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碩士論文

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蒙古國股票投資人之處分效果探討

A Study of the Disposition Effect for Individual Investors in the

Mongolian Stock Market

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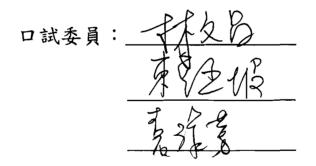
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企業管理學系管理科學碩士班 碩士學位論文

蒙古國股票投資人之處分效果探討

A study of the disposition effect for individual investors in the mongolian stock market

經考試合格特此證明





口試日期:中華民國 109 年 12 月 31 日

Letter of Recommendation for ABT Masters

Enkhgerel Batbaatar, a student of NHU Master Program for Business Administration for 2.5 years, has completed all of the courses and theses required for graduation.

- In terms of studies, <u>Enkhgerel Batbaatar</u> has acquired <u>36</u> credits, passed all of the obligatory subjects such as <u>Research Methods</u>, <u>Management Science</u>, <u>Seminar on Marketing Management</u>, <u>Seminar on</u> <u>Business Ethics</u>, etc. (Please refer to transcript.)
- 2. In terms of theses, <u>Enkhgerel Batbaatar</u> has completed the following:
 - i. Master thesis : A study of the disposition effect for individual investors in the Mongolian stock market
 - ii. Conference : A study of the disposition effect for individual investors in the Mongolian stock market

Academic Advisor: 14/2 Date:

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109學年度第1學期碩士論文摘要

論文題目:蒙古國股票投資人之處分效果探討

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論文摘要內容

本研究探討在股票市場行為特徵中,投資者決策過程中的投資情緒和認知因素,根據 處置效果與預期理論建立蒙古國個人投資者的股票投資行為模型。本研究以蒙古國股 票投資人為研究對象,共計發出 300 份問卷,再以 SPSS 統計軟體進行分析,根據本 研究實證分析結果提出以下結論:蒙古國不同年齡投資者的平均投資經驗以及處置效 應存在顯著差異。迴歸分析的結果,性別、年齡、教育、收入和股票投資經驗,對避 免後悔、心理帳戶、追求驕傲和厭惡損失具有顯著正向影響。

關鍵詞:處置效果、蒙古股票市場、預期理論、個人投資者

Title of Thesis: A Study of the Disposition Effect for Individual Investors in the Mongolian Stock Market

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Name of Student: Enkhgerel Batbaatar Advisor: Cheng-Po Lai

Abstract

This study attempts to determine a behavior model of individual Mongolian investors consistent with the disposition effect and therefore the prospect theory. The research is conducted on the behavioral characters of the financial sector and explores whether the emotional and cognitive factors in the decision-making process of investors. This study attempts to determine a behavior model of individual Mongolian investors consistent with the disposition effect and the prospect theory. To do so, it conducts an analysis of ANOVA from questionnaire survey to investigate the latent psychological effect factors behind the disposition effect. In the result that there are significant differences among the averages of trade experience, avoiding regret, as well as avoiding regret based upon education in Mongolia. Moreover, the results also show that there are significant differences among the averages of trade experience as well as disposition effect in different age and income of investors in Mongolia. The results of regression analysis which is Gender, Age, Education, Income and Trade experience factors has strong positive impact of the Avoiding regret, Mental accounting, Seeking pride and Loss aversion.

Keywords: Disposition effect, Mongolian Stock Market, Prospect Theory, Individual investors

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CHAPTER ONE INTRODUCTION

1.1 Research Background and Motivation

In recent years, Mongolian stock market is growing rapidly. The starting point for the stock market process is an investor decision. It is very important for investors to make an investment decision. The investment decision specifies the market information of the asset, the trend and the psycho-social impact of the investor are world-wide. This topic was studied relatively little in Mongolia, with only one research work called "Confusion Analysis". In this connection, this study, will investigate how disposition effect the investment decisions of Mongolian individual investors. Several researchers have suggested that individual decision-making effects may affect individual investment decisions. Through controlled experiments, Kahneman and Tversky, (1979) proposed the prospect theory to research individual investment behavior and therefore the decision-making process under risk. There is a direct correlation between the stock exchange and therefore the economy, because the capital market improves as the economy improves. On the contrary, the expansion of the economy features a positive effect on the stock market. Therefore, the choices taken by the investors within the market play a crucial role in determining market trends and successively affect the economy. It is important to examine the psychological characteristics of those who are trading on Mongolian stock exchanges in order to better interpret the decisions of investors, and to investigate the behavioral factors affecting their decisions and how these factors influence investment performance. This study will help them understand their responses and help them make a right decisions.

1.2 Research Objective

The purpose of the study is to identify the behavior of individual investors in the Mongolian stock market and to help them make a right decision to investments. Based on the on top of analysis background and analysis motivations, this study collects information and conducts surveys of individual investors in Ulaanbaatar, Mongolia. Why emphasis only individual investors? There is a logical and emotional component within each individual that varies from person to person. Individuals use both logic and emotions when making decisions. When making an investment you must be able to process both the logical and behavioral data to make a good decision. But you cannot know everything you need to know and process. For these and other reasons we will make a subpar decision at time. This is the case with the most analytical individuals.

The main objective of the study often summarized as follows:

- 1. To investigate how disposition effect the investment decisions of Mongolian individual investors.
- 2. Identify patterns of behavior of individual investors in Mongolian stock market.
- Determine the characteristics of their investment decision of investors in Mongolian stock market.

The main contribution of the study can be summarized as follows:

- 1. This study will contribute the disposition effect and determine its possible properties for Mongolian investors.
- 2. Set up a conduct model of Mongolian investors consistent with the disposition effect result and also the prospect theory.
- 3. Identify the relationship between investment behavior and also the disposition effect, that specialize in individual investors.

1.3 The Procedure of the study

The study examines disposition effect of Mongolian individual investors in some company of stock market in Ulaanbaatar, Mongolia. The framework offers theoretical backgrounds in finance, the theory of all dependent and independent decision making as mentioned above. Then, using the quantitative research model to conduct surveys, the study will collect data and draw final conclusions. The research process is described in Figure 1-1 as below:

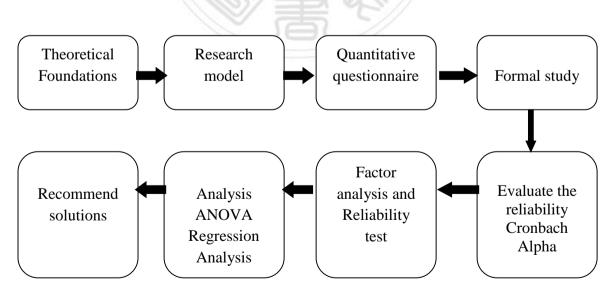


Figure 1.1 Research process

1.4 Structure of the study

The analysis paper has five chapters and also the outline for every chapter. Chapter one presents the analysis background and motivation, analysis objectives, procedure and therefore the structure of the study. Furthermore, Chapter two includes the previous literature related to Mongolian stock market, current state of investment, individual investors, definition of behavioral finance, disposition effect. Chapter three introduces the research model and constructs measurement. This chapter includes demographic information of survey respondents, data analysis procedures. Chapter four presents data analysis and results, demographic characteristics, factor analysis and reliability test, independent sample T-test, one-way analysis of variance (ANOVA) and Regression analysis. Chapter five introduces about conclusion.



CHAPTER TWO LITERATURE REVIEW

2.1 Historical development of the Mongolian Stock Market

A stock market is a form of financial market that regulates economic relations arising from the use of temporary funds through the sale and purchase of securities and the creation of credit and investment sources.

The stock market is one in all the quickest growing sectors in Mongolia over the last two years. At the beginning of 2017, Mongolia's total market capitalization reached 524 million USD, and was 899 million USD at the end of November. In other words, it has increased by 70 percent during this period. As a result, by 2018, the total value exceeded 937 million USD. The total trading volume reached 91 million USD by "Mongolian Stock Exchange" JSC and "Mongolian Securities Exchange" LLC by the end of the year. According to the total trading volume there is 11 million USD in the primary trading market, 67 million USD in the secondary market, 12 million USD in the government securities, and 236 thousand USD bond company and total 374 thousand USD in Mongolian Stock Exchange's primary market trading corporate bonds and 109 thousand USD for the secondary market. A detailed registration of the securities regulation committee of the Financial Regulatory Commission is registered with a total of 307 Joint-stock market companies. In 2019, there have 52 securities companies are operating according to the license issued by the Committee.

The following are the historical dates of the Mongolian stock market in Fig. 2.1.:

formalized and the citizens' rights were officially approved 1991, Mongolian Stock Exchange was established by Resolution No. 22. 1992, the first trade on privatization of investment vouchers was made on the Mongolian Stock Exchange. 96.4 million shares of 3 million USD, 1.2 million investors traded on 470 stock companies. 1995, the sale of shares between shareholders to share money was started. The market capitalization reached 20 million USD. Mongolian 1999, The TOP-75 index comprises stocks of the top 75 companies. Stock Market In 2003, changed the TOP-20 index. In 2005, "Mongol Shiltgeen" Co., Ltd was first established and 44792 shares were issued. At that time 393 JSC companies were registered. In 2007, Number of domestic investors increase and share prices increase, 6 companies raised their IPOs, and 2 companies raised additional stocks, with market demand rising as demand increase.

In 2011, established a Business master construct with London Stock Exchange.

1990, the amendment to the constitution and civic laws was

In 2018, LEND MN JSC became the most tailor-made company among the securities issuers in the Mongolian capital market.

Figure 2.1 Historical Dates of the Mongolian Stock Market

2.1.1 Current state of the Mongolian Stock Market

In our country, the stock market is under the supervision of a Mongolian stock exchange with intermediary companies that meet the rules and regulations approved by the Financial Regulatory Commission. The stock market is a market for issuing, placing, shopping for and commerce securities for investment over amount of time. In the marketplace, the stock exchanges perform the following these include:

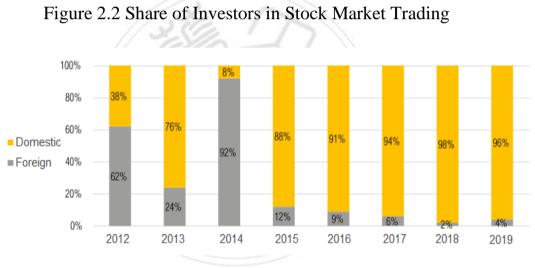
- Increase the assets of the companies and expand their operations.
- Savings can be invested.
- Provides opportunities for small investors.
- Governments are able to make money for infrastructure development.
- Stock Exchange indices measure the country's economic progress. (Mongolian TOP-20 index, American S&P500, Japan Nikkei 225, British FTSE 100)

2.2 Mongolian Individual Investors

These are key players on the capital market. There are 302,050 foreign and domestic investors on the MSE. State investors account for 40% of the total stock, 813 big investors hold 56%, and the remaining 4% is held by 301,237 small investors due to stock concentration. For the reason of there being state-owned coal-mining companies, the parliament decided to distribute 1,072 of their shares to each citizen to assure equal benefit for the population. As a result, thousands of individuals opened an account at the Mongolian Securities Clearing House and Central Depository. The depository has 785,863 accounts in total, of which 99.4% are held by domestic individuals and the remaining 0.6% are held by 1,768 foreign individuals, 2,429 domestic entities, and 177 foreign entities.

In terms of investor share in market trading, the composition of

domestic and foreign investors has changed dramatically due to the economic situation, the investment law, the legislative environment, and the activeness of domestic investors. Foreign investment has been quite volatile since the beginning and it significantly increased during the mining boomled economic growth years. During 2017, the share of foreign enterprises and individuals in the total trading volume at the MSE, was 4%; domestic enterprises and local investors accounted for the balance of 96%. At the end of 2017, total market capitalization reached MNT 2.4 trillion, a figure MNT 271.6 billion higher than the highest economic growth period of 2013.



Source: FRC (2019) Annual Report

2.3 Definition of Behavioral Finance

Behavioral finance examines how people engage in financial activities. Especially the psychology of learning affects financial decision making, corporations, and financial markets. Depending on time and situation, the "Behavioral Finance" is the same as the content, but it is defined in different ways in relation to the scope and purpose of the study. Therefore, this study was determined as follows: Behavioral finance "is a subject of studying the effects of psychical impact on financial market participants" decisions and how it affects the market. The subject is based on experiments and theories as to why the decision was based on an investor's emotions or "intuition". Behavioral theorists focus on measuring the decision-making process, which is related to factors such as emotions and uncertainty.

Behavioral finance is that the study of the influence of science on the behavior of investors or financial analysts. It focuses on the precise undeniable fact that investors is not going to be invariably rational, maintain limits to their self-control, and are influenced by their very own biases. In 1979, "Prospect Theory" of Daniel Kahneman and Amos Tversky: The Decision-Making Approach in Risky Environments The financial analysts' relations and action studies of economists surveyed by the centuries have led to theoretical "behavioral finance" today. Kahneman and Tversky's research was developed by Richard Taylor in 1980 and was published as "Toward a Positive Theory of Consumer Choice."

Uncertainty in making decisions is considered under condition risk-based "Prospect Theory".

2.4 Disposition Effect

The disposition effect is that the propensity for investors to hold losing positions too long and to sell winning positions too early Shefrin and Statman, (1985). This phenomenon frequently outlined as, disposition to "ride losers for extensive interval of time". Barber et al., (2007), Chen et al., (2007), Boolell-Gunesh et al., (2009), and Lee et al., (2012) has been proposed as a possible explanation for market anomalies as widespread as momentum obtainable returns (Grinblatt and Han, 2005; Hur et al., 2010) and post earnings announcement drift (Frazzini, 2006). The unreasonable religion that prices will return on frequent creates a bent for traders to vend their profitable

securities to avoid the development reversal and postpone the sale of shedding securities to require benefit of the development reversal. Differently we see the disposition effect play out is that the loss aversion related to the form of the investor valuation function consistent with which the disposition effect is that the results of the various treatment of gains and losses relative to a point of reference. The authors clarify that traders maintain on to shares with losses to avoid the feeling of regret, whereas they vend shares with good factors to be certain that a way of satisfaction (Muermann and Volkman, 2007; Petit, 2010; Rau, 2015; Shefrin and Statman, 1985).

2.4.1 Prospect Theory

This examine presents a critique of anticipated utility principle as a descriptive model of deciding under risk, and develops an alternate model, known as prospect theory. As a distinguished concept of decision-making beneath uncertainty, prospect theory was first proposed by Kahneman and Tversky (1979) and prolonged by Tversky and Kahneman (1992). Under prospect theory, investors consider outcomes, not according to ultimate prosperity levels, but according to their perception of gains and losses relative to a point of reference, typically the acquisition price; investors are extra delicate to losses than to gains of an equivalent magnitude and investors are risk-averse for gains and risk-seeking for losses. Especially, individuals underweight outcomes are merely possible as in contrast with outcomes which are obtained with certainty. An alternate theory of choice is developed, throughout which value is assigned to gains and losses as a substitute of to closing property and by which possibilities are changed by decision weights. A standard explanation of the disposition effect refers to prospect theory and mainly to the asymmetric risk aversion in line with which investors are risk averse when confronted with positive aspects and risk-seeking when confronted with losses. This theory cites that the investor's value system effected the decision-making process. Prospect theory's several behavioral variables are avoiding regret, mental accounting, seeking pride, loss aversion.

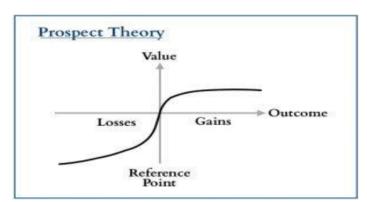


Figure 2.3 Prospect Theory

Source: iFAST compilations

2.4.2 Avoiding Regret

Avoiding regret is a psychological bias that is faced out of extreme specialize in emotions of regret on the time of deciding, which turned out to be poor, primarily as a result of the outcomes of the selection are visibly higher for the investor to understand. Alternative commonly confused word theories describing how determination makers behave underneath uncertainty own been proposed, resulting in the event of prospect idea Kahneman and Tversky, (1979). Barberis and Thaler, (2003). Specifically, Shefrin and Statman (1985) used prospect theory to indicate that investors may maintain shedding trades longer than worthwhile ones a now documented phenomenon labeled because the disposition effect. Furthermore, proof means that investors' unwillingness to chop their losses is carefully related to the conceit of regret, which may be accentuated by having to confess their errors to individuals Kahneman et al., (1982). Investors may avoid selling loss-making shares in an effort to don not the remorse of getting made a foul funding selection and the discomfort of reporting the loss. Regret aversion permits the investors to take sub-optimal choices and holding onto a poorly-performing stock for long.

2.4.3 Mental Accounting

Mental Accounting is perhaps stated because the set of cognitive operations employed by individuals and households to rearrange consider and preserve file of financial actions leading to an inclination for people to separate their cash into separate accounts supported a ramification of subjective reasons. Individuals are inclined to assign totally different features to every asset group, which has frequently irrational and detrimental impact on their consumption choices and different behaviors. Mental Accounting may be described because the codes of individuals use when evaluating an investment choice resulting in low or no diversification of investment.

2.4.4 Seeking Pride

The important thought is that an investor who regrets investing while a dropping stock would love to maintain holding the stock and hope that it goes up in price so that he could avoid regret. On the opposite hand, the investor's feeling of pleasure from invested in a winning stock causes him to sell the stock; if the stock had gone down later, the investor would own foregone the seeking pride. Of their model, the authors assume the investors are comparatively extra involved about remorse than they're joyful about pride.

2.4.5 Loss Aversion

Loss aversion is an inclination in behavioral finance the place investors are so afraid of losses that they concentrate on attempting to try not to a loss more so than on making gains. Research on loss aversion exhibits that traders really feel the ache of a loss greater than twice as strongly as they really feel the enjoyment of creating a profit. Loss aversion is that the mistake that investors assign extra significance to losses than they assign to gains. Whereas making investment decisions, losses and disadvantages hold higher affect over preferences than beneficial properties and advantages. Barberis and Thaler, (2003) observed the evidence showing that people are more distressed at the prospect of losses than they are pleased by equivalent gain. Moreover, a loss coming later prior achieve is proved much less painful than normal whereas a loss arriving afterwards a loss appears to be extra painful than standard Barberis and Huang, (2001).



CHAPTER THREE RESEARCH METHODOLOGY

3.1 Research Model

Supported the above research hypotheses development, as a research framework as shown in Figure 3.1.

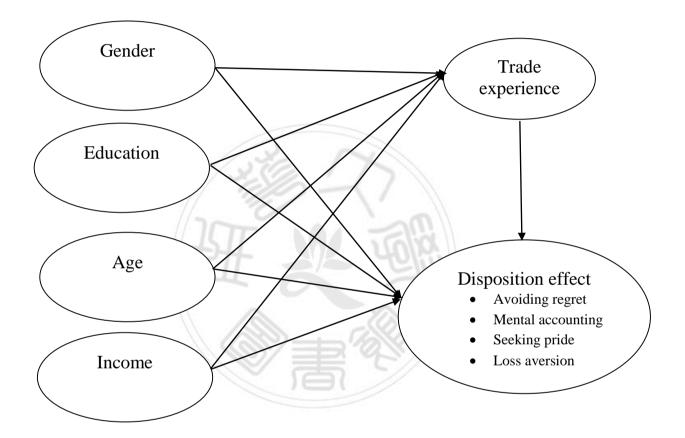


Figure 3.1 Proposed Research Framework

3.2 Constructs Measurement

This study examined relationship among four research constructs and assessing the relationships among each variable. These constructs are avoiding regret, mental accounting, seeking pride, loss aversion. A survey, questionnaire items and scales were designed by adapting the measurement that had been validate by other previous researcher or by converting the definitions of each constructs.

All the items use the five-point Likert Scales to measure from 1=strongly disagree to 5=strongly agree. The questionnaire items are shown in Table 3-1 below:

Table3. 1 Measurement of Avoiding Regret

Research Constructs: Avoiding Regret

AR1: I will keep holding stocks even though they are losing and will never think about selling the stocks until they balance the losses.

AR2: I usually sell profitable stocks to realize gains first when I am in want of money. I buy other stocks and keep holding them to wait for the price of unprofitable stocks to go up.

AR3: I tend to keep holding an unprofitable stock because I believe that it is a blue-chip investment worthy of long-term preservation.

AR4: I don't want to buy those stocks that are obviously overvalued.

AR5: If I choose stock financing, I pay additional cash or securities as a result of the actual margin declining below the maintenance margin (margin call).

Table3. 2 Measurement of Mental Accounting

MA1: There is profit from several share transactions for me at times, which could not compensate for one loss.

MA2: I don't have any quick responses to good or bad news and tend sell profitable stocks too early and sell losing stocks too late.

MA3: After selling profitable stocks, I will be upset with those losing ones that have not been sold yet.

MA4: I will feel regret and disappointed if the price of the stock I sold keeps growing.

MA5: I sell profitable stocks because I am, afraid that the stock price would fall again

Table3. 3 Measurement of Seeking Pride
Research Constructs: Seeking Pride

SP1: If the stock market index has been surging for a while, I will continue holding unprofitable stocks and will not sell them immediately or buy other stocks.

SP2: I will be satisfied with my decision when I gain profit from the surging price of the stock I bought.

SP3: I am fully confident in my stock market knowledge and ability, which gives me the advantage of participating in the market.

Table3. 4 Measurement of Loss Aversion

Research Constructs: Loss Aversion

LA1: I am ready to face more risks after I have to made a certain amount of money

LA2: I have a tendency to avoid any risk after a certain amount of loss.

LA3: I am seeking investing in low-return, guaranteed investments over more promising investments that carry higher risk.

3.3 Demographic Information

This questionnaire was taken by sending 300 questionnaires to Mongolian individual investors. That items which are related with the demographic information will be presented on the first section of the entire questionnaire. In this study use five demographic questions on analysis which is (gender, age, educational background, monthly income, trade experience). Because other questions can't describe disposition effect. Based on others research up to now and the measurement needed for this study, the individual demographic options could possibly be measured by the following indicators:

 Table3. 5 Demographic Information of Respondents

Demographic Information		
1. Gender		
2. Ages		
3. Educational Background		
4. Employment status		
5. Monthly income		
6. Trade Experience		
7. Domestic or Foreign trade		
8. Level of Market value		
9. Making an investment decision		
10. Percentage of optimal investment decision		

3.4 Translation

The questionnaire was taken from Mongolian investors and translated from English to Mongolian language because Mongolian is that the official and most generally language of Mongolia. English is another wide spoken foreign language in Mongolia. For several Mongolians, English is exchange Russian because the commonest foreign language spoken. This is often a mirrored image of Mongolia in its post-Communist times. Learning English is seen as the way to participate. Many of us are learning and speaking English worldwide as a second language.

3.5 Data Analysis Procedures

In this study applied SPSS 20.0 to research the collected information. The subsequent data analysis procedures were adopted:

- Descriptive Statistic Analysis
- Factor Analysis and Reliability test
- Cronbach's alpha coefficient
- Independent Sample T-test
- One-way Analysis of Variance (ANOVA)
- Regression Analysis

3.5.1 Descriptive Statistic Analysis

To better perceive the characteristics of every variable, descriptive analysis is employed to present the means and variance for every analysis variable. In this study will use descriptive statistical analysis techniques in term of frequency of distribution.

In all probability essentially the most repeatedly used descriptive statistic is the mean. The nasty is a very informative degree of the "central tendency" of the variable whether it is reported together with its confidence intervals. To measure about characteristics of all variables, the descriptive statistical analysis method is very convenient. It will possibly illustrate the means, and standard deviations of every analysis variable.

3.5.2 Factor Analysis and Reliability Test

The statistic outcomes from reliability analysis are the Cronbach's alpha coefficient. Both factor analysis and reliability test are statistical techniques used to reduce a much bigger set of measured items into a smaller set of latent constructs. Factor analysis reveals that ascertained variables square measure powerfully correlative with one another and ought to maybe be sorted along.

3.5.3 Cronbach's alpha Coefficient

Cronbach's alpha is a measure of internal consistency, that is, however closely connected a collection of items area unit as a group. It is thought of to be a measure of scale responsibility. A "high" value for alpha does not imply that the measure is unidimensional. If, additionally to activity internal consistency, you would like to provide evidence that the dimensions in question is unidimensional, additional analyses is performed. This study uses the Cronbach's alpha to use the reliability of quantity factors after the factorial analysis. If the Cronbach's alpha coefficient is above 0.7, these questions are considered to be highly relevant or realistic to determine the factor.

Cronbach's alpha	Corresponding value
$0.9 \ge \alpha \ge 0.8$	Excellent
$0.8 \ge \alpha \ge 0.7$	Good
$0.7 \ge \alpha \ge 0.6$	Acceptable
$0.6 \ge \alpha \ge 0.5$	Questionable
$0.5 < \alpha$	Not acceptable

Table3. 6 Cronbach alpha's Explanation

Source: Original study

3.5.4 Independent Sample T-test

To test whether the differences between two groups in relation with single variable, independent sample t-test is used for this case. In this study, it was applied to compare the differences between male female in the four constructs: avoiding regret, mental accounting, seeking pride, loss aversion.

3.5.5 One-way Analysis of Variance (ANOVA)

To test whether the differences between more than two groups in relation with one variable, one-way ANOVA is used in this study. In this study, it was applied to compare the differences between demographic variables (i.e., education, age and monthly income,) of the respondents in the four constructs: avoiding regret, mental accounting, seeking pride and loss aversion.

3.5.6 Regression Analysis

The simple linear regression analysis is used to investigate the relationship between two variables or factors, which the value being predicted is the dependent variable and the value used to predict is called independent variable. Regression analysis is a set of statistical processes to estimate the correlation between variables. It involves various methods of modeling and analyzing variables when it relates to dependent variables. In particular, the regression analysis helps you to understand how the relative value of a dependent variable (or "variable indicator") changes to one of the independent variables. Regression analysis P-value is less than 0.05, which indicates that it is statistically significant. Or P-value will be higher than 0.05, which indicates that it is not statistically significant.

CHAPTER FOUR DATA ANALYSIS AND RESULTS

This chapter includes a section of the empirical results of the research. The first section is that the descriptive analysis of the respondents together with the response rates, characteristics of the respondents, and the measurement results of variables. The second section is the results of factor analysis and the reliability tests of measurement scales which consist of principal component factor analysis, item-to-total correlation, and Cronbach's alpha. The final section will indicate the results of independent t-test, one-way analysis of variance (ANOVA) and regression analysis.

4.1 Demographic Characteristics

Questionnaires were collected from 300 Mongolian individual investors. Table 4.1 presents the demographic characteristics of respondents' information. Approximately 136 of respondents are male and 164 are female. 44 of the respondents are below 25 years old, while 115, 87, 45 and 9 are from 26 to 35 years old, 36-45 years old, 46-55 years old and above 56 years old, respectively. 16 of the overall respondents are high school or lower, whereas 144 are bachelors, 99 are masters, 34 are doctorate or Ph.D. and 7 are others. About employment status, 20 are government organization, 34 are non-government organization, 58 are banks and financial institutions, 83 are private company, while 49, 26, 21 and 9 are from entrepreneur, international organizations, students and unemployed, respectively. The rate of the respondents that receive most higher monthly income 100 are 1 million 5hundred thousand to 2 million tughrik, the most under monthly income 8 are over 3 million tughrik. About trade experience, 51 are less than 1 year, 82 are 1-3 years, 114 are 3-5 years, 43 are 5-10years and 10 are more than 10years

experience. 78 are only for domestic trade involved, 93 are only for foreign trade, 129 are both of domestic and foreign trade. About market of valuation, 55 are high market level, 176 are average market value, 69 are low market value. Approximately, about making decision to buy and sell stocks, 69 are own analysis, 99 are broker, while 35, 31, 34, 21 and 11 are from professional expert (foreign and domestic), social media, friends and others. The last demographic characteristic is optimal of investment decision, 73 are more than 80%, 196 are 50-80%, 31 are less than 50%.

Demographic	Variables	Frequency (N=300)	Percentage
Gender	Male	136	45.2
	Female	164	54.5
Age	Below 25	44	14.6
	26-35	115	38.2
	36-45	87	28.9
	46-55	45	15.0
	Above 56	9	3.0
	High school or lower	16	5.3
	University	144	47.8
Education	Master's degree	99	32.9
	Ph.D.	34	11.3
	Others	7	2.3
	Government organization	20	6.6
	Non-government organization	34	11.3
	Banks and financial institutions	58	19.3
Employment	Private company	83	27.6
Status	Entrepreneur	49	16.3
	International organizations	26	8.6
	Student	21	7.0
	Unemployed	9	3.0

 Table 4.1 Sample Distribution

Demographic	Variables Frequ	ency (N=300)	Percentage
	Under 5 hundred thousand Tughrik/month	n 15	5.0
	5 hundred thousand to 1 million Tughrik/m		9.3
	C		23.3
Ŧ	1 to 1 million 5hundred thousand Tughrik/		
Income	1 million 5hundred thousand to 2 million T	0	33.2
	2 to 2 million 5hundred thousand Tughrik/		16.3
	2 million 5hundred thousand to 3 million T	ughrik 30	10.0
	Over 3 million Tughrik/ month	8	2.7
	Less than 1 year	51	16.9
Trade	1 to 3 years	82	27.2
Experience	3 to 5 years	114	37.9
	5 to 10 years	43	14.3
	More than 10 years	10	3.3
	Only for Domestic trade	78	25.9
Domestic or	Only for Foreign trade	93	30.9
Foreign Trade	Both of Domestic and Foreign trade	129	42.9
Market	High market value	55	18.3
Value	Average market value	176	58.5
	Low market value	69	22.9
	Own analysis	69	22.9
	Broker	99	32.9
Making	Professional expert(foreign)	35	11.6
Decision	Professional expert(domestic)	31	10.3
	Social media	34	11.3
	Friends	21	7.0
	Others	11	3.7
Investment	More than 80 %	73	24.3
Decisions	50-80 %	196	65.1
	Less than 50 %	31	10.3

4.2 Measurement Results for Relevant Research Variables

This section shows the descriptive statistics of questionnaire variables including five items of Avoiding regret, five items of Mental accounting, three items of Seeking pride, three items of Loss Aversion.

Research Items	Mean	Std. Dev.
Avoiding regret		
[AR1] I will keep holding stocks even though they are losing		
and will never think about selling the stocks until they balance the losses.	3.97	1.133
[AR2] I Usually sell profitable stocks to realize gains first when		
I am in want of money. I buy other stocks and keep holding them	3.71	0.958
to wait for the price of unprofitable stocks to go up.		
[AR3] I tend to keep holding an unprofitable stock because I		
believe that it is a blue-chip investment worthy of long-term preservation.	3.78	2.056
[AR4] I don't want to buy those stocks that are obviously		
overvalued.	3.64	1.105
[AR5] If I choose stock financing, I pay additional cash or		
securities as a result of the actual margin declining below the maintenance margin	3.64	1.175
Mental Accounting		
[MA1] There is profit from several share transactions for		
me at times, which could not compensate for one loss.	3.59	1.128
[MA2] I don't have any quick responses to good or bad		
news and tend sell profitable stocks too early and sell losing stocks too late.	3.51	1.111
[MA3] After selling profitable stocks, I will be upset with		
those losing ones that have not been sold yet.	3.50	1.093
[MA4] I will feel regret and disappointed if the price of the		
stock I sold keeps growing.	3.46	1.131
[MA5] I sell profitable stocks because I am, afraid that the		
stock price would fall again.	3.46	1.137
Seeking Pride		
[SP1] If the stock market index has been surging for a while,		
I will continue holding unprofitable stocks and will not sell	3.48	1.134
them immediately or buy other stocks.		
[SP2] I will be satisfied with my decision when I gain profit		
from the surging price of the stock I bought.	3.64	1.071
[SP3] I am fully confident in my stock market knowledge		
and ability, which gives me the advantage of participating in the market.	3.65	1.116

Research Items	Mean	Std. Dev.
Loss Aversion		
[LA1] I am ready to face more risks after I have to made a		
certain amount of money.	3.63	1.188
[LA2] I have a tendency to avoid any risk after a certain		
amount of loss.	3.58	1.126
[LA3] I am seeking investing in low-return, guaranteed		
investments over more promising investments that carry	3.58	1.169
higher risk.		

4.3 Factor Analysis and Reliability Test

There are four variables that must be constructed such as avoiding regret, mental accounting, seeking pride and loss aversion.

For each research construct, factor analysis is adopted first to pick the items with higher factor loading, and so to match with the theory steered items. Identify the internal consistency and reliability of the construct measurement calculated. There are several criteria which must be followed:

- KMO> 0.5
- Factor Loading, FL > 0.6
- Eigen Value > 1
- Explained Variance > 0.6
- Different between loadings > 0.3
- Item to Total Correlation > 0.5
- Communality > 0.5
- Cronbach's alpha Coefficient > 0.7

4.3.1 Avoiding Regret

There are total five items in this construct using to explain the avoiding regret, which are listed in table 4.3. All items factor loading is higher than 0.6

between each item, item AR3 has the highest Factor loading is 0.985, which indicates the highest relation to construct avoiding regret. Construct's Eigen value is 2.942 higher than 1. Reliability test showed all variables are significant when the item-to-total correlations of all items are above 0.5, AR3 lower than 0.5 which is 0.285. Contributing to high value of Cronbach's coefficient alpha is 0.738. There are total five items were selected for further analysis.

Construct	Item	Factor Loading	Eigen- value	Cumulative Explained	Item to total correlation	Cronbach's Alpha
Avoiding		1/22	2.942	58.843		.738
regret	AR3	.985	2-	V.	.285	
	AR4	.873		Tala	.652	•
	AR1	.868		- 490	.625	
	AR2	.858	0		.644	
	AR5	.849	\$.613	

Table 4.3 Results of Factor Analysis and Reliability (Avoiding Regret)

Source: Original study

4.3.2 Mental Accounting

There are total five items in this construct using to explain the Mental accounting, which are listed in table 4.4. All items factor loading is higher than 0.6. Between each item, item MA5 is the highest Factor loading is 0.896, which indicates the highest relation to construct mental accounting. Reliability test showed all variables are significant when the item-to-total correlations of all items are above 0.5, contributing to high value of Cronbach's coefficient alpha is 0.877.

Table 4.4 Results of Factor Analysis and Reliability (Mental Accounting)

Construct	Item	Factor	Eigen-	Cumulative	Item to	Cronbach's
		Loading	value	Explained	total	Alpha
					correlation	
			3.360	67.208		.877
Mental	MA1	.877			.684	
Accounting	MA2	.750			.718	
6	MA3	.848			.746	
	MA4	.678	1		.733	
	MA5	.896]		.662	

Source: Original study

4.3.3 Seeking Pride

There are total three items in this construct using to explain the Seeking pride, which are listed in table 4.5. All items factor loading is higher than 0.6. Between each item, item SP1 is the highest Factor loading is 0.930, which indicates the highest relation to construct seeking pride. Reliability test showed all variables are significant when the item-to-total correlations of all items are above 0.5, contributing to high value of Cronbach's coefficient alpha is 0.832.

Construct	Item	Factor	Eigen-	Cumulative	Item to	Cronbach's
		Loading	value	Explained	total	Alpha
					correlation	
			2.254	75.133		.832
	SP1	.930			.632	
Seeking	SP2	.913	-		.772	
Pride	SP3	.866	-		.678	

Table 4.5 Results of Factor Analysis and Reliability (Seeking Pride)

Source: Original study

4.3.4 Loss aversion

There are total three items in this construct using to explain the loss aversion, which are listed in table 4.6. All items factor loading is higher than 0.6. Between each item, item LA1 is the highest Factor loading is 0.917, which indicates the highest relation to construct loss aversion. Reliability test showed all variables are significant when the item-to-total correlations of all items are above 0.5, contributing to high value of Cronbach's coefficient alpha is 0.848.

Construct	Item	Factor	Eigen-	Cumulative	Item to	Cronbach's
		Loading	value	Explained	total	Alpha
		1/20	6. 1	S	correlation	
Loss Aversion		N. T.	2.305	76.846		.848
	LA1	.917		1610	.676	
	LA2	.866	No.	CEIN	.7 76	
	LA3	.906	5	~ /	.700	

 Table 4.6 Results of Factor Analysis and Reliability (Loss Aversion)

Source: Original study

4.4 Independent Sample T-Test

Independent Sample T-test will be shown different between groups effect on independent factors. There is no significant different between male and female investors. Male and female investors have similar perception in trade experience. In table 4.7 shown difference between gender and trade experience.

Table 4.7 Result of Gender and trade experience

Gende	er	Mean	Std. Deviation	t
Trade	Male	2.60	0.969	-0.016
experience	Female	2.60	1.089	

ARS	Male	18.82	4.823	0.28
	Female	18.67	4.593	
MAS	Male	17.42	4.509	-0.346
	Female	17.60	4.664	
SPS	Male	10.65	2.827	-0.637
	Female	10.86	2.920	
LAS	Male	10.65	3.025	-0.738
	Female	10.91	3.077	

Note: p<0.1*, p<0.05**, p<0.01***

Source: Original Study

4.5 One-way Analysis of Variance (ANOVA)

The evaluation of variance related to the one-way model is presented. When the teams in a one-way ANOVA are recognized as mixtures of two or more factors. To compare the dissimilar of the dimensions' mean score based on respondent's education, age and monthly income, the One-way ANOVA was conducted.

4.5.1 Education

There are significant differences among the averages of trade experience, avoiding regret, as well as avoiding regret based upon education in Mongolia. Mental accounting seeking pride and loss aversions are not significant.

		Sum of Squares	Mean Square	F-value	P-value
	Between Groups	284.029	71.007	3.327	0.011
ARS	Within Groups	6295.69	21.341		
	Total	6579.72			
	Between Groups	173.323	43.331	2.089	0.082
MAS	Within Groups	6119.56	20.744		
	Total	6292.88			

Table 4.8 Results of Difference in means of Education

*p<.05, **p<.01, ***p<.001; ARS=Avoiding Regret sum; MAS=Mental Accounting sum;

SPS=Seeking Pride sum; LAS=Loss Aversion sum

Source: Original study

		Sum of Squares	Mean Square	F-value	P-value
SPS	Between Groups	70.368	17.592	2.161	0.073
	Within Groups	2401.83	8.142		
	Total	2472.2			
	Between Groups	86.568	21.642	2.367	0.053
LAS	Within Groups	2697.2	9.143		
	Total	2783.77			

Table 4.9 Results of Difference in means of Education (Continued)

*p<.05, **p<.01, ***p<.001; ARS=Avoiding Regret sum; MAS=Mental Accounting sum;

SPS=Seeking Pride sum; LAS=Loss Aversion sum

Source: Original study

4.5.2 Age

There are significant differences among the averages of trade experience. All the items in disposition effect are significant different. P-values are lower than 0.05. All items are significant.

		Sum of Squares	Mean Square	F-value	P-value
	Between Groups	462.673	115.668	5.578	< 0.001
ARS	Within Groups	6117.047	20.736		
	Total	6579.720			
	Between Groups	330.756	82.689	4.091	0.003
MAS	Within Groups	5962.124	20.211		
	Total	6292.880			
	Between Groups	130.253	32.563	4.102	0.003
SPS	Within Groups	2341.943	7.939		
	Total	2472.197			
	Between Groups	137.635	34.409	3.836	0.005
LAS	Within Groups	2646.135	8.970		
	Total	2783.770			

Table 4.10 Results of Difference in means of Age

*p<.05, **p<.01, ***p<.001; ARS=Avoiding Regret sum; MAS=Mental Accounting sum;

SPS=Seeking Pride sum; LAS=Loss Aversion sum

Source: Original study

4.5.3 Income

There are significant differences among the averages of trade experience, avoiding regret, mental account, seeking pride as well as loss aversion based on income in Mongolia. All items are significant and P-value are lower than 0.05.

		Sum of	Mean	F-value	P-value
		Squares	Square		
	Between	1121.697	186.950	10.036	< 0.001
ARS	Groups				
	Within Groups	5458.023	18.628		
	Total	6579.720			
	Between	926.821	154.470	8.434	< 0.001
MAS	Groups	6	7		
	Within Groups	5366.059	18.314		
	Total	6292.880			
	Between	304.581	50.763	6.862	< 0.001
SPS	Groups		16lia		
	Within Groups	2167.616	7.398		
	Total	2472.197	1000		
	Between	366.053	61.009	7.394	< 0.001
LAS	Groups			la l	
	Within Groups	2417.717	8.252		
	Total	2783.770	43/		

Table 4.11 Results of Difference in means of Income

*p<.05, **p<.01, ***p<.001; ARS=Avoiding Regret sum; MAS=Mental Accounting sum; SPS=Seeking Pride sum; LAS=Loss Aversion sum Source: Original study

4.6 Regression Analysis

Regression analysis was used to the relationship between independent variables and the dependent variables. The research model 1 has four independent variables (Gender, Age, Education, Income) expected to influence the dependent variable (Trade experience).

The other four research model has independent variables (Gender, Age, Education, Income) expected to influence the dependent variables (Avoiding regret, Mental accounting, Seeking pride and Loss aversion).

	Trade experience	ARS	MAS	SPS	LAS
Independent factor	Model 1 Beta (β)	Model 2 Beta (β)	Model 3 Beta (β)	Model 4 Beta (β)	Model 5 Beta (β)
Constant	0.375**	15.286**	14.171**	8.169**	8.263**
Gender	-0.049*	-0.267*	0.094*	0.199**	0.236**
Age	0.351**	0.542**	0.431**	0.133*	0.113*
Education	0.019*	0.346**	0.273**	0.008*	0.133*
Income	0.350**	0.414**	0.364**	0.498**	0.396**
R^2	0.537	0.065	0.047	0.073	0.052
Adj-R ²	0.531	0.053	0.034	0.061	0.039
F	85.660	5.149	3.639	5.823	4.020
P-value	0.01	0.01	0.07	0.01	0.03
VIF range	1	(d)	/1	1	1
D-W	1.576	1.110	1.259	1.437	1.275

Table 4.12 Results of Regression Analysis

*p<.05, **p<.01, ***p<.001

As shown in Table 4.12 the independent variables Gender, Age, Education, Income and Trade Experience were regressed with the dependent variables Avoiding regret, Mental accounting, Seeking pride and Loss aversion completely explained. According to regression analysis in Table 4.12 the Trade experience of value R^2 is 0.537 variation in the Trade experience is explained by the (Gender, Age, Education and Income) factors and remaining by other factors. The value of significance level of <0.001 showed the strong positive impact of (Gender, Age, Education and Income) factors on Trade

experience. In the second, the value of R^2 is 0.065 variation in the Avoiding regret is explained by the (Gender, Age, Education, Income and Trade experience) factors and remaining by other factors. Significance level of <0.001 showed the strong positive impact of the (Gender, Age, Education, Income and Trade experience) factors on Avoiding regret. In the Mental accounting, the value of R^2 is 0.047 variation in the Mental accounting is explained by the (Gender, Age, Education, Income and Trade experience) factors and remaining by other factors. Significance level of <0.001 showed the strong positive impact of the (Gender, Age, Education, Income and Trade experience) factors on Mental accounting on the basis of Beta value and its significance. In the Seeking pride, the value of R^2 is 0.073 variation in the Seeking pride is explained by the (Gender, Age, Education, Income and Trade experience) factors and remaining by other factors. Significance level of <0.001 showed the strong positive impact of the (Gender, Age, Education, Income and Trade experience) factors on Seeking pride. In the last, the value of R^2 is 0.052 variation in the Loss aversion is explained by the (Gender, Age, Education, Income and Trade experience) factors and remaining by other factors. Significance level of <0.001 showed the strong positive impact of the (Gender, Age, Education, Income and Trade experience) factors on Loss aversion. In the result all of factors strong positive relationship.

CHAPTER FIVE CONCLUSION AND LIMITATION

5.1 Research Conclusion

This study focused on the individual Mongolian investors and help them to make optimal investment making decision. The research is conducted on the behavioral characters of the financial sector and explores whether the emotional and cognitive factors in the making decision process of investors. As mentioned in Chapter 1, the primary objective of this study is to including to research background and motivation, research objective and the procedure of the study. Based on Chapter 2 is literature review of Mongolian individual investors, behavioral finance, disposition effect, prospect theory, avoiding regret, mental accounting, seeking pride and loss aversion. Chapter 3 shown that research methodology, research framework and data analysis procedures. Chapter 4 presented the results of research. Chapter 5 will be the chapter summarizes the results of the research were obtained.

The study used SPSS Version 20.0 software to analyze the collected data. Which are descriptive statistic analysis, factor analysis and realiability test, Cronbach's alpha coefficient, independent sample t-test, one-way Analysis of Variance (ANOVA) and Regression analysis. This study assed the relationship among four research constructs and assessing the relationships among each variable. These constructs are avoiding regret, mental accounting, seeking pride, loss aversion.

The results show that there are significant differences among the averages of trade experience, mental accounting, as well as avoiding regret based upon education in Mongolia. Moreover, the results also show that there are significant differences among the averages of trade experience as well as

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disposition effect in different age and income of investors in Mongolia. The results of regression analysis which is Gender, Age, Education, Income and Trade experience factors has strong positive impact of the Avoiding regret, Mental accounting, Seeking pride and Loss aversion.

5.2 Research Limitation

This research survey can't use base on paper and interview. An online survey has high risk and respondents are possible to fill fake. Therefore, the future study will focus to use multiple delivery channels (Paper questionnaire, telephone interviews, in-person interviews, etc.) for the survey to enhance data quality.



Appendix: Variable Definitions

Variable	Definition	
AR	Avoiding regret	
MA	Mental accounting	
SP	Seeking pride	
LA	Loss aversion	
Gender	1. Male, 2. Female	
Age	1. Below 25, 2. 26-35, 3. 36-45, 4. 46-55, 5. Above 56	
Education	1. High school or below, 2. University, 3.	
	Master's degree, 4. Ph.D., 5. Others	
Employment status	1. Government organization, 2. Non-government	
	organization, 3. Banks and financial institutions, 4.	
	Private company, 5. Entrepreneur, 6. International	
	organizations, 7. Student, 8. Unemployed	
Income	1. Under 5hundred thousand Tughrik, 2. 5hundred	
	thousand to 1 million Tughrik, 3. 1 to 1 million 5 hundred	
	thousand Tughrik, 4. 1 million 5 hundred thousand to	
	2million Tughrik, 5. 2 to 2million 5hundred thousand	
	Tughrik, 6. 2million 5hundred thousand to 3million	
	Tughrik, 7. Over 3million Tughrik	
Trade experience	1. Less than 1 year, 2. 1 to 3 years, 3. 3 to 5 years, 4. 5 to	
	10years, 5. More than 10years	
Domestic or	1. Only for domestic trade, 2. Only for foreign trade,	
Foreign Trade	3. Both of domestic and foreign trade	
Market value	1. High market value, 2. Average market value,	
	3. Low market value	

Making decision	1. Own analysis, 2. Broker, 3. Professional expert
	(foreign), 4. Professional expert (domestic), 5. Social
	media, 6. Friends, 7. Others
Investment decision	1. More than 80%, 2. 50-80%, 3. Less than 50%



REFERENCES

- Daniel Kahneman, A. T. (1973). Availability: A Heuristic for Judging. cognitive psychology, 5,pp.207-232.
- Daniel Kahneman, A. T. (1974). Judgment under uncertainty: The Econometric Society, pp.1124-1131.
- Daniel Kahneman, A. T. (1979). Prospect theory: an analysis of decision under risk. The Econometric Society.
- Schreiber, J. B. (2006). Reporting Structural Equation Modeling and Confirmatory Factor Analysis Results: A Review. The Journal of Educational Research, pp.330.
- 5. Sung, Samuel. (2007). The Effect of Pride and Regret on Investors' Trading Behavior. Wharton Research Scholars, 44, pp.3-4.
- O'Brien, K. (2007). Factor Analysis: An Overview in the Field of Measurement. Physiotherapy Canada, pp.142-155.
- Waweru, N. M. (2008). The effects of behavioral factors in investment decision-making: a survey of institutional investors operating at the Nairobi Stock Exchange. J. Business and Emerging Markets, Vol. 1, 28.
- Joseph F Hair, Rolph E Anderson, Ronald L Tatham and William C Black (2009). Multivariate Data Analysis.
- 9. Ghauri, P. A. (2010). Research methods in business studies, 189.
- 10.Baber, W. R., Kang, S. H., & Li, Y. (2011). Modeling discretionary accrual reversal and the balance sheet as an earnings management constraint. The Accounting Review, 86(4), pp. 1189–1212.
- 11.Singh. (2012). Investor Irrationality and Self-Defeating Behavior: Insights from Behavioral Finance. Global Business Management, pp. 116-122.

- 12.Nada, S. M. (2013). Behavioral Factors influencing investment decision making: An empirical study of Palestine Stock Exchange.
- 13.Achleitner, A. K., Guenther, N., Kaserer, C., Siciliano, G. (2014). Real earnings management and accrual- based earnings management in family firms. European Accounting Review.
- 14. Ундрах, Г. (2014). Хөрөнгө оруулалтын шийдвэр гаргалтыг зан төлөвийн санхүүгийн ойлголтоор тайлбарлах нь.
- 15.Fabio La Rosa, Giovanni Liberatore (2014). Biopharmaceutical and chemical firms' R&D disclosure, and cost of equity: The impact of the regulatory regime.
- 16.Yeong-Jia Goo, Dar-Hsin Chen, Sze-Hsun Sylcien Chang & Chi Feng Yeh. (2015). A Study of the Disposition Effect for Individual Investors in the Taiwan Stock Market. Australian National University.
- 17. Ticbo. (2016). Structural Equation Modeling.
- 18.Giusy Chesini, Elisa Giaretta (2017). Depositor discipline for better or for worse. What enhanced depositors' confidence on the banking system in the last ten years?
- 19.Энхтуул, Б. (2018). Үнэт цаасны багц сонголтод өгөгдөл олборлолтыг ашиглах арга зүй.
- 20.Монголын Хөрөнгийн Бирж, <u>http://www.mse.mn/mn/news/6772</u>
- 21.<u>https://tradingeconomics.com/mongolia/forecast</u>
- 22. https://www.invest-mongolia.com/
- 23.<u>https://books.google.com.tw/books/about/Behavioral_Finance_and_Inv</u> estor_Types.
- 24. UNCTAD World Investment Report 2019
- 25.Financial Regulatory Committee, 2019 https://www.frc.mn/en/

APPENDIXQUESTIONNAIRE

Dear

I am Enkhgerel Batbaatar, student of Nanhua University, doing my final year MBA as part of the curriculum; I am conducting a survey on "A STUDY OF THEDISPOSITION EFFECT FOR INDIVIDUAL INVESTORS IN THE MONGOLIAN STOCK MARKET". I request you to kindly give me your valuable time to fill this questionnaire.

Хөрөнгө оруулагчийн зан төлөвийн судалгаа

Тус судалгаа нь Магистрантын зэрэг горилох ажлын нэг хэсэг бөгөөд хөрөнгө оруулагчдын зан төлөвийг тодорхойлох зорилготой. Энэхүү судалгаатай холбоотой хувийн мэдээллийг нууц хэвээр хадгалах болно. Та судалгааны үр дүнг авахыг хүсвэл и-мэйл хаягаа үлдээхэд хангалттай.

Үнэтэй цаг заваа зориулж байгаа танд баярлалаа.

Respondent's Details:

Name.....

Contact No.....

Q1: What is your gender (Таны хүйс)

- **1.** Male (эр)
- **2.** Female (эм)

Q2: How many years old? (Таны нас)

- 1. 16-25
- 2. 26-35
- 3. 36-45
- 4. 46-55
- 5. Above 56

Q3: What is your educational background? (боловсролын түвшин)

1. High school or below (Бүрэн дунд болон түүнээс доош)

- **2.** University (Бакалавр)
- **3.** Master (Магистр)
- 4. Ph.D. (Доктор)
- **5.** Others (Бусад)

Q4: Which sector are you working? (Та ямар ажил эрхэлдэг вэ?)

- 1. Government organization (Төрийн байгууллага)
- 2. Non-government organization (Төрийн бус байгууллага)
- **3.** Banks and financial institutions (Банк, санхүүгийн байгууллага)
- 4. Private company (Хувийн компани)
- 5. Entrepreneur (Бизнес эрхлэгч)
- 6. International organizations (Олон улсын байгууллага)
- 7. Student (Оюутан)
- 8. Unemployed (Ажил эрхэлдэггүй)

Q5: Which one level is your monthly income (individual/household)?

(Таны сарын орлого)

- **1.** 0-500,000**₮**
- **2.** 500,000₹-1,000,000₹
- **3.** 1,000,000₮-1,500,000₮
- **4.** 1,500,000**₮**-2,000,000**₮**
- **5.** 2,000,000**F**-2,500,000**F**
- **6.** 2,500,000₮-3,000,000₮
- 7. 3,000,000₮ above

Q6: How many years have you been involved in stock trading?

(Та хувьцааны арилжаанд оролцоод хэдэн жил болж вэ?)

- 1. Less than 1 year (1-с бага жил)
- **2.** 1 to 3
- **3.** 3 to 5
- **4.** 5 to 10
- **5.** More than 10 year (10-с дээш жил)

Q7: Which trade are you involved in Domestic or Foreign?

(Та дотоод болон гадаадын арилжааны алинд ордог вэ?)

1. Only for Domestic trade (Зөвхөн дотоод арилжаанд ордог)

- **2.** Only for Foreign trade (Зөвхөн гадаад арилжаанд ордог)
- **3.** Both of Domestic and Foreign trade (Дотоод болон гадаад арилжаанд хоёуланд нь ордог)

Q8: What level of valuation do you usually choose when buying stocks?

(Та хувьцаа худалдан авахдаа ихэнхдээ үнэлгээний ямар түвшинд сонголт хийдэг вэ?)

- 1. High market value (Зах зээлийн өндөр үнэлгээтэй)
- 2. Average market value (Зах зээлийн дундаж үнэлгээтэй)
- **3.** Low market value (Зах зээлийн бага үнэлгээтэй)

Q9: Whose analysis do you trust when making a decision to buy / sell shares? (Хувьцааг худалдаж авах/зарах шийдвэр гаргахдаа хэний дүн шинжилгээнд итгэдэг вэ?)

- 1. Own analysis (Өөрийн дүн шинжилгээ)
- 2. Broker (Брокер)
- **3.** Professional expert (foreign) (Мэргэжлийн шинжээчийн (гадаад))
- 4. Professional expert (domestic) (Мэргэжлийн шинжээчийн (дотоод))
- 5. Social media (Олон нийтийн мэдээллийн хэрэгслээр явж буй мэдээлэл)
- 6. Friends (Найз нөхөд)
- 7. Others (Бусад)

Q10: What percentage is optimal in your investment decisions? (Таны хөрөнгө оруулалтын шийдвэр гаргалт хэдэн хувьд нь оновчтой байдаг вэ?)

- **1.** More than 80% (80%-иас их)
- 1. 50-80 %
- **2.** Less than 50% (50%-иас бага)

Section 1 Avoiding Regret (AR)	Levels of agreement				
Please take a short look on the questions beneath associated with the Disposition Effect , after which CIRCLE the extent of agreement on every of the items below base on your opinion Доорх асуултуудыг анхааралтай уншиж тохирох хариултыг дугуйлна уу!	Strongly disagree Огт санал нийлэхгүй байна	Disagree Санал нийлэхгүй байна	Neutral Мэдэхгүй байна	Agree Санал нийлж байна	Strongly agree Бүрэн санал нийлж байна
 1.I will keep holding stocks even though they are losing and will never think about selling the stocks until they balance the losses. 1. Би хувьцаагаа алдаж байгаа ч гэсэн алдагдлаа тэнцвэржүүлэх хүртлээ хувьцаагаа зарахгүй хадгалсаар байх болно. 	1	2	3	4	5
 2.I Usually sell profitable stocks to realize gains first when I am in want of money. I buy other stocks and keep holding them to wait for the price of unprofitable stocks to go up. 2. Би ихэвчлэн мөнгөтэй болохыг хүсэхдээ эхлээд ашигтай хувьцаа зардаг. Би бусад хувьцааг худалдаж аваад ашиггүй хувьцааны үнэ өсөхийг хүлээхийн тулд үргэлжлүүлэн хадгалдаг. 	AN		3	4	5
 3.I tend to keep holding an unprofitable stock because I believe that it is a blue-chip investment worthy of long-term preservation. 3. Би ашиггүй хувьцаа эзэмших хандлагатай байдаг, учир нь энэ нь урт хугацаанд хадгалсанаараа цэнхэр чипийн хөрөнгө оруулалт болно гэж би итгэдэг. 		2	3	4	5
 4.I don't want to buy those stocks that are obviously overvalued. 4. Би илүү үнэлэгддэг хувьцааг худалдаж авахыг хүсэхгүй байна. 	1	2	3	4	5
 5.If I choose stock financing, I pay additional cash or securities as a result of the actual margin declining below the maintenance margin. 5. Хэрэв би хувьцааны санхүүжилтийг сонговол засвар үйлчилгээний хязгаараас доогуурх бодит мөнгөний үр дүнд нэмэлт мөнгө буюу үнэт цаас төлдөг. 	1	2	3	4	5

	Levels of agreement				
Please take a short look on the questions beneath associated with the Disposition Effect , after which CIRCLE the extent of agreement on every of the items below base on your opinion Доорх асуултуудыг анхааралтай уншиж тохирох хариултыг дугуйлна уу!	Strongly disagree Огт санал нийлэхгүй байна	Disagree Санал нийлэхгүй байна	Neutral Мэдэхгүй байна	Аgree Санал нийлж байна	Strongly agree Бүрэн санал нийлж байна
Section 2 Mental Accounting (MA)		-		-	
 1. There is profit from several share transactions for me at times, which could not compensate for one loss. 1. Зарим үед миний хувьд хэд хэдэн хувьцааны гүйлгээнээс ашиг бий. нэг 					
алдагдлыг нөхөх боломжгүй байсан.	1	2	3	4	5
 2.I don't have any quick responses to good or bad news and tend sell profitable stocks too early and sell losing stocks too late. 2. Би сайн, муу мэдээнд хариу үйлдэл үзүүлэхгүй бөгөөд ашигтай хувьцааг эрт зарж, алдагдсан хувьцааг хэтэрхий хямд зарж борлуулдаг. 	1	2	3	4	5
 3.After selling profitable stocks, I will be upset with those losing ones that have not been sold yet. 3.Ашигтай хувьцааг зарсны дараа хараахан зарагдаагүй байгаа хувьцаагаа алдах болно. 	1	2	3	4	5
 4.I will feel regret and disappointed if the price of the stock I sold keeps growing. 4. Миний зарсан хувьцааны үнэ өссөөр байгаад харамсаж, сэтгэлээр унадаг 		2	3	4	5
 5.I sell profitable stocks because I am, afraid that the stock price would fall again. 5. Би хувьцааны үнэ дахиад унана гэж айж байгаа учраас ашигтай хувьцаа зарж байна. 	1	2	3	4	5

	Levels of agreement				
Please take a short look on the questions beneath associated with the Disposition Effect , after which CIRCLE the extent of agreement on every of the items below base on your opinion Доорх асуултуудыг анхааралтай уншиж тохирох хариултыг дугуйлна уу!	Strongly disagree Orr caнал нийлэхгүй байна	Disagree Санал нийлэхгүй байна	Neutral Мэдэхгүй байна	Agree Санал нийлж байна	Strongly agree Бүрэн санал нийлж байна
Section 3 Seeking Pride (SP)					
 1.If the stock market index has been surging for a while, I will continue holding unprofitable stocks and will not sell them immediately or buy other stocks. 1.Хэрэв хөрөнгийн зах зээлийн индекс хэсэг хугацаанд өсч байсан бол ашигтүй хувьцааг үргэлжлүүлэн эзэмшээд шууд зарахгүй эсвэл бусад хувьцааг худалдаж авахгүй. 2.I will be satisfied with my decision when I gain profit from the surging price of the stock I bought. 2.Би худалдаж авсан хувьцааныхаа үнийн өсөлтөөс ашиг олж чадвал энэ шийдвэртээ сэтгэл хангалуун байх болно. 3.I am fully confident in my stock market knowledge and ability, which gives me the advantage of participating in the market. 3. Би хөрөнгийн зах зээлийн мэдлэг, 		2	3	44	5
чадвардаа бүрэн итгэдэг бөгөөд энэ нь зах зээлд оролцох давуу талыг өгдөг.		2	3	4	5
Section 4 Loss Aversion (LA)					
 1.I am ready to face more risks after I have to made a certain amount of money. 1.Би тодорхой хэмжээний мөнгө хийсний дараа илүү их эрсдэлтэй тулгарахад бэлэн байна. 	1	2	3	4	5
 2.I have a tendency to avoid any risk after a certain amount of loss. 2. Би тодорхой хэмжээний алдагдал хүлээсний дараа аливаа эрсдэлээс зайлсхийх хандлагатай байна. 	1	2	3	4	5

 3.I am seeking investing in low-return, guaranteed investments over more promising investments that carry higher risk. 3. Би өндөр эрсдэл дагуулдаг илүү 					
ирээдүйтэй хөрөнгө оруулалтаас бага					
өгөөжтэй, баталгаатай хөрөнгө оруулалт					
хийхийг хүсч байна.	1	2	3	4	5

