EFFECTS OF INVESTOR PSYCHOLOGY ON REAL ESTATE MARKET PRICES IN NAIROBI, KENYA

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DECLARATION

I, Anthony K. Muthama, hereby declare that this research project is my original work and has not been submitted to any other university or institution for the award of any degree.

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This research project has been submitted with my approval as University Supervisor

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DEDICATION

I dedicate this research project to my dear wife, Grace Wanjiku Muthama and children, Victor Kitonga Muthama, Faith Mutanu Muthama and Emmanuel Munene Muthama.

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ABSTRACT

This research project is a study on the effects of investor psychology on real estate market prices in Nairobi, Kenya. Chapter one is an introduction to the study which covers the background to the study, statement of the problem, objectives of the study and significance of the study. The background to the study covers some brief explanations on investor psychology, real estate prices, relationship between investor psychology and real estate prices and real estate market in Kenya. In the statement of the problem, the controversy between standard or modern finance on one hand, and behavioural finance on the other, is re-visited. Standard/modern finance is based on rational utilitarianism while behavioural finance focuses on psychological factors which influence people to deviate from rationality in decision making. The objective of the study is stated as being the effects of investor psychology on real estate market prices in Nairobi, Kenya. The significance of the study is that it will be of benefit to investors and more specifically, real estate investors; investment advisors and financiers; and academicians and scholars in the field of behavioural finance.

Chapter two is on literature review. It discusses theories such as prospect theory, disposition effect theory, efficient markets hypothesis and random walk theory. It also reviews past literature on psychological factors that influence investment decisions such as overconfidence, mental accounting, frame dependence, affect, herding and representativeness. A review is also done of past studies on real estate investment markets both in Kenya and other parts of the world.

Chapter three is on research methodology. It discusses the research design adopted in the study, which is the descriptive research design. The population of the study is specified, which is institutional real estate investors whose offices are located within Nairobi CBD, who were found to be 68 in number. The sampling design is also specified as simple random sampling technique. A sample size of 40 respondents was arrived at by using Slovin's formula. The data collection method is in form of structured questionnaire to

facilitate ease of data analysis. Appropriate models have been used in the study to show the relationships among the variables being studied.

Chapter four is on data analysis and presentation. It contains responses to research questions, analysis of the responses and the presentation of outcomes through tables and charts. The tables and charts show frequency distributions, percentages and means appropriately. Ratings have been used to measure the extent and importance of psychological influences on real estate investment decisions and market prices.

Chapter five is on summary and interpretation of findings. It is found out from the study that indeed, psychological factors influence real estate investment decisions and market prices. Psychological factors cause shifts in supply and demand, which causes changes in market prices, that deviate from values based on fundamentals. Fundamentalists can thus take advantage of resultant mis-pricings. The study recommends that real estate property dealers be acquainted with the fact that investor psychology plays a great role in determining investment decisions and market prices. The respondents' rankings of psychological factors in order of their importance from the most important to least important are overconfidence, frame dependence, representativeness, mental accounting, herding and affect. The chapter ends with the limitations of the study and suggestions for further research.

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LIST OF ABBREVIATIONS

BV/MV   -   Book Value to Market Value ratio

CBD   -   Central Business District

CCN   -   City Council of Nairobi

CMA   -   Capital Markets Authority

EMH   -   Efficient Markets Hypothesis

HOSP   -   Home Ownership Savings Plan

KENSUP   -   Kenya Slum Upgrading Programme

KRA   -   Kenya Revenue Authority

NHC   -   National Housing Corporation

NSE   -   Nairobi Securities Exchange

P/E   -   Price-Earnings ratio

REITs   -   Real Estate Investment Trusts

SMEs   -   Small and Micro Enterprises

US or USA   -   United States or United States of America

OPERATIONAL DEFINITION OF TERMS

Behavioural Finance -   An emerging field of finance built upon cognitive psychology (how people think) and the limits to arbitrage (markets inefficiency). It contends with standard finance and its assumptions of investor rationality and market efficiency.

Bubble   -   A situation where market prices are observed to rise far higher than would be justified by rational fundamental analysis. Investment bubbles eventually burst and investors find themselves holding assets with very low values.

Crash   -   A situation where market prices collapse suddenly and significantly. Bubbles may eventually lead to a crash. A bubble lasts much longer than a crash. The disastrous effects of a crash can last for many years.

Investor Psychology -   Psychological factors that influence investors in making decisions

CHAPTER ONE

INTRODUCTION

1.1   Background To The Study

The background to this study covers investor psychology, real estate prices, the relationship between investor psychology and real estate prices, and the real estate market in Kenya.

1.1.1 Investor Psychology

According to Ritter (2003), Behavioural Finance, which contrasts Standard Finance and its assumptions of investor rationality and market efficiency, is built upon cognitive psychology (how people think) and the limits to arbitrage (when markets will be inefficient). Rather than using all available information to evaluate investments, people filter out some information. Psychological factors influence decision making so that investors have been found to make irrational decisions. The existence of market anomalies has also proven that markets are not always efficient.

Many people make investment decisions emotionally. Feelings, fantasy, mood and sentiments have been observed to affect investment decisions (Statman, Fisher & Anginer, 2008). Investors have been found to maintain separate mental accounts of every asset they hold and associate each with its purchase price. They seem to have a personal relationship and emotional attachment to each asset they hold (Jordan & Miller, 2008). Psychological studies have shown that investors are much more distressed by prospective losses than they are happy about equivalent gains. They tend to be risk-averse with regard to gains but risk-seeking when faced with losses (Jordan & Miller, 2008).

Investors have the tendency to sell winners too fast and hold on to losers too long (Shefrin & Statman, 1984). This tendency has been termed as disposition effect and is an

irrational behavior. Many investors dislike selling assets at prices lower than purchase prices so as to avoid the pain and regret of having sold at a loss. They keep hoping that the prices will rise in the future (Ritter, 2003). Investors are affected by how investment problems are presented to them. They often make different choices pertaining similar scenarios depending on how the problem has been framed (Jordan & Miller, 2008). If presented in form of a choice between a sure gain and a gamble, they choose the sure gain. But if the choice is between a sure loss and a gamble, they choose the gamble, even if the basic underlying principle is similar in both cases. This irrational behaviour is known as frame dependence.

People have been found to be over-confident concerning their abilities, which is manifested through lack of diversification (Jordan & Miller, 2008). Investors tend to purchase stocks of companies they are familiar with such as stocks of local companies, even when it would be more rationally justifiable to buy stocks of distant companies. Over-confidence has been observed to be reflected in high trading frequency, which leads to lower returns (Barber & Odean, 2001). People tend to give more importance to recent experiences than to events that happened further away in the past (Ritter, 2003). This psychological bias is termed as representativeness. When the stock market turns bullish, investors expect the big gains to continue for a long period, forgetting that bearish markets also occur (Parikh, 2009).

1.1.2 Real Estate Prices

Many people believe that real estate investments generally keep on appreciating in value over time. Modern/standard finance is built upon the Efficient Markets Hypothesis (EMH) which states that markets are efficient, implying that market prices reflect all relevant information and that any mis-pricings leading to arbitrage opportunities, disappear as soon as they arise (Ritter, 2003). 'Bubbles' and 'crashes', however, point to inefficiencies in financial markets, referred to as market anomalies. Bubbles and crashes have been observed to also exist in real estate markets.

Fundamental analysts, also called fundamentalists, seek to purchase under-priced securities and sell over-priced securities. Under-priced securities are those whose market prices are lower than their intrinsic values. Over-priced securities on the other hand, are those whose market prices are higher than their intrinsic values. A stock is considered a value stock if its book value to market value (BV/MV) ratio is high (Parikh, 2009). Technical analysts, also called chartists, do not bother themselves with finding out the real intrinsic values of assets. Instead, they chart past market price movements with a view to establish patterns which they use to predict future prices. Chartists are basically market timers. According to random walk theory, in an efficient market, price changes are random and unpredictable. Thus, it would be of no use to chart past price patterns and use them as a yard-stick to predict future prices (Bodie, Kane & Marcus, 2007).

1.1.3   Relationship Between Investor Psychology And Real Estate Prices

According to rational utilitarianism, prices are governed by the forces of demand and supply. When demand exceeds supply, prices go up and when supply exceeds demand, prices fall. This same law of demand and supply is expected to also prevail in real estates. But anomalies have been observed to also occur in real estate markets just like in securities markets. The behaviour of investors (investor psychology) influences real estate prices. For example, herding to buy lands is likely to push up prices due to excessive demand. Purchasing of land for speculative reasons may lead to bubbles and crashes.

Over-confidence can lead active traders in lands, such as real estate agents, to over-estimate the degree to which their knowledge and experience is responsible for their past successes, and thus make extrapolations into the future. For every real estate property acquired in form of lands and buildings, there is a possibility of investors maintaining a separate mental account. The purchase price becomes the reference point against which market prices are compared to determine profits or losses on each investment. How real estate investment problems are framed may affect the response even when the basic facts remain unchanged.

Real estate investors may buy lands and buildings based on affect rather than on fundamental intrinsic values. Fantasies, moods and emotions may influence real estate prices. Even the liking or dislike for the name of a location may influence prices without regard to fundamental factors that determine value. Recent past events are likely to influence real estate investors' estimations of future prices than events that occurred further away in the past. There is also the possibility of the disposition to sell real estate investments that have risen in value ('winners') and hold those that have fallen in value ('losers'). Prospective losses are likely to make real estate investors to be more distressed and thus become risk seeking, as opposed to when they are faced with equivalent prospective gains.

1.1.4 Real Estate Market In Kenya

The real estate sector in Kenya has been growing at a high rate in recent years. It has attracted many investors, both individuals and institutions. The growing demand for residential and commercial premises is responsible for the booming real estate sector. Population explosion has been experienced in urban areas, especially the city of Nairobi due to rural-urban migration. The demand for housing is still far lower than its supply. Vision 2030 estimates that 200,000 housing units are required per annum, yet only 35,000 are produced (Ruitha, 2010). Home ownership level is low, estimated to be 16% (Ruitha, 2010). In Kenya, real estate markets are not yet well developed in terms of regulation. The real estate market consists of individuals and institutions who/which operate as real estate agents or developers. The Capital Markets Authority (CMA) is currently embarking on enhancing trading on real estates, on the Nairobi Securities Exchange (NSE) through establishing Real Estate Investment Trusts (REITs).

1.2 Statement Of The Problem

A severe battle has been raging between standard or modern finance on one hand, and behavioural finance on the other. Controversy exists as to which of the two is responsible

for influencing investment decisions and market prices. Standard finance assumes that markets are efficient and investors are rational; that they will favour investments that maximize their wealth. Behavioural finance which is based on psychological factors, contends with market efficiency and investor rationality. Studies have been done in various parts of the world whose findings challenge the audacity of the EMH. Bubbles and crashes are market anomalies that have occurred even in developed financial markets, including USA and Japan. In Kenya, cognitive psychological biases have taken prominence over rational behaviour in various occasions.

Nyaribo (2010) studied the behavioural factors influencing the choice of financing methods by SMEs. She found out that the respondents were influenced by behavioural factors such as over-confidence, frame dependence, loss aversion, anchoring, mental accounting, innumeracy and representativeness, in their choice of financing source. Ombai (2010) focused on investigating the "herd effect" at the NSE during the global financial crisis during the period 2006 – 2009. He found out strong evidence of herding behaviour at NSE in the subsequent period after inception of the global credit crunch. Kahuthu (2011) studied the effects of herd behaviour on trading volume and prices of securities at NSE. The results of the study showed that herd behaviour has positive correlation with trade volume and prices of securities quoted at the NSE. Findings by Werah (2006) as quoted by Nyaribo (2010) were that herd behaviour was prevalent among individual investors at the NSE. Waweru et al. (2008) also quoted by Nyaribo (2010) established that behavioural factors affected the decisions of institutional investors at the NSE.

The studies carried out locally concentrate mainly on herd behaviour at NSE without focusing on other behavioural factors, and without being focused on the real estate sector. Studies conducted on real estate investment have majorly concentrated on housing challenges and the need for decent housing. Housing is a basic human need and a fundamental human right recognized by UN-HABITAT. The influence of psychological factors in real estate markets has not been adequately studied, hence the reason for this research. To what extent does investor psychology influence real estate investment

decisions and real estate prices? This is the major question to be answered by this research.

1.3   Objectives Of The Study

The objective of this research is to study the effects of investor psychology on real estate market prices in Nairobi, Kenya.

1.4   Significance Of The Study

This study will be of importance to investors generally, and more specifically, to real estate investors. They will be acquainted with knowledge about psychological factors that influence investment decisions and market prices. They will be able to apply and relate the psychological influences to investment decisions they have made in the past. They will be able to learn their own behavioural patterns that deviate from rationality and be equipped to make better and more rewarding investment decisions in the future.

Investment advisors and financiers will benefit from this study by discovering that investors are not always guided by rationality in their investment decisions. Psychological factors play an undeniable role in influencing individuals' decisions, including investment decisions. Equipped with findings from this research, investment advisors and financiers will be able to offer more informed quality advice to investors. Academicians and scholars in the field of behavioural finance will find this study enriching to the already growing body of knowledge, and be able to identify research gaps for further study.

CHAPTER TWO

LITERATURE REVIEW

2.1   Introduction

This chapter examines past literature on psychological factors that influence investment decisions generally, and real estate investment specifically. The first section reviews theories advanced regarding behavioural finance such as prospect theory, disposition effect theory, efficient markets hypothesis (EMH) and random walk theory. The second section is a review of past empirical studies and general literature on cognitive psychological biases (psychological factors), which are the basis of behavioural finance. The third section deals with a review of past studies on real estate investment markets. The final section draws the conclusions on literature review.

2.2   Review Of Theoretical Literature

This section discusses the theories advanced in the field of behavioural finance. In particular, a review is done on the prospect theory, disposition effect theory, efficient markets hypothesis (EMH) and random walk theory.

2.2.1   Prospect Theory

The prospect theory was developed by Tversky and Kahneman in 1979. The theory contradicts expected utility theory upon which Standard finance is based. According to Jordan and Miller (2008), Prospect theory is an alternative to classical, rational economic decision making. Prospect theory emphasizes that investors tend to behave differently when they face prospective gains and losses; investors are much more distressed by prospective losses than they are happy about equivalent gains, and a typical investor considers the pain of losing one dollar to be twice the pleasure received from the gain of one dollar.

Investors have been found to respond in different ways to identical situations, depending on whether they are presented in terms of gains or in terms of losses. Investors seem to be willing to take more risk to avoid loss than they are to make an equivalent profit. The tendency of investors to be risk-averse regarding gains but risk-seeking regarding losses, is the essence of prospect theory. When an investor has the choice between a sure gain and a gamble that could increase or decrease the sure gain, the investor is likely to choose the sure gain. But when faced with a choice between a sure loss and a gamble which could increase or decrease the sure loss, investors are more likely to take the gamble (Jordan & Miller, 2008).

2.2.2   Disposition Effect Theory

The disposition effect theory was developed by Shefrin and Statman in 1985. Disposition effect refers to the tendency that investors have of selling assets that have gained value ('winners') and keeping assets that have lost value ('losers'). The disposition effect is reflected in aggregate stock trading volume. When prices fall, investors tend to hold to assets they already have, to avoid the regret of having sold at a loss, hoping that the prices will rise in the future. On the other hand, when prices rise, investors tend to sell assets too fast to realize gains.

According to Weber and Camerer (1998), disposition effects can be explained by the two features of prospect theory: the idea that people value gains and losses relative to a reference point (which is the initial purchase price of assets), and the tendency to seek risk when faced with possible losses, and avoid risk when a certain gain is possible. Shefrin and Statman (1985) found evidence that due to their desire to avoid regret, investors tend to sell winners too early and ride losers too long.

Shiller and Case (1988) interviewed home buyers and found prevalence of disposition effects; that homeowners were more eager to sell at a profit than at a loss. Real estate economists and agents widely believe that volume slows, sometimes dramatically, when

prices sag (Weber & Camerer, 1998). Barber and Odean (1999) cite studies showing evidence of the disposition effect in the exercise of company stock options (Heath, Huddart, & Lang, 1999), in the sale of residential housing (Genesove & Mayer, 1999), among professional futures traders (Locke & Mann, 1999), Israeli investors (Shapira & Venezia, 1998), and Finnish investors (Grinblatt & Keloharju, 1999). Barber and Odean (1999) conclude that the disposition effect based on loss aversion best explains the tendency for investors to hold losers and sell winners. They even found that investors are more inclined to purchase additional shares of their losing investments by almost 1.5 times than additional shares of their winning investments.

2.2.3 Efficient Markets Hypothesis

Modern finance is built upon the Efficient Markets Hypothesis (EMH). EMH is the notion that securities' prices already reflect all available information. The EMH argues that competition between investors seeking abnormal profits drives prices to their "correct" value, so that any arbitrage opportunities disappear as soon as they arise. Behavioral finance assumes that, in some circumstances, financial markets are informationally inefficient (Ritter, 2003). A market is said to be efficient with respect to some information if that information is not useful in making investors to earn excess positive return (Jordan & Miller, 2008). The market is not efficient if some investors have access to insider information leading to insider trading and their ability to earn excess positive returns than other investors.

Statman (1999) states that market efficiency is at the center of the battle of standard finance versus behavioral finance versus investment professionals. He argues that the term "market efficiency" has two meanings. One meaning is that investors cannot systematically beat the market and Statman concurs with this. The other meaning is that security prices are rational implying that they reflect only "fundamental" or "utilitarian" characteristics, such as risk, but not "psychological" or "value-expressive" characteristics, such as sentiment. Statman strongly disagrees with this second meaning.

According to EMH, it is very difficult for investors to consistently beat the market (earn positive excess return) over a long period of time. The excess return is the difference between the earnings of a particular investment and the earnings of other investments with similar risk. A positive excess return means that an investment has out-performed other investments of the same risk (Jordan & Miller, 2008). Odean (1999) states that excessive trading in retail brokerage accounts could result from either investors' overconfidence or from the influence from brokers wishing to generate commissions. Excessive institutional trading could also result from overconfidence or from agency relationships. He cites a study by Dow and Gorton (1997) which shows that money managers, who would otherwise not trade, do so for the mere reason of signaling to their employers that they are earning their fees and are not "simply doing nothing".

2.2.4   Random Walk Theory

'Random Walk' refers to the notion that changes in stock prices are random and unpredictable (Bodie, Kane & Marcus, 2007). It is thus of no use, to attempt to predict future stock prices. Past patterns of stock price movements should not be used as a basis to extrapolate future price trends. According to Bernstein (1984), investors consistently push stock prices to unsustainable levels, both upwards and downwards.

Parikh (2009) in advocating for 'value investing' quotes Benjamin Graham who says, "price is what you pay, value is what you get". He states that value investors buy stocks when the market is bearish, when expectations of investors are low; during bullish times, the value investors look for good neglected stocks which are out of favour with investors. He shows that 'growth stock investing' on the other hand, "is based on dreams, illusions or popular opinion". He further argues that "the concept of growth stock is a creation of a bull market, which dies when the bear market sets in" and that "bear markets create values". A study by Anyumba (2010) concluded that NSE follows a random walk under the weak form of market efficiency.

2.3 Review Of Empirical And General Literature On Cognitive Psychological Biases

In this section, a review is undertaken of empirical studies and general literature on psychological factors and their effects on investment decisions, including decisions regarding investment in real estate markets.

2.3.1 Over-confidence

According to Jordan and Miller (2008), overconfidence manifests itself through lack of diversification. People tend to invest in local companies that they are familiar with, as opposed to distant companies which might even be performing better. Another form of overconfidence is the tendency for people, including investors, to remember their past successes and disregard their past failures. Barber and Odean (1999) highlight two common mistakes investors make: excessive trading resulting from overconfidence, and the tendency to hold on to losing investments while selling winners which is prompted by the human desire to avoid regret.

Odean (1999) cites studies by psychologists which show that most people generally are overconfident about their abilities (Frank, 1935) and about the precision of their knowledge (Fischhoff et al., 1977; Alpert & Raiffa, 1982; Lichtenstein et al., 1982). Odean (1999) found out that overconfident investors are more likely to seek jobs as traders or to actively trade on their own account. Traders' past successes tend to make them overestimate the degree to which they were responsible for their own successes, and end up taking too much credit for their own successes thereby becoming overconfident. The securities that overconfident investors sell have been found to mostly out-perform those they buy, and trading often leads to losses. Overconfident investors engage in costly trading, even when their expected trading profits are insufficient to offset the costs of trading.

Barber and Odean (1999) observed that overconfidence increases trading activity because it causes investors to over-consider their own opinions than the opinions of others. They cite studies that show that people are unrealistically optimistic about future events and expect good things to happen to them more often than to their peers (Weinstein, 1980; Kunda, 1987); People are even unrealistically optimistic about pure chance events (Marks, 1951; Irwin, 1953; Langer & Roth, 1975) and have unrealistically positive self-evaluations (Greenwald, 1980); Most individuals see themselves as better than the average person and as better than others see them and rate their abilities and their prospects higher than those of their peers (Taylor & Brown, 1988) . In addition, people overestimate their contributions to past positive outcomes. When people expect a certain outcome and the outcome does occur, they often overestimate the degree to which they were instrumental in causing it (Miller & Ross, 1975).

Barber and Odean (2002) found out that online trading fosters greater overconfidence which leads to more frequent trading and poor performance. They further cite studies which indicate that people tend to ascribe their successes to their personal abilities and their failures to bad luck or the actions of others (Langer & Roth, 1975; Miller & Ross, 1975). Barber and Odean (2000) show that after accounting for trading costs, individual investors who trade the most realize, by far, the worst performance. Barber and Odean (2001) show that men tend to be more overconfident than women, trade nearly one and a half times more actively than women and their investments under-perform those of women. Graham and Harvey (2009) found that investors who feel more confident trade more often. They also found that male investors and investors with larger portfolios or more education, are more likely to perceive themselves as more competent than female investors and investors with smaller portfolios or less education.

2.3.2 Mental Accounting

According to Jordan and Miller (2008), investors maintain a separate mental account for each asset and unknowingly, have a personal relationship with each. As a result, it becomes difficult to sell one of them. According to Shefrin and Statman (1985), the main

idea underlying mental accounting is that decision makers tend to segregate the different types of gambles faced into separate accounts. When a new stock is purchased, rather than evaluating the whole investment, a new mental account is opened. The asset purchase price is used as the reference point. A running score is then kept on this account indicating gains or losses relative to the purchase price. Investors find it difficult to close mental accounts at a loss, a situation termed as 'the break-even effect'. Investors may resist the realization of a loss because it stands as proof that their first judgment was wrong.

While closing a stock account at a loss induces regret, closing at a gain induces pride (Shefrin & Statman, 1985). The quest for pride, and the avoidance of regret lead to a disposition to realize gains and defer losses. Regret is stronger than pride. As a result, investors may be prone to inaction than action due to the strong desire to avoid regret. For example, if an asset's price rises and the investor sells it, the pride of gain would vanish away if the asset's price rises further. The investor would regret for having sold too quickly. Thus some investors would prefer not selling at all (inaction) whether prices rise or fall.

2.3.3   Frame Dependence

People have been found by researchers to have the tendency to respond differently to equivalent situations depending on whether they are presented (framed) in form of gains or losses. When presented in form of gains, they tend to be risk-averse but when presented in form of losses, they become risk-seekers. If an investment problem is presented in two different but equivalent ways, investors often make inconsistent choices (Jordan & Miller, 2008).

According to Statman (1999), the role of frames is illustrated well in the dividend puzzle. He cites the example of Consolidated Edison Company, the New York city's power company, which eliminated its dividend during the energy crisis of 1973-1974: "Some shareholders cried at Con Edison's 1974 annual meeting; others had to be restrained from

physically harming the chair of the company's board". He notes that frames are a part of Kahneman and Tversky's (1979) prospect theory – that a dividend dollar is different from a capital dollar in prospect theory because the investor frames the dollars into two distinct mental accounts; the decline in the price of Con Edison's shares is a loss in the capital mental account, while the elimination of the dividend is a loss in the dividend mental account.

Besides dividends and capital, there are many other examples of mental accounting frames. People often keep their portfolio money in separate mental accounts or "pockets"; "some money is retirement money, some is fun money, some is college education money, and some is vacation money" (Statman, 1999). Jordan and Miller (2008) note that gamblers at Casinos are more willing to take risks with money they have won than with money they brought with them from home. Money earned through hard work is considered more precious than lottery winnings whereas according to rationality, the same dollar amount has the same purchasing power regardless of its source. Frame dependence behaviour as explained by loss aversion was observed by Nyaribo (2010) on SMEs entrepreneurs.

2.3.4 Affect

Affect is manifested through sentiments, likes and dislikes of people about something, including investments. Even the very name of a company can attract or repel prospective investors without regard to the fundamental value of the company's stock. Moods and emotions influence people in decision making, including investment decisions. This is irrational behaviour from an economic point of view. Statman, Fisher, and Anginer (2008) argue that investors often admire a stock or disapprove of it when they hear its name even before they think about its P/E or the growth of its company's sales, and that affect is exhibited in stocks, houses, cars, watches, and many other products. They further define affect as the specific quality of "goodness" or "badness", and cite Slovic, Finucane, Peters, and MacGregor (2002) who described affect as a feeling that occurs rapidly and automatically, often without consciousness. Statman et al. (2008) quote

Zajonc (1980) as having written that; "We do not just see house: We see a handsome house, an ugly house, or a pretentious house". The liking and attraction to something is what mostly drives investment decisions.

Statman (1999) shows the effect of affect by using the analogy of the watch market. He cites a Rolex watch and Timex watch whose market prices were $10,000 and $50 respectively, even though both watches have approximately the same utilitarian qualities of displaying the same time. He observes that Rolex buyers were willing to pay an extra $9,950 over the price of the Timex because the affect of a Rolex, in terms of prestige and beauty, is more positive than that of a Timex. Statman et al. (2008) cite studies by Cooper, Dimitrov, and Rau (2001) who found that companies that changed their names to dot-com names during the boom years of the late 1990s, had positive abnormal returns of 74 percent in the 10 days surrounding the day on which the change was announced, even when nothing about the business had changed; companies with dot-com names, however, acquired negative affect in the early 2000s, and studies by Cooper, Khorana, Osobov, Patel, and Rau (2005) found that companies that changed from a dot-com name to a conventional name during that time experienced positive abnormal returns.

"Socially responsible" investors display affect by excluding from their portfolios, stocks of companies engaged in selling tobacco, alcohol, military products, or firearms, in the gaming industry, or in nuclear operations (Statman et al., 2008). They cite Hong and Kacperczyk (2007) as well as Statman and Glushkov (2008) who found that stocks of companies associated with tobacco, alcohol, gaming, firearms, military sales, and nuclear operations had relatively higher returns than stocks of other companies. Affect thus goes against rational utilitarianism.

2.3.5 Herding

Many investors instead of making their own judgments logically, rely on collective wisdom, which often results in irrationality and losses. This is due to the law of supply and demand. Herding to buy assets leads to demand exceeding supply thereby causing

price hikes. When the herd rushes to sell, supply exceeds demand leading to fall in prices. Prechter (2001) argues that herding behavior, though appropriate in some primitive life-threatening situations, is inappropriate and counter-productive to success in financial situations. People are driven to follow the herd because they do not have firsthand knowledge adequate to form an independent conviction. This makes them seek wisdom in numbers. People thus assume that "the herd knows where it's going" (Prechter, 2001). A rational investor would have to make investment decisions that are contrary to the majority of investors but unfortunately, not many of them do so. Even institutional investors who are expected to be prudent fall victims of herding behaviour by following the crowd. For example, if a fund manager buys stocks of an obscure company and it performs badly, he is likely to lose his job; but if he buys stocks of a blue chip company and it performs badly, it would be un-punishable (Parikh, 2009).

Ombai (2010) found strong evidence of herding behaviour at the NSE and agrees with Christie and Huang (1995) that investors are more likely to herd during market stress. Kahuthu (2011) also found that herd behaviour indeed exists at the NSE and that the volume of shares traded increased during the herd instinct period, due to irrational thinking when a person is in the presence of others. He further found that group leaders (and more specifically treasurers and chairpersons), strongly influenced decisions.

2.3.6 Representativeness

People tend to put too much weight on recent experience and little weight on events that occurred further away in the past, even when the longer term past event seems more rational than the recent experience. This cognitive psychological bias known as representativeness, is also termed as the 'recency bias' and also the 'law of small numbers'. "Cognitive psychologists have discovered that the human mind is a pattern seeking device even when the events are clearly random" (Jordan & Miller, 2008). People tend to become more optimistic when the market goes up (bull market) and more pessimistic when the market goes down (bear market). Ritter (2003) believes that people underweight long-term averages and tend to put too much weight on recent experience.

2.4 Review Of Past Studies On Real Estate Investment Markets

In Kenya, real estate markets are not yet well developed in terms of regulation. A transformation is taking place in the Kenyan real estate market. The Capital Markets Authority (CMA) is currently embarking on enhancing trading on real estates, on the Nairobi Securities Exchange (NSE), through establishing Real Estate Investment Trusts (REITs) and accompanying regulations. This move will see investors including small investors who could not afford to buy whole properties in form of lands and buildings, begin to own portions of such properties in form of share-holdings. High interest rates have made many people to keep off the acquisition of properties through mortgage facilities.

Affordable decent housing is of global concern and is one of the fundamental human rights according to UN-HABITAT. Decent housing projects have been embarked on in various slum areas by the Ministry of Housing through the Kenya Slum Upgrading Programme (KENSUP), a joint initiative between the government of Kenya and UN-HABITAT with the aim of upgrading slums to make them habitable.

Demand for housing is by far greater than its supply (Mwangi, 1997). According to Sessional Paper No. 5 of 1966/67 on National Housing Policy, the annual housing requirement was 7,600 and 38,000 new units in urban and rural areas respectively, and the Kenyan population was 9 million then. Sessional Paper No. 3 of 2004 estimates the annual housing demand to be 150,000 and 300,000 units in urban and rural areas respectively. The annual supply of urban housing was only between 20,000 – 30,000 units meaning a short-fall of over 120,000 units, hence rapidity of squatter and informal settlements.

Home ownership is considered a valuable investment (Keely, Ark, Levanon & Burbank, 2012). Land is highly regarded for economic and social reasons. It is considered a great asset for inheritance. Major political crises in Kenya are centered around land ownership. Lands and buildings are a readily acceptable collateral against loans. Desire for home

ownership has led to thriving of mortgage companies. Kiyosaki and Lechter (2000) emphasize on 'owning the roof under which you live' (home ownership) which according to Clason (1926) was one of the great wisdoms of ancients.

According to 2009 Population and Housing Census Results, Kenya's population has been growing at a high rate; 10.9 million in 1969, 15.3 million in 1979, 21.4 million in 1989, 28.7 million in 1999 and 38.6 million in 2009. Vision 2030 estimates that 200,000 housing units are required per annum, yet only 35,000 are produced (Ruitha, 2010). Home ownership level is low, estimated to be 16% (Ruitha, 2010). Majority of urban population relies on rental housing due to low levels of income, even though the government encourages home ownership through schemes such as Home Ownership Savings Plan (HOSP) and Owner Occupier Interest, which offer tax advantages. The growing demand for residential and commercial buildings is a challenge to the government and presents an opportunity to real estate investors, both individuals and institutions. The investment in housing requires so much capital outlay that developers have to engage in some form of borrowing, begging or even stealing! (Nabutola, 2004).

It is widely believed that investment in lands and buildings is worthwhile because prices and rental incomes keep on increasing. Land may be bought for speculative reasons with the expectation of fetching high future prices and making lucrative profits, or for development purposes where buildings are constructed either for sale or renting. Speculative buying is likely to lead to soaring prices and eventually result in bubbles and possibly, crashes. According to Keely, Ark, Levanon and Burbank (2012), house prices in America fell by over 30% representing a decline in the value of housing assets of $ 7 trillion during the housing crash of 2006 – 2011. They, however, state that the worst is over and predict a recovery from year 2012 onwards. Levitt and Syverson (2008) found out that agents sell their own houses for prices that are more (3.7%, which is roughly $ 7,600) than those of houses belonging to their clients. Agents are also willing to wait for longer periods of time in the market (10%, which is roughly 10 days) to fetch higher returns on their own houses, yet they strongly persuade their clients to sell their houses more quickly and at lower prices.

In Kenya, prices of lands and buildings are likely to keep on rising owing to high demand and gross under-supply. According to Ruitha (2010), prices of housing and prime land have skyrocketed, increasing at an annual rate of; 16% for apartments/flats, 28% for maisonettes and annual rents for selected markets increasing at the rate of 10% per annum. Excessive speculation especially around major cities and county headquarters, may however, push prices to high unsustainable levels leading to bubbles and bursts.

2.5   Conclusion From Literature Review

Empirical studies challenge the validity and relevance of standard finance and its underlying assumptions. Many behavioural finance scholars have carried out studies which show that people, and specifically investors, are not always governed by rationality when making decisions, including investment decisions. Furthermore, markets are not always efficient especially in terms of asset pricing. Mis-pricings and market anomalies have been observed to exist in financial markets. Bubbles and crashes have also been observed to exist in real estate markets. Cognitive psychological biases which are a manifestation of people's deviation from rational utilitarianism, have been observed by behaviourists to influence investment decisions, leading to sub-optimization.

Real estate markets in Kenya are not well developed in terms of regulation. But a transformation is taking place, with CMA's introduction of REITs and on-going establishment of regulations that will enhance the opening up of trading in real estate properties (lands and buildings) at the NSE. Transactions in real estate properties have been taking place in Kenya among individual and institutional investors, without being undertaken via organized markets such as NSE. Home-ownership in Kenya is very low and housing demand is by far greater than its supply. This wide gap which is further escalated by rural-urban migration and population explosion, presents a great opportunity for real estate investors due to high demand for residential and commercial premises.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1   Introduction

This chapter describes the research design used in this study, the population of the study, sampling design (sample size and sampling technique), data collection methods, data analysis tools and techniques, and finally data validity and reliability.

3.2   Research Design

This study used the descriptive research design. A descriptive study is concerned with finding out who, what, where, when, or how much (Cooper & Schindler, 2006). This research is descriptive because it is concerned with discussing investor psychology (the 'what') and its influence on decisions by investors (the 'who") in real estate markets. Both primary and secondary sources of data have been used in this research.

3.3   Population Of The Study

According to Mugenda and Mugenda (2003), a population refers to a complete set of individuals, cases or objects with some common observable characteristics, which differentiate it from other populations. The target population of this study is real estate investors in Kenya. The accessible population of this study consists of institutional real estate investors whose offices are located within Nairobi CBD. This population consists of 68 institutional real estate investors.

The accessible population of this study was obtained from information contained in the latest (2012) Nairobi edition of the Kenya Telephone Directory, which enlists 80 institutional real estate investors whose offices are located within Nairobi CBD. This was expected to facilitate ease of access since information contained in the records of the

City Council of Nairobi (CCN) and other relevant bodies may have out-dated physical addresses and telephone contacts. CMA records are also not currently expected to generate reliable and comprehensive information on real estate market players since REITs and real estate property trading at the NSE is merely at its conception stages. Upon commencement of data collection, the researcher noticed that some institutional real estate investors were no longer located within the buildings shown in the latest (2012) Nairobi edition of the Kenya Telephone Directory. Some were even no longer within Nairobi CBD. This prompted an actual physical re-establishment of those that are currently within Nairobi CBD, and were found to be 68. The study covered the whole area enclosed by Tom Mboya Street, University Way, Uhuru Highway and Haile Selassie Avenue.

3.4 Sampling Design

A sample is a sub-set of a particular population. Sampling design encompasses sampling technique and sample size. This study used simple random sampling technique. This was considered appropriate because the population of the study was considered highly homogeneous. The Slovin's formula (cited by Ellen) was used to determine the appropriate sample size of 40 respondents from the accessible population of 68. The formula is stated as follows:

$$n = N / (1 + Ne^2)$$

where n = Number of samples, N = Total population, and e = Error tolerance

Source: Ellen, S. (http://www.ehow.com)

Slovin's formula allows a researcher to sample the population with a desired degree of accuracy, and gives the researcher an idea of how large his sample size needs to be to ensure a reasonable accuracy of results (Ellen). The confidence level used by the researcher was 90% implying 0.1 margin error. Thus by applying the formula with population of 68, the sample size was obtained as follows:

$$n = 68 / (1 + 68 * 0.1 * 0.1) = 40$$

3.5 Data Collection Methods

Data collection methods refer to the instruments used to gather the required data from respondents. In this research, data were collected using structured questionnaires to facilitate ease of analysis. The questionnaires were administered to respondents by the researcher. The researcher endeavoured to book appointments with senior managers to be granted opportunity to administer the questionnaires. The researcher was available to clarify any issues on demand by respondents. Scales were used in questionnaires to help in facilitating the analysis of results obtained that are in form of measurements. Both qualitative and quantitative data were gathered through questionnaires.

3.6 Data Analysis Tools And Techniques

Collected data were analyzed using statistical tools and have been presented by use of tables and charts. Ms-Excel has been used to generate the tables and charts. Frequencies and percentages have been used to display results of findings.

An appropriate real estate investment model is adopted from Levitt and Syverson (2008). The model was used in studying market distortions when agents are better informed. Real estate agents serve home-owners by selling properties on their behalf. But real estate agents also own properties which they sell for themselves. Being experts in the real estate market, agents possess more superior information than the property owners they serve, and have been found to exploit their knowledge to their own advantage rather than fully benefiting home-owners. Agents strongly persuade home-owners to accept sales prices which are much lower than what they themselves would accept for their own properties of equivalent value. The model is as follows:

$$y_{htc} = \beta * AGENT\_OWNED_{ht} + X_{ht}\gamma + K_{ct} + \lambda_b + \epsilon_{ht,}$$

where h, t, c, and b correspond respectively to house, year, city, and city block. The dependent variable y is either a house's logged sales price or days on the market. X_{ht} is the full set of housing characteristics which include numbers of rooms of different types,

numbers of garage stalls and fire places, presence of amenities like master baths, style of the house, the home's exterior, and written descriptions of the home. K_{ct} is city-specific variation in annual prices. λ_b is the fixed effects for each city block.

Source: Levitt & Syverson (2008)

Another model was developed by Case and Quigley (1991) to determine the sale price of real estate properties or rent per square foot. It is expressed as follows:

$$Vt = f(x, t)$$

where Vt represents the sale price of real estate properties (or rent per square foot); x represents the physical and locational characteristics of the properties; and t is a representation of time. Thus according to the model, sales prices of real estate properties (or rent per square foot) depend on the physical and locational characteristics of the properties and time.

Source: Case and Quigley (1991)

A model can be developed showing that real estate market prices depend on investor psychology as follows:

$$MPre = \alpha\,OC + \beta\,MA + \chi\,FD + \delta\,AF + \varepsilon\,HE + \varphi\,RE + k$$

where *MPre* represents real estate market prices; *OC, MA, FD, AF, HE* and *RE* correspond to Over-confidence, Mental Accounting, Frame Dependence, Affect, Herding Effect and Representativeness respectively, which are psychological factors that influence investors in decision making; $\alpha,\ \beta,\ \chi,\ \delta,\ \varepsilon$ and φ are the coefficients of the various psychological factors which will be determined in terms of the relative degree to which they influence real estate investment decisions and market prices; k is a constant which is introduced into the model to hold constant all other factors that determine real estate investment decisions and market prices.

Source: Author (2012)

The mean rating and regression for each psychological factor are calculated using the formulae:

Mean = $\frac{\Sigma fx}{\Sigma f}$ = $\frac{\Sigma xy}{\Sigma y}$

Correlation coefficient (r) = $\frac{n\Sigma xy - \Sigma x \Sigma y}{\sqrt{\{(n\Sigma x^2 - (\Sigma x)^2)(n\Sigma y^2 - (\Sigma y)^2)\}}}$

The regression equation is given as: $y = a + bx$, where y represents the market price of real estate properties, x represents the psychological factor under consideration, a is a constant, while b is a coefficient of the psychological factor under consideration.

3.7   Data Validity And Reliability

Validity is the degree to which results obtained from the analysis of data actually represent the phenomenon under study, or in other words, how accurately the data obtained in the study represents the variables of the study (Mugenda & Mugenda, 2003). External validity of research findings refer to the data's ability to be generalized across persons, settings and times while internal validity refers to the ability of a research instrument to measure what it is purported to measure (Cooper & Schindler, 2006). Pre-testing of questionnaires was undertaken and it was established that responses indeed would generate accurate results as per the variables of this study.

Reliability is a measure of the degree to which a research instrument yields consistent results or data after repeated trials (Mugenda & Mugenda, 2003). Reliability is the degree to which a measure supplies consistent results, and is a necessary contributor to validity, though not a sufficient condition for validity (Cooper & Schindler, 2006). The test-retest technique of assessing reliability was used in this study. This involved verbally asking the respondents some of the same questions administered to them through the questionnaire, so as to receive verbal replies and compare them with questionnaire responses. The verbal responses were found to be similar to the questionnaire responses.

CHAPTER FOUR

DATA ANALYSIS AND PRESENTATION

4.1   Introduction

This chapter presents data on the findings of this research. Collected data are presented in form of tables and figures to facilitate comparisons. The figures are in form of charts/graphs. Explanations are also given on the contents of tables and figures. The accessible population of study was institutional real estate investors whose offices are located within Nairobi CBD, totaling 68. A sample size of 40 was selected through simple random sampling. Out of these, 35 responses were received representing a response rate of 87.5%. It is the data obtained from these respondents that is analysed and presented.

4.2   Overconfidence In Real Estate Investment Decisions And Market Prices

Indeed, overconfidence has been established from this study to be the greatest factor influencing real estate investment decisions and market prices. Confidence, knowledge and experience was the highest rated factor responsible for real estate investors' success in making investment decisions, scoring a mean rating of 4.3143 from a scale of 1 to 5.

Table 1: Factors Responsible For Respondents' Investment Success

Factor	Mean of respondents' ratings	Ranking (highest to lowest)
Your confidence, knowledge & experience	4.3143	1
Right advice from friends and relatives	2.7714	4
Professional advice from investment experts	3.9429	2
Good market performance	3.8857	3
Adequate government support	1.8000	5

Source: Author (2012)

Concerning the factors responsible for their wrong investment decisions, respondents did not readily attribute it to their own mistakes but rather blamed it on external factors such as poor market performance (ranked highest with a mean of 3.0857) followed by lack of government support (mean of 3.0571). The investors' own mistakes came third (mean of 2.9429), followed by inadequate information/advice from experts (mean of 2.7714) and lastly, incorrect advice from friends and relatives (mean of 2.3429).

Table 2:   Factors Responsible For Respondents' Wrong Investment Decisions

Factor	Mean of respondents' ratings	Ranking (highest to lowest)
Your own mistakes	2.9429	3
Incorrect advice from friends and relatives	2.3429	5
Inadequate information/advice from experts	2.7714	4
Poor market performance	3.0857	1
Lack of government support	3.0571	2

Source: Author (2012)

What is more interesting is that respondents gave ratings of opinions on factors responsible for wrong investment decisions of majority of real estate investors that were quite different from the factors they themselves had cited. Own mistakes of the majority of real estate investors ranked highest (with a mean of 3.4571), followed by inadequate information/advice from experts (mean of 3.2571), poor market performance (mean of 3.2286), lack of government support (mean of 3.2000) while incorrect advice from friends and relatives ranked lowest (mean of 2.8000). This comparison shows that the respondents were highly overconfident about their investment prudence and that they make better investment decisions than their peers.

Table 3: Factors Responsible For Wrong Investment Decisions Of Majority Of Real Estate Investors

Factor	Mean of respondents' ratings	Ranking (highest to lowest)
Their own mistakes	3.4571	1
Incorrect advice from friends and relatives	2.8000	5
Inadequate information/advice from experts	3.2571	2
Poor market performance	3.2286	3
Lack of government support	3.2000	4

Source: Author (2012)

Respondents also manifested overconfidence about a better future by showing their willingness to continue investing in lands and buildings even when it is unprofitable with the hope of future improvements in profits. Those willing to do so were 28 (80%) against 7 (20%) who would be unwilling.

Table 4: Influence Of The Hope For a Better Future

Choice	Frequency	Percentage
YES	28	80%
NO	7	20%
TOTAL	**35**	**100%**

Source: Author (2012)

Figure 1:   Influence Of The Hope For a Better Future
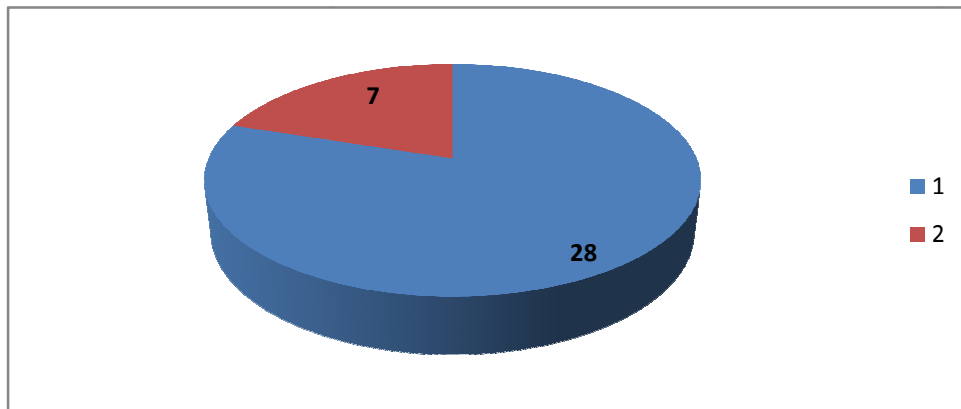
Source: Author (2012)

In terms of importance, overconfidence (shown in form of confidence, knowledge and experience) ranked highest according to respondents' ratings with a mean of 4.4857 on a scale of 1 to 5, with 1 being least importance and 5 being very great importance. Overconfidence about future expectations of real estate properties price hikes would propel investors to buy and hold the properties so as to sell them later at high prices. If many investors seek to buy the properties, this high demand would push market prices upwards even beyond their real values. This would lead to possible crashes and bubbles in the future.

Table 5:   Importance Of Overconfidence In Real Estate

Rating	Frequency	Percentage
1	0	0%
2	1	3%
3	3	9%
4	9	26%
5	22	63%
15	**35**	**100%**

Source: Author (2012)

28

Figure 2: Importance Of Overconfidence In Real Estate
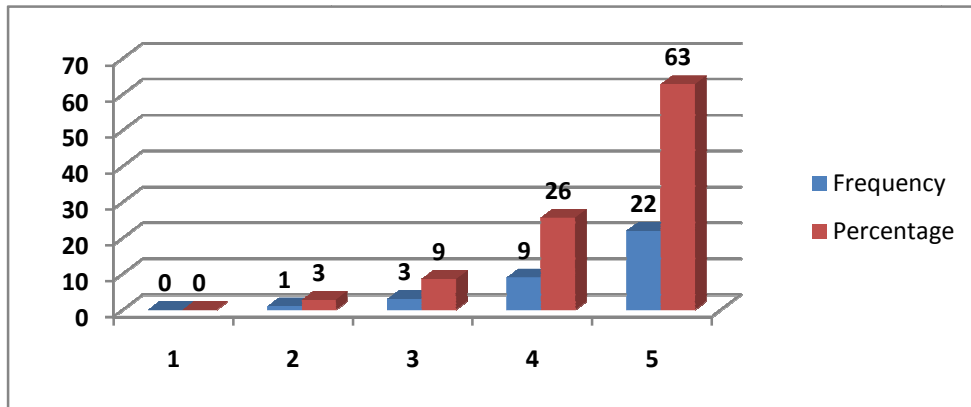
Source: Author (2012)

The mean rating for overconfidence is 4.4857 from a scale rating of 1 to 5. The regression coefficient is 0.9052, implying that real estate market prices are positively correlated with overconfidence. Upon computation, the regression equation is found to be: $y = -8.6 + 5.2x$, where y represents real estate market price and x represents overconfidence.

Table 6: Mean And Regression Of Overconfidence In Real Estate

x	y	x^2	y^2	xy
1	0	1	0	0
2	1	4	1	2
3	3	9	9	9
4	9	16	81	36
5	22	25	484	110
15	**35**	**55**	**575**	**157**

Mean rating   4.4857
a   -8.6
b   5.2
r   0.9052
y = -8.6 + 5.2x

4.3 Mental Accounting In Real Estate Investment Decisions And Market Prices

The influence of mental accounting on respondents' real estate investment decisions was displayed through only 6 (17%) of the respondents choosing the option of accounting for losses and profits accruing from buildings together as one combination while the majority (29 respondents, comprising 83%) chose the option of accounting for each building separately. This confirms that the investors maintain a separate mental account for each real estate property they acquire, and use the purchase price as the yardstick against which to measure gains or losses on the property.

Table 7: Influence Of Mental Accounting In Real Estate Market

Decision	Frequency	Percentage
(a) Account for both buildings together as one combination	6	17%
(b) Account for each building separately	29	83%
Total	**35**	**100%**

In terms of importance, mental accounting ranked fourth out of six with a mean rating of 4.0571 based on a scale of 1 (least importance) to 5 (very great importance). Mental accounting would make investors to have the disposition to sell the properties which have risen in price and hold on to those that have fallen in value. Real estate properties whose market prices have risen in value could rise further in the future. This would cause regret on investors who sold them for having sold too quickly. Likewise, there is a possibility that properties whose market prices have fallen in value could fall further in the future. This would cause regret on investors who have kept on holding such properties.

Table 8: Importance Of Mental Accounting In Real Estate

Rating	Frequency	Percentage
1	2	6%
2	0	0%
3	6	17%
4	13	37%
5	14	40%
15	**35**	**100%**

Source: Author (2012)

Figure 3: Importance Of Mental Accounting In Real Estate
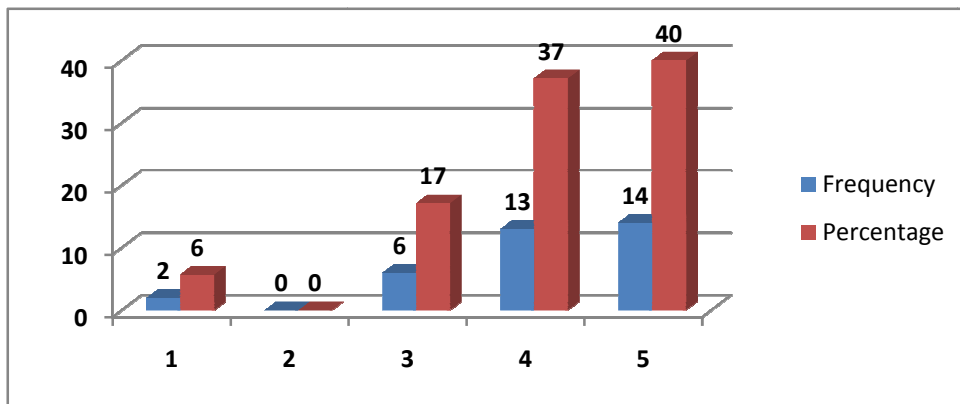
Source: Author (2012)

The mean rating for mental accounting is 4.0571 from a scale rating of 1 to 5. The regression coefficient is 0.9250, implying that real estate market prices are positively correlated with mental accounting. Upon computation, the regression equation is found to be: y = -4.1 + 3.7x, where y represents real estate market price and x represents mental accounting.

Table 9:   Mean And Regression Of Mental Accounting In Real Estate

x	y	x^2	y^2	xy
1	2	1	4	2
2	0	4	0	0
3	6	9	36	18
4	13	16	169	52
5	14	25	196	70
15	**35**	**55**	**405**	**142**

Mean rating	4.0571
a	-4.1
b	3.7
r	0.9250

$y = -4.1 + 3.7x$

Source: Author (2012)

4.4   Frame Dependence In Real Estate Investment Decisions And Market Prices

The influence of frame dependence based on loss aversion was prevalent among the respondents. Only 4 respondents, representing 11% chose option 1, of acquiring property that has a 20% possibility of making loss while the majority (31 respondents, representing 89%) chose option 2, of acquiring property that has a 40% possibility of making profit. Rationality would require the choices to be the reverse. This is because the property with 20% possibility of making loss actually has 80% possibility of profit assuming 0.5 chance of profit and 0.5 chance of loss. Also, the property with 40% possibility of making profit actually has 60% possibility of loss assuming 0.5 chance of profit and 0.5 chance of loss. Clearly, 80% possibility of profit (option 1) is rationally better than 40% possibility of making profit (option 2). Also, 20% possibility of loss (option 1) is rationally better than 60% possibility of loss (option 2).

Table 10:   Influence Of Framing Effects On Purchase Decision

Decision	Frequency	Percentage
(a) Acquiring Property that has a 20% possibility of making Loss	4	11%
(b) Acquiring Property that has a 40% possibility of making Profit	31	89%
Total	**35**	**100%**

Source: Author (2012)

Frame dependence ranked second out of six in terms of importance with a mean rating of 4.3429 on a scale of 1 to 5 (least importance to greatest importance). Real estate properties whose advertisements have been framed in terms of gains even though chances of loss are higher, would attract many investors who would end up losing if the features and prices have been exaggerated. Loss aversion would set in if framing is done in terms of loss, possibly because some parties with vested interests would want to discourage prospective buyers intending to be the ones to purchase prime properties at low prices.

Table 11: Importance Of Frame Dependence In Real Estate

Rating	Frequency	Percentage
1	0	0%
2	0	0%
3	6	17%
4	11	31%
5	18	51%
15	**35**	**100%**

Source: Author (2012)

Figure 4:   Importance Of Frame Dependence In Real Estate
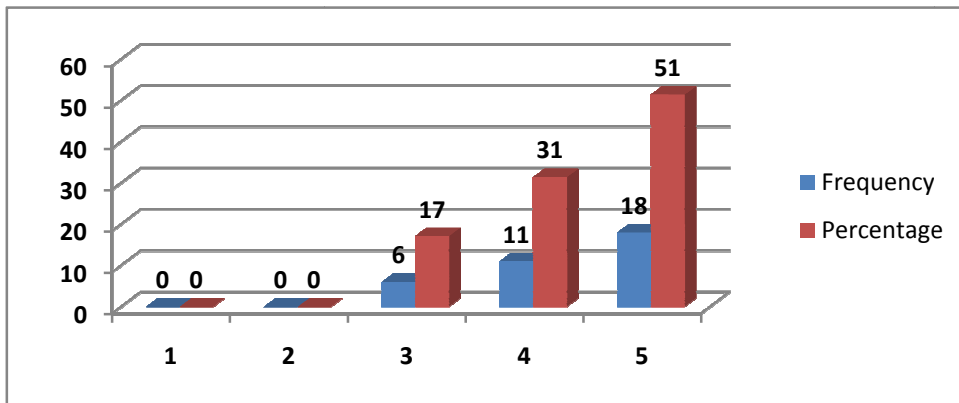
Source: Author (2012)

The mean rating for frame dependence is 4.3429 from a scale rating of 1 to 5. The regression coefficient is 0.9675, implying that real estate market prices are positively correlated with frame dependence. Upon computation, the regression equation is found to be: y = -7.1 + 4.7x, where y represents real estate market price and x represents frame dependence.

Table 12: Mean And Regression Of Frame Dependence In Real Estate

x	y	x^2	y^2	xy
1	0	1	0	0
2	0	4	0	0
3	6	9	36	18
4	11	16	121	44
5	18	25	324	90
15	**35**	**55**	**481**	**152**

Mean rating	4.3429
a	-7.1
b	4.7
r	0.9675

y = -7.1 + 4.7x

4.5 Affect In Real Estate Investment Decisions And Market Prices

The influence of affect was displayed by respondents in various ways such as degree of willingness to sell land depending on how it was acquired, purchasing on the basis of attractiveness of site, shape and features, and liking or dislike of the location's name. The respondents' willingness to sell land won through promotional lotteries ranked highest (with a mean of 3.4286) followed by willingness to sell land personally bought by them (mean of 3.3429). Willingness to sell inherited land ranked lowest (mean of 1.6286). This shows that how property was acquired determines the degree of willingness to sell. Very few people showed a willingness to sell inherited land. Investors who have acquired lands/buildings through promotional lottery winnings would most likely sell them at throw away prices since they did not sweat to obtain them. Unwillingness to sell inherited lands/buildings would require prospective buyers to pay substantial amounts to convince their owners to soften their stand and agree to sell.

Table 13: Willingness To Sell Land On The Basis Of How It Was Acquired

Decision	Mean of respondents' ratings	Ranking (highest to lowest)
Sell inherited land	1.6286	3
Sell land you have personally bought	3.3429	2
Sell land won through promotional lotteries	3.4286	1

Source: Author (2012)

A great majority of respondents (32, representing 91%) agreed that they would make decision on buying of lands and buildings based on attractiveness of site, shape and features. Only 3, representing 9% were of the contrary opinion.

Table 14: Influence Of Attractiveness Of Site, Shape And Features On Purchase Decision

Choice	Frequency	Percentage
YES	32	91%
NO	3	9%
TOTAL	**35**	**100%**

Source: Author (2012)

Figure 5:   Influence Of Attractiveness Of Site, Shape And Features On Purchase Decision
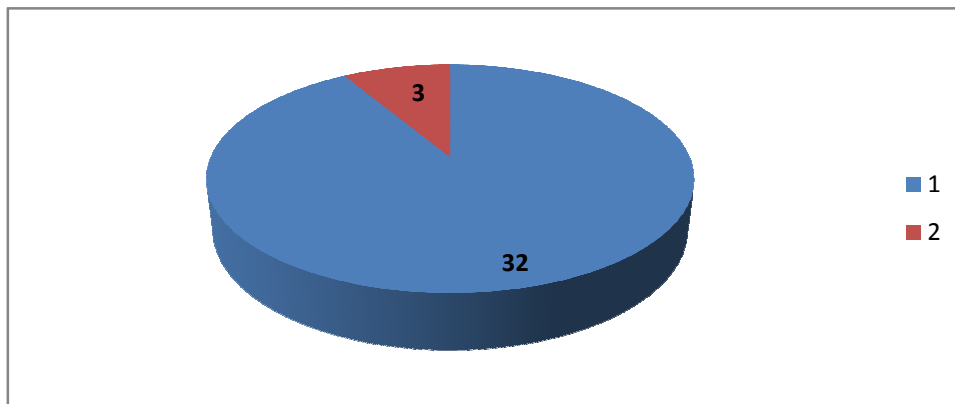
Source: Author (2012)

Regarding location's name, 17 respondents who constitute 49% preferred buying land/building at a location with a name they like while none would be willing to buy land/building at a location with a name they don't like. The other 18 respondents, constituting 51% would give the two options equal weight. Affect in the form of liking of a location's name would push up prices of lands and buildings beyond their real values, while dislike for a location's name would lead to decline in prices below their real values.

Table 15: Influence Of Location's Name On Purchase Decision

Decision	Frequency	Percentage
(a) Buying Land/building at a location with a name you like	17	49%
(b) Buying Land/building at a location with a name you don't like	0	0%
(c) Giving the two options (a) and (b) equal weight	18	51%
Total	**35**	**100%**

Source: Author (2012)

Importance of affect as a factor in determining real estate investment decisions and market prices was the least rated by the respondents (position 6) with a mean rating of 3.0000 on a scale of 1 (least importance) to 5 (greatest importance).

Table 16: Importance Of Affect In Real Estate

Rating	Frequency	Percentage
1	8	23%
2	6	17%
3	6	17%
4	8	23%
5	7	20%
15	**35**	**100%**

Source: Author (2012)

Figure 6:   Importance Of Affect In Real Estate
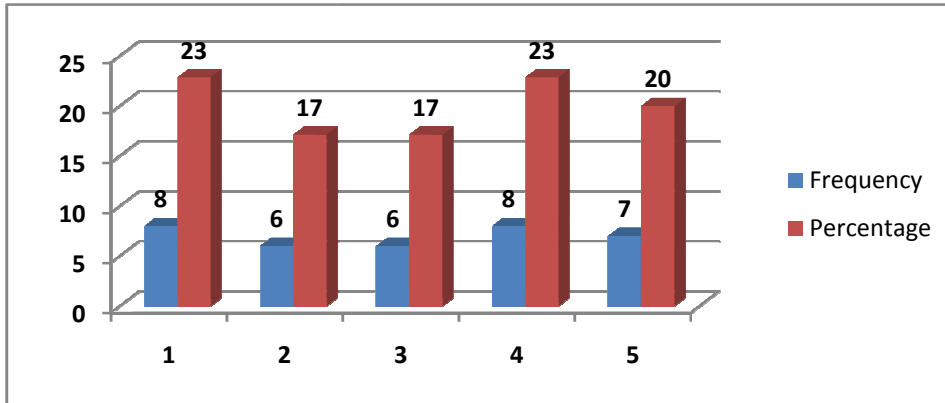
Source: Author (2012)

The mean rating for affect is 3.0000 from a scale rating of 1 to 5. The regression coefficient is 0, implying that real estate market prices are not correlated with affect from the findings of the responses of this study. Upon computation, the regression equation is found to be: $y = 7$, where y represents real estate market price.

Table 17: Mean And Regression Of Affect In Real Estate

x	y	x^2	y^2	xy
1	8	1	64	8
2	6	4	36	12
3	6	9	36	18
4	8	16	64	32
5	7	25	49	35
15	35	55	249	105

Mean rating   3.0000
a   7
b   0
r   0
$y = 7$

Source: Author (2012)

4.6 Herding In Real Estate Investment Decisions And Market Prices

The influence of herding in real estate was demonstrated by a greater number of respondents (23 representing 66%) agreeing that indeed even institutional real estate investors follow popular majority opinions when making decisions on buying and selling of lands while only 12, representing 34% disagreed. Herding to buy real estate properties would increase demand thus leading to escalation in prices. Herding to sell on the other hand, would reduce demand thus leading to fall in prices.

Table 18: Influence of Popular Majority Opinions On Institutional Real Estate Investors

Choice	Frequency	Percentage
YES	23	66%
NO	12	34%
TOTAL	**35**	**100%**

Source: Author (2012)

Figure 7:   Influence of Popular Majority Opinions on Institutional Real Estate Investors
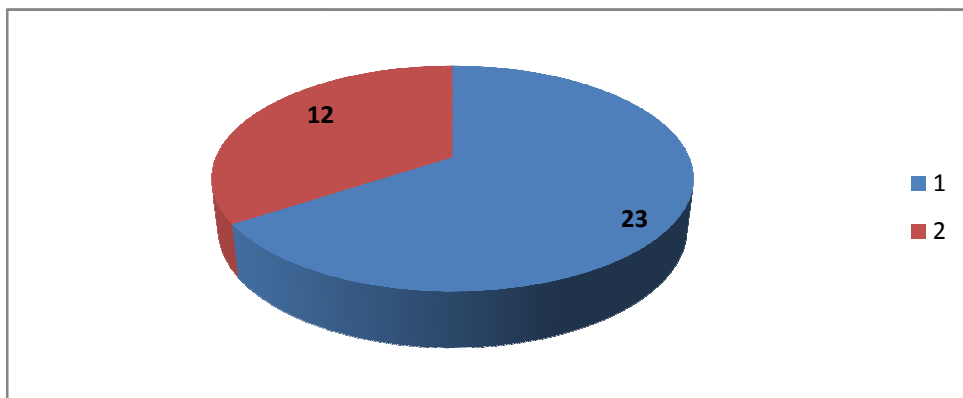
Source: Author (2012)

In terms of importance in determining real estate investment decisions and prices, herding occupied the second last position (position 5 out of 6), with a mean rating of 3.8286 on a scale of 1 to 5.

Table 19: Importance Of Herding In Real Estate

Rating	Frequency	Percentage
1	2	6%
2	3	9%
3	8	23%
4	8	23%
5	14	40%
15	**35**	**100%**

Source: Author (2012)

Figure 8:   Importance Of Herding In Real Estate
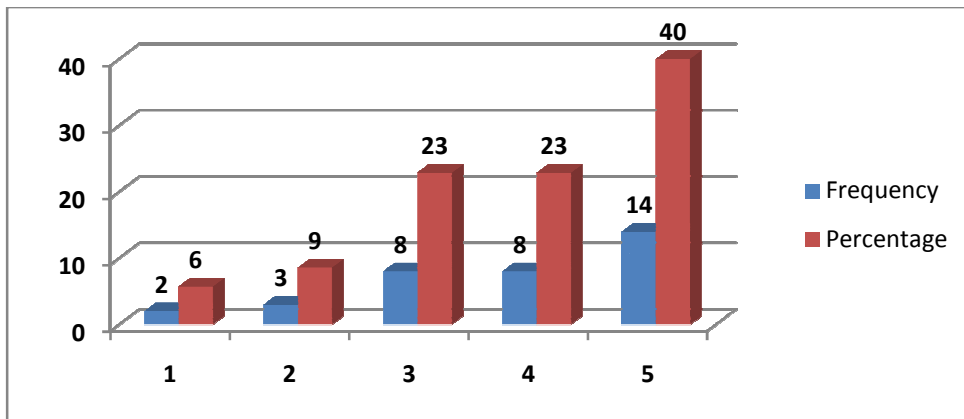
Source: Author (2012)

The mean rating for herding is 3.8286 from a scale rating of 1 to 5. The regression coefficient is 0.9561, implying that real estate market prices are positively correlated with

herding. Upon computation, the regression equation is found to be: y = -1.7 + 2.9x, where y represents real estate market price and x represents herding.

Table 20: Mean And Regression Of Herding In Real Estate

x	y	x^2	y^2	xy
1	2	1	4	2
2	3	4	9	6
3	8	9	64	24
4	8	16	64	32
5	14	25	196	70
15	**35**	**55**	**337**	**134**

Mean rating	3.8286
a	-1.7
b	2.9
r	0.9561

y = -1.7 + 2.9x

Source: Author (2012)

4.7   Representativeness In Real Estate Investment Decisions And Market Prices

Representativeness was demonstrated in various ways: through influence of current and past events on future prices of real estate properties; the level of safety of bank deposits depending on the popularity of bank managers; the degree of willingness to purchase properties based on familiarity with the seller; and the proximity of real estate properties to the buyer's locality. An analysis of the respondents answers showed that events happening currently have the greatest chance of determining future prices of lands and buildings (with a mean of 4.3143) followed by events that happened 10 years ago (mean of 2.6000) and finally by events that happened 20 years ago (mean of 2.1429). Thus current events were considered more relevant than past events, in determining future prices of real estate properties.

Table 21: Influence Of Current and Past Events on Future Prices

Decision	Mean of respondents' ratings	Ranking (highest to lowest)
Events happening currently	4.3143	1
Events that happened 10 years ago	2.6000	2
Events that happened 20 years ago	2.1429	3

Source: Author (2012)

On their opinions of whether banks with well known managers are safer to keep investment money in, 20 respondents equivalent to 57% agreed while the rest (15, equivalent to 43%) disagreed.

Table 22:   Influence Of Popularity Of Bank Managers

Choice	Frequency	Percentage
YES	20	57%
NO	15	43%
TOTAL	**35**	**100%**

Source: Author (2012)

Figure 9:   Influence Of Popularity Of Bank Managers
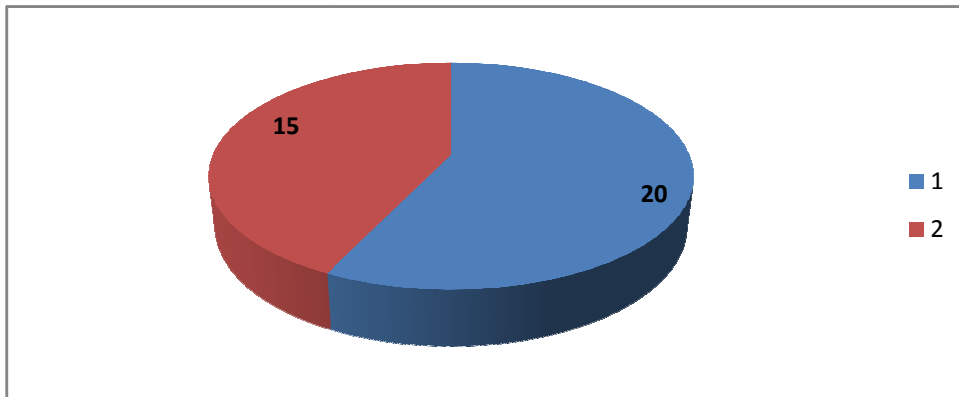
Most respondents chose the option of buying land/building from a person/firm they are familiar with (19 respondents, constituting 54%), while only 1 respondent, constituting 3% preferred buying land/building from a person/firm new to them. The remaining 15 respondents, constituting 43% would give the two options equal weight.

Table 23:   Influence Of Familiarity Of Seller On Purchase Decision

Decision	Frequency	Percentage
(a) Buying Land/building from a person/firm you are familiar with	19	54%
(b) Buying Land/building from a person/firm new to you	1	3%
(c) Giving the two options (a) and (b) equal weight	15	43%
Total	**35**	**100%**

Ten respondents (constituting 29%) gave preference to buying land/building near their home town, 6 respondents (constituting 17%) opted for buying land/building in a town far away from their home town while the majority (19 respondents, constituting 54%) gave the two options equal weight. In terms of importance, representativeness was ranked third out of six with a mean rating of 4.3143 based on a scale of 1 to 5.

Table 24:   Influence Of Proximity Of Property On Purchase Decision

Decision	Frequency	Percentage
(a) Buying Land/building near your home town	10	29%
(b) Buying Land/building in a town far away from your home town	6	17%
(c) Giving the two options (a) and (b) equal weight	19	54%
Total	**35**	**100%**

Rationally, current and past events may merely be random implying that projection of their effect on future prices could be highly inaccurate. Future events could be totally different from current and past events, thus influencing real estate property prices in an unpredictable manner. Keeping money in banks whose managers are popular is irrational. Rationally, purchasing lands/buildings near one's home town or far is irrelevant. However, the place preferred by many investors would increase demand and consequently, market prices while neglected places would have low demand and thus fetch lower prices, even though fundamentals would be in favour of the contrary.

The rating by respondents, of the importance of the belief that current and recent past events have a greater chance of determining future prices of real estate properties, than events that happened long time ago resulted in a mean rating of 4.3143 based on a scale of 1 to 5.

Table 25: Importance Of Representativeness In Real Estate

Rating	Frequency	Percentage
1	1	3%
2	0	0%
3	5	14%
4	10	29%
5	19	54%
15	**35**	**100%**

Source: Author (2012)

Figure 10: Importance Of Representativeness In Real Estate
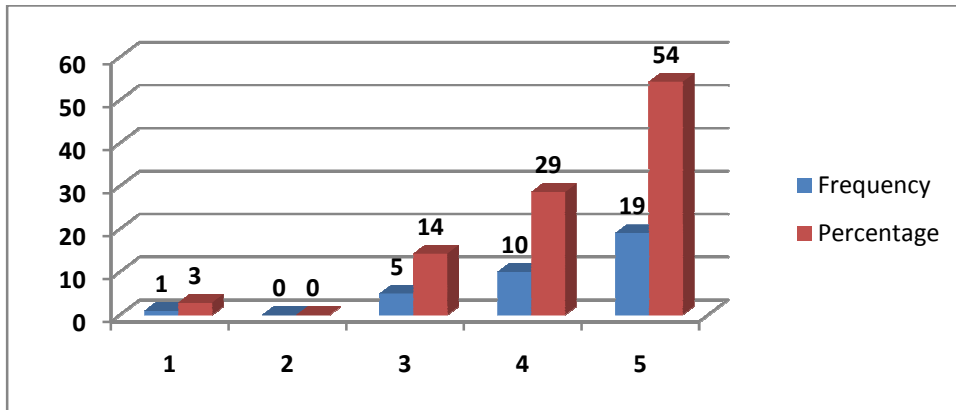
Source: Author (2012)

The mean rating for representativeness is 4.3143 from a scale rating of 1 to 5. The regression coefficient is 0.9351, implying that real estate market prices are positively correlated with representativeness. Upon computation, the regression equation is found to be: y = -6.8 + 4.6x, where y represents real estate market price and x represents representativeness.

Table 26:   Mean And Regression Of Representativeness In Real Estate

x	y	x^2	y^2	xy
1	1	1	1	1
2	0	4	0	0
3	5	9	25	15
4	10	16	100	40
5	19	25	361	95
15	**35**	**55**	**487**	**151**

Mean rating   4.3143
a   -6.8
b   4.6
r   0.9351

y = -6.8 + 4.6x

Source: Author (2012)

4.8 Prospect Theory And Disposition Effect Theory In Real Estate Markets

The prospect of making loss seems to be avoided by real estate investors at all cost. The mention of the word loss made investors avoid an option which was framed in form of loss even though it actually had a greater possibility of profits. Majority of the respondents instead chose the option which was framed in form of profits even though it actually had a greater possibility of loss. Only 4 respondents, representing 11% chose option 1, of acquiring property that has a 20% possibility of making loss while the majority (31 respondents, representing 89%) chose option 2, of acquiring property that has a 40% possibility of making profit. This is display of irrational behaviour.

The disposition to sell real estate properties at a profit and avoid selling at a loss was prevalent among respondents. The majority of respondents (26 representing 74%) expressed their willingness to sell land whose market price has risen by 30% while only 9 respondents (equivalent to 26%) would be willing to sell land whose market price has fallen by 20%. Fear of selling at a loss could trigger real estate investors to hold on to their properties whose prices could even fall further thus causing more pain. Disposition to sell real estate properties that have risen in value could also lead to unpleasantness if after selling, the prices rise further. Investors would regret for having sold too fast.

Table 27:   Influence Of Market Price Changes On Willingness To Sell

Decision	Frequency	Percentage
(a) Land whose market price has risen by 30%	26	74%
(b) Land whose market price has fallen by 20%	9	26%
Total	**35**	**100%**

Source: Author (2012)

4.9   Rankings Of Importance Of Psychological Factors

Investor psychology, which manifests through investment behaviour that deviates from rationality, is evident among real estate investors as has been established in this study. In terms of the order of their importance in determining real estate investment decisions and prices from most important to least important, the psychological factors are ranked as follows: overconfidence (mean of 4.4857), frame dependence (mean of 4.3429), representativeness (mean of 4.3143), mental accounting (mean of 4.0571), herding (mean of 3.8286) and affect (mean of 3.0000).

Table 28:   Rankings Of Importance Of Psychological Factors

Factor	Mean	Ranking
Overconfidence	4.4857	1
Mental accounting	4.0571	4
Frame dependence	4.3429	2
Affect	3.0000	6
Herding	3.8286	5
Representativeness	4.3143	3

Source: Author (2012)

Figure 11: Rankings Of Importance Of Psychological Factors
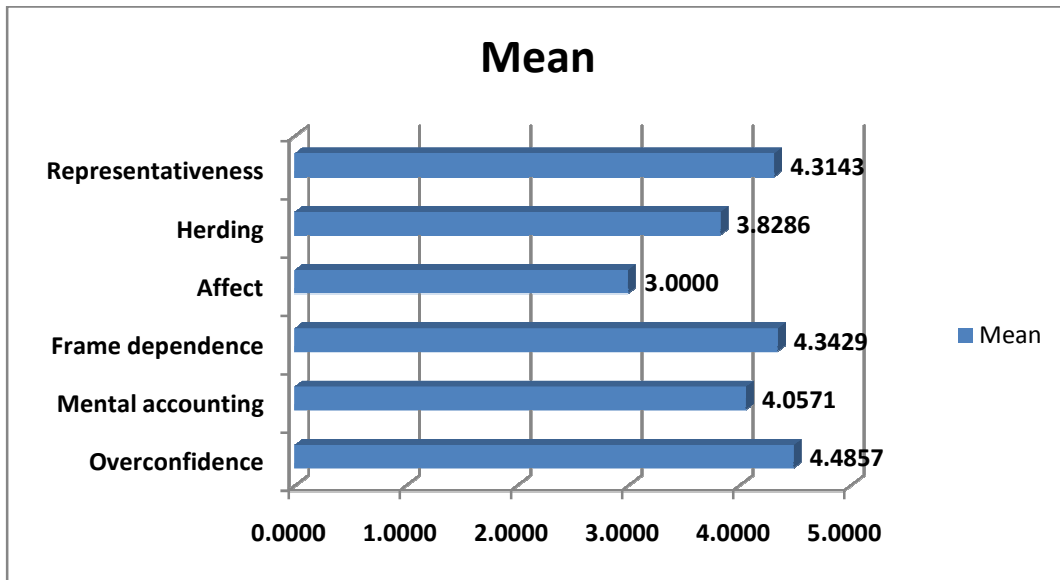
Source: Author (2012)

CHAPTER FIVE

SUMMARY AND INTERPRETATION OF FINDINGS

5.1   Summary

This section is a summary of the influence of investor psychology on real estate investment decisions and market prices, based on the collected data as analysed and presented in chapter 4 of this research. In summary form, investor psychology has been indeed established in this study, to play a major role in influencing real estate investors in their investment decisions, and consequently also influencing real estate market prices. Psychological factors such as overconfidence, mental accounting, frame dependence, affect, herding and representativeness, all influence real estate investment decisions and market prices but in varying degrees. Ranked in terms of the extent of their influence from the most important to the least important as per the findings of this research, the order is as follows: overconfidence, frame dependence, representativeness, mental accounting, herding and affect.

Respondents were also found to possess loss aversion by avoiding prospects that were framed in form of losses even though such options possessed greater chances of making gains, and instead choosing options which were framed in form of profit even though greater chances of losses were possible in such options. Thus, the prospect theory was prevalent. The disposition to sell winners and ride losers (disposition effect) was also evident among respondents. Respondents displayed a great willingness to sell real estate properties that had risen in value, while holding on to those whose prices had fallen.

5.2   Conclusion

Investor psychology, which manifests through investment behaviour that deviates from rationality, is evident among real estate investors as has been established in this study.

The effect of psychological influences is that real estate investors would not always be guided by rationality in making investment decisions and that market prices would not always be governed by the real intrinsic values of real estate properties. Psychological factors would lead to shifts in supply and demand, and thus lead to market price changes that deviate from fundamental values. Mis-pricings (both over-pricing and under-pricing) of real estate properties would result from psychological influences.

The findings of this study are in agreement with those of Nyaribo (2010) who found out that psychological influences were prevalent among SMEs entrepreneurs. The study also agrees with Odean (1999) that investors are often overconfident about their abilities and the precision of their knowledge. Real estate investors were found in this study to portray frame dependence based on loss aversion by showing more willingness to sell land won through promotional lotteries than personally purchased land, and than inherited land. This finding concurs with Jordan and Miller (2008) that people are more willing to take risks with money won through lottery than with money they have personally come with from home.

This research showed evidence of mental accounting in real estate, through investors wishing to account for gains and losses on each property separately instead of accounting for them as one combination. This confirms findings by Shefrin and Statman (1985) that investors separate decisions that should principally be combined. Shiller and Case (1988) found prevalence of disposition effect among home buyers, that they were more eager to sell at a profit than at a loss. This study has also come up with similar findings that real estate investors would be more willing to sell properties that have risen in value and keep those whose prices have fallen expecting their prices to improve in future when they would sell them at a profit. This finding is also in concord with the disposition effect theory by Shefrin and Statman (1984), and prospect theory by Tversky and Kahneman (1979). Affect was relatively less prevalent among real estate investors according to the findings of this study.

5.3   Policy Recommendations

From the findings of this study, it is recommended that psychological factors be taken into consideration when setting prices of real estate properties. Apart from considering only the fundamentals, real estate property dealers should endeavour to find out the perceptions of prospective clients and the particular psychological factors that are likely to strongly influence the clients' decisions to buy and/or sell their properties. Fundamentalists can take advantage of any mis-pricings. Policy makers need to be aware that it is not only fundamentals such as location of real estate properties, type of construction materials, type of building designs, type of surrounding neighbourhood, accessibility to amenities and services etc. that influence decision to invest in lands and buildings, and that influence market prices of real estate properties. Real estate investors are also influenced by their psychological compositions in their perceptions and investment decisions, which in turn impacts on market prices. Psychological influences make real estate investors to at times make decisions that contradict rationality.

5.4   Limitations Of The Study

A major challenge encountered during this research was that some respondents were not co-operative while others had tight work schedules. The researcher took time to explain the importance of the research and assured the respondents that it was purely for academic purposes, and information provided would be treated with utmost confidentiality. The researcher distributed the questionnaires to respondents and gave them sufficient time to fill, making some agreement with them on when to collect the filled questionnaires.

Another limitation that was faced by the researcher was that some real estate agents, valuers and developers whose offices were located within Nairobi CBD according to the latest (2012) official Nairobi edition of the Kenya Telephone Directory, could not be physically traced. Also, other real estate agents, valuers and developers not appearing in the 2012 official Nairobi edition of the Kenya Telephone Directory were physically

identified within Nairobi CBD. The researcher re-constituted a new list of real estate agents, valuers and developers based on those physically identified within Nairobi CBD, from which a sample was obtained.

5.5   Suggestions For Further Studies

A similar study is recommended to be undertaken in a different locality in Kenya or even in another country so as to compare the findings with those of this research. As noted in this study, the Kenyan Capital Markets Authority (CMA) is in the process of establishing Real Estate Investment Trusts (REITs). This will enable real estate investors who cannot afford whole complete lands and buildings to own portions through shareholding. Also, trading in real estate properties at the NSE will be enhanced through REITs. Establishment of REITs is currently at the conception stage. The legal framework is being developed before REITs become operational. The researcher recommends that future researchers conduct similar studies with real estate investors operating through REITs as the respondents.

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APPENDIX I

PROPOSAL CORRECTION FORM

UNIVERSITY OF NAIROBI

SCHOOL OF BUSINESS

PROPOSAL CORRECTION FORM

Student Name...... MUTHAMA ANTHONY K.

Registration Number...... D61/70048/2009

Department...... FINANCE AND ACCOUNTING

Specialization...... FINANCE

Title of Project Proposal... EFFECTS OF INVESTOR PSYCHOLOGY ON REAL ESTATE MARKET PRICES IN NAIROBI, KENYA

The student has done all the corrections as suggested during the Proposal Presentation and can now proceed to collect data.

Name of Supervisor.... D Aduda ...Signature... Aduda ...Date... 24/5/12

APPENDIX II

DATA COLLECTION INTRODUCTION LETTER

UNIVERSITY OF NAIROBI
SCHOOL OF BUSINESS
MBA PROGRAMME

Telephone: 020-2059162	P.O. Box 30197
Telegrams: "Varsity", Nairobi	Nairobi, Kenya
Telex: 22095 Varsity	

DATE 26TH JUNE 2012

TO WHOM IT MAY CONCERN

The bearer of this letter... MUTHAMA ANTHONY K.

Registration No. D61/70048/2009

is a bona fide continuing student in the Master of Business Administration (MBA) degree program in this University.

He/she is required to submit as part of his/her coursework assessment a research project report on a management problem. We would like the students to do their projects on real problems affecting firms in Kenya. We would, therefore, appreciate your assistance to enable him/her collect data in your organization.

The results of the report will be used solely for academic purposes and a copy of the same will be availed to the interviewed organizations on request.

Thank you.

IMMACULATE OMANO
MBA ADMINISTRATOR
MBA OFFICE, AMBANK HOUSE

APPENDIX III

LIST OF INSTITUTIONAL REAL ESTATE INVESTORS WITHIN NAIROBI CBD

Adasca Agencies

Rehema Hse, 3rd Flr, Kaunda St, Nairobi

Archvillas Agencies

Lakhamshi Hse, 4th Flr, Biashara St, Nairobi

Afriland Agencies

Nanak Hse, 3rd Flr, 305 Kimathi St, Nairobi

Ardhiworth (Real Estate) Ltd

Maendeleo Hse, 3rd Flr, Monrovia St, Nairobi

Breakthrough Services Ltd

Agip Hse, 5th Flr, Haile Selassie Ave, Nairobi

Capital Valuers

Bruce Hse, 8th Flr, Standard St, Nairobi

Casas Ltd

I & M Building, 1st Flr, Kenyatta Ave, Nairobi

Claytown Valuers

Consolidated Bank Hse, 2nd Flr, 202 Koinange St, Nairobi

Cornerstone Real Estate Ltd

View Park Tws, 10th Flr, University Way, Nairobi

Crystal Valuers Ltd

Bruce Hse, 4th Flr, Standard St, Nairobi

Daykio Plantations Ltd

Hughes Bldg, 4th Flr Muindi St, Nairobi

Derby Registrars Ltd

Laptrust Hse, 3rd Flr, Haile Selassie Ave, Nairobi

Ebony Estates Ltd

Hughes Bldg, 2nd Flr, Kenyatta Ave, Nairobi

Exotic Homes Properties Ltd

Ukulima Co-operative, 10th Flr, Parliament Rd, Nairobi

Flash Development Planners Ltd

Bruce Hse, 10th Flr, Standard St, Nairobi

Gembug Commercial Agencies

Kimathi Hse, 5th Flr, Kimathi St, Nairobi

Gemini Shelters Properties

Maendeleo Hse, 3rd Flr, Monrovia St, Nairobi

Greenplots Properties

Maendeleo Hse, 2nd Flr, Monrovia St, Nairobi

Habitat Realtors International Ltd

Rehema Hse, 5th Flr, Standard St, Nairobi

Hectares and Associates

Hughes Bldg, 5th Flr, Kenyatta Ave, Nairobi

Homexperts Ltd

Stanbank Hse, 2nd Flr, Moi Ave, Nairobi

Horeria & Co

Standard Bldg, 4th Flr, Standard St, Nairobi

Joyland Estate Agent

Olympic Hse, 3rd Flr, Koinange St, Nairobi

Kaiwi Agencies Ltd

Caxtin Hse, Koinange St, Nairobi

Kinyua Koech Ltd

Kencom Hse, 1st Flr, Moi Ave, Nairobi

Lamka Properties Ltd

Nanak Hse, Kimathi St, Nairobi

Le Buneei Diversity Ltd

Maendeleo Hse, 3rd Flr, Monrovia St, Nairobi

Lifestyle Apartments Ltd

Chai Hse, 3rd Flr, Koinange St, Nairobi

Maestro Properties Limited

Maendeleo Hse, 8th Flr, Monrovia St, Nairobi

Mamuka Valuers Management Ltd

Ruprani Hse, 1st Flr, Moktar Daddah Street

Manclen Management Ltd

Hughes Bldg, 4th Flr, Kenyatta Ave, Nairobi

Masterways Properties Ltd

Old Mutual Bld, 2nd Flr, Kimathi St, Nairobi

Metrocosmo Ltd

Hughes Bldg, 7th Flr, Kenyatta Ave, Nairobi

Mosica Properties Ltd

Electricity Hse, Harambee Ave, Nairobi

Muigai Commercial Agencies Ltd

Posta Sacco Plaza, University Way, Nairobi

Muntana Estate Agents

Prudential Bldg, 7th Flr, Wabera St, Nairobi

Mutirithia Wa Andu Co Ltd

Kimathi Hse, 2nd Flr, Kimathi St, Nairobi

N W Realite Ltd

Lonrho Hse, 9th Flr, Standard St, Nairobi

Ndatani Enterprises Co Ltd

Afya Centre, 10th Flr, Tom Mboya St, Nairobi

Neat Properties Ltd

Travel Hse,Opp City Hall, 5th Flr, Nairobi

Ngarish Homes Properties Ltd

Kimathi Hse, 5th Flr, 505, Kimathi Street

Ninjah Enterprises

Kenya Hse, 2nd Flr, Koinange St, Nairobi

Njihia Muoka Rashid Co. Ltd

Hughes Bldg, 7th Flr, Kenyatta Ave, Nairobi

Noskcid (Africa) Asset Management Ltd

Bruce Hse,South Wing, 8th Flr, Standard St, Nairobi

Nouvetti Realtors Ltd

Agip Hse, 4th Flr, B444/446, Haile Selassie Ave, Nairobi

Nyumba-Link Ltd

Trans National Plaza, 5th Flr, Mama Ngina St, Nairobi

Omega Commercial Services Ltd

City Hall Annexe, 8th Flr, 3 Muindi Mbingu St, Nairobi

Pelly Properties & General Services

Badru Hse, 1st Flr, Moi Ave, Nairobi

Propensity Properties & Consultants

N H C Hse, 2nd Flr, Harambee Ave, Nairobi

Property Express Ltd

Mercantile Hse, 2nd Flr, 210 Koinange St, Nairobi

Proxima Limited

Hughes Bldg, 5th Flr, Kenyatta Ave, Nairobi

Prudential Valuers Ltd

Maendeleo Hse, 2nd Flr, 11B Monrovia St, Nairobi

Real Appraisal Limited

Transnational Plaza, 3rd Flr, 331 Mama Ngina St, Nairobi

Realtor Guru Ltd

Electricity Hse, 9th Flr, Harambee Ave, Nairobi

Receng Agencies Ltd

Town Hse, 9th Flr, Kaunda St, Nairobi

Samro Properties Ltd

Kenbanco Hse, 4th, Ext 2 Flr, Haile Selassie Ave, Nairobi

Scheme Developers Limited

Electricity Hse, 13th Flr, Harambee Ave, Nairobi

Seb Estates Ltd

Anniversary Towers, 14th Flr, University Way, Nairobi

Sedco Consultants Ltd

Maendeleo Hse, 9th Flr, Loita St, Nairobi

Shelter Point Developments Limited

Nacico Chambers, 3rd Flr, Moi Ave, Nairobi

Stanbic Enterprices Co Ltd

Development Hse, 2nd Flr, Moi Ave, Nairobi

Sunland Real Estates

Salama Hse, 1st Flr, Mama Ngina St, Nairobi

Teeline Properties Ltd

Mercantile Hse, 1st Flr, 120 Koinange St, Nairobi

Toco Properties

Kimathi Hse, 8th Flr, Kimathi Street

Toprank Holdings Ltd

Caxton Hse, 3rd Flr, Rm 3B Koinange St, Nairobi

Traca Management Services Ltd

Rattansi Educational Trust Bldg, 2nd Flr, Rm D28 Koinange/Monrovia St, Nairobi

Urban Properties Consultants & Developers Ltd

Kimathi Hse, 2nd Flr, Kimathi Street

Wainaina Real Estates Ltd

Hughes Bldg, 1st Flr, Kenyatta Ave, Nairobi

TOTAL = 68

APPENDIX IV

QUESTIONNAIRE

Kindly take a few minutes to respond to this questionnaire. Information supplied is purely for academic research purposes and will be treated with utmost confidentiality.

For question 1 to 5, indicate your opinion by rating the factors shown using a scale of 1 to 5 whereby 1 represents very small extent and 5 represents very great extent.

1   Indicate your opinion by ticking the extent to which the factors listed below have been responsible for your success in making investment decisions

	1	2	3	4	5
Your confidence, knowledge & experience					
Right advice from friends and relatives					
Professional advice from investment experts					
Good market performance					
Adequate government support					

2   Indicate your opinion by ticking the extent to which the factors listed below have been responsible for your past wrong investment decisions

	1	2	3	4	5
Your own mistakes					
Incorrect advice from friends and relatives					
Inadequate information/advice from experts					
Poor market performance					
Lack of government support					

3   Indicate your opinion by ticking the extent to which the factors listed below have been responsible for past wrong investment decisions of majority of the real estate investors you know about

	1	2	3	4	5
Their own mistakes					
Incorrect advice from friends and relatives					
Inadequate information/advice from experts					
Poor market performance					
Lack of government support					

4   Indicate your opinion by ticking the extent to which you would be willing to do the following

	1	2	3	4	5
Sell inherited land					
Sell land you have personally bought					
Sell land won through promotional lotteries					

5   Indicate your opinion by ticking the extent to which you think the following events would affect future prices of lands and buildings

	1	2	3	4	5
Events happening currently					
Events that happened 10 years ago					
Events that happened 20 years ago					

6   In your opinion, do institutional real estate investors follow popular majority opinions when making decisions to buy or sell lands and buildings? (Tick one option)

YES [   ]   NO [   ]

7   Indicate your opinion by ticking Yes or No, against each of the following statements regarding your real estate investments

Decision	YES	NO
Will continue investing in lands & buildings even when it is unprofitable with the hope of future improvements in profits		
Will buy lands and buildings based on attractiveness of site, shape & features		
Banks with well known managers are safer to keep investment money in than banks whose managers are not well known		

8   Which option would you choose from the following? (Tick one option)

(a) Buying Land/building from a person/firm you are familiar with	
(b) Buying Land/building from a person/firm new to you	
(c) Giving the two options (a) and (b) equal weight	

9   Which option would you choose from the following? (Tick one option)

(a) Buying Land/building near your home town	
(b) Buying Land/building in a town far away from your home town	
(c) Giving the two options (a) and (b) equal weight	

10 Which option would you choose from the following? (Tick one option)

(a) Buying Land/building at a location with a name you like	
(b) Buying Land/building at a location with a name you don't like	
(c) Giving the two options (a) and (b) equal weight	

11 Which option would you choose from the following? (Tick one option)

(a) Acquiring Property that has a 20% possibility of making Loss	
(b) Acquiring Property that has a 40% possibility of making Profit	

12 You have purchased two pieces of land. The market price of one has risen by 30% while the other has fallen by 20%. Which of the two would you be willing to sell? (Tick one option)

(a) Land whose market price has risen by 30%	
(b) Land whose market price has fallen by 20%	

13 You have purchased two buildings. The market price of one has risen by 40% while the other has fallen by 30%. Which of the two ways would you account for them? (Tick one option)

(a) Account for both buildings together as one combination	
(b) Account for each building separately	

For question 14 to 19, indicate your opinion by rating the importance of the factors shown using a scale of 1 to 5 whereby 1 represents least importance and 5 represents very great importance.

14 Importance of high level of confidence, knowledge and experience in real estate investment business

1	2	3	4	5

15 Importance of accounting for profits or losses on every land or building separately rather than accounting for all real estate investments as one combination

1	2	3	4	5

16 Importance of avoiding to sell real estate properties at a loss but instead holding them expecting to sell in future at a profit

1	2	3	4	5

17 Importance of purchasing lands and buildings on the basis of attractiveness and liking of location's name

1	2	3	4	5

18 Importance of buying lands and buildings in places favoured by majority of persons

1	2	3	4	5

19 Importance of current and recent past events having a greater chance of determining future prices of real estate properties, than events that happened long time ago

1	2	3	4	5