THE IMPACT OF INVESTOR AWARENESS LEVELS OF THE RED FLAGGING ON INVESTMENT DECISIONS WITH INVESTOR RISK TOLERANCE AS INTERVENING VARIABLE

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ABSTRACT

The purpose of this research is to obtain empirical evidence whether investors in Indonesia have realized the red flags as fraud indicators that can influence investment decision making with investor's risk tolerance level as intervening variable. Many investors face investment decisions in weakening economic growth of various business sectors due to the Covid-19 pandemic. These conditions may push companies and people to commit fraud, so investors must be more aware of red flags to estimate the risk they will face before making investment decisions. Investors must be able to make investment decisions appropriately. This research will give investors in Indonesia to think about red flags, which will help investors determine risk tolerance levels and make the best investment decisions. This study used primary data in the form of questionnaires distributed to investors by convenience sampling method. Sixty-eight questionnaires were analyzed using WarpPLS 6.0 software. The findings indicate that the investor's awareness level of red flags is quite good. However, many investors have not used the red flags checklist before making an investment decision. This research also concluded that the investor's awareness level of red flags had a significant positive effect on investor's risk tolerance and investment decisions. Through red flags, investors can identify the risks they will face from an investment and consider the advantages and disadvantages they will experience. Therefore, investors will increase their risk tolerance limits and be more willing to choose stock investments that tend to be riskier but have a relatively higher level of return (high risk high return). However, this research indicates that risk tolerance does not significantly influence investor investment decisions and is not a mediating variable for investor's awareness of the benefits of red flags on investor investment decisions. The age factor might influence respondents to respond because they are mostly still young (18-25 years old).

Keywords: investor's awareness of red flags, investor's risk tolerance, investment decisions.

INTRODUCTION

People invest with the hope can earning income, which will fulfill their future needs. There are two components in investment, risk and return from selected investment. Investors must have the right investment decisions to maximize their investment return. Nowadays, Indonesian people are interested in settling on stock investment that promises a more significant return in the longer term. However, the higher return is accompanied by a more considerable stock investment risk too. The Covid-19 pandemic that attacked Indonesia since 2020 has disrupted business operations in various business sectors, which adds risk faced by investors. Since the government imposed Large-Scale Social Restrictions, many companies have collapsed and laid many workers off. According to World Bank data, 60% of businesses collapsed during the Covid-19 pandemic (Anggraeni, 2020). These conditions may push many companies and people to commit fraud. Companies may manipulate their financial statements, so their performances still increase in all conditions to keep their stock prices. The pressure of economic difficulties during the Covid-19 pandemic may cause workers to commit fraud, making companies lose. Proper investment decisions making will be more accessible when investors are aware of the benefits of red flags, which will be an indicator to justified fraud, making investment loss even more considerable. As an external part of the company, investors can use accounting and non-accounting information to identify fraud. After identifying the red flags, investors can determine their risk tolerance acceptance and choose their investment decisions.

The research conducted by Koornhof & Plessis (2000) showed that investors and creditors in South Africa are starting to recognize the benefits of red flags as an early warning system. However, checklist red flags are still rarely used in their investment decisions making process. Research conclusion by van Dureen et al. (2016) also showed that investors use ESG (Environmental, Social, and Governance) information as red flags to do risk management. Another research about red flags often used the auditor's point of view and infrequently used the investor's point of view.

Investment decisions have similar characteristics with lending decisions where investors and creditors trust other people to manage their funds, hoping they will get a greater return in the future. Investors and creditors also face the risk of loss if they create wrong decisions.

Some researchers conclude that investors for lending decisions use accounting and non-accounting information (Lestari (2017), Niode et al. (2016), Sholikha (2015), Arief (2010), and Sudaryono (2005)). Another research concludes that some accounting and non-accounting information impacted lending decisions (Mariana et al., 2018). A study conducted by Karamina (2012) showed that accounting and non-accounting information impacted lending decisions simultaneously, but partially only accounting information. Hasibuan (2003) concludes that just a few accounting and non-accounting information impacted lending decisions partially. Intervening variables may cause various researches conclusions.

We predicted that investor's risk tolerance level to be an intervening variable that interferes with the impact of investor's awareness level of red flagging on investment decision making because some researchers stated risk tolerance level affected investor's

investment decisions (Pak & Mahmood (2015), Pujiyanto (2013), Gunawan et al. (2015), Wulandari & Iramani (2014), Yohnson (2008), Bailey & Kinerson (2005)).

We propose five research questions of this research, those are:

1. Have investors in Indonesia realized the benefits of red flags?
2. Does the investor's awareness level of the benefits of red flags affect their risk tolerance level?
3. Does an investor's risk tolerance level affect their investment decisions making?
4. Does the investor's awareness level of the benefits of red flags affect their investment decisions making?
5. Can an investor's risk tolerance level intervene with the influence of investor's awareness level of the benefits of red flags to investor's investment decisions?

The primary purpose of this research is to analyze the impact of investor's awareness level of red flagging on investment decision making that mediated by risk tolerance level variable. Furthermore, this research will give investors in Indonesia to think about the red flags, which will help them estimate the investment risk before determining their investment decisions. So, investors can avoid the fraud and minimize the possibility of losses.

LITERATURE REVIEW

Prospect Theory

Kahneman & Tversky (1979) developed the prospect theory on psychology and economics that analyze economic decisions making behavior if there are two choices. According to the theory, the investment decisions making process can be divided into two phases. The first phase is the editing phase, investors who understand the benefit of red flags will use it to analyze and predict investment risk early. The second phase is evaluation phase, investors will evaluate the red flags to determine their risk tolerance level acceptance.

Kahneman & Tversky also researched in 1991, concluding that response in change will be more intense for detrimental changes than favorable changes. Consistent with this theory, investors will be more sensitive to negative information. They tend to avoid investment with the possible risk being more significant than the potential return. Finally, investors will choose the investment with the more significant return but still in their risk tolerance level acceptance.

Investors Awareness Level of Financial Statements Fraud Red Flagging

Investor's awareness level of red flagging will help investors identify investment risk early to be more willing to choose the investment with greater returns in their risk acceptance. Investor's awareness level of red flagging during this research will be proxied by usage level and importance level of red flagging according to investors.

Generally, red flags are often categorized based on fraud tree ACFE (Association of Certified Fraud Examiners), which consist of fraudulent financial statements, asset misappropriation, and corruption. This research will focus on red flags of fraudulent financial statements that allow investors to access the information as an external part. Red flags of asset misappropriation and corruption are more challenging to identify by investors because of their limited knowledge.

Red flags of fraudulent financial statements in this research are taken from Fraud Examiners Manual ACFE (2017), Fraud Auditing and Forensic Accounting by Singleton & Singleton (2010), and Red Flags for Fraud by DiNapoli (State of New York, Office of the State Controller). They allow investors to identify, i.e.:

1. The replacement of external auditors frequently.
2. Company structured is modified frequently.
3. Unreasonable gross profit margin increasing far above the industry average.
4. Routine operations have negative cash flow results but an overall increase in profit and positive cash flow.
5. Significant, rarely, or complex transactions at the end of the fiscal year.
6. Unusual revenue growing from minor business units.
7. There have been a large number of unexplained account deletions.
8. With unclear business considerations, several bank accounts, subsidiaries or branches operate in the "tax-heaven" area.
9. There are restrictions for auditor in accessing certain people or information.
10. There are unusual or unexpected increases in the cost of good sold.
11. Irrational financial ratios.
12. Unusual or unexplained changes in asset value significantly.
13. They sold company assets below their fair value.
14. The overlarge cancellations, discounts, or returns rate.
15. Abnormal inventory depreciation.

Risk Tolerance

Wulandari & Iramani (2014) stated risk tolerance as the level at which investors can still accept investment risk. According to Mahardika (2017), risk tolerance is how far investors can tolerate the investment risk. Anggirani (2017) defined risk tolerance as the higher level of risk handled by investors. This research defines risk tolerance as the level of risk that investors can accept in their investment activity to gain an inevitable return.

According to their risk tolerance, investors classify into three groups. The first type is risk seeker type, who dares to choose a higher risk investment. Generally, this investors type is aggressive and speculative in their investment decisions making. The second type is risk neutral type who wants an equivalent increasing in return if the level of risk increases. This second type of investors is usually flexible and prudent in their investment decisions making. The third type is risk averter type that prefers the safest investment and avoids risk (Halim, 2005).

Investment Decisions Making

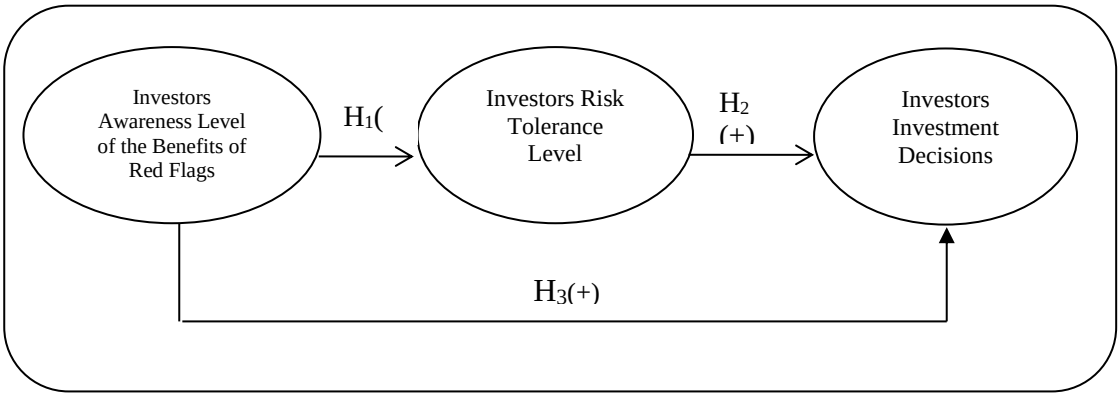
Investors decide to invest their assets or funds in one or more investment types to gain return in the future (Wulandari & Iramani, 2014). According to Mahardika (2017), someone will decide to invest their funds in a selected investment to create a profit in the future. Anggirani (2017) stated investment decisions as a process of determining the investment type to invest their fund to gain the greatest return in the future. Kahneman & Tversky (1981) defined decisions making as an action or option that has to choose between the possible outcomes or consequences of that action or choice. Definition of investment decisions for this research is investor's decisions to invest their capital in hunting the greatest return in the future.

They may perceive "high risk high return, low risk low return" in the financial market. It suggested that high risk investments usually have a high return level of return. Otherwise, low risk investments only have a low return level. Investors who have a high-risk tolerance level tend to a stock investment. Meanwhile, investors who have low risk tolerance level tend to choose deposit savings for his or her investment.

Research Design

The literature review presented in the previous section shows that red flags indicate investment risk that investors can consider. The extent to which investors are aware of the red flags can affect investment decisions and the level of investor risk tolerance. Furthermore, an investor's risk tolerance level can affect investment decisions (Wulandari & Iramani, 2014). The research model is depicted in Figure 1:

Figure 1: Research model



This research was survey research to gather information to describe investor's knowledge about red flags, the usage level of red flags method in investor's decisions making, risk tolerance level that investors can accept, and investment decisions making pattern. The primary data used for this research was questionnaire for investors. With convenience sampling method, questionnaire distributed to investors registered at Diponegoro University Master of Management IDX (Indonesia Stock Exchange) Investment Gallery, Group Studying Capital Market (KSPM) from various universities in Semarang, and several other investors have known by researcher. Questionnaires returned within maximum period of 6 weeks from the sending date corresponding with the data collection procedure during this research were considered to represent all investors in Indonesia who make investment decisions making.

Research Variable

Investor awareness level of the benefits of red flags as an independent variable in this research is proxied by investor's usage level of red flags and importance level of red flags according to investors. The measurement of usage level and importance level of red flags using a five-point Likert scale. We removed neutral point for the importance level of red flags to avoid bias in respondent's answers. Besides that, we measured the independent variable by asking whether investors used a red flags checklist before and whether other red flags outside the list were considered necessary by investors.
Risk tolerance level as an intervening variable in this research measured by a red flag's scenario. We used the dummy variable to determine whether an investor is a risk seeker (high risk tolerance level) or a risk averter (low risk tolerance level).

Investor's investment decisions making is the dependent variable in this research. We measured it through the same scenario used in the intervening variable (risk tolerance level variable). We used the dummy variable to determine whether an investor chooses stock investment (which tends to be riskier) or deposit saving (relatively safer).

Data Analysis Technique

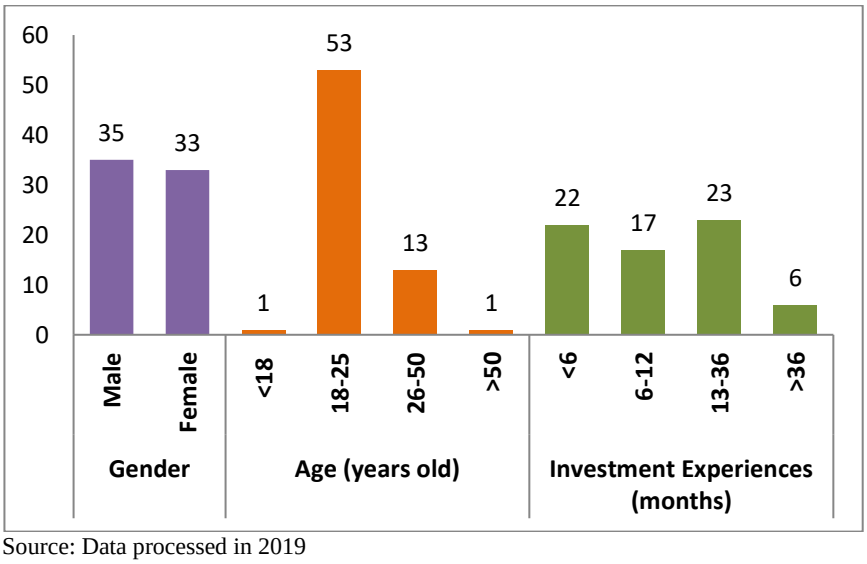
We used data analysis techniques as follows:

1. Descriptive Statistical Analysis
   We used descriptive statistical analysis to provide an overview of respondents. This technique will help to interpret and explain respondent's data from questionnaires.
2. Non-response Bias Test
   Non-response bias test to ensure no significant differences between respondent's characteristics who participated and respondent's characteristics who did not participate. Respondents who returned the questionnaires before the cut-off date represented the participating respondent's characteristics. Meanwhile, the respondent's who returned the questionnaires after the cut-off date represented the non-participating respondent's characteristics. We used tests administered through a different test analysis or t-test. There is no bias within the answer of questionnaires if the significance value is more than 0.05.
3. Path Analysis
   The analysis technique used is PLS Path Modeling analyzes the outer model, inner model, and hypothesis testing. The outer model analysis tested the feasibility (validity and reliability) through the test of convergent validity (value of the loading factor on the latent variable with its indicators >0.7). It also tested the discriminant validity (the loading value of the intended construct must be greater than the loading value with other constructs). It tested composite reliability (composite reliability >0.7 has high reliability), average variance extracted/ AVE (Expected AVE value >0.5), Cronbach's Alpha (Cronbach's Alpha expected value >0.6 for all constructs).
   Inner model analysis/ structural model analysis assesses whether the structural model is robust and accurate (Hussein, 2015). Inner model assessment predicted R-Square (R^2), the estimate for path coefficients, and prediction relevance (Q^2).
   Before conducting hypothesis testing, we gave an overview of investor behavior to explain the awareness level of the benefits of red flags. Red flags are proxied by the usage level of red flags and the importance level of red flags according to investors using index value that calculated for every indicator. Then, we use the three-box criteria method to describe the index value. We tested the hypothesis completed through probability value and t-statistic. For probability value, the p-value must be less than 0.05 for alpha 5%. Meanwhile, for t-statistics, the hypothesis is accepted if the t-statistic is greater than the t-table value.

RESULTS AND DISCUSSION

The data research was processed using descriptive statistical analysis. We used the non-response bias test using a different test (t-test) with SPSS 16.0 software and therefore the hypothesis was tested using PLS Path Modeling with WarpPLS 6.0 software. There were 68 questionnaires returned and used in the data processing. We described the respondent's profile in Figure 2:

Figure 2: Respondent's profile



Source: Data processed in 2019

Descriptive statistical analysis for investor awareness level of red flagging which proxied by usage level and importance level of red flags according to investors described in Table 1:

Table 1: Descriptive statistical analysis for investor awareness level of red flagging

	N	Minimum	Maximum	Mean
Usage Level of*Red Flags*	68	1.00	5.00	3.12
Importance Level of*Red Flags*	68	1.00	4.00	2.61

Source: Data processed in 2019

Table 1 show that minimum value from the usage level of the red flags variable is 1 and the maximum value is 5. The mean from 68 respondents for all indicators of usage level of red flags is 3.12 above their median value, representing that respondent's usage level of red flags is quite good. Meanwhile, the minimum value of red flag's importance level is 1 and the maximum value is 4. The mean from 68 respondents for all indicators of importance level of red flags is 2.61 that above their median value, so it means that respondent's usage level of red flags is quite good.

Descriptive statistical analysis for investor's risk tolerance level and their investment decision described in Table 2:

Table 2: Descriptive statistical analysis for risk tolerance level and investment decisions

Variable	Indicators	N	%
Investors Risk Tolerance Level	High (1)	17	25.00%
	Low (2)	51	75.00%
Investment Decisions	Stock Investment (1)	47	69.12%
	Deposit Saving (2)	21	30.88%

Source: Data processed in 2019

Table 2 shows that 51 respondents (75%) have a low risk tolerance level and 17 respondents (25%) have a high risk tolerance level. These results are consistent with prospect theory, and investors tend to avoid risk. For investment decisions, 47 respondents (69.12%) choose stock investments, and 21 respondents (30.88%) choose relatively safer deposit savings.

From 68 questionnaires used in data processing, we received 59 questionnaires before the cut-off date, and 9 returned after. The non-response bias test assessed whether the mean from respondents who participated and respondents who do not participate significantly differed. The results for non-response bias test are in Table 3:

Table 3: Non-response bias test

Variables	N=59		N=9		*t-value*	*p-value*
	Mean	Std. Deviation	Mean	Std. Deviation		
Usage Level of *Red Flags*	3,2593	0,87651	3,6667	0,56862	-1,095	0,305
Importance Level of *Red Flags*	2,5704	0,64473	3,0148	0,28437	-1,776	0,114
Risk Tolerance Level	1,8889	0,33333	1,5556	0,52705	1,414	0,195
Investment Decisions	1,5556	0,52705	1,2222	0,44096	1,414	0,195

Source: Data processed in 2019

The significant level of all variables in Table 3 is >0.05, so we concluded that there are no significant differences between respondents who participated and respondents who do not participate. The data used is additionally ready to explain the research conclusion. The research indicator is reflective, so outer model analysis consists of convergent validity, discriminant validity, and composite reliability. Convergent validity is doing through viewing the cross-loading value as shown in Table 4 below:

Table 4: Indicator loadings and cross-loadings output

Variabel	Indikator	SE	Cross Loadings	P Value	Conclusion
Investors Awareness Level of Red Flagging	Usage Level of Red Flags	0,088	0,965	<0,001	Valid
	Importance Level of Red Flags	0,088	0,965	<0,001	Valid
Risk Tolerance Level		0,087	1	<0,001	
Investment Decisions		0,087	1	<0,001	

Source: Data processed in 2019

The cross-loading value for the usage level of red flags and the importance level of red flags is 0.965 which is greater than 0.7, so the usage level of red flags and importance level of red flags indicators are meet convergent validity criteria. For risk tolerance level and investment decisions, variables only have one indicator, resulting in their cross-loading value are 1.
Convergent validity measurement continued to AVE (Average Variance Extracted) value which may be seen in latent variable coefficients in Table 5:

Table 5: Latent variable coefficients output

	Investors Awareness Level of Red Flagging	Risk Tolerance Level	Investment Decisions
R-Squared		0,058	0,165
Composite Reliability	0,964	1,000	1,000
Cronbach's Alpha	0,926	1,000	1,000
Average Variance Extracted	0,931	1,000	1,000
Q-Squared		0,066	0,185

Source: Data processed in 2019

AVE value for investor's awareness level of red flagging in Table 5 is 0.931, more than 0.5. We concluded that convergent meet validity criteria. Meanwhile, the AVE value for risk tolerance and investment decisions is 1 because there is just one indicator.
Discriminant validity is doing through comparison of loading intended construct value must be greater than the loading of other constructs value as shown in Table 6. It shows that the usage level of red flags and the importance level of red flags indicators are meet the discriminant validity criteria.

Table 6: Loading construct latent value

Indicators	Loading Value of Investors Awareness Level of Red Flagging		Loading Value to Other Construct		Conclusion
			Risk Tolerance Level	Investment Decisions	
Usage Level of Red Flags	0,965	>	-0,055	0,047	Fulfilled discriminant validity criteria
Importance Level of Red Flags	0,965	>	0,055	-0,047	Fulfilled discriminant validity criteria

Source: Data processed in 2019

We tested the discriminant validity by viewing square roots of the AVE value presented in Table 7 below:

Table 7: Correlations among latent variables with square roots of AVE

	Investors Awareness Level of Red Flagging		Risk Tolerance Level	Investment Decisions
Investors Awareness Level of the Benefits of Red Flags	(0,965)	>	0,240	0,407

Source: Data processed in 2019

Table 7 shows that square roots of the AVE value for investor's awareness level variable are more remarkable than the square roots of AVE value for risk tolerance level and investment decisions variables. This result means the usage level of red flags and the importance level of red flags indicators precisely measure the investor's awareness level of red flagging variable.
The construct reliability done by composite reliability result showed the Cronbach's Alpha in Table 8:

Table 8: Composite reliability and Cronbach's Alpha value

	Investors Awareness Level of Red Flagging	Risk Tolerance Level	Investment Decisions
Composite Reliability	0,964	1,000	1,000
Cronbach's Alpha	0,926	1,000	1,000

Source: Data processed in 2019

Composite reliability and Cronbach's Alpha value for investor's awareness level of red flagging variable in Table 8 are 0.964 and 0.926. We concluded that composite reliability fulfilled the criteria. Risk tolerance level and investment decisions variables only have one indicator that causes their composite reliability and Cronbach's Alpha value to be 1.

To obtain an overview of the usage level of red flags and the importance level of red flags according to investors, we used an index analysis by calculating the index value and three box criteria method. The average index value for the usage level of red flags is 62.35. If we met this value is fulfilled by three box criteria method, we concluded that the investor's usage intensity of red flags is quite good. However, respondents use of the red flags checklist before making investment decisions remains lacking because only five respondents (7.35%) have used the red flags checklist. Respondents also added several red flags that they often use, i.e., projects divided to avoid auctions and there is no specific control to cost of goods sold. Then, the average index value for the importance level of red flags is 65.22. If this value fulfilled the three box criteria method, we concluded that investors already understand the importance of red flags. Red flags with the highest index value (70.22) indicate they deter auditors from accessing certain people or information.

Inner model analysis administered by estimate for path coefficients, R^2, and Q^2. Results for estimate for path coefficients is in Table 9:

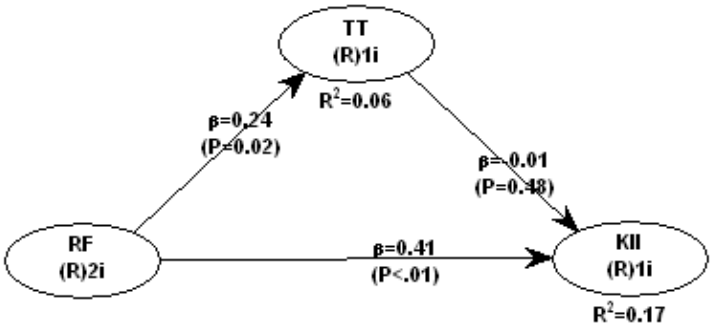
Table 9: Model fit and quality indices

Model Fit and Quality Indices	Indeks	*p-value*	Criteria	Conclusion
Average path coefficient (APC)	0,218	0,014	*p*<0,05	**Significant**
Average R-Squared (ARS)	0,111	0,086	*p<0,05*	**Not Significant**
Average Adjusted R-Squared (AARS)	0,091	0,110	*p<0,05*	**Not Significant**
Average Block Variance Inflation Factor (AVIF)	1,061	< 5 and ideally≤ 3,3		**Accepted**
Average Full Collonearity VIF (AFVIF)	1,173	< 5 and ideally≤ 3,3		**Accepted**
Tenenhaus GoF (GoF)	0,330	small≥0,1, medium ≥0,25, large ≥0,36		**Medium**
Sympson's paradox ratio (SPR)	0,667	>0,7 and ideally= 1		**Accepted**
R-SquaredContribution Ratio (RSCR)	0,998	≥0,9 and ideally= 1		**Accepted**
Statictical Suppression Ratio (SSR)	1,000	>0,7		**Accepted**
Nonlinear Bivariate Causality Direction Ratio (NLBCDR)	**1,000**	**≥0,7**		**Accepted**

Source: Data processed in 2019

From Table 9, it has known that the analysis result met 8 criteria. However, the p-value of Average R-Squared (ARS) and Average Adjusted R-Squared (AARS) is more than 0.05, which mean not significantly caused by weak R^2 value and the existence of no significant relationship between variables as seen through Figure 3:

Figure 3: Indirect effect model



Source: Data processed in 2019

Q-Squared value at Table 5 for investment decisions variable shows that a good predictive validity, which is 0.185 is greater than 0. The R^2 value indicated that the investor's awareness level of the benefit of red flags (RF) and risk tolerance level (TT) influenced the investor's investment decision variable (KII). It is 0.17, which indicates that exogenous latent variables are only 17% effect by endogenous latent variables, or we interpreted that the research model is weak.

Figure 3 shows the estimated value for a direct effect of investor's awareness level of red flagging to risk tolerance level variable is 0.24 (β=0.24) and significant with p-value 0.02 less than 0.05. Hence, the investor's awareness level of the benefits of red flags has a significant positive impact on the risk tolerance level. If the R value is 0.24, then determinant coefficients (KD) value is $(0.24)^2$x100% = 5.76%, which suggests 5.76% risk tolerance level (TT) variances can be explained by investor's awareness level of red flagging (RF) variances.

Consistent with prospect theory, investors will be more sensitive to negative information and tend to avoid risk. Almost 80% of respondents who returned questionnaires gained investment knowledge through education, the primary respondents may be aware of the behavior and awareness through academic knowledge. Nevertheless, because most respondents have investment experiences less than three years, maybe it causes investor's awareness of the benefits of red flags still relatively moderate, only 25% of respondents have high risk tolerance level. Investors must be more aware of red flags in this uncertainty of business condition during the Covid-19 pandemic, which might cause fraud to happen. Better analytical and evaluation capabilities of red flags can make investors more daring to line a higher risk tolerance level, hoping to obtain greater returns in the future.

The estimated value for a direct effect of investor's risk tolerance level on their investment decisions is -0.01 (β=-0.01) and not significant with p-value 0.48, which is greater than 0.05. Hence, the risk tolerance level has no significant impact on investor's investment decisions. If the R value is -0.01, then determinant coefficients (KD) value is $(-0,01)^2$x100% = 0.01% which suggest only 0.01% investors investment decisions (KII) variances can be explained by risk tolerance level (TT) variances. Only 25% of respondents have a high risk tolerance level and 69.12% choose stock investments. Like most respondent's age during this research are still young (18-25 years old), so there is the possibility that capital limited owned by respondents. However, they hope to able to make higher returns in the future through stock investments.

The estimated value for a direct effect of investor's awareness level of red flagging to investment decisions variable is 0.41 (β=0.41) and significantly with p-value <0.01. It is less than 0.05, so investor's awareness level of the benefits of red flags has a positive significant impact on their investment decisions. If the R value is 0.41, then determinant coefficients (KD) value is $(0.41)^2$x100% = 16.81%, which means that by investor's awareness level of red flagging (RF) can affect an investor's investment decisions (KII) of 16.81%. Consistent with prospect theory, investors will be more sensitive to negative information and tend to avoid risk. Almost 80% of respondents who returned questionnaires showed that respondents had investment knowledge through education. There is the possibility that most respondents are aware of the benefits of red flags through academic knowledge. However, because most of the respondents have investment experiences less than three years, maybe it causes investor's awareness level of the benefits of red flags still relatively moderate, and 69.12% of respondents choose stock investments. Even though many companies had collapsed in this pandemic era, some companies exactly had better performance than before. For example, companies in the telecommunication sector significantly increased profit because of the high use of internet during Work From Home (WFH) and online school (Fakhrunnas, 2020). With the increasing investor's awareness level of the benefits of red flags, investors will be more daring to choose stock investments in the hope of obtaining a greater return in the future because stock investments have high risk and high return characteristics.

Mediating test was administered using Hair et al. (2013) approach through Variance Accounted For (VAF) with the result presented within Table 10:

Table 10: VAF calculation result

Effect	Results
Indirect Effect (RF→TT=0,24 * TT→KII=-0,01)	-0,0024
Direct Effect (RF→KII=0,41)	0,41
Total Effect = (-0,0024)+0,41	0,4076
VAF	-0,00589 or -0,589% or absolute value is 0,589%

Source: Data processed in 2019

Table 10 shows that VAF value of 0.589% means risk tolerance level has no mediating impact between investor's awareness level of red flagging to investment decisions. Besides that, p-value of 0.493, which is greater than 0.05, indicates that risk tolerance level is not an intervening variable for the impact of investor's awareness level of red flagging on investor's investment decisions. Because the direct effect risk tolerance level has no significant effect on investor's investment decisions, the risk tolerance level variable can not be an intervening variable for investor's awareness level of red flagging on investor's investment decisions.

CONCLUSION

Based on data results of data analysis and literature review, we concluded as follows:

1. Investor's usage level of red flags is quite good and investors have entirely understood the importance of red flags. However, most investors in Indonesia have not used a red flags checklist before making investment decisions.
2. The most important red flags, according to respondents, are restrictions for auditors in accessing certain people or information and auditors being unable to communicate effectively with the board of directors or audit committee. Respondents provide additional red flags in projects divided to avoid auctions and there is no specific control over the cost of goods sold.
3. The investor's awareness level of red flagging has a significant positive impact on the investors risk tolerance level. Red flags will help investors identify investments risk early, so they will increase their risk tolerance level to obtain a greater return.
4. Investor's awareness level of the benefits of red flags has a significant positive impact on investor's investment decisions. After identifying red flags, investors will be daring to choose stock investments that are riskier than deposit savings but relatively have a higher return.
5. Risk tolerance level has no significant impact on investor's investment decisions. It does not have to mediate the relationship between the investor's awareness of red flagging and investment decisions. Most of the respondents are still young (18-25 years old), they may have capital limited and want to get a greater return in the future from their investments.

This research gives theoretical implication. There are knowledge contributions that investor's awareness level of red flagging can affect investor's risk tolerance and investment decisions. This result can inform the auditing profession to show red flags in their audit task, so investors can use it to determine their risk tolerance and investment decisions. The practical implication of this research provides a guide that Indonesian investors got to be more understand the importance of red flags to estimate the risk that they will face from an investment. So, they can determine their investment decisions more appropriately whether more profitable to invest in stock investment or deposit saving, especially in this pandemic era where there is a possible fraud to be happen. As an external part of the company, investors need to be aware of the red flag's benefits to avoid fraud and minimize losses, especially in this pandemic era.

Some limitations of this research are the low response rate to questionnaires. The bias in respondent's answers may cause the generalization the research results to be more careful. The majority of respondent's investment experiences are less than three years, and they perhaps have investment characteristics comprehension comes from academic knowledge. Because of the respondent's age, it is the possibility that the respondent's capital is limited. The respondent's age is mainly 18-25 years old, and maybe respondents tend to choose stock investments to gain a greater return. Future research may extend the data, samples, and consider observing conditions before and after the Covid-19 pandemic.

REFERENCES

Anggirani, N. (2017). *Pengaruh Risk Tolerance, Overconfidence, dan Literasi Keuangan Terhadap Pengambilan Keputusan Investasi Masyarakat Surabaya*.

Anggraeni, R. (2020). *Aduh, 60% Perusahaan Bangkrut Gegara Covid-19*. Okezone.com. http://economy.okezone.com/read/2020/12/10/455/2324978

Arief A, A. (2010). *Peran Laporan Keuangan dan Intuisi Dalam Pengambilan Keputusan Kredit (Studi Empiris Pada Perbankan Kota Semarang)*. Semarang.

Association of Certified Fraud Examiners (ACFE). *Fraud Examiners Manual, 2017 International Edition (2017)*. Association of Certified Fraud Examiners, Inch.

Bailey, J. J., & Kinerson, C. (2005). *Regret Avoidance and Risk Tolerance*. Association for Financial Counseling and Planning Education, 16(1), 23–29. Retrieved from https://afcpe.org/assets/pdf/vol1613.pdf

DiNapoli, T. P. (n.d.). *Red Flags for Fraud*. (S. J. Hancox, Ed.). New York: State of New York, Office of the State Controller. https://doi.org/x143

Fakhrunnas, F. (2020). *Investasi Sebelum dan Sesudah Pandemi Covid-19, Bagaimana Pengaruhnya?* Program Studi Ekonomi Pembangunan Univesitas Islam Indonesia Yogyakarta.

Gunawan, M. F., Linawati, N., & Memarista, G. (2015). *Pengaruh Risk Tolerance dan Personality Traits Terhadap Pemilihan Portofolio Investor di Surabaya*. FINESTA Vol. 3, No. 2, (2015), 3(2), 33–37.

Halim, A. (2005). *Analisis Investasi, Edisi Pertama*. Jakarta: Salemba Empat.

Hasibuan. (2003). *Pengaruh Informasi Akuntansi terhadap Keputusan Pemberian Fasilitas Modal Kerja pada Bank Bumiputera Cabang Medan*. Program Pascasarjana Universitas Sumatera Utara Medan

Hussein, A. S. (2015). *Penelitian Bisnis dan Manajemen Menggunakan Partial Least Squares (PLS) dengan smartPLS 3.0*. Modul Ajar Jurusan Manajemen Fakultas Ekonomi Dan Bisnis Universitas Brawijaya. https://doi.org/10.1023/A:1023202519395

Kahneman, D., & Tversky, A. (1979). *Prospect Theory: An Analysis of Decision Under Risk*. Econometrica, 47(2), 263–291. https://doi.org/10.2174/138920312803582960

Karamina, A. (2012). *Analisis Pengaruh Informasi Akuntansi dan Informasi Non-Akuntansi Terhadap Keputusan Kredit*. Accounting Analysis Journal, 1(2). Retrieved from http://journal.unnes.ac.id/sju/index.php/aaj

Koornhof, C., & du Plessis, D. (2000). *Red flagging as an indicator of financial statement fraud: The perspective of investors and lenders.*Meditari Accountancy Research, 8(1), 69–93. https://doi.org/10.1108/10222529200000005

Lestari, I. (2017). *Pengaruh Informasi Akuntansi dan Informasi Non-Akuntansi Terhadap Keputusan Pemberian Kredit (Studi Pada PT. Bank Negara Indonesia Tbk Cabang Tanjung Karang Kota Bandar Lampung)*. Bandar Lampung.

Mahardika, V. A. (2017). *Pengaruh Overconfidence, Risk Tolerance, dan Faktor Demografi Terhadap Pengambilan Keputusan Investasi Masyarakat Gresik*. Skripsi S1 Sekolah Tinggi Ilmu Ekonomi Perbanas Surabaya.

Mariana, Nadiarsyah, & Abdullah, S. (n.d.). *Informasi Akuntansi, Informasi Non-Akuntansi, dan Keputusan Pemberian Kredit*. Jurnal Reviu Akuntansi Dan Keuangan, 8(2), 177–186. https://doi.org/10.22219/jrak.v8i2.37

Niode, M. P., Saerang, David Paul EliaPaul, D., & Ilat, V. (2016). *Analisis Penggunaan Informasi Akuntansi dan Informasi Non-Akuntansi Dalam Keputusan Pemberian Fasilitas Kredit Pada PT. Bank Mandiri (Persero) Tbk Area Manado*. Acountability Journal, 5(2), 260–268.

Pak, O., & Mahmood, M. (2015). *Impact of Personality On Risk Tolerance and Investment Decisions: A Study On Potential Investors of Kazakhstan*. Emeralds Insight, International Journal of Commerce and Management, 25(4), 370–384. https://doi.org/10.1108/IJCoMA-01-2013-0002

Pujiyanto, N. (2013). *Regret Aversion Bias Dan Risk Tolerance Dalam Keputusan Investasi*. Skripsi S1 Fakultas Ekonomika dan Bisnis Universitas Kristen Satya Wacana Salatiga.

Sholikha, D. L. (2015). *Pengaruh Penilaian Kelayakan Kredit dan Informasi Akuntansi Terhadap Keputusan Pemberian Kredit Pada Bank Umum di Surabaya*. Surabaya.

Singleton, T., & Singleton, A. (2010). *Fraud Auditing and Forensic Accounting, 4th ed.* New Jersey: John Wiley & Sons, Inc.

Sudaryono. (2005). *Persepsi Analisi Kredit Tentang Informasi Akuntansi dan informasi Non Akuntansi Pengaruhnya terhadap Keputusan Kredit*. Program Studi Magister Sains Akuntansi Universitas Diponegoro Semarang.

van Dureen, E., Plantinga, A., & Scholtens, B. (2016). *ESG Integration and the Investment Management Process: Fundamental Investing Reinvented*. Journal of Business Ethics, 138(3), 525–533. https://doi.org/10.1007/s10551-015-2610-8

Wulandari, D. A., & Iramani, R. (2014). *Studi Experienced Regret , Risk Tolerance , Overconfidance dan Risk Perception Pada Pengambilan Keputusan Investasi Dosen Ekonomi.*Journal of Business and Banking, 4(1), 55–66.

Yohnson. (2008). *Regret Aversion Bias dan Risk Tolerance Investor Muda Jakarta dan Surabaya.*Jurnal Manajemen Dan Kewirausahaan, 10(2), 163–168. Retrieved from http://puslit2.petra.ac.id/ejournal/index.php/man/article/view/17042

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