# PSYCHOLOGICAL RISK PERCEPTION OF INVESTORS IN THE MALAYSIA STOCK MARKET: A STUDY IN KOTA KINABALU

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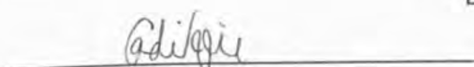

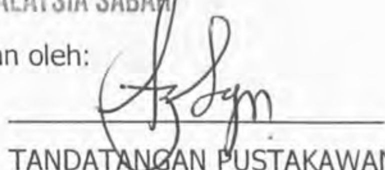

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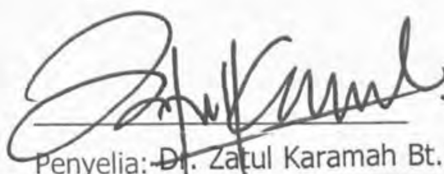

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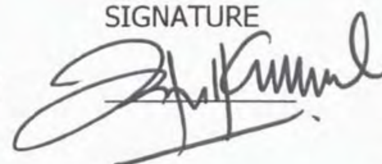

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# ABSTRACT

## PSYCHOLOGICAL RISK PERCEPTION OF INVESTOR IN MALAYSIA STOCK MARKET: A STUDY IN KOTA KINABALU

Investment is the commitment of funds into stocks, savings and others for the purpose of obtaining a profit. Risk perception influences investors' decision to invest. The objectives of this study are to study the relationship between information asymmetry, financial knowledge and overconfidence, and risk perception of investors in Kota Kinabalu. Age, gender and education level were also examine to determine their contingent effect on the relationships. A validated self-administered questionnaire, using a 7 point Likert-scale was distributed to 150 respondents at Innosabah Securities Limited Company. A total of 100 questionnaires were completely filled. Data were analyzed using factor analysis, Cronbach's alpha, Multiple regression and Hierarchical regression analysis. A p value of <0.05 was considered statistically significant. Respondents were 46% female, 56% male, age ranged from 24 years to 60 years and 50% had university education. The analysis shows that only financial knowledge (p<0.048) and overconfidence (p<.000) were found to be positively related to risk perception. There were no significant value that age, gender and education level moderates the relationship between information asymmetry financial knowledge and overconfidence, and risk perception. These findings are expected to assist financial advisors on portfolio assessment and indirectly provide better advice to investors.

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# ABSTRAK

*Pelaburan adalah satu komitmen dana seperti saham, simpanan dan lain-lain dengan bertujuan untuk mendapatkan keuntungan. Persepsi risiko mempengaruhi keputusan pelabur untuk melabur. Objektif kajian ini adalah untuk mengkaji hubungan antara 'maklumat tak simetri', 'pengetahuan kewangan', 'terlalu yakin', dan risiko persepsi bagi pelabur di Kota Kinabalu. Umur, jantina dan tahap pendidikan turut dikaji sama ada ia menghubung kait di antara 'maklumat tak simetri', 'pengetahuan kewangan', 'terlalu yakin' dan risiko persepsi. Soal selidik dengan menggunakan 7-Likert scale diedarkan kepada 150 responden di Syarikat Innosabah Securities Berhad. Sejumlah 100 soal selidik telah diisi. Data dianalisis menggunakan analisis faktor, 'Cronbach Alpha', 'Multiple regression' and 'Hierarchical regression analysis'. Responden bagi perempuan adalah 46% manakala lelaki adalah 56%, dalam lingkungan 24 tahun hingga 60 tahun dan 50% memegang sijil universiti. Analisis menunjukkan bahawa 'pengetahuan kewangan' ($p< 0.048$) dan 'terlalu yakin' ($p< 0.000$) didapati ia mempengaruhi persepsi risiko. Didapati bahawa umur, jantina dan tahap pendidikan tidak mempengaruhi di antara 'maklumat tak simetri', 'terlalu yakin' 'dan pengetahuan kewangan', dan persepsi risiko. Penemuan ini dapat membantu penasihat kewangan terhadap penilaian portfolio dan memberi nasihat yang baik kepada pelabur.*

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## ABBREVIATIONS

| | |
|---|---|
| IV | Independent variable |
| DV | Dependent variable |
| USA | United States of America |
| GAAP | Generally Accepted Accounting Principles |

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# CHAPTER ONE

# INTRODUCTION

## 1.1 OVERVIEW

Investing is to allocate money or capital into stocks, bonds, unit trust, savings for the purpose of obtaining an income or profit. Investment comes together with the risk of loss of the principal sum. The investment that has not been analyzed in detail can be risky because the possibility of losing money is not within the investor's control. In finance, investment is the commitment of funds by buying securities or other paper financial assets in the money market or capital markets.

An investor is a party that makes an investment with the objective of making a profit. Investors can be classified according to their investment styles. For this, an important investor psychology trait is risk perception. Behavioral finance use social, cognitive and emotional factors in the understanding of decisions of investors and their effects on market prices and returns. Behavioral finance highlights inefficiencies such as under- or over-reactions to information as causes of market trends and in extreme cases of bubbles and clashes. Such reactions have been attributed to limited investor attention, overconfidence and gambler fallacies.

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Different people invest with different strategies such as getting "inside information", tips from friends and encouragement from investment bankers and also through past experiences. Changes in attitude to take risk and changes in the performance in investment environment provide opportunities for investors to become involved in investing.

Potential investors must make investment decisions or taking risks in investments. Decision making processes included reasoning patterns of investors, emotional processes and the degree emotions play to influence the process. Investment involved taking risk or uncertainty that exist as to what eventual outcome will be. Risk perception maybe conceived as primarily a cognitive activity,

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involving the accurate appraisal of external and internal states. It is an idiosyncratic process that adds meaning to an objective situation and is itself shaped by knowledge, emotion, and experience (Roszkowski and Davey, 2010). However, investors are limited by their values, limited information and knowledge.

Factors influencing investors' choices are information asymmetry, overconfidence and financial knowledge. Changes with age, gender, and education level will also determine investors' risk perception.

## 1.2 PROBLEM STATEMENT

Investor behavior may respond differently under different situation and locations. Most of the reports regarding investors' behaviors are from market analysis or deducing from information relating to stock market index. Recently, there have been interests in conducting field studies on investors' behavior. Nik (2009) reported that investors are partially rational in making their investment decisions in Malaysia. Wang *et al.* (2006) found that most of the investors lack knowledge and skills when investing in stock market in China. Furthermore, in United Kingdom, Diacon (2004) indicated that individual investors have deficiency knowledge and understanding about financial products. Veld and Veld-Merkoulova (2008) found that risk perception give impact on risky investment.

Risk perception is based on how the investor perceived risk on the stock market. It influences investing behavior on how investors are willing to invest. Jacobs-Lawson and Hershey (2005) suggested that it would be interesting to study psychological variables that impact the decision making of investors. However, this study will be based on the risk perception which investors invest investment product but do not rely the importance of risk. There are many variables that influence risk perception. Among them are information asymmetry, overconfidence and financial knowledge. There were limited studies associating information asymmetry, overconfidence and financial knowledge to risk perception in investors in Kota Kinabalu. Therefore, it is interesting to investigate the investor's risk perception in order to understand and to help financial institution to approach potential investors.

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## 1.3 RESEARCH QUESTION

The research questions of this study are:

1. What is the relationship between the information asymmetry and risk perception?
2. What is the relationship between overconfidence and risk perception?
3. What is the relationship between financial knowledge and risk perception?
4. What demographic factors (age, gender, marital status, and education level) moderate the relationship between information asymmetry, overconfidence, financial knowledge and risk perception of investors in Kota Kinabalu?

## 1.4 RESEARCH OBJECTIVE

The research objectives for this study are:

1. To examine the relationship of information asymmetry on risk perception.
2. To examine the relationship between overconfidence and risk perception.
3. To examine the relationship between financial knowledge and risk perception
4. To determine whether demographic factors play a moderating role between information asymetry, overconfidence, financial knowledge and risk perception of investor in Kota Kinabalu.

## 1.5 SCOPE OF THE STUDY

The purpose of this study is to examine risk perception (dependent variable) of investors in Kota Kinabalu. Questionnaires were distributed to investors in Kota Kinabalu. Independent variables (information asymmetry, overconfidence and financial knowledge) were analyzed to determine their influence on investors' perception. Demographic factors such as age, gender and education level were moderating variable and were analyzed to determine their contingent effect on the independent variables, dependent variable relationship.

## 1.6 SIGNIFICANCE OF THE STUDY

This study will provide an in-depth understanding of investors' behaviour towards risk perception in the stock market in Kota Kinabalu. An appreciation on the relationship between information asymmetry, overconfidence and financial



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knowledge is important to identify investor behaviour and their reaction and willingness to take investment risks. Implication of this study would benefits investment financial advisors in advising potential investors and to influence investment decision making success, thus presenting an opportunity to make a superior investment return.

## 1.7 KEY VARIABLE DEFINITION

### 1.7.1 Risk perception

Many definitions can be described as risk. Liles (1981) defined risk as the probability of a negative outcome occurring from some course of action. Risk is the uncertainties where by investors invest with guessing and hoping high rate of return

### 17.2 Information asymmetry

Transaction of superior information which happens that the seller knows more than the buyer or vice versa.

### 1.7.3 Overconfidence

Investors with too much confidence in the accuracy of their judgment and their judgement are usually not as correct as they think they are.

### 1.7.4 Financial knowledge

The ability of a person to understand and possess a set of skill to determine the risk perception.

### 1.7.5 Demographic factors

Variables of a population such as age, gender, and education level.



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# CHAPTER TWO

# LITERATURE REVIEW

## 2.1 INTRODUCTION

Literature review on behavioral finance, conceptual definition of dependent variable (risk perception) and independent variables (information asymmetry, overconfidence, and financial knowledge) and moderator variables (age, gender and education level) will be presented in this chapter.

## 2.2 BEHAVIORAL FINANCE THEORY

Microeconomics was closely related to psychology. Early works by Kahneman and Tversky (1973) used cognitive psychology to explain decision making under risks and uncertainty that involved risks. Behavioural finance theory uses social, cognitive and emotional factors in understanding the economic decisions of those performing economic functions.

Behavioural finance is a part of finance that involves in psychological decision processes. Investor behaviour and stock market are closely related with each other in behavioural finance. Ricciardi and Simon (2000) studied the behavioural finance and found that emotional process influences investor in decision making process.

Baltussen (2009) stated that behavioural finance is a field of finance which explain psychology-based theories on stock market anomalies. An assumption is that sufficient information and market participants affect investor's investment decisions. Behavioural finance attempts to fill the void that market hypothesis cannot captured plausibly in models based on perfect investor rationality. Behavioural finance has two building blocks: cognitive (how people think) psychology (too confident with their experience) and the limits to arbitrage (predicting in what circumstances arbitrage forces will be effective and ineffective or when markets will be inefficient) (Ritter, 2003).



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Ricciardi and Simon (2000) included psychological factors in the behavioural finance theory where psychological factors influence the financial decision making process of individuals. Knowledge is a part of psychological factor that influence investors to make decision. Types of information determine the investor to seek and understand where the stock market is going. Thus, he or she will decide to make decision to purchase stock.

Emmanuel *et al.* (2010) mentioned that cognitive psychology, which investors' beliefs and preference are involved in investors decision making. Investment portfolio in stock market will be judged by investors and which portfolio market will be beneficial to them. Experience and memory to search information are the components that determine the investors to make decision. In addition, personal knowledge provides an opportunity when making comparisons.

Behavioural finance described psychological biases that will influence investor behaviour and stock prices (Nik, 2009). Investors refer to past performance to evaluate the present performance in stock market. They do not involve all asset categories. Their perspective will change when making decision as investors have make comparison during the period of time. Investors will behave aggressively when purchasing stock that they believe will have high profit gain. On the other hand, investors who do not any have confident only to purchase small amount of stock.

Ritter (2003) stated that the cognitive psychology include overconfidence where investors are confident on their abilities. In an entrepreneurship context, entrepreneurs are overconfident because they believed that participation in market industry do face risk and as a return, they will earn high profit. In finance, overconfident means too little diversification, investors only invest in one item rather than two or more items. Because of this, they invest too much in one stock company.

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Besides that, Ricciardi (2004) stated that psychology influence a person perceive risk of activity. Personality traits and demography play an important role which differs among survey respondents in this study.

## 2.3 CONCEPTUAL DEFINITION OF RISK PERCEPTION IN FINANCE

Risk is the matter of perception that is related to problems in business and economics (Brachinger and Weber, 1997). People assumed risk is a negative preference and bad outcome. However, Brachinger and Weber (1997) stated that risk increase when gamble appears many times and risk decreases when there are positive translations. For instance, risk is used to evaluate and predict choices under uncertainty.

In finance, risk is the main determinants of investment decision (Ozer *et al.*, 2004). Limited information exposes investors to greater risks. Insufficient information lead to investor act irrational when involve in decision making. Therefore, psychological factors are relevant in evaluating risk perception among investors.

Ricciardi (2007) focused on the risk perception in behavioural finance. In the literature review, behavioural approach is used in the risk to evaluate through laboratory experiment and questionnaire instrument. Questionnaire is the method that used to test on investors behaviour whether they have understand on risk perception towards stock market. Therefore, risk is classify as subjective and contained the beliefs, attitudes and feelings towards risk.

Willingness to take risk depends on how investor tolerates the risk. Some investors are conservative and are afraid to lose money. Risk perception is the maximum risk exposure that they want to take and comfortable with. They can make portfolio mix by doing ratio between stocks and fixed income and this could be the best method that can decrease the risk exposure (Chambers and Rogers, 2004).



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Furthermore, Ricciardi (2007) mentioned that risk tolerance is where investors feel better with the natural risk given type of investment. Product investments are those investors who feel comfortable with risk tolerance with their investment. To match their product investments, people tend to invest base on their risk level. Investors do not change their mind and consider what they perceived. Therefore, risk increases when investors invest more assets in investment (Kendirl and Tuna, 1999).

Several studies found that risk perception is influenced by psychological factors. McConnel *et al.* (1985) examined how the knowledge influences risk taking behaviour by using questionnaires through mail. It was found that investors' knowledge is positively correlated with specific risk-return preferences. Three risk-return preferences were then utilized to calculate risk preference such as investor's preference for income versus capital gains, dividends versus capital gains, and level or extent of risk aversion. The results showed that knowledge was positively relation to risk tolerance.

Houghton *et al.* (2000) introduced the three independent variables (laws of numbers, illusion of control, and overconfidence) to investigate the risk perception decision making. A surveyed was conducted with business college students. The findings showed that the laws of numbers and illusion of control decreased in risk perception and overconfidence was not correlated in risk perception.

Yip (2000) investigated the financial risk tolerance as a psychological trait. This study involved students and using on-line trading simulation, risk tolerance was measured pre competition and post competition (eight weeks after the competition). It was found that risk tolerance was not affected by financial experience and knowledge. In terms of trading strategies, males are more risk tolerant than women. Therefore, financial risk tolerance is considered as a trait.

Different level of risk was examined by Grable and Lytton (1999) by investigating the demographic, socioeconomic and attitude on individual behaviours. This survey was carried out in South-eastern United States and divided into two

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category respondents (above average versus below average risk tolerance investors). Statistical method discriminant analysis was utilized in grouping investors into risk tolerance.

Walia and Kiran (2009) analyzed investor's risk perception towards mutual funds services and found that investors' purchase decision for mutual funds is influenced by a chain of factors and investment avenue are determined by the risk and expected return. Structured questionnaire were used using 5 point Likert scale to measure risk perception towards various financial avenues. Respondents were investors who had experience of mutual fund investment. Ranking and raking methodology was also followed to prioritize the investor's preferences.

Veld and Merkoulova (2008) studied the risk perceptions of individual investors by asking experimental questions to 2226 members of a consumer panel. Questionnaire contained experimental questions in the form of pairwise comparisons. The result showed that stock investors choose semi-variance as a risk measure while bond investors favour probability of loss. Respondents with a preference for the semi-variance as a risk measure were more likely to hold individual stocks. The results of regressions analysis showed that benchmarking for risk measurements in ascending order were market return, risk-free rate of return and original investment value. The different types of risk attitudes among individual investors found significant directly translate into their investment behaviour.

Sung and Hanna (1996) investigated that financial risk has on effect of financial and demographic variables. Subjects were employed respondents who had in the 1992 Survey of Consumer Finances. To measure this, logistic regression analysis showed that female headed household were risk tolerant as compared to male head or a married couple. In this research, gender, marital status, ethnic group and education found difference in understanding of the nature of risk.

Hence, in this study, risk perception is conceptualized because they are measurable, and can be self rated by respondents. The risk perception as dependent variable is in line with previous studies.



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