

**An Empirical Study on Behavioural Factors Influencing Individual Investors
Decision Making in Nepal Stock Exchange**

A Thesis Proposal

Submitted By

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Introduction

1.1 Background of the study

Stock market is a market where stocks are bought and sold (Zuravicky, 2005). In an economy, besides playing the role of a source for financing investment, stock market also performs a function as a signaling mechanism to managers regarding investment decisions, and a catalyst for corporate governance (Samuel, 1996). However, stock market is best known for being the most effective channel for company's capital raise (Zuravicky, 2005). People are interested in stock because of "long-term growth of capital, dividends, and a hedge against the inflationary erosion of purchasing power" (Teweles & Bradley, 1998). The other feature that makes the stock market more attractive than other types of investment is its liquidity (Jaswani, 2008). Most people invest in stocks because they want to be the owners of the firm, from which they benefit when the company pay dividends or when stock price increases (Croushore, 2006). However, many people buy stocks for the purpose of control over the firms. Regularly, shareholders need to own specific amount of shares to be in the board of directors who can make strategic decisions and set directions for the firms.

Tracing back to the past, financial activities relating to stock market seemed to exist in ancient civilization. The Roman became the pioneer in establishing corporative organizations, of which capital was raised by selling shares into the public, for bidding government contracts in the second century BC (Sobel, 2000; Smith, 2004). The place for trading in Rome was near the Temple of Castor, which was called Forum (Smith, 2004). The Forum was said to be regarded as an immense stock exchange where people bought and sold not only shares, bonds but also various goods for cash (Smith, 2004). By 1000, although some share-holding firms were held in Europe resembling old Roman companies, sole proprietorship was preferred (Sobel, 2000). By the fifteenth century, the first brokers appeared (Sobel, 2000, p.4). During this period, Rialto Bridge of Venice was the business center for Europe (Sobel, 2000). The commercial revolution during the sixteenth, seventeenth and eighteenth century was the impetus for the boom and bust in hundreds of joint-stock ventures (Sobel, 2000). The first active market was held in Antwerp and then in Amsterdam in the sixteenth century, which was the financial center of northern Europe (Smith, 2004). London Stock Exchange was formed in 1801 by brokers and dealer (Smith,

2004). In America, a place for trading slaves and corn was first held by a group of merchants in 1752, and then a formal market was established at the foot of Broad Street and later in Fraunces Tavern (Sobel, 2000).

Nowadays, the stock markets are classified into three types: developed (such as the USA, the UK, Japan, EU...), emerging (such as Mexico, China, India...) and frontier or pre-emerging (such as Vietnam, Estonia, Kenya...) due to the quality of markets criteria (FTSE, 2011). The USA is the most world-scale powerful economy, which has strong impacts on global security markets (Reza, Zamri & Tajul, 2009). Reza, Zamri and Tajul (2009) stated that Asian stock markets tend to fall into the control of the New York index on a day-to-day basis. Whereas, Patricia and Oluwatobi (2005) found that the major stock markets of the world including the US, the UK and the EU, are converging at least over the long-term period, although, the US and the UK stock markets seem to be less bound to a common trend. In other words, the influence and the dependence of stock markets on the others are relatively high. Therefore, the global issues such as: terrorist movements, energy crisis, natural calamity have had a great influence on the volatility of all security markets around the world, specifically in the USA, the UK and Japan (Fernandez, 2006).

1.2 Research problem

In business world, there are millions of decisions made around the world every minute. Investment decisions are not an exception of this statement. Behavioral factors affecting the decision making process in the world of investment are many and various.

One type of these factors is related to investors' psychological compositions which are responsible for their financial behaviour.

The behavioural factors influencing investment decision making are many and haven't been studied in Nepal particular in Nepal Stock Exchange, Hence, this research will try to uncover the behavioural factors standing behind the investment decision making process as they are affecting the decisions made by investors in Nepalese stock Exchange. So, what impact do behavioural factors have on individual investors' investment decision making in Nepalese stock Exchange Market?

1.3 Research objectives

There is one main objective: To investigate the impact of the behavioural factors within the domain of the Prospect and Heuristics theories on investment decision making of individual investors in Nepalese Stock Exchange.

There are a number of sub objectives:

- To measure the impact of overconfidence on the financial behaviour of individual investors in Nepalese Stock Exchange
- To determine the impact of loss aversion on the financial behaviour of individual investors in Nepalese Stock Exchange.
- To assess the impact of representativeness on the financial behaviour of individual investors in Nepalese Stock Exchange.
- To examine the impact of price anchoring on the financial behaviour of individual investors in Nepalese Stock Exchange.
- To measure the impact of regret aversion on the financial behaviour of individual investors in Nepalese Stock Exchange.

1.4 Research hypothesis

- H1: There is significant relationship between over confidence and investment decision at Nepal Stock Exchange.
- H2: There is significant relationship between loss aversion bias and investment decision Nepal Stock Exchange.
- H3: There is significant relationship between regret aversion bias and investment decision Nepal Stock Exchange
- H4: There is significant relationship between price anchoring and investment decision Nepal Stock Exchange.
- H5: There is significant relationship between representativeness and investment decision Nepal Stock Exchange.

1.5 Significance of the study

The study is important for many parties due to different reasons as follows:

- ***To the individual investors:*** The research is a good reference of stock-investment behavior for the investors to consider and analyze the stock market trend before making suitable decisions of investment.

- ***To the security organizations:*** The research provides them with a good background for their prediction of future stock-market trend and giving more reliable consultant information to the investors.
- ***To the field of behavioral finance:*** The concepts of behavioral finance are relatively new in comparison to other financial theories. In developed security markets, behavioral finance is applied widely to explore the behaviors that impact the investment decisions; however, as mentioned above, behavioral finance has the limited number of application for less developed security markets. This study is done with hope to confirm the suitability of using behavioral finance for all kinds of stock markets.
- ***To the authors:*** The research provides a good chance for the authors to understand more theoretically and practically about the stock market as well as the theories of behavioral finance.

1.6 Limitation of the study

Every study has some limitations. This research was also undertaken within the following limitations:

- Respondents emotions, perception and suggestions are not included in this research.
- The sample will be taken from randomly selected respondents, who might not represent the whole population
- The size of the sample was relatively small. A bigger sample would probably enhance the reliability of the research.
- As respondents are chosen from ten leading securities companies, generalization for the whole population is not perfectly fulfilled although random sampling is applied.

1.7 Organization of the study

The study has organized into five chapters each denoted to some aspects of study of clearing and settlement system. The title of each chapter is as follows:

Chapter-1 Introduction

In this section, we will include general background of the study, statement of problem, objective of the study, significance of the study and limitations of the study.

Chapter-2 Review of Literature

Regarding the research in any topics there should be consisted about the literature review; because it makes attractive and simplicity to a report. This chapter will also consist of the review of literature, conceptual review and review of related journals, books and previous studies relevant to study.

Chapter-3 Research Methodology

The third chapter explains the research methodology used or the purpose of the study, which includes research designing, source of data, data collection procedure, population and sample size of the study, data processing procedure and financial as well as statistical tool, analytical tools, description, comparison and so on.

Chapter-4 Data Presentation and Analysis

The body of report is defined by this chapter; will attempt to analyze and evaluate the data with the help of analytical tools and interpret the result according to input, process and output method. Collection and presentation of data will be input, analysis of data will be process and findings or summary will be output.

Chapter-5 Summary, Conclusion and Recommendations

This chapter will sum up the results obtained through analysis and provides reasonable recommendation as per the result of the study. Findings of the study will also be covered in this chapter. Being an end section of the study; will be depended upon the conclusion with references and appendices.

2. Literature review

In an ideal framework, a security's price equals its "fundamental value" as frictions do not exist and agents seem to be rational. The fundamental value is said to be the "discounted sum of expected future cash flows", in the context that investors are able to process all available information accurately and the discount rate is consistent with the accepted preference specification (Barberis & Thaler, 2003). The Efficient Markets Hypothesis (EMH), which supports the opinion that actual prices reflect fundamental values, affirms that prices are right as they are determined by agents, who are sensible preferences and understand Bayes' law, which relates to conditional probabilities (the probability of an event given by another one). Moreover, efficient market is the market where average returns cannot be greater than what are warranted for its risk despite whatever investment strategy is applied (Barberis & Thaler, 2003). According to EMH, although not all investors are rational, the markets are assumed to be rational.

Initially, the behavioral finance was not widely accepted (Kim & Nofsinger, 2008) and the study of DeBondt and Thaler was not an exception as it was doubted and faced a lot of arguments (DeBondt & Thaler, 1995). Recently, "the ramifications of less-than rational agents" have been explored based on many theoretical models. At first, most of studies concentrated on asset pricing, however, recently, the effects rather than rational ones that managers may have in decision making process have been incorporated in many models. Barberis and Thaler (2003) are considered as one of the famous writers who provide an excellent study about various types of behavioral biases that affect decision making as well as financial markets.

Heuristic theory

Heuristics are defined as the rules of thumb, which makes decision making easier, especially in complex and uncertain environments (Ritter, 2003) by reducing the complexity of assessing probabilities and predicting values to simpler judgments (Kahneman & Tversky, 1974). In general, these heuristics are quite useful, particularly when time is limited (Waweru et al., 2008), but sometimes they lead to biases (Kahneman & Tversky, 1974; Ritter, 2003). Kahneman and Tversky seem to be ones of the first writers studying the factors belonging to heuristics when introducing three factors namely

representativeness, availability bias, and anchoring (Kahneman & Tversky, 1974). Waweru et al. also list two factors named Gambler's fallacy and Overconfidence into heuristic theory (Waweru et al., 2008).

Representativeness refers to the degree of similarity that an event has with its parent population (DeBondt & Thaler, 1995) or the degree to which an event resembles its population (Kahneman & Tversky, 1974). Representativeness may result in some biases such as people put too much weight on recent experience and ignore the average long-term rate (Ritter, 2003). A typical example for this bias is that investors often infer a company's high long-term growth rate after some quarters of increasing (Waweru et al., 2008). Representativeness also leads to the so-called "sample size neglect" which occurs when people try to infer from too few samples (Barberis & Thaler, 2003). In stock market, when investors seek to buy "hot" stocks instead of poorly performed ones, this means that representativeness is applied. This behavior is an explanation for investor overreaction (DeBondt and Thaler, 1995).

Prospect theory

Expected Utility Theory (EUT) and prospect theory are considered as two approaches to decision-making from different perspectives. Prospect theory focuses on subjective decision-making influenced by the investors' value system, whereas EUT concentrates on investors' rational expectations (Filbeck, Hatfield & Horvath, 2005). EUT is the normative model of rational choice and descriptive model of economic behavior, which dominates the analysis of decision making under risk. Nonetheless, this theory is criticized for failing to explain why people are attracted to both insurance and gambling. People tend to underweigh probable outcomes compared with certain ones and people response differently to the similar situations depending on the context of losses or gains in which they are presented (Kahneman & Tversky, 1979). Prospect theory describes some states of mind affecting an individual's decision-making processes including Regret aversion, Loss aversion and Mental accounting (Waweru et al., 2003).

Regret is an emotion occurs after people make mistakes. Investors avoid regret by refusing to sell decreasing shares and willing to sell increasing ones. Moreover, investors tend to be

more regretful about holding losing stocks too long than selling winning ones too soon (Forgel & Berry, 2006; Lehenkari & Perttunen, 2004). Loss aversion refers to the difference level of mental penalty people have from a similar size loss or gain (Barberis & Huang, 2001). There is evidence showing that people are more distressed at the prospect of losses than they are pleased by equivalent gains (Barberis & Thaler, 2003). Moreover, a loss coming after prior gain is proved less painful than usual while a loss arriving after a loss seems to be more painful than usual (Barberis & Huang, 2001). In addition, Lehenkari and Perttunen (2004) find that both positive and negative returns in the past can boost the negative relationship between the selling trend and capital losses of investors, suggesting that investors are loss averse. Risk aversion can be understood as a common behavior of investor, nevertheless it may result in bad decision affecting investor's wealth (Odean, 1998).

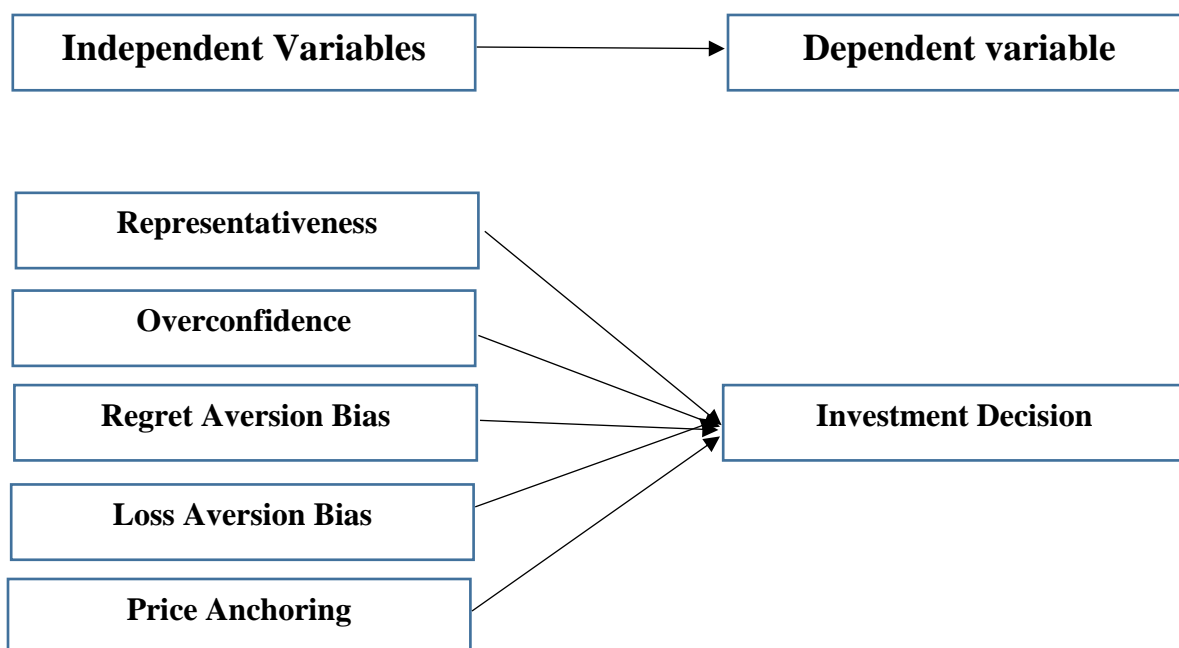
Market factors

DeBondt and Thaler (1995) state that financial markets can be affected by investors' behaviors in the way of behavioral finance. If the perspectives of behavioral finance are correct, it is believed that the investors may have over- or under-reaction to price changes or news; extrapolation of past trends into the future; a lack of attention to fundamentals underlying a stock; the focus on popular stocks and seasonal price cycles. These market factors, in turns, influence the decision making of investors in the stock market. Waweru et al. (2008) identifies the factors of market that have impact on investors' decision making: Price changes, market information, past trends of stocks, customer preference, over-reaction to price changes, and fundamentals of underlying stocks.

Normally, changes in market information, fundamentals of the underlying stock and stock price can cause over/under-reaction to the price change. These changes are empirically proved to have the high influence on decision-making behavior of investors. Researchers convince that over-reaction (DeBondt & Thaler, 1985) or under-reaction (Lai, 2001) to news may result in different trading strategies by investors and hence influence their investment decisions. Waweru et al. (2008) conclude that market information has very high impact on making decision of investors and this makes the investors, in some way, tend to focus on popular stocks and other attention-grabbing events that are relied on the stock

market information. Moreover, Barber and Odean (2000) emphasize that investors are impacted by events in the stock market which grab their attention, even when they do not know if these events can result good future investment performance. Odean (1998a) explores that many investors trade too much due to their overconfidence. These investors totally rely on the information quality of the market or stocks that they have when making decisions of investment.

Theoretical framework



Overconfidence:

It can be summarized as unwarranted faith in one's intuitive reasoning, judgments, and cognitive abilities. In overconfidence, subjects overestimate both their own predictive abilities and the precision of the information they've been given. So, investors overestimate their ability and the accuracy of the information they have.

Representativeness:

Two primary interpretations of representativeness bias apply to individual investors. First: Base-Rate Neglect: In base-rate neglect, investors attempt to determine the potential success of, say, an investment in Company by contextualizing the venture in a familiar,

easy-to-understand classification scheme. Second: Sample-Size Neglect: In sample-size neglect, investors, when judging the likelihood of a particular investment outcome, often fail to accurately consider the sample size of the data on which they base their judgments.

Loss aversion bias:

Loss aversion bias was developed by Daniel Kahneman and Amos Tversky in 1979 as part of the original prospect theory specifically, in response to prospect theory's observation that people generally feel a stronger impulse to avoid losses than to acquire gains.

Regret aversion bias:

People exhibiting regret aversion avoid taking decisive actions because they fear that, in hindsight, whatever course they select will prove less than optimal. Basically, this bias seeks to forestall the pain of regret associated with poor decision making. Therefore, individuals make decisions in a way that allows them to avoid feeling emotional pain in the event of an adverse outcome.

Price anchoring:

It is a psychological heuristic that influences the way people intuit probabilities. Investors exhibiting price anchoring are often influenced by purchase points or arbitrary price levels or price indexes and tend to cling to these numbers when facing questions like should I buy or sell this security?

3. Research Methodology

Research introduction

Research Methodology, the combination of these two terms itself defines its meaning – if we define the terms separately the literal meaning of the term can be understood. Here research is basically considered as a movement from the known to the unknown- i.e. it is the systematized effort to gain new knowledge. In other words, research is to investigate or say repeatedly search in an effort to discover answers to the unsolved problems.

Research design

Descriptive analysis methodology will be applied, primary and secondary data sources, and data collection through a questionnaire designed particularly to address the issues of

interest. The questionnaires will target the target sample, the individual investors in the Palestine Stock Exchange. The collected data will be analyzed by SPSS.

Research population and sample:

The population of the study will be the small individual investors in Nepal Stock Exchange in Kathmandu valley who has invested less than Nrs 2 million in the equity share market of Nepal. It includes Individual investors at Nepal Stock Exchange.

Research parameter:

- **Time parameter:** This research will be done in December 2020-January 2021.
- **Place parameter:** This research is limited by the place limits Kathmandu valley.
- **Human parameter:** The sample in this research will include individual investors in Nepal Stock Exchange.
- **Subject parameter:** This study will be restricted to testing the impact of the behavioural factors included in the Prospect and Heuristics theories.

Sources of data

Data necessary for the study will be collected mainly from primary sources. Five point likert scale structured questionnaire will be distributed to the investors of Nepal stock exchange. Similarly, for the purpose of literature review the required information will be taken from annual reports of the specific banks. Besides the supportive data for this study was gathered from various sources like: books, newspapers, periodical and bulletins, magazines, annual reports of the concerned banks via internet and self-collection, different booklets (NRB/Statistical Bureau), various articles and journals, wide range of websites, different college libraries, selected published and unpublished thesis reports, informal chat with people having knowledge on this area.

Data processing and analysis

The tabulated data will be analyzed and interpreted with the help of different statistical tools such as pie chart, bar diagram, averages and percentages. Descriptive statistics like percentage and mean/ simple average were used mainly as necessary. For testing the hypotheses, Pearson Correlation Coefficient was used. The major objective of the research will be used to test the relationship between independent and dependent variables and find

out the impacts of heuristic and prospect variables on investment decision making in Nepal Stock Exchange. SPSS software was used to calculate correlation coefficient and test hypotheses. To collect data, websites of the sample banks were browsed. Published annual reports were downloaded from their websites.

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