

BEHAVIOURAL FACTORS INFLUENCING INVESTMENT DECISION IN STOCK MARKET: A SURVEY OF INVESTMENT BANKS IN KENYA

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ABSTRACT

Decision-making is process of choosing a particular alternative from a number of alternatives. It is an activity that follows after proper evaluation of all the alternatives. Decision making by individual investors is usually based on their personal factors such as age, education, income, and investment portfolio. The investor as decision maker has no control over the states of nature that will prevail in future but the future states of nature will certainly affect the outcome of any strategy that an investor may adopt. Effective decision-making in stock market requires better insight, and understanding of human nature in a global perspective, apart from sharp financial skills and ability to gain best out of investments. The main objective of this study was to establish the behavioral factors influencing individual investors' decisions at the Nairobi Stock Exchange. The study was guided by the following specific objectives, that is, to find out the effect of risk aversion on investment decisions in Kenyan stock market, to investigate whether prospecting influences decision making in stock market investments, to establish the effect of anchoring on investment decision in Kenyan stock market and to determine the effect of herding on Investment decisions in Kenyan stock market. The target population of this study was 17 investment banks. The study relied mostly on primary data sources. The study employed a stratified random sampling technique in coming up with a sample size of 47 respondents. The study generated both qualitative and quantitative data where quantitative data was coded and entered into Statistical Packages for Social Scientists (SPSS Version 17.0) and analyzed using descriptive statistics. The study concluded herding effect, risk aversion, prospecting and anchoring influences the investment decision making in stock market. The study recommended that since herding effect or behavior is relevant to the individuals, market environment and atmosphere, the investment banks should give their investors the relevant information to ensure that they are well versed with the prevailing market and economic situations. The study also recommended that since risk aversion influences investment decision of the individuals in stock market, there is need for the relevant organizations to ensure that their investment in the stock market are well chosen to ensure that the interests of the investors are well taken care of. The study further recommended that since prospecting influences the investment decision making in

stock market the investors respond differently to equivalent situations depending on whether it is presented in the context of a loss or a gain. Finally the study recommends that since anchoring has an influence on the investment decision in the stock market and mainly investors assume current prices are about right then the investors should be offered with the right information in the right time since it plays a role when investors form expectations about future returns.

Key Words: *Anchoring, Behavioral Finance, Frontier Market, Herding, Prospecting and Risk Aversion.*

Introduction

Decision-making is a complex process which includes analysis of several factors and following various steps. It is the process of choosing a particular alternative from a number of alternatives. It is an activity that follows after proper evaluation of all the alternatives (Subramani & Venkatraman, 2003). It is believed that decision-making is based on primarily two things: personal resources or factors, and technical factors. Similarly, while making decisions in stock market, investors tend to rely on these two factors. Decision making by individual investors is usually based on their personal factors such as age, education, income, and investment portfolio, etc. Simultaneously, their investment decisions are also derived from complex models of finance (Harper, 2002). These models include those based on expected risk and return associated with an investment, and risk-based asset pricing models like CAPM (Capital Asset Pricing Model).

Decision-making is a process by which an individual responds to the opportunities and threats that confront him/her by analyzing the options and making determinations or decisions about specific goals and course of action (Akintoye, 2006). So, investors in bonds and securities or shares also go through a decision making process. According to Eastlick (1996) while many share investments may involve several participants who play such role as initiator, influencer, buyer and user just as in buying behaviour, the investment decision-maker goes through a decision making process consisting of problem recognition, information search, evaluation of alternative purchase decision and post purchase behaviours. This implies that investors in bonds and securities or shares go through a decision making process which is usually influenced by number of factors. There are however, contending theories on the factors that influence investment decisions in shares.

Statement of the Problem

The key principal objective of an investment is to make profit. In the early years, investment was based on performance, forecasting, market timing and so on. This produced very ordinary results, which meant that investors were showered with very ordinary futures, and little peace of mind. However, there was a huge gap between available returns and actually received returns which forced them to search for the reasons (Kim & Nofsinger, 2008). Fundamental mistakes in the decision-making process were identified as main causes during the examining process.

Individual investors seem to be less impacted by attention-grasping stock for their selling decisions because the selling decision and the buying decision are differently run (Barberis & Thaler, 2003). Because of short-sale restraints, when deciding to choose a stock for selling, they only focus on the stocks that currently belong to them. Whereas, with investing decision, individuals have a lot of chances to choose the wanted stocks from the wide range of selective sources, this explains why factors of attention impact more on the stock buying decisions than the selling decisions.

Due to the positive correlation between stock market and economy, the rise of stock market positively affect the development of the economy and vice versa. Thus, the decisions of investors on stock market play an important role in defining the market trend, which then influences the economy. However, financial commentators have argued that behavioural financial theories assume that investors rationally maximize their wealth by following basic financial rules and making investment decision on the risk-return consideration. Level of risk acceptance of the investors depends on their personal characteristics and attitudes to risk (Madinios, Sevic & Theriou, 2007).

In Kenya, while several studies have been done on stock market, none has focussed on factors affecting influencing investment decision in stock market. Kibuthu (2005) did a study on capital market on emerging economies with reference to Nairobi Stock Exchange. He established that most of the investors in the developing states have less information than those in developed countries thus making survival of that stock market at a low pace. Odundo (2004) did a study on the overview and evolution of investment instruments in Sub-Saharan Africa with special reference to Kenya. He established that need to invest and financial constrains were the major factors that led to Evolution of Investment. Wagacha and Mbui (2001) also carried out a survey of Enterprise Attitudes on Kenyan capital market. As observed various studies have not yet described the factors that exert a significant influence on investment decision in stock market. This study therefore will add to the existing literature in these areas by analysing behavioural factors influencing investment decision in stock market.

General Objective

The objective of the study was to investigate behavioral factors influencing investment decision in stock market.

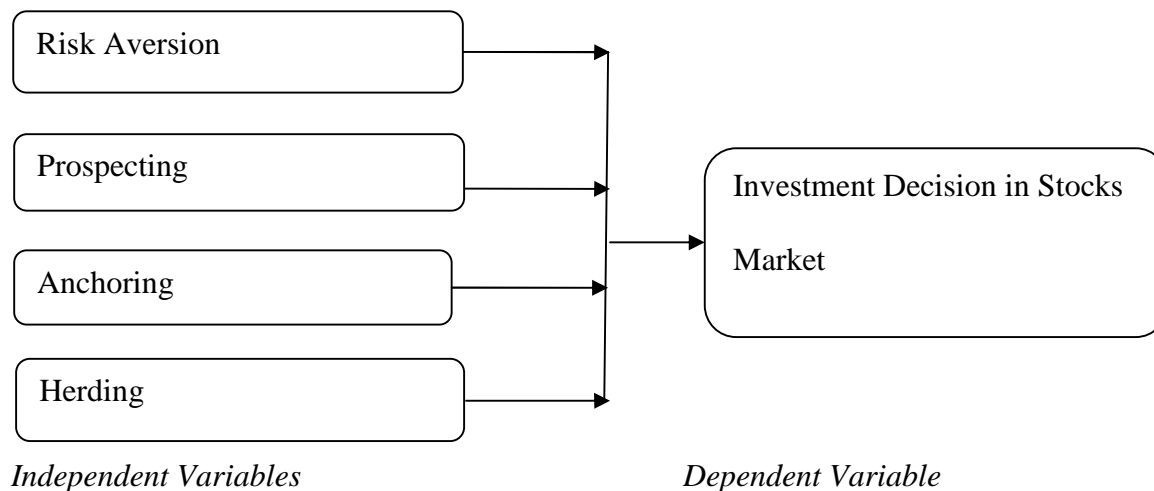
Specific Objectives

The specific objectives of the study were:

1. To ascertain the influence of risk aversion on investment decisions in Kenyan stock market.
2. To establish influence of prospecting on investment decision making in stock market.
3. To examine influence of anchoring on investment decision in Kenyan stock market.
4. To investigate influence of herding on Investment decisions in Kenyan stock market

Conceptual Framework

Conceptual framework is a diagrammatical presentation of the independent and dependent variables and the relationship among themselves. This enables the reader to not only have a snapshot but clear understanding of what the study seeks to establish (Mugenda and Mugenda, 2003). In this study, the independent variables are risk aversion, prospecting, anchoring and herding while dependent variable would be investment decision in the stock market.



Theoretical Framework

Behavioral Finance Theory

The behavioral finance ideas started emerging in the early 1990s opposing the Efficient Market Hypothesis with research based on the judgment and decision makes process of the participants of the financial markets. Thaler (1993) called behavioral finance as "simply open-minded finance". What makes behavioral finance theory different from the classical finance is that it is not only based only on mathematical calculus, but it applies all other social sciences as psychology, sociology, anthropology, political science or, since recently, neuroscience.

The main ideas of this discipline were inspired by the breakthrough studies by psychologists Kahneman and Tversky (1974) on human biases and cognitive errors, which later developed to what is called a prospect theory. In this section I will review the main aspects of prospect theory, human biases influencing their irrational behavior in the markets and provide some ideas on arbitrage. There is a huge number of aspects that behavioral finance is scoping, so in the following pages I review only those ones which I see relevant for my further analysis.

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. In general, these heuristics are quite useful, particularly when time is limited, but sometimes they lead to biases (Waweru et al., 2008). The decision process by which the investors find things out for themselves, usually by trial and error, lead to the development of rules of thumb. In other words, it refers to rules of

thumb which humans use to made decisions in complex, uncertain environments (Ritter, 2003). The reality, the investors decision making process are not strictly rational one. Thought the investors have collected the relevant information and objectively evaluated, in which the mental and emotional factors are involved. It is very difficult to separate. Sometimes it may be good, but many times it may result in poorer decision outcomes.

Availability bias happens when people make use of easily available information excessively. In stock trading area, this bias manifest itself through the preference of investing in local companies which investors are familiar with or easily obtain information, despite the fundamental principles so-called diversification of portfolio management for optimization (Waweru et al., 2003).

Prospect theory

This theory was developed by Kahneman and Tversky (1979). The theory focuses on subjective decision-making influencing investors' value system (Filbeck & Horvath, 2005). Nonetheless, this theory is criticized for failing to explain why people are attracted to both insurance and gambling. People tend to under-weigh 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 & Perttunen, 2004).

Prospect theory describes some states of mind affecting an individual's decision-making processes including Regret aversion, Loss aversion and mental accounting (Waweru, Munyoki, & Uliana, 2008). 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). Mental accounting is a term referring to the process by which people think about and evaluate their financial transactions (Barberis & Huang, 2001). Mental accounting allows investors to organize their portfolio into separate accounts. Rockenbach (2004) suggested that connection between different investment possibilities is often not made as it is useful for arbitrage free pricing.

Modern Portfolio Theory

Modern Portfolio Theory (MPT) also called portfolio theory or portfolio management theory is a sophisticated investment approach/strategy and is the philosophical opposite of traditional stock picking (Shefrin, 2000). It is the creation of economists who try to understand the market as a whole, rather than business analysts who look for what makes each investment opportunity unique. Investments are described statistically in terms of their expected long-term return rate and their expected short-term volatility. The volatility is equated with risk, measuring how much worse than average an investment's bad years are likely to be. The goal is to identify the acceptable level of risk tolerance and then to find a portfolio with the maximum expected return for that level of risk.

The theory of Behavioral finance is from a broader social science perspective including psychology and sociology (Tony, 2000). It therefore, applies scientific research on human and social, cognitive and emotional factors to better understand economic decisions by consumers, borrowers, investors and how they affect market prices, returns and the allocation of resources.

Specifically, behavioral finance has two building blocks: cognitive psychology and the limits to arbitrage. Cognitive refers to how people think. There is a huge psychology literature documenting that people make systematic errors in the way that they, think, they are overconfident they put too much weight on recent experience, etc.

Research Methodology

Research Design

Orodho (2003) defines a research design as the scheme, outline or plan that is used to generate answers to research problems. According to Kombo and Tromp (2006), research design can be thought of as the structure of research. This research problem will be studied through the use of a descriptive research design. Cooper and Schindler (2003) posited that descriptive study is concerned with finding out the what, where and how of a phenomenon. This study therefore generalized the findings to investment banks in Kenya. The main focus of this study was quantitative. However some qualitative approach used in order to gain a better understanding and possibly enable a better and more insightful interpretation of the results from the quantitative study.

Population

The target population of this study was 17 investment banks within Nairobi while the study population was managers in different departments as shown in table 3.1. This is justified by the fact that they are more appropriate in giving a personal account of how they perceive investment in stocks and how they go about on announcing shares sales hence investors decisions. Mugenda and Mugenda (2003) explained that the target population should have observable characteristics to which the researcher intends to generalize the result of the study. This definition assumes that the population is not homogeneous.

Sample and Sampling Technique

The sampling plan describes the sampling unit, sampling frame, sampling procedures and the sample size for the study. The sampling frame describes the list of all population units from which the sample selected (Cooper & Schindker, 2003). The study employed stratified random sampling technique in coming up with a sample size of 47 respondents from a total of 158 staffs from the following department, that is, business growth and development, corporate strategy and planning, finance, internal audit, risk managers and entrepreneurial personnel. The study employed a percent of 30 in sampling.

Data Collection Instrument and Procedure

The study employed questionnaire to collect primary data. Questionnaires are appropriate for studies since they collect information that is not directly observable as they inquire about feelings, motivations, attitudes, accomplishments as well as experiences of individuals (Mellenbergh, 2008). The questionnaire comprised of both open (and close-ended questions. Franker (2006) stated that a questionnaire is useful in obtaining objective data because participants are not manipulated in any way by the researcher. According to Franker (2006)

questionnaires have the added advantage of being less costly and using less time as instruments of data collection.

Data Analysis

Before processing the responses, the completed questionnaires were edited for completeness and consistency. The study generated both qualitative and quantitative data. Quantitative data coded and entered into Statistical Packages for Social Scientists (SPSS Version 17.0) and analyzed using descriptive statistics. Qualitative data was analyzed based on the content matter of the responses. Responses with common themes or patterns were grouped together into coherent categories.

Descriptive statistics involves use of absolute and relative (percentages) frequencies, measures of central tendency and dispersion (mean and standard deviation respectively). Quantitative data was presented in tables and graphs and explanation was presented in prose. In addition, the study conducted a multiple regression analysis. This provided the generalization of the findings on behavioral factor influencing investment decision making. The regression equation given below was used:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \varepsilon$$

Whereby the variables were identified as follows

Dependable variable Y = investment Decision in stock market,

Independent variable X_1 = herding effect

Independent variable X_2 = risk aversion

Independent variable X_3 = prospecting

Independent variable X_4 = anchoring.

While β_1 , β_2 , β_3 and β_4 are coefficients of determination and ε is the error term.

Research Results

Inferential Analysis

To establish the relationship between the independent variables and the dependent variable of the study the study conducted inferential analysis which involved a Correlation Analysis, coefficient of determination and a multiple regression analysis.

Correlation Analysis

To compute the correlation (strength) between the study variables and their findings the researcher used the Karl Pearson's coefficient of correlation (r). From the findings, it was clear that there was a positive correlation between investment decision in stocks market and risk aversion as shown by a correlation figure of 0.518, it was also clear that there was a positive correlation between investment decision in stocks market and prospecting with a correlation figure of 0.542, there was also a positive correlation between Investment decision in stocks market and anchoring with a correlation value of 0.614 and a positive correlation between investment decision in stocks market and herding with a correlation value of 0.746. This shows that there was a positive correlation between investment decision in stocks market and risk aversion, prospecting, anchoring and herding.

Table 1: Coefficient of Correlation

			Investment Decision in Stocks Market	Risk aversion	Prospecting	Anchoring	Herding
Investment Stocks Market	Pearson Correlation		1				
	Sig. (2-tailed)						
Risk aversion	Pearson Correlation		0.518	1			
	Sig. (2-tailed)		0.0032				
Prospecting	Pearson Correlation		0.542	0.3421	1		
	Sig. (2-tailed)		0.0021	0.0014			
Anchoring	Pearson Correlation		0.614	0.124	0.0621	1	
	Sig. (2-tailed)		0.0043	0.012	0.0043		
Herding	Pearson Correlation		0.746	0.342	0.1240	0.166	1
	Sig. (2-tailed)		0.0172	0.0031	0.0215	0.0031	

Regression Analysis

The coefficient of determination was carried out to measure how well the statistical model was likely to predict future outcomes. The coefficient of determination, r^2 is the square of the sample correlation coefficient between outcomes and predicted values. As such it explains the extent to which changes in the dependent variable can be explained by the change in the independent variables or the percentage of variation in the dependent variable (investment decision in stocks market) that is explained by all the four independent variables (risk aversion, prospecting, anchoring and herding). The four independent variables that were studied (risk aversion, prospecting, anchoring and herding) explain only 66.5% of the investment decision in stocks market as represented by the R^2 . This therefore means the four independent variables only contribute about 66.5% to the investment decision in stocks market while other factors not studied in this research contribute 33.5% of investment decision in stocks market.

Table 2: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.816	.665	.626	.48203

Predictors: (Constant), risk aversion, prospecting, anchoring and herding.

Regression Coefficients

The researcher further conducted a multiple regression analysis so as to identify the behavioral factors influencing investment decision in stock market in Kenya. Multiple regression is a statistical technique that allows the study to predict a score of one variable on the basis of their

scores on several other variables. The main purpose of multiple regressions is to learn more about the relationship between several independent or predictor variables and a dependent or criterion variable. The researcher applied the statistical package for social sciences (SPSS) to code, enter and compute the measurements of the multiple regressions for the study.

Table 3: Multiple Regression Analysis

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.225	.223		2.349	.025
	Risk aversion	.504	.094	.006	.039	.036
	Prospecting	.523	.098	.425	2.846	.007
	Anchoring	.571	.070	.062	.449	.026
	Herding	.678	.082	.566	4.983	.000

Dependent Variable: Investment decision in stock market

The regression equation, $Y = \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4 + \alpha$ becomes:

$$Y = 1.225 + .504X_1 + .523X_2 + .571X_3 + .678X_4$$

Where Y is the dependent variable (investment decision in stock market), X1 is the risk aversion independent variable, X2 is the prospecting independent variable, X3 is anchoring independent variable and X4 is herding. From the regression equation established, taking all the factors (risk aversion, prospecting, anchoring and herding) constant at zero, the investment decision in stocks market would be 1.225. Further, if all the other variables are kept constant, a unit increase in herding will lead to a 0.678 success in investment decision in stocks market. A unit increase in anchoring will lead to a 0.572 success in investment decision in stock market, a unit increase in prospecting will lead to a 0.523 success in investment decision in stock market, while a unit increase in risk aversion will lead to a 0.504 success in investment decision in stock market. These results imply that herding contribute more to the investment decision in stock market followed by prospecting then prospecting, while risk aversion contributes the least to investment decision in stocks market.

Summary of the Findings

From the study, majority of the respondents had attended a course of stock exchange. Most of the investment bank, investors had invested on a different values ranging from Ksh 40,001 to 60,000 for the last one month while few had invested only Ksh 10,000 and below.

On herding effect the study found that the investors in their organizations invest due to herding effect, this has resulted the bank to experience emotional biases and congruity. Herding causes a state of inefficient market, which is usually recognized by speculative bubbles, most of the investors seem to be less interested in herding behaviors while making decisions on investing in stock market and investors act the same way and rely on little knowledge and information from

the surrounding environment and gather in groups to support each other and buy shares as a group hence influencing individual investor(s) to invest in stock market to a great extent. In regression equation, a unit increase in herding will lead to a 0.678 success in investment decision in stocks market. From the correlation analysis, it was clear that there was a positive correlation between investment decision in stocks market and herding with a correlation value of 0.746.

On risk aversion, the study established that the investors in the organizations base their investment on gain they expect from the investment, though there is frequent postponing in investing on stock market among investors till investment bank assure them of the return. However, most of the investors have confidence in with investment bank as they are guaranteed of interest rate by investing in their investment partners. Past positive returns boosts the selling trend and capital investment of the investors within bank and the clients regard the benefit that the investment will add to their investment values when investing to the organization to a great extent. In regression equation, a unit increase in risk aversion will lead to a 0.504 success in investment decision in stock market. From the correlation analysis, it was clear that there was a positive correlation between investment decision in stocks market and risk aversion as shown by a correlation figure of 0.518.

Further the study established that prospecting influences the investment decision making in stock market, however, most of the organizations engage in advising inventors' on the ways to invest. The study also found that investors are used to selling their shares once they note they are not profit earning at early stage while others regretted investing in stock market due to past mistakes, more investors' lose hope due to experienced loss during their initial investment. Additionally, the survey noted that investors invest in the stock market basing their decision on a successful investment in the investment and mentoring investors who have incurred loss after gain persists to invest again as they assume the loss occurred due to economic situation of the country. The study also noted that prospecting influence investment decision to a great extent. In regression equation, a unit increase in prospecting will lead to a 0.523 success in investment decision in stock market. From the correlation analysis, it was clear that there was a positive correlation between investment decision in stocks market and prospecting with a correlation figure of 0.542. The study finally found that anchoring influences the investment decision in Kenyan stock market. Availability of the information about stock market investment facilitates inventors' to reach investment decision. However, investors tend to buy shares when stock price has fallen as they gain overconfidence of increase in of the rate of buying shares to a great extent. In regression equation, unit increase in anchoring will lead to a 0.572 success in investment decision in stock market. From the correlation analysis, it was clear that there was a positive correlation between Investment decision in stocks market and anchoring with a correlation value of 0.614.

Conclusions

The study concludes that herding effect has an influence on the investment decision making in stock market amongst the investment banks in Kenya. Accordingly, the investors usually invest

on stock market with specific prospects whereas the organizations offer advice to the investors. It is also clear from the study results that investors are used to selling their shares once they note they are not profit earning at early stage, some of the investors have regretted investing in stock market due to past mistakes, more investors' lose hope of investing in stock market if they experienced loss during their initial investment, investors invest in our organization basing their decision on a successful investment in the organization and investors who have incurred loss after gain persists to invest again as they assume the loss occurred due to economic situation of the country.

The study deduces that risk aversion influences investment decision of the individual in stock market and the investors in the organizations base their investment on gain they expect from the investment. The organizations experience investors postponing their stock market investment till they are assured of the return, most of the investors in the organization have confidence in the organizations as they are guaranteed of interest rate by investing in the banks, past positive returns boosts the selling trend and capital investment of the investors in our organization and the clients regard the benefit that the investment will add to their investment values when investing to the organization.

The study further concludes that prospecting influences the investment decision making in stock market. The investors invest on stock market with specific prospects and organizations offer advice to the investors. The investors are used to selling their shares once they note they are not profit earning at early stage, some of the investors have regretted investing in stock market due to past mistakes, more investors' lose hope of investing in stock market if they experienced loss during their initial investment, investors invest in our organization basing their decision on a successful investment in our organization and investors who have incurred loss after gain persists to invest again as they assume the loss occurred due to economic situation of the country.

The study also established that anchoring has an influence on the investment decision in Kenyan stock market. The results also show that the investors in stock market rely on some information as they make decision on investment, majority of the investors mostly buy shares when stock price has fallen and overconfidence of the investors accelerate their rate of buying shares.

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