presented in the three formats. The dependent variable is the investment decision to buy or sell stocks in their report analysis. Participants were also asked to indicate the degree of their confidence as a percentage when developing investment decisions, from very unsure (0%) to very sure (100%). This study also uses a covariate, which is the participants' work experience as an investment analyst, measured in months (Arnold, Bedard, Phillips, & Sutton, 2008).

Participants

Participants in this research were 54 investment analysts. An investment analyst in this study is a professional manager who manages a variety of securities (such as stocks, bonds and other assets) to achieve a profitable investment for the investor by taking into account the level of risk attached to these assets. Investment analysts were chosen as participants because the information and decisions from investment analysts (to buy, sell or hold a particular stock) is likely to be followed by investors. Participant demographic data are shown in Table 2. The participants were divided into two experimental cells; each cell was composed of 27 participants. The number of participants per cell is sufficient to meet the requirements of the minimum number of participants (15 participants per cell), according to Christensen (2007) and Smith (2008).

Table 2
Demographic data of participants

About	Number of people	Percentage (%)
• Prospective participants were contacted via e-mail	215	100.0
• Participants who access the experiment website	62	28.84
• Participants who did not qualify the manipulation check procedure	(8)	
• Participants as the final subject of experiment	**54**	
Total participants as subject of experiment:	54	100.0
• Men	35	64.8
• Woman	19	35.2
Age:		
• 20–30 years old	32	59.3
• 31–40 years old	20	37.0
• 41–50 years old	2	3.7
Work experience:		
• 0–1 year	6	11.1
• 1–3 years	20	31.0
• 3–5 years	24	44.4
• More than 5 years	4	7.4
Stocks and analysed financial statements:		
• Companies in the banking industry category	38	70.4
• Companies in the manufacturing category	16	29.6

This study used manipulation check procedures to be followed by prospective participants after they followed the experiment. Participants obtained a cash reward as compensation for participating in this experiment. The reward was given in a certain range and adjusted by the decisions made in the experiment. Any options/recommendations made by the participants will affect the reward that will receive. There is a sense of loss that is associated with the rewards that participants will receive, and this is expected to create a form of risk faced by participants. Participants felt the risk when they formulate investment decisions because every answer given has an effect on the reward they receive. Each participant involved in this experiment had the same opportunity to earn rewards in a specified range of values. To avoid biases, the number of rewards received by the participants covered the magnitude of responses in this experiment, which was stated at the beginning of the experiment (Kruse & Thompson, 2001; Maines & McDaniel, 2000; Cameron & Pierce, 1994). The cash rewards also aimed to avoid incomplete forms because the reward was given if the participants completed all phases of the experiment.

Instruments and Experimental Procedures

The instruments used in this study are modified instruments of the study from Maines and McDaniel (2000), which consisted of the following three main components:

1. Public instruction
2. Software that contains (a) general information about the hypothetical company, (b) a report of risk in different formats, and (c) questions about the investment decisions made by participants after they have been informed of risk
3. Manipulation check forms, demographic data, and an explanation of the purposes to cover the implications of the implementation of this experiment

The research instruments were displayed on an online website. The use of a website eliminated experimental effects to enhance the external validity of research and to reach a broader range of participants. Participants who accessed the website received a random instrument sequentially so that each participant that was entered into the website received a different software application, in accordance with its login sequence, which was undertaken for randomisation purposes. After randomisation, participants were asked to perform assigned tasks.

Each participant in the experiment received a scenario consisting of two options. The first scenario contained information from a risk report with qualitative information only (first option) and the second contained a case with qualitative and quantitative information in the risk report (second option). Participants were asked to draw up an investment decision, and buy or sell the relevant stocks based on their analyses. Participants were also asked to indicate the degree of confidence they had when developing their investment decisions as a percentage, from very unsure (0%) to very sure (100%). At the end of the experiment, participants performed a manipulation check procedure and demographic data entry. An example of a case in the experiment is shown in Appendix 1. The overall time allocated to individual cases in each of these applications was approximately 30 minutes.

Hypotheses Testing

The first hypothesis in this study is whether an investment analyst will have a better evaluation of companies that fully disclose their reports compared to companies that did not fully disclose the risk report. Comparisons were made using ANCOVA, which compared participants' decisions to buy or sell shares for each risk reporting format (sensitivity analysis, value at risk and tabular format)

in the design of the study. Decisions made before the participants were given complete risk information were compared to decisions made after the participants were given complete risk information in each experiment scenario using ANOVA.

The second hypothesis in this study is based on the results of research conducted by Hodder and McAnally (2001) and Linsmeier et al. (2002) that indicates that the tabular format is the form of risk report that is the most widely used by financial analysts, even if another report format has a balanced weight and ability to inform and reduce bias in security prices. A test with the ANCOVA statistical tool was performed by comparing participants' decision to buy or sell shares for each risk reporting format (sensitivity analysis, value at risk and tabular format) in the design of the study. Decisions made before participants were given complete risk information were compared to decisions made after participants were given complete risk information in each experiment scenario using ANOVA. The test in this section will serve as the basis of a conclusion about the second hypothesis. The *P*-value obtained was a positive value below 0.05 when the difference is tested between options in each format's risk report at a confidence level of 95%, which indicates that a decision was made as the result of differences in the presentation of the risk reports in different formats.

RESULT AND DISCUSSION

Manipulation Check

There were 62 investment analysts involved in this study. However, certain participants were passed over after the procedure manipulation check, which resulted in 54 participants. The manipulation check, which refers to certain types of secondary evaluations of an experiment, consisted of separate measured variables that showed what the manipulated variables concurrently affect. Participants who passed the criteria of the test manipulation check in this experiment had to answer at least 3 of the 5 cases presented in the procedure correctly or the mistakes that they made in the resolution of manipulation check should not exceed 40%.

The First Hypothesis Testing and Discussion

The first hypothesis posited that investment analysts will better evaluate companies that disclose the full risk report—both qualitative and quantitative—compared to companies that only released a qualitative risk report. This study attempts to determine whether an investment analyst will better evaluate companies that disclose a full risk report compared to companies that do not

disclose a full risk report. A better evaluation was indicated when a sell option from the highest scale value of 10 changed to a buy option on the scale value of 1. Comparisons were made using the ANCOVA analysis tools that included the covariate of the work experience of participants.

A test using ANCOVA was performed by comparing the answers of the participants' buy/sell decisions for shares under each risk reporting format in the design of the study. Changes in decisions made from the time that participants were given only qualitative risk information to after they were given complete risk information (qualitative and quantitative) in each experiment scenario were tested using the ANCOVA tool.

ANCOVA Results for the Presentation of Qualitative Risk Information and the Impact on Investment Decisions

As part of the statistical results undergoing the ANCOVA test for the sensitivity analysis, value at risk, and tabular format presenting the qualitative report, the work experience of each participant as an investment analyst (in months) was included as the covariate, as shown in Table 3.

Table 3 shows the significance of covariate work experience in months as consecutive 0.847, 0.753, and 0.662. Because the significance for the third option is < 0.05, then this indicates at a 95% confidence level that there is no linear relationship between the work experience of the 54 participants and whether they chose to buy or sell shares for each risk reporting format (sensitivity analysis, value at risk and tabular format) presenting only qualitative information; this indicates that work experience does not affect how participants make investment decisions in our experiment. Thus, differences in participants' work experience in this experiment did not lead to a bias in formulating investment decisions.

The result brings us to a further test, which was undertaken by eliminating the effect of differences in the panel between reports with qualitative information only and reports with complete qualitative and quantitative information; additional test was conducted to determine the effect of differences in each panel with respect to the decision to buy or sell shares for each risk format (sensitivity analysis, value at risk and tabular format). The test was undertaken by eliminating the influence of working experience on the model.

After processing, the results show that the significance of the variables in Panel A for the sensitivity analysis (qualitative only) is 0.100. Because the significance of the third option value is above 0.05, it is reasonable to conclude that differences in the panel's work experience did not influence the value obtained from participants' decisions to buy or sell shares based on the sensitivity

analysis risk reporting format at a 95% level of confidence.

Table 3 also shows that the significance value for the Panel B value at risk reporting (qualitative only) is 0.051. Because the value is > 0.05, it is reasonable to conclude that differences in the panel based on work experience (qualitative only) did not influence the value obtained from participants' decisions to buy or sell shares based on the value at risk format at a 95% confidence level.

Table 3
ANCOVA for dependent variable option sensitivity analysis, value at risk, and tabular format_ qualitative information risk

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Panel A: Option sensitivity analysis_qualitative risk information					
Corrected Model	76.177[a]	4	19.044	4.622	0.003
Work experience_month	0.279	1	0.156	0.038	0.847
Panel	4.926	3	25.189	6.113	0.100
[a.] *R*-Squared = .274 (Adjusted *R*-Squared = .215)					
Panel B: Option value at risk_qualitative risk information					
Corrected Model	61.378[b]	4	15.344	3.660	0.011
Work experience_month	0.420	1	0.420	0.100	0.753
Panel	61.373	3	20.458	4.880	0.051
[b.] *R*-Squared = .230 (Adjusted *R*-Squared = .167)					
Panel C: Option tabular format_ qualitative risk information					
Corrected Model	145.272[c]	4	36.318	8.807	0.000
Work experience_month	0.796	1	0.796	0.193	0.662
Panel	137.103	3	45.701	11.083	0.062
[c.] *R*-Squared = .418 (Adjusted *R*-Squared = .371)					

Furthermore, Table 3 also shows that the significance of the variables in Panel C for the tabular format is 0.062. Because its value is > 0.05, it is reasonable to conclude that differences in the panel's work experience did not influence the value obtained from participants' decisions to buy or sell shares based on the tabular risk report format at a 95% confidence level.

ANCOVA Results for the Presentation of Qualitative and Quantitative Risk Information and the Impact on Investment Decisions

The values obtained from the participants' decisions based on the sensitivity analysis, value at risk, and tabular format risk reports presented in quantitative and qualitative reports (complete format) in this experiment will be tested by

ANCOVA, with a participant's work experience as an investment analyst (in months) as the covariate. The test results are shown in Table 4. The test was undertaken by eliminating the influence of work experience from the model. Processing of the results shows that the number of variables of significance on Panel A for the sensitivity analysis is 0.008 (with α 0.05). Because its value is below 0.05, it is reasonable to conclude that, without the influence of work experience, there is an influence of differences in the panel (qualitative and quantitative) on the value obtained in the form of participants' decisions to buy or sell shares based on the sensitivity analysis risk reporting that provides complete risk information.

Table 4 shows that the number of variables of significance for Panel B in the value at risk format is 0.000. Because the value is < 0.05, it is reasonable to conclude that, without the influence of work experience, there is an influence of differences in the panel on the value obtained from the participants' decisions to buy or sell shares for the value at risk reporting format at a 95% confidence level. Table 4 also shows that the significance value for the variable in Panel C in the tabular format presented with qualitative and quantitative information is 0.001. Because the value is < 0.05, it may reasonably be concluded that, without the influence of work experience, there is an influence of differences in the panel on the value obtained from the participants' decisions to buy or sell shares based on tabular format risk reporting.

We can observe the determination of the effects of differences in work experience and panels on the value obtained from participants' decisions to buy or sell shares based on each risk reporting format (sensitivity analysis, value at risk, and tabular format) that is presented with both qualitative and quantitative information sets from the significance value in the Corrected Model. The significance value for the sensitivity analysis, value at risk and tabular format risk reporting formats are 0.017, 0.000 and 0.003, respectively. Because these values are below 0.05, it can be concluded at a 95% confidence level that the work experience of participants and the risk reporting format (sensitivity analysis, value at risk and tabular format) simultaneously affect the participants' investment decisions to buy or sell shares.

Discussion of the First Hypothesis

The results of statistical test in this study show that there are significant differences between investment decisions that are made based on qualitative risk information only and investment decisions made based on complete risk information. The results of statistical tests utilising the ANCOVA tool showed that there were differences in the influence of risk information formats (sensitivity analysis, value at risk, and tabular format) on the value obtained from

participants' decisions to buy or sell shares. It may be reasonably concluded that the findings are based on statistical tests that support the first hypothesis in this study. Participants in this study evaluated companies more favourably that offered their risk report in a complete report than companies that reported only the qualitative risk. This positive evaluation is shown by the positive difference between investment decisions based on qualitative risk statements only compared to investment decisions based on comprehensive risk reporting (qualitative and quantitative). The results are consistent with the results of Rajgopal (1999), Roulstone (1999), Linsmeier et al. (2002), and Schrand (1997) that found that risk reports presented in full can affect the sensitivity of trading volume based on the level of stock market pricing.

Additional quantitative information also increases the confidence of participants in making investment decisions. This occurs particularly when risk reports are presented in tabular format and the sensitivity analysis format. Therefore, it may be reasonably concluded that the statistical tests support the first hypothesis in this study.

The Second Hypothesis Testing and Discussion

This section will present the results of the test for the second hypothesis. The second hypothesis in this study posited that investment analysts will give a better evaluation to companies that disclose their risk reports in the simpler and more comprehensive form of the tabular format compared to firms that disclose their risk reports as risk sensitivity analyses or in the value at risk format. Tests on these results were conducted utilising ANCOVA.

Tests were also conducted on the tabular format with qualitative and quantitative risk information in comparison to sensitivity analysis and value at risk formats with qualitative and quantitative risk information, using the ANCOVA tool and work experience (in months) as the covariate. The test results are shown in Table 5. The test was undertaken by first eliminating the influence of different variables in the tabular format from the model; tests were then conducted to determine the effect of differences in each variable option of the tabular format on the dependent variables of sensitivity analysis and value at risk.

Processing the results shows that the significance value for the tabular format variable with the dependent variables sensitivity analysis and value at risk is 0.000. Because its value is far below 0.05, it may be concluded that, without the influence of work experience, there are differences in the influence of the variable tabular format on the dependent variables sensitivity analysis and value at risk at a 95% confidence level.

Table 5 also shows that the significance value for the variable tabular format on the dependent variable value at risk is 0.000. Because its value is below 0.05, it can be concluded that, without the influence of work experience, there is the influence of different variable options for the tabular format on the dependent variable value at risk at a 95% confidence level.

Table 4
ANCOVA for Dependent Variable Option Option Sensitivity Analysis, Value at Risk, and Tabular Format_Qualitative and Quantitative Risk Information

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Panel A: *Option sensitivity analysis_qualitative and quantitative risk information*					
Corrected Model	70.728[a]	4	17.682	3.343	0.017
Work experience_month	0.000	1	0.000	0.000	0.994
Panel	70.448	3	23.483	4.440	0.008
[a.] *R*-Squared = .274 (Adjusted *R*-Squared = .215)					
Panel B: *Option value at risk_qualitative and quantitative risk information*					
Corrected Model	130.899[b]	4	32.725	6.752	0.000
Work experience_month	0.001	1	0.001	0.000	0.987
Panel	127.734	3	42.578	8.786	0.000
[b.] *R*-Squared = .355 (Adjusted R-Squared = .303)					
Panel C: *Option tabular format_qualitative and quantitative risk information*					
Corrected Model	115.338[c]	4	28.835	4.605	0.003
Work experience_bulan	1.619	1	1.619	0.259	0.613
Panel	114.779	3	38.260	6.110	0.001
[c.] *R*-Squared = .418 (Adjusted *R*-Squared = .371)					

The effect of the variables differences in employment experience and the tabular format option presented with qualitative and quantitative information on the dependent variable options sensitivity analysis and value at risk can simultaneously be observed from the significance values in the Corrected Model. The significance values for the dependent variables sensitivity analysis and value at risk are 0.000. The significance value for both dependent variables is below 0.05, which indicates at a 95% confidence level that the working experience of participants and the variable tabular format simultaneously affect the dependent variables sensitivity analysis and value at risk.

Discussion of the First Hypothesis

The results of the statistical tests indicate that the variable tabular format with qualitative and quantitative risk information has a variance with the dependent

variables sensitivity analysis and value at risk presented with qualitative and quantitative risk information. This indicates that there are differences in investment decisions when risk information is presented in a tabular format and risk information is presented in the sensitivity analysis and value at risk formats. In addition, of the 54 people who participated, 31 men (57.4%) chose the tabular format as their preferred format for the presentation of risk information that is the most informative and most improves investment analyses. Moreover, 16 participants (29.6%) chose the sensitivity analysis and 7 participants (13%) chose value at risk as their preferred format for risk report information that is the most informative and most improves investment analysis. Thus, it can be concluded that the second hypothesis in this study is supported.

Table 5
ANCOVA for dependent variables option sensitivity analysis and value at risk presented in qualitative and quantitative risk information tested with variable option tabular format

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Variable option tabular format with dependent variable option sensitivity analysis					
Corrected Model	221.130[a]	10	22.113	9.016	0.000
Intercept	208.432	1	208.432	84.984	0.000
Work experience_months	4.445	1	4.445	1.813	0.185
Tabular format_complete	220.088	9	24.454	9.971	0.000
Error	105.462	43	2.453		
Total	1358.000	54			
Corrected Model	326.593	53			
[a.] *R*-Squared = .677 (Adjusted *R*-Squared = -.602)					
Variable option tabular format with dependent variable option value at risk					
Corrected Model	214.285[b]	10	21.429	5.769	0.000
Intercept	146.840	1	146.840	39.534	0.000
Work experience_months	3.672	1	3.672	0.989	0.326
Tabular format_complete	200.822	9	22.314	6.007	0.000
Error	159.715	43	3.714		
Total	1550.000	54			
Corrected Model	374.000	53			
[b.] *R*-Squared = .573 (Adjusted *R*-Squared = .474)					

The findings are consistent with the results of Linsmeier and Pearson (1997) and Linsmeier et al. (2002) that showed that the tabular format as a risk reporting format is the most widely used by financial analysts when comparing the three risk reporting formats (sensitivity analysis, value at risk, and tabular

format). The underlying reason is that the tabular format displays data in a simple and understandable form that is flexible because the analyst can change the data into a sensitivity analysis or value at risk format. The tabular format is also considered to be more informative than the other two risk reporting formats because it contains fundamental data sets that are separate from one another. Simple sets of formatted information and the flexibility to be converted into another format are preferred by investors compared to a rigidly formatted information set. In addition, fundamental data are presented as a set of information that is preferred by analysts compared to hypothetical data (Hodder & McAnnaly, 2001). Thus, it is possible that the tabular format may be used as an alternative for companies in Indonesia to prepare risk reports and there is evidence that investment analysts prefer the tabular format in formulating investment decisions.

CONCLUSIONS

This study aims to examine the impact of the preparation of risk reports by banking companies in Indonesia on investment decisions. The obligation to prepare risk reports is part of the policy guidelines of Indonesia SFAS 60 that were issued by the Financial Accounting Standards Board Indonesia Institute of Accountants (IAI DSAK), effective 1 January 2012. Indonesia SFAS 60 was adopted from International Financial Reporting Standards (IFRS) 7: Financial Instruments: Disclosure. GAAP requires that banking companies in Indonesia prepare a risk report in the form of a sensitivity analysis or value at risk or in tabular format. This study sought to examine which format is the preferred format for risk reports in Indonesia, based on the opinion of investment analysts.

This research was conducted as a website on-line field experiment that involved 54 investment analyst participants. Experiments were conducted to test whether different formats of risk information (sensitivity analysis, value at risk, and tabular format) can influence the investment decision-making process. The experimental method was chosen because the method is able to combine the strengths of the external validity of representative public opinion survey with the power of internal validity in the decision-making process.

The statistical test results in this study show that there are significant differences between investment decisions based on qualitative risk information only and investment decisions based on complete risk information. The results of statistical tests utilising the ANCOVA tool showed that there were differences in the influence of the three different formats of the risk report on participants' decisions to buy or sell shares. In addition, different test results showed a significant difference between the investment decisions made when only

qualitative risk information is presented and when complete risk information is presented.

Participants in this study gave better evaluations to companies that reported risk in a complete report than to companies that reported qualitative risk information only. These positive evaluations are shown by the positive differences between investment decisions based only on qualitative risk information and investment decisions based on comprehensive risk reporting.

The results are consistent with the results of Rajgopal (1999), Roulstone (1999), Linsmeier et al. (2002), and Schrand (1997) that indicate that risk reports presented with full risk can influence the sensitivity of trading volume based on stock market pricing. Additional quantitative information also increased the confidence of participants in formulating investment decisions.

Another finding from this study suggests the existence of differences in investment decisions when risk information is presented in a tabular format than when risk information is presented in a sensitivity analysis or value at risk format. Most participants chose the tabular format as the format of risk information that is the most informative and enhance their ability to perform investment analysis. The findings are consistent with the results of Linsmeier and Pearson (1997) and Linsmeier et al. (2002) that show that the tabular format is the risk reporting format most widely chosen by financial analysts among the three risk reporting formats (sensitivity analysis, value at risk, and tabular format) because the tabular format presents data in a simple and understandable form that is also flexible enough to be converted into a sensitivity analysis or value at risk format. The tabular format is also considered to be more informative than the two other risk reporting formats because it contains fundamental data sets that are separate from one another. The simple presentation and the flexibility to be converted into other formats are preferred by investors and analysts compared to rigidly formatted information sets. In addition, the tabular format presents fundamental data in sets that are preferred by analysts compared to hypothetical data (Hodder & McAnnaly, 2001). Thus, the findings in this study suggest that the tabular format can be used by companies in Indonesia in preparing risk reports.

The results in this study may be the earliest evidence for the standard maker in Indonesia, IAI DSAK, about the impact of policy in presenting risk information for investment decisions. This study has the implication that the tabular risk information format may be an alternative in risk reporting because this format was shown to be the preferred format for investment analysts in making investment decisions. Investment analysts are one of many parties involved in investment decisions. By knowing the risk reporting format

preferences of investment analysts, companies are expected to prepare reports in accordance with market requirements and GAAP, which is expected to increase the value of the firm, and companies may reap the benefits of releasing risk information that is conveyed in the appropriate format.

This study has several limitations. First, participants in this study were not solely analysts specialising in bank financial statements only. No significant distinctions were made between the answers of bank analyst specialists and non-banking analysts. Therefore, further experiments and field studies can examine decisions made by analysts who focus on the financial statements of companies in specific industry categories. Second, this study only performs the procedure of a pilot experiment to test the instruments used in real experiments. Pre-test procedures should be performed subsequently to determine the ability of participants to understand the experiments presented.

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APPENDIX A
Experiment Case

Thank you for visiting the website of Risk Analysis Research.

In this website, you are required to be a participant in full by filling some of the questions that came with the case and fundamental data provided. Cases and questions are provided in the form of a simulation game buy/ sell shares. You are also asked to complete a demographic data at the end of this research.

There is no right or wrong answers to any questions.

The time available to answer all the questions is approximately 30 minutes.

For those participant who complete and pass the manipulation check test will get a reward, which will be converted from the number of answers in the simulation game of buy/sell shares in this research.

We will maintain the confidentiality of the identity of each participant.

Thank you for participating in this research.

Case A1.

Indonesia's banking regulator plans to decrease the Bank Indonesia interest rate benchmark (SBI) by 5 basis points (bps), from the original 17% to a maximum of 12% per year. All banks in Indonesia must comply with the interest rate benchmark gradually, over a period of three months from the specified regulations.

If the benchmark done in loan interest rates gradually by PT. Bank Corp., over three months it is expected a decrease in loan interest income annually, bringing total revenue to Rp 7–10 billion.

Indicate your choice/recommendation (buy or sell) the shares of PT. Bank Corp.:

1	2	3	4	5	6	7	8	9	10

Strong buy Strong sell

According to your prediction, the choice of buy or sell the share price will result in:

[ ] Increasing in share price [ ] Decreasing in share price

How confident are you in establishing that "my choice is worth"? (Show your faith by giving marks out of 10 points).

1	2	3	4	5	6	7	8	9	10

Very unconfident Very confident

Case A2.

Indonesia's banking regulator plans to decrease the Bank Indonesia interest rate benchmark (SBI) by 5 basis points (bps), from the original 17% to a maximum of 12% per year. All banks in Indonesia must comply with the interest rate benchmark gradually, over a period of three months from the specified regulations.

If the benchmark done in loan interest rates gradually by PT. Bank Corp., over three months it is expected a decrease in loan interest income annually, bringing total revenue to Rp 7–10 billion.

As a result of these regulations, companies are condemned to lose the annual loan interest income of Rp 3 billion. The following risk analysis report Sensitivity Analysis PT. Bank Corp., for three consecutive years:

> *Based on the level of debt and the interest rate of the company during the period of 31 December 2009, any increase or decrease of 5 basis points interest rate will affect the increase or decrease in annual interest costs and payments that are affiliated Rp 10 billion, including Rp 4 billion related with interest contracts are cleared by the company. Potential increases and decreases are based on simplifying assumptions, regardless of additional changes that occur. The following table shows changes in the estimated increase or decrease in Net Interest Income (NII) of the increase or decrease in interest rates gradually by 5 basis points for three consecutive years 2007, 2008 and 2009:*

	2007		*2008*		*2009*	
Interest Rate Change (in basis points)	*-25*	*+25*	*-25*	*+25*	*-25*	*+25*
Estimated exposure as % of NII	*1.4%*	*(1.7%)*	*1.%*	*(2.1%)*	*2.3%*	*(2.0%)*

Indicate your choice/recommendation (buy or sell) the shares of PT. Bank Corp.:

1	2	3	4	5	6	7	8	9	10

Strong buy Strong sell

According to your prediction, the choice of buy or sell the share price will result in:

[ ] Increasing in share price [ ] Decreasing in share price

How confident are you in establishing that "my choice is worth"? (Show your faith by giving marks out of 10 points).

1	2	3	4	5	6	7	8	9	10

Very unconfident Very confident

Case B1.

Indonesia's banking regulator plans to decrease the Bank Indonesia interest rate benchmark (SBI) by 5 basis points (bps), from the original 17% to a maximum of 12% per year. All banks in Indonesia must comply with the interest rate benchmark gradually, over a period of three months from the specified regulations.

If the benchmark done in loan interest rates gradually by PT. Bank Corp., over three months it is expected a decrease in loan interest income annually, bringing total revenue to Rp 7–10 billion.

Indicate your choice/recommendation (buy or sell) the shares of PT. Bank Corp.:

1	2	3	4	5	6	7	8	9	10

Strong buy Strong sell

According to your prediction, the choice of buy or sell the share price will result in:

[ ] Increasing in share price [ ] Decreasing in share price

How confident are you in establishing that "my choice is worth"? (Show your faith by giving marks out of 10 points).

1	2	3	4	5	6	7	8	9	10

Very unconfident Very confident

Case B2.

Indonesia's banking regulator plans to decrease the Bank Indonesia interest rate benchmark (SBI) by 5 basis points (bps), from the original 17% to a maximum of 12% per year. All banks in Indonesia must comply with the interest rate benchmark gradually, over a period of three months from the specified regulations.

If the benchmark done in loan interest rates gradually by PT. Bank Corp., over 3 months it is expected a decrease in loan interest income annually, bringing total revenue to Rp 7–10 billion.

As a result of these regulations, companies are condemned to lose the annual loan interest income of Rp 3 billion. The following risk analysis report Value at Risk PT. Bank Corp., for three consecutive years:

> *VAR analysis calculates the potential risks with 99% confidence level for disclosure of commitments made by the company (cash flows), including the effect of foreign currency derivatives. VAR model assumes stock prices generally normally distributed data and volatility derived from the currency market. Based on the overall disclosure of the currency on the date 31 December 2009, which include derivative positions, estimated currency change will affect the pre-tax cash flow of $250 million, with a 99% confidence level. The following table calculations that take into account the potential loss of interest rates, exchange rates, commodity and equity risk inherent in trading activity based on the analysis of VAR for three consecutive years 2007, 2008 and 2009:*

Year/Rate	*2007*			*2008*			*2009*		
	Avg.	*High*	*Low*	*Avg.*	*High*	*Low*	*Avg.*	*High*	*Low*
Based on perfect positive correlation interest rate	*85.6*	*126.8*	*66.8*	*120.2*	*163.8*	*92.7*	*143.8*	*187.9*	*102.5*
Based on zero correlation interest rate	*25.7*	*41.2*	*18.6*	*37.6*	*49.9*	*29.3*	*41.8*	*53.7*	*34.7*

Indicate your choice/recommendation (buy or sell) the shares of PT. Bank Corp.:

1	2	3	4	5	6	7	8	9	10

Strong buy Strong sell

According to your prediction, the choice of buy or sell the share price will result in:

[ ] Increasing in share price [ ] Decreasing in share price

How confident are you in establishing that "my choice is worth"? (Show your faith by giving marks out of 10 points).

1	2	3	4	5	6	7	8	9	10

Very unconfident Very confident

Case C1.

Indonesia's banking regulator plans to decrease the Bank Indonesia interest rate benchmark (SBI) by 5 basis points (bps), from the original 17% to a maximum of 12% per year. All banks in Indonesia must comply with the interest rate benchmark gradually, over a period of three months from the specified regulations.

If the benchmark done in loan interest rates gradually by PT. Bank Corp., over 3 months it is expected a decrease in loan interest income annually, bringing total revenue to Rp 7–10 billion.

Indicate your choice/recommendation (buy or sell) the shares of PT. Bank Corp.:

1	2	3	4	5	6	7	8	9	10

Strong buy Strong sell

According to your prediction, the choice of buy or sell the share price will result in:

[ ] Increasing in share price [ ] Decreasing in share price

How confident are you in establishing that "my choice is worth"? (Show your faith by giving marks out of 10 points).

1	2	3	4	5	6	7	8	9	10

Very unconfident Very confident

Case C2.

Indonesia's banking regulator plans to decrease the Bank Indonesia interest rate benchmark (SBI)

by 5 basis points (bps), from the original 17% to a maximum of 12% per year. All banks in Indonesia must comply with the interest rate benchmark gradually, over a period of three months from the specified regulations.

If the benchmark done in loan interest rates gradually by PT. Bank Corp., over three months it is expected a decrease in loan interest income annually, bringing total revenue to Rp 7–10 billion.

As a result of these regulations, companies are condemned to lose the annual loan interest income of Rp 3 billion. The following risk analysis report Tabular Format PT. Bank Corp., for three consecutive years:

For assets and liabilities, the following table displays the major cash flows that exist on the maturity date and the average interest rate. For interest rate swaps, the table below represent the nominal value and the interest rate is expected to be received by the company for three consecutive years 2007, 2008 and 2009:

Assets	*Year*				
	2007	*2008*	*2009*	*Thereafter*	*Total*
Variable-rate loans	*181,137*	*156,395*	*142,033*	*728,680*	*2,056,408*
Change in interest income when rates decrease 100 bps	*-1,811*	*-1,564*	*-1,420*	*-7,287*	*-20,564*
Liabilities					
Variable-rate time deposits	*50,814*	*12,812*	*0*	*0*	*63,626*
Variable-rate long-term obligations	*0*	*564*	*0*	*0*	*564*
Total variable-rate liabilities	*50,814*	*13,376*	*0*	*0*	*64,190*
Change in interest income when rates decrease 100 bps	*-508*	*-134*	*0*	*0*	*-642*
Change in NII when rates decrease 100 bps	*-5,538*	*-2,301*	*-1,811*	*-7,287*	*-16,937*

Indicate your choice/recommendation (buy or sell) the shares of PT. Bank Corp.:

1	2	3	4	5	6	7	8	9	10

Strong buy Strong sell

According to your prediction, the choice of buy or sell the share price will result in:

[ ] Increasing in share price [ ] Decreasing in share price

How confident are you in establishing that "my choice is worth"? (Show your faith by giving marks out of 10 points).

1	2	3	4	5	6	7	8	9	10

Very unconfident Very confident