

Behavioural Factors Influencing Investment Decisions in the Kenyan
Property Market

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DECLARATION

I declare that this work has not been previously submitted and approved for the award of a degree by this or any other University. To the best of my knowledge and belief, the thesis contains no material previously published or written by another person except where due reference is made in the thesis itself.

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ABSTRACT

This study applies Behavioural Finance theory to explain the performance of the property market in Kenya. The study investigates behavioural factors influencing investment decisions in the Kenyan property arena. This is aimed to better reflect the way property investors think and behave by using Behavioural Finance theory. The study uses survey questionnaire to collect data targeting all the real estate agents within Nairobi region who are listed in the yellow pages. The target population was 155 listed Estate Agents operating in Nairobi as per Kenya Pastel Directory 2010 Nairobi edition. This study found out that out of the two broad classifications of human cognitive illusions that are heuristics and prospect theory, heuristics influenced investors more. The key heuristic theory, that influence investors are anchoring, representativeness and availability bias.

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DEDICATION

To my amazing kids, Wairegi Gitau and Wairimu Gitau. Wise beyond their years.

CHAPTER ONE: INTRODUCTION

1.0 Introduction

This chapter introduces Behavioural Finance theory and its application to the Kenyan Property market. The first section gives a background to the subject of Behavioural Finance where the author shows the link between Traditional Finance theories and psychology. The next section describes and formulates the problem by giving the reader a general view of the property market in Kenya. This leads to the purpose of the study where the general objective is given. This part also includes the research questions to be answered through this study. Discussion on the Scope and limitations of this study finally concludes this chapter.

1.1 Background of the Study

Traditional Finance and economic theories assumes that individuals act rationally and the law of one price holds. This implies that under Traditional Finance economic decision makers are rational and utility maximizing. However studies done by Kahneman and Tversky (1979), Shefrin and Statman (1994) Shiller (1995) and Shleifer (2000) indicate that this is not always the case. These studies have further shown evidence of irrationality and inconsistency in the way human beings make decisions when faced with uncertainty.

According to Peter (1996), Efficient Market Hypothesis (EMH) has dominated the economic arena up to the 1980's. EMH assumes that investors are fully rational and make decisions that reflect all available information (Fama, 1970). However, EMH has increasingly failed to explain market behaviour (Statman, 1995). Furthermore, there are doubts on the application of EMH to property market as noted by Gou (1984) and later empirically tested by Case and Shiller (1989), and Brown & Chau (1997). The consensus in all these studies is that market is neither perfectly efficient nor completely inefficient meaning that none of the EMH variants can explain it.

The Modern Portfolio Theory (MPT), Capital Asset Pricing Model (CAPM), and Arbitrage Pricing Theory (APT) are the quantitative models that propel the rational expectations based theories (Morkowitz, 1995; Sharpe, 1964; Ross, 1976). However, recent research suggests that these theories do not necessarily hold. Fama and French, (1993, 1996) found that facts about average market returns and behaviour of individual investors could not be explained by the underlying assumptions in these models. Shiller (2005) further noted that the level of volatility of the stock market could not be explained by any variant of the EMH.

In the global financial markets, application of investment ideas based on the notion that the market is predictable, complete price flexibility, and complete knowledge of the other players in the markets are increasingly unrealistic (Fromlet, 2001). Thus, markets are irrational as stated by Burton Malkiel (1973) and when it comes to investing, people generally follow their emotions and not their reason.

The Traditional Finance models argue that arbitrage process can undo market irrationality (Friedman, 1953). The underlying assumption under the Traditional Finance models is that the law of one-price holds and that the market operates at an equilibrium price. The other assumption of Traditional Finance model is that the rational traders quickly capitalise on any mispricing created by irrational traders correcting the price back to equilibrium. However according to De Long, Shleifer, Summers, and Waldmann (1990) and Shleifer and Vishny (1997) the process of arbitrage has limitations. These authors argue that the strategies required to undo any mispricing are both costly and risky thus rendering the process unattractive.

As such, Behavioural Finance theory has emerged based on the limitations of the Traditional Finance theories (Statman, 1995). Barberis and Thaler, (2003) noted that Behavioural Finance theory explains investor irrationality and the decision making process by drawing evidence from the cognitive psychology and biases associated by the way people make believes and preferences. Indeed the two approaches of limits to

arbitrage and psychology are according to Barberis and Thaler, (2003) the pillars of Behavioural Finance theory.

De Bondt (2004) views Behavioural Finance theory as a model that applies cognitive psychology to explain the market and investor behaviour. In essence, this theory argues that investors do not apply full rationality while making choices, and it attempts to understand the investment market phenomena by dropping two key assumptions of Traditional Finance paradigm that is agents fail to update their beliefs correctly and there is a systematic deviation from the normative process in making investment choices (Fromlet, 2001).

Behavioural Finance theory has successfully explained stock price anomalies related to overreaction, under reaction, and momentum strategies and herding behaviour. Studies done by Barberis, Shleifer, and Vishny, (1996), Lakonishok, Shleifer and Vishny, (1997), Daniel, Hirshleifer, and Subramanyam, (1998), Daniel and Titman, (2000) and Barberis and Shleifer, (2003) have focused on these trading strategies and refers to them as trading anomalies. They argue that these anomalies violate the trading rules of the EMH theory and hence render the CAPM and other rational based models inappropriate in relating investment risk and returns.

Kishore (2004) applied Behavioural Finance theory to analyse the property boom in Australia. According to Australian Bureau of Statistics (2004) prices in the Australian market doubled between 1999 and 2003. This boom as seen by Kishore (2004) suggested the presence of investor irrationality and it was purely speculative. Kishore (2004) further argued that the high prices were created largely by investor enthusiasm rather than by consistent estimate of real value. This is attributable to the pattern of herd mentality, developed upon fear and regret behaviour of not owning a home and overreaction to increase in future interest rates.

The above analysis of Australian would suggest that property investors do not make rational decisions. This irrationality can be used to explain the rapid rise of property prices in Kenya, where property prices in the city of Nairobi have doubled

since the year 2006 while the rent/price ratio have significantly reduced (Hass property index, 2009). This thesis therefore argues that the property prices in Kenya are not efficient and do not reflect the true intrinsic value.

Behaviour based research has been used to effectively analyse the stock market, a market which is much more rational and has available data compared to the property market. The property market on the other hand is less efficient and has high presence of human element. This makes it ripe for behavioural-based research. This study therefore contributes to the limited research by investigating which behavioural factors influence the Kenyan property market. Kenya is among the nine emerging economies of Africa (World Bank, 2000). It would therefore be interesting to establish how Behavioural theories that evolved in the context of developed markets could be extended to emerging markets such as Kenya.

1.2 Problem Statement

There has been a great appreciation of property prices and volatility across the different property markets in Kenya since the year 2006. According to Hass property consultants, in their first property index in Kenya, the prices for high end residential properties has doubled between the years 2005 and 2009 (Hass property index, 2009). The current rental yields that is the return on capital tied up in property is lower than mortgage interest. The Hass Consult property index data for the first quarter in 2011 indicates that rental yields are down to 5.62 per cent per year from a high of 7.3 percent per year in 2007. The Hass survey further reveals that property prices have risen 55 per cent since the year 2007 while rental yields have appreciated with only 18 per cent. Interestingly this has not barred investors from rushing to buy property.

There is an increased competition between banks in Kenya targeting young professionals who cannot buy property on cash basis and are enticed by owning a home. This has come at a time when returns on property are near stagnation. According to figures from Mortgage Centre, Kenya Commercial Bank's mortgage division, monthly mortgage repayment on a Kshs 15 million loan (\$200,000) (at a per cent rate) would

be Kshs 356,850 (\$4,758) for five years, Kshs 241,995 (\$3,226) for 10 years and Kshs 209,940 (\$2,799) for 15 years. Given these figures, investors who rely on rental income to repay mortgage would definitely default. One has to double the amount of rent received to repay mortgage. As such, these high prices are not considered to be efficient and do not reflect the true intrinsic value of the property. Property investors exhibit herd mentality, attributable to fear and regret behaviour of not owning a home and overreaction to increase in future interest rate as noted by Kishore (2004) in the Australian market.

Based on the above observations, traditional finance appears to play a limited role in understanding or explaining issues such as why property investors would tie up capital where returns are low. Secondly why would an investor take a mortgage at 15% per annum only to buy a property with a rental yield of 5.62% per annum? This does not conform to Traditional Finance theories, which presume that investors think and behave rationally. Specifically investors are supposed to use all available information to form informed decisions about any investment thus the notion of efficient markets (Fama, 1970).

The environment surrounding property market in Kenya as discussed above indicates that none of the Traditional Finance models can apply. The Modern Portfolio Theory (MPT), Capital Asset Pricing Model (CAPM), and Arbitrage Pricing Theory (APT) are the quantitative models that propel the rational expectations based theories (Morkowitz, 1995; Sharpe, 1964; Ross, 1976). The underlying assumptions in these models are not sufficient to explain the Kenyan property market. Further the trading anomalies in the Kenyan property market violates the trading rules of the EMH theory and hence render the *CI/PM* and other rational based models inappropriate in relating investment risk and returns,

There is a lot of irrationality in the property market in Kenya and investors do not seem to arrive at reasoned decisions. According to Barberis and Thaler (2003), Behavioural Finance theory explains investor irrationality and the decision making by drawing evidence from the cognitive psychology and biases associated by the way people make believes and preferences. and Song (2001), Cooper et al., (2001),

Hand (2000), Thaler (1999), and Shiller (1987) have explained the causes and effects of speculative property bubbles by applying Behavioural Finance theories. This thesis has used knowledge from similar theoretical background and applied it to study the investor behaviour in the Kenyan property market.

1.3 Purpose and General Objective of the Study

This study utilizes Behavioural Finance theory and draws its application to the volatility of property prices in Kenya. The aim is to determine the main behavioural factors that influence the property investment decision in Kenya and the factors that predominantly explain the behaviour of property investors. The study also aims to establish the effect of these behavioural factors to the property investment decisions. Specifically this study addresses the following objectives:

1. To determine the main behavioural factors that influences the property investment decision in Kenya.
2. To establish the effect of these behavioural factors to the property investment decisions
3. To establish the extent, behaviour of property investors, affects property investment decisions.

1.4 Research Questions

This paper investigated the following research questions:

1. Which behavioural factors mainly influence the property investment decisions in the Kenyan property market?
2. What effect do these behavioural factors have to the property investment decisions?
3. To what extent does behaviour of property investors affect property investment decisions?

1.5 Significance of the Study

This study is of importance to various bodies in Kenya. First, it will enrich the handbook of Institute of Surveyors in Kenya in terms of analyzing the behavioural aspects of property investors. Second, it shall be important to the Capital Markets Authority (CMA) as they prepare to roll out the first REITS market in Kenya. Thirdly, the study is of great benefit to investors and lending institutions as they shall be able to understand the property investment decision-making environment.

1.6 Scope of the Study

This study has only focused on factors that influence property investment decisions and connected to Behavioural Finance theory. However, it is clear that a range of factors may influence property investors or cause price variations. This study does not address them as they entirely from another area of research. The study does not give the full description of Behavioural Finance theory but only selects the parts that are valuable for the research. The study has been limited to real estate agents registered and practicing in the city of Nairobi.

This thesis is organised as follows: Chapter 1 introduces the research problem and offers the justification to this study. In chapter two, the related literature to this study is reviewed and analysed. Specifically it provides an overview of the core theories of Behavioural Finance that pertain to the study of real property market. It follows by reviewing the related literature to the effects of these theories in decision making in the property market arena. Chapter three discusses the field survey, the methodology that has been used in this research. Chapter four presents and analyses the results, while chapter five discusses and concludes the study.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

This chapter reviews and analyses the related literature to the concept of Behavioural Finance. It begins by an attempt to define Behavioural Finance theory. The major theories that have been applied in respect to human behaviour are discussed. These include prospect and heuristics theory. In particular, key concepts of these theories, which are Regret, Loss aversion, Mental Accounting, Representativeness, Gambler's fallacy, Anchoring, Overconfidence, and Availability bias, are addressed. All these are states of mind that can influence the decision making process of a human mind. The chapter concludes by reviewing the effects of these theories on property investment decisions and the sources of property information.

2.2 Theoretical Framework of Behavioural Finance

As Barberis and Thaler (2003) points out Behavioural Finance has emerged by combining emotions and cognitive errors and their influence to investors and the decision making process. Various researchers have defined Behavioural Finance with considerable agreement between them. Sewell (2005) defines it as a study of the influence of psychology on investors and the effect of this influence to the market. Lintner (1998) defines it, as a study of human decision-making errors when interpreting and acting on information. Kahneman and Tversky (1979), Shefrin and Statman (1994), Shiller (1995) and Shleifer (2000) are among the leading researchers who have used Behavioural Finance to explain investors behaviour.

Behavioural Finance attempts to explain human behaviours in markets by importing theories of human behaviour from the social sciences, (Shiller 1998). Psychologists and economists have researched this field since the early 1970s (Thaler 1994). Ellsberg (1961) study is among the earlier work researched. The major theories that have been applied are discussed here below.

2.3 Human behavioural Theories

Limitations of the traditional financial models in explaining investor biases have led researchers to focus on human behavioural aspects. These aspects are based on cognitive psychology, which is caused by cognitive illusions. There are two broad classifications of these cognitive illusions namely heuristics decision process and the prospect theory.

2.3.1 Prospect Theory

Kahneman and Tversky (1979) in their critique of the expected utility theory as a descriptive model of decision making under risk and uncertainty developed an alternative model, which they called prospect theory. According to their empirical evidence, Kahneman and Tversky (1979) found out that human beings give more weight to outcomes that are more certain as compared to outcomes that are merely probable. This theory assigns more value to gains and losses as compared to the final asset. The theory divides the choice process into two faces. The first face involves framing by which mental accounts are created and the second phase involves the evaluation of these mental accounts and making a choice. Kahneman and Tversky (1979) noted that people do not adapt easily to losses.

According to Wood (1996), investors are able to frame situations creating a feeling of a possible loss or gain, which would yield pain or pleasure. Lebaron (1999) observes that, prospect of losses is more distressful to a human being than they are pleased by equivalent gains. Tversky (1990) noted that, people exhibit risk seeking rather than risk averse behaviour when faced with higher chances of loss. The most studied concepts of prospect theory include; Regret aversion, Loss aversion and Mental accounting. All these are states of mind that can influence the decision making process of a human mind,

Pious, (1993) notes that regret refers to people's emotional reaction to making a mistake while Evans (2002) states that those investors consistently engage behaviour that they

regret later. According to Shiller, (1998) and Lebaron, (1999) investors avoid selling shares that have decreased in value, and readily sell shares that have increased in value. Berry and Fogel (2006) found that investors reported regrets about holding a losing stock too long than about selling a winning stock too soon. Statman (1999) argued that errors in judgement affect investors making them grief or sorrowful.

Loss aversion recognizes that the mental penalty associated with a loss is greater than the mental reward from a similar size gain (Shiller 2000). Loss aversion may encourage investor-herding behaviour, for example, to invest in respected companies as these carry implicit insurance against regret (Koenig 1999). Lehenkari and Perttunen (2004) found that both positive and negative historical returns significantly reinforce the negative association between the selling propensity of investors and capital losses, suggesting that investors are risk averse. Odean (1998b) argues that loss aversion may be a common feature of investor behaviour, but it generally produces bad decision-making and directly affects investor wealth.

Mental accounting is the propensity for individuals to organize their world into separate mental accounts. Investors tend to treat each element of their investment portfolio separately, which can lead to inefficiency, and inconsistency in making investment decisions (Shiller 2000). Rockenbatck (2004) found that investors do not seem to make the connection between different investment possibilities, as is essential for arbitrage free pricing.

2.3.2 Heuristic decision processes

Heuristics are rules of thumb, which people use to make decisions in complex, uncertain environments. Kahneman & Tversky (1979) observed that when it comes to decision making investors do not behave rationally. They noted that the art of collecting all the relevant information and objectively evaluate it is not followed rather investors take mental shortcuts. Mental shortcuts are not necessarily bad depending on the timing of decision. However, heuristic decision processes may result poorer decisions. Illusions resulting from the use of heuristics are; Representativeness, Gambler's fallacy,

Anchoring, Overconfidence and Availability bias as observed by Kahneman & Tversky (1979)

In financial markets, representativeness can manifest itself when investors seek to buy 'hot' stocks and to avoid stocks, which have performed poorly in the recent past. This behaviour could provide an explanation for investor overreaction (De Bondt and Thaler, 1995). People tend to relate events to a good occurrence and to overstress the importance of such a relation. For example, share prices often rise when a company reports increased earnings several quarters in a row, because investors tend to infer a high long-term earnings growth rate (Barberis 2001).

Gamblers' fallacy is associated with the situation where investors tend to predict a reverse of a particular trend. In most situations, it leads investors to anticipate the end of a good! bad market performance. Thus investors who are biased to a status tend to choose an alternative disregarding whether the choice is optimal or not (Kempf and Ruenzi, 2006).

Anchoring arises when investors place too much weight to the recent performance. Investors assume that current prices are right and usually use their purchase price as a reference point (Kalmeman and Riepe, 1998). According to Shiner (1998), investors fix prices in relation to the last price. Anchoring can lead investors to expect a share to continue to trade in a defined range or to expect a company's earnings to be in line with historical trends, leading to possible under-reaction to trend changes. Investors tend to be optimistic in times of good market performance and pessimistic when the market dips. As an example, Shiller (2000) found that during the peak of the Japanese market only 14% of investors expected it to crash but after it finally crashed the number rose to 32% .

Overconfidence gives investors courage making them to overestimate their predictive skills and believe they can the market. Studies have shown that one side effect of investor overconfidence is excessive trading (Evans 2006, Allen and Evans, 2005). There is evidence (Evans 2006) that financial analysts are slow to revise their previous

assessment of a company's likely future performance, even when there is strong evidence that their existing assessment is incorrect. Naturally, people always believe beyond their own abilities, and investors and analysts are particularly overconfident in areas where they have some knowledge (Shiller 1998; Evans 2006).

Availability bias refers to a situation where investors overly on the most available information to make decisions. Investors give more weight on easily available information. Thus, investors always prefer what they know and are familiar with, this explains why investors strongly favour investing in local companies; regardless of the fundamental principles of portfolio investment, that diversification is important for optimization (Barberis 2001).

2.4 Effect of Behavioural Factors on Property Investment Decisions

Psychology factors rather than fundamentals have been argued to impact property price dynamics. Case and Shiller (1989) gives evidence from their study that either boom in the market are as a result of investor reactions to one another, past price or past market booms. They further argue that investors in housing markets do not know fundamentals but rather interpret events in terms of hearsay, cliches, and casual observations. Case and Shiller (1989) further confirmed that there is indeed evidence of price rigidity in falling markets than in raising markets. Genesove and Mayer (2001) further confirm this argument by showing that loss aversion affects seller behaviour in the residential real estate market. According to Genesove and Mayer (2001), property transaction prices are determined by seller characteristics in addition to unit attributes which makes the property market far from being a perfect asset market. All this explanations of property price dynamics comes from the prospect theory of Kahneman and Tversky (1979) where losses and gains are viewed differently.

Seller and Seilcr (2010) in their study of mental accounting and false reference points revealed that mental accounting is commonplace and investors focus on breaking point as a reference point. The tendency of the investor to focus on a false reference point can be attributed to regret aversion in line with the regrets theories of Bell (1982). Other

authors who have used mental accounting to explain the role of behavioural factors in property price dynamics include Case and Shiller (1998, 1989, & 2004) and Shiller (2007). They all conclude that investors form expectations about growth in property price and use that expectation as a basis for the asking price clearly disregarding market forces.

Human heuristic decision process has impact on property investment decisions. Gallimore et al (1999) conducted an investigation on decision making in small property companies. They found that property investment decision making does not strictly follow the normative models of decision-making process. They also found out a firmly held belief that some decision makers could perfectly judge the stage of the property cycle and even forecast beyond the present. It can be argued that, this judgement of the market is based on prior analysis of fundamentals but Gallimore (1999) in his investigation proved that the information accessed was very selective to form any basis for market fundamentals. These investors were relying more on insights, which are explained by the various forms of human heuristics that is availability bias, representativeness, or overconfidence.

Barkham and Ward (1999) in their examination of discount trading in the UK property noted that some companies traded their properties less than the net asset value. They found that noise traders contributed to the discount trading. Gallimore and Gary, (2002) further confirmed the aspect of irrational noise traders. In their study about, investors' sentiment in property decision-making, Gallimore and Gary examined the importance of sentiment and its relationship to the information used in decision-making process. The authors used a questionnaire survey to explore the perceptions of sentiment and basing on their findings they concluded that investor sentiment is an important factor in making property investment decisions. Investor sentiment and noise traders are purely based on the use of insights rather than market fundamentals. As proved by Gallimore et al (1999) human heuristics behaviour can explain such insights,

2.5 The Sources Property Information

Engel, Blackwell, and Miniard (1995) defined consumer behaviour as activities directly involved in obtaining, consuming, and disposing of products and services. Included in this definition is the decisions process that proceeds and follows these actions. Schiffman and Kanuk (1997) terms consumer behaviour, as what is displayed by consumers when searching to purchase, use, evaluate and dispose products or services. Thus consumers referred to in this review relates to property investors as these thesis is concerned with the Behavioural Finance theory that influence the Kenyan property investors who in this case could be buyers or sellers of property or tenants hence consumers of a product or a service.

According to Gibler and Nelson (2003), much of real property, investments are high involvement goods that require complex decision-making. Thus, the three major comprehensive models of complex consumer decision-making developed in the late 1960's by Nicosia, (1966); Engel, Kollat and Blackwell, (1968) and Howard and Sheth, (1969) would be applicable to most real property decision making. These models are designed to track individual's state psychologically from the point they realize a possibility of satisfying a need with a product or service to the final evaluation of purchase consequences. The underlying assumption is that consumers do mental information processing before making any purchase. The three key elements of these models are search of the relevant information, evaluation of alterative and decision rules.

2.5.1 Information Search

Schmidt and Spreng (1996) states that consumers seek information to help them decide how best to satisfy a need. Schmidt and Spreng (1996) further argue that economic and psychological / information-processing approaches are two well-established theoretical perspective of external information search. The economic perspective is based on cost Ibenefit basis where consumers will keep searching for additional information as long as the marginal benefit exceeds the marginal cost.

psychological perspective deals with the cognitive process of how consumers search gather and process information.

Consumers' first check internally for information they already possess as is noted by Bettman (1979) and Punj (1987). However, depth of experience, length of time since last purchase and satisfaction with previous purchases will affect the consumers' reliance on internal information as noted by Kiel and Layton (1981). This is further supported by Engel, Blackwell and Milliard, (1995) who states that as consumers purchase real property infrequently they rarely rely solely on past knowledge when selecting a new property to purchase rather they perform an external information search. The effects of quality of previous experience with real property, on the amount and type of search undertaken appear to vary. According to Barya and Zumpano (1995), knowledge can reduce search by allowing the consumer to rely more heavily on internal information, On the other hand Anglin (1997) argues that knowledge can also encourage search by enabling more effective use of newly acquired information. Sources of external information range from personal inspection, real estate brokers, newspaper adverts, and reference groups (Clark and Smith, 1979, Talarcheck, 1982). The National Association of Realtors (1989) assembles reference groups into family, friends, and colleagues who form the initial source of external information especially for first timers. Kaynak (1985) concurs with the argument that consumers with extremely limited knowledge rely heavily on reference groups. In addition Kaynak (1995) further notes that moderately informed consumers possess sufficient knowledge to explore and understand more information, thus they undertake more extensive external search on their own. On the other hand, consumers with the greatest knowledge of the product and market may already possess all the information they need to make a decision without extended search of any type.

Hempel (1969) and Bettman and Sujan (1987) are of the opinion that experience may affect what type of information is gathered. They note that experienced consumers know which dimensions were useful in the past for comparing alternatives. However, on the other hand they contend that inexperienced buyers are more susceptible to

external influences, such as real estate agents in determining what criteria they should use to select a property.

External search is greatly affected by consumer's beliefs and attitudes. According to Baryla and Zumpano (1995), some consumers enjoy the shopping process more than others do and like to visit open houses and inspect more property before making a decision. Demographics characteristics on the other hand are related to information search. Clark and Smith (1982) observe that age is negatively related to the amount of information search. They attribute this to be reflective of more accumulated experience and knowledge as one ages creating reduced desire for additional information. Another characteristic that appears to relate to the amount of search is education. Hempel (1969) notes that more educated consumers search more, perhaps because of greater confidence in their ability to undertake the search and consume the information gathered more effectively.

2.5.2 Decision Making

Searching the market for all possible alternatives is usually impossible. The consumer must place limits on the alternatives considered. Engel, Blackwell, and Miniard (1995) refer to the reduced set of alternatives from which the consumer must make choices as consideration or evoked set. The consumer must determine what criteria to use in evaluating the alternatives in the evoked set to make a final choice. Engel, Blackwell, and Miniard (1995) further indicate that some criteria are more salient thus having a greater impact in determining consumer selections. For these reason and as noted by Kaynak (1985) real properties researchers wanting to identify salient attributes have turned to surveys of home buyers, retail tenants, and corporate real estate executives.

Capon and Khun (1982) argues that consumers may be limited to determine the optimal choice based on all the salient characteristics. They may use simplified methods for comparing alternatives on a limited number of determinants characteristics. According to Engel, Blackwell, and Miniard (1995) their theory of consumer behaviour, one

to simplify the process of comparing alternatives is to use non-compensatory

decision rules. Cut-offs are used to qualify products such price range and minimum size to consider. Two commonly used non-compensatory decision rules are the Conjunctive rule and Lexicographic rule.

The Conjunctive decision rule sets minimum acceptable levels on all important attributes and eliminates any alternative that do not meet all the minimums. If only one property meets all the minimums then the consumer selects it. If several are acceptable then the consumer has narrowed down the choices and can raise the cut offs or use another decision rule to make the final choice. If none of the properties meets any of the decision rule the consumer can either change the acceptable minimum or change the decision rule.

The other non-compensatory decision rule according to Engel, Blackwell, and Miniard (1995) is Lexicographic rule. The consumer ranks the determinants attributes in order of priority. If one is better than all the others on the most important attribute are, then the consumer selects that property. If the consumer perceives two or more as equal on the most important criterion, does then the properties are compared on the second most important determinant. This process is continued until the tie is broken.

The other type of decision rule according to Engel, Blackwell, and Miniard (1995) is the Compensatory decision rule. The consumer identifies all the determinants attributes for the product being considered and assigns importance on each attribute on a weighted scale. The alternatives are rated on each attribute and the one generating the highest summated weighted score is selected. Consumers may use a combination of decision rules in choosing a product, first simplifying the decision by narrowing down choices with the non-compensatory rule and using the compensatory process to make final choice. Dibb (1994) suggests that homebuyers use such a sequential decision strategy. First, they apply a non-compensatory decision rule to eliminate properties that do not possess the minimum requirements on primary issues such as price, size, and location. Then they use compensatory rule to evaluate each property across a wide range of secondary criteria.

This paper has conceptualised the research model with the help of the literature review as shown in Figure 1.1 below. This model encompasses both the normative theory and the behavioural theory and links them to the psychological biases that affect investor behaviour resulting to subjective human decision-making process leading to price distortions. The model is based on the information processing theory of human problem solving developed by Newell and Simon (1972) and further refined by Diaz (1993). This theoretical base was applied by Diaz (1993) who first developed a behavioural framework for real property by providing the activities model (Diaz 1993).

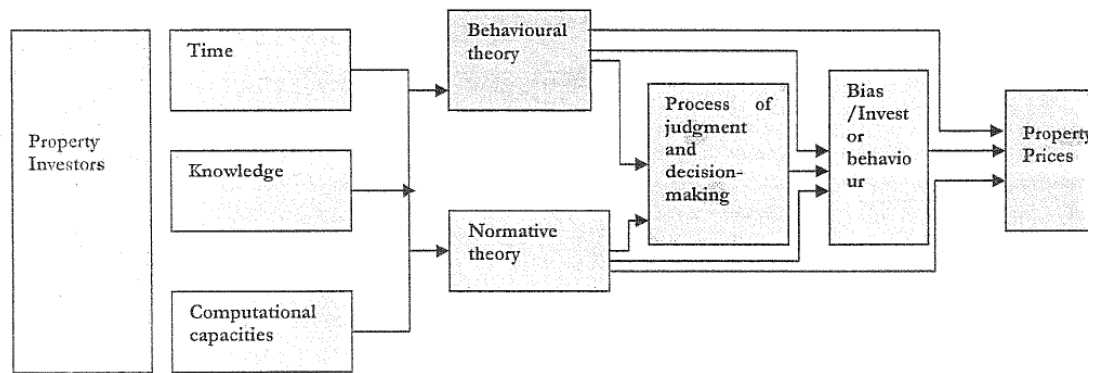


Figure 1.1 Conceptual Framework: Source: activities model (Diaz, 1993)

In figure 1.1 above, the main elements that affect the process of property investment decision making have been summarised. From onset there are the property investors who are ready to take risks by investing in the property market. Moving to the right this study has incorporated the aspects that affect the human information processing. Since the human mind is a serial information processor that has limited capacities and must solve problems within a problem space. This involves knowledge of the market and computational capacities (Diaz 1993). In the next column, we have incorporated the two theories that affect human investment decision making as discussed in literature

review. These are the behavioural theory and the normative theory. These two theories interfere with human judgement and decision making leading to distorted property prices.

2.7 Research Gap

Property investment decisions are reliant upon information. This makes the area of real estate much ripe for study from Behavioural Finance perspective since arbitrage limits are likely to be more binding in this area. Behavioural research has focused on the valuation process. Barkham and Ward (1999) and Gallimore and Gray (2002) are perhaps the only two studies that have focused on the investor behaviour in property investment decision making. On the other hand, while all consumers follow the general decision making models in gathering information, evaluating alternatives, and choosing a property, their individual behaviour within these process is greatly influenced by differences among individuals. This study contributes knowledge by seeking to find out Behavioural Finance theories that influence investment decision making in the Kenyan property market.

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

This chapter presents the method that is applied in this thesis. First, the research design is presented, where the qualitative method is described, and the field survey discussed. The chapter further continues with the population and sampling design. The data collection method is discussed and the tool to be used is presented followed by the research procedures. The chapter concludes with discussion on the data analysis methods.

3.2 Research Design

In this thesis, a qualitative research method is applied with the aim of reproducing an extensive picture of the situation. The reason for choosing qualitative method for this thesis is its nature, which is to understand and interpret Behavioural Finance theories in relation to property investor's decision-making. This is according to Myers (1997), who argues that the nature of any research problem should guide the methodology adopted. Crotty (1998) further supports this argument and points out that justification of the methodology adopted should relate to the research statement and the problem formulated. According to Cassell and Symon (1994), qualitative research covers an array of interpretive techniques, which seek to describe phenomena in the social world.

This thesis has used field survey as a data development technique as supported by Diaz and Hansz (1997) who contend that three data development techniques, the field survey, the process tracing protocol and the controlled experiment dominate the real property behavioural research. These techniques have all been borrowed from the behavioural sciences where they have a firm foundation. Neumann (2006) contends that the field survey is the most widely used data-gathering tool. One important aspect of survey is that it reveals attitudes and opinions yielding relations that serve as a guiding hypothesis for follow up research thus its relevance this study (Gallimore 1994). This thesis has used the field survey as the method data development technique,

3.3 Population and Sampling

This research is a census survey with the population of interest consisting of all real estate's agents firms listed in the official yellow directory 2010 Nairobi edition. The official yellow pages directory is published by Kenya Postal directories limited which is a registered company in Kenya. There are 155 listed estate agents operating in Nairobi. This entire population of listed real estate agents operating in Nairobi was covered fully since the population size is small and accessibility is easy within Nairobi. Kothari, (1990) describes this as a complete enumeration of all items in the population or universe.

3.4 Data Collection

This research has used primary data, The primary data in this thesis has been gathered through survey questionnaires (Appendix I). Survey questionnaires were administered to all the 155 listed estates agents operating in Nairobi as per the official yellow pages 2010 Nairobi edition. Estate agents were used in this study due to the role they play in property transaction. According to Matrara and Zabel (1995) the principle players in any property transaction are the sellers, the estate agents and the buyer. Mantrala and Zabel (1995) further noted that the function of the agent or broker is matching the prospective buyers and sellers. This is done by collecting information about prospective buyers and sellers and providing familiarity with bargaining and details of the transaction. Sawyer, Crowston, Wigand and Allbritton (2001) strengthen the case of estate agents by noting their contribution in the real estate market due to its nature of complex transactions. They contend that such intermediaries are less replaceable than stockbrokers or travel agents. Other studies which concur with the importance of estate agents are Baryla and Zumpano (1995) who see estate agents as the mirror between the seller and the buyer. Thus this study has used estate agents as the respondents because they can clearly state the case for both the buyer and seller and what transpires during a transaction.

The questions administered in this study were standard and they were based on the theoretical framework and the practical applications of behavioural theory as 21

suggested by Fromlet (2001). The measures in the questions are derived from Waweru et al (2008) and a further review of literature. The questionnaire had six parts drawn from the objectives of the study. Part one and two of the questionnaire dealt with general characteristics of the responding firm and their experience. Part three and four investigated the presence of Behavioural factors while part five asked the respondents to rank the impact of the factors on certain property investment decisions. Part six investigated source of property information, These questions were formed in a way that the respondents would develop their answers. Out of the target population of 155 real estate agents 145 responded. The response rate was 93.5%. The questionnaires were administered within a period of 21 days. The high response rate is attributed to the drop and- pick method used to administer the questionnaires and the references given by the estate agents personally known to the researcher.

3.5 Research Procedures

This study used survey questionnaires administered to real estate agents to establish their perception of the various decision making process of property investors. Real estate agents are the intermediaries in any property transactions. They act for both the seller and the buyer. The respondents were drawn from real estate agents registered and practicing in the city of Nairobi. All the 155 listed estates agents operating in Nairobi as per the official yellow pages 2010 directory Nairobi edition were served with questionnaires, The procedure entailed making a phone call to the respective agent to book an appropriate date upon which the questionnaire was administered. This mode of data collection using drop-and-pick technique on all the firms, and reference given by the estate agents personally known the researcher reduced the turn-around time especially when following up.

3.6 Data Analysis Methods

Completed questionnaires were edited for completeness and consistency. Out the 145 respondents 4 were discarded after editing. A total 141 questionnaires were coded and checked for coding errors and omissions. The coded data was processed in the SPSS software package and analysed using percentages, modes, mean and dispersion

scores. Factor analysis was used to identify the major behavioural factors influencing investment decisions from the 14 measures tested in part II of the questionnaire. Further Hest was applied to test for the significant differences between the factor means. The results have been presented in tables displaying the respective frequency and percentage scores.

CHAPTER FOUR: RESEARCH FINDINGS

4.1 Introduction

This chapter deals with analysis, presentation and interpretation of the study findings. The findings of the study have been organised according to the research questionnaire. The research findings presented include the years of experience in real estate, behavioural factors affecting investment decision making by property investors, effect of behavioural factors in property investment decision making, how behaviour of property investors affect property investment decisions, how the property investors search for property information and factors that property investors considers before making investment decisions. Descriptive analysis, factor analysis and the t- test were used to summarize the study findings.

Table 4.1 Years of Experience in Real Estate

Years of experience in real estate	Frequency	Percent
Between 1-5 Years	19	13.50%
Between 6-10 Years	46	32.60%
Between 11-15 Years	46	32.60%
Between 16-20 Years	18	12.80%
Above 20 Years	8	5.70%
Total	137	97.20%

The study findings indicates that 92 (65.2%) of the respondents had experience real estate for a period of between 6- 15 years. Nineteen (13.5%) had an experience of between of 1-5 years while 18 (12.8%) had an experience of 16-20 years and only 8 (5.7%) had an experience of above 20 years. As most of the respondents had an

experience of more than 6 years it implies they can explain the guiding behaviour in property investment.

4.3 Behavioural Factors Affecting Investment Decision Making

To answer the first research question the respondents were asked to indicate the extent to which a set of factors affected property investors. These set of factors are drawn from the two broad classifications of human cognitive illusions namely heuristics decision process and the prospect theory. The findings of the behavioural factors that affect investment decision making by property investors are presented in this section. The study sought the influence of the various states of minds among the property investors using a five point Likert scale where key to scaling was; 1= Never, 2=Rarely, 3=Sometimes, 4= Often and 5= Always.

4.3.1 Use of Heuristics

The use of heuristics in decision making was determined by the presence of representativeness, Gambler's fallacy, anchoring, overconfidence and availability bias. All these are states of mind that can influence the decision making process of a property investor in the Kenyan property market. The study findings were summarized using descriptive measures of central tendency. The respective frequency, percentage scores and the mean of the respective factors were tabulated in Table 4.2 below.

Table 4.2 Behavioural Factors Affecting Investment Decision Making by Property Investors: Heuristic Factors.

Heuristic Factors	Mean Scores
Representativeness	4.09
Overconfidence	3.44
Anchoring	4.11
Gamblers Fallacy	3.06
Availability Bias	3.65
Total Factor Mean Score	3.74

The findings suggest that anchoring (mean 1 featured prominently as the factor that influences property investor behaviour. Most property investors (59.6 %) always set the value of property basing on the recent selling! buying price but investors sometimes (32%) or often (32%) use property purchase price as a reference point in trading. This :finding concurs with Kahneman and Riepe (1998) who noted that investors assume that current prices are right and usually use their purchase price as a reference point. In addition Shiller (1998) noted that investors fix prices in relation to the last price. Other studies which suggest the same are those of Lebaron (1999) and Evans (2002) who contend that investors assume that current prices are correct and they refer to this before making investment decision.

The findings further suggest that representativeness (mean 4.09) is the second factor that mostly influences property investment behaviour. Most property investors always (43%) place undue weight on past performance as an indicator of future performance while always (42.6 %) use trend analysis to make investment decision. These findings concurred with De Bondt and Thaler (1995) and Barberis (2001) who noted that people tend to relate events to a good occurrence and to overstress the importance of such a relation.

A t-test (2" tails, paired test) comparing the means of these two most influencing factors that is anchoring and representativeness showed a significant difference between them ($t = -2.104$; $P < 0.0186$) suggesting that the influence of anchoring is to a larger extent than representativeness.

The other heuristic indicators were also exhibited by property investors but less strongly than those discussed above. Availability bias (mean 3.65) was cited by most of the respondents who often (44%) prefer to buy local property than trade international property. Barberis (2001) found similar results. Overconfidence (mean 3.44) ranked fourth; this is consistent with the works of Tversky (1990), Wood (1996), who observed

that people often interpret their success to be the result of their skills. Finally gamblers fallacy (mean 3.06) was the lowest ranked.

4.3.2 Use of Prospect Theory

Prospect theory was evidenced by the presence or absence of the following three behaviour characteristics, loss aversion, regret aversion and mental accounting. Using a five point Likert scale where key to scaling was; 1= Never, 2=Rarely, 3=Sometimes, 4= Often and 5= Always, respondents were asked to indicate whether these factors influenced their investment decision making process. The study findings were summarized using descriptive measures of central tendency. The respective frequency, percentage scores and the mean are tabulated in Table 4.3 below.

Table 4.3 Behavioural Factors Affecting Investment Decision Making by Property Investors: Prospect Factors

Prospect Factors	Mean Score
Loss Aversion	3.02
Regret Aversion	3.62
Mental Accounting	3.2
Total Factor Mean Score	3.23

Among the prospect theory Regret aversion (mean 3.62) was the highest ranked with investors responding that they often (27%) avoid selling property that have decreased in value while (36%) equally often sell property that have increased in value faster. This was consistent with other studies on regret aversion by Shiller (1998), Lebaron (1999), Odean (1999), and Statman (1999). Similarly Berry and Fogel (2006) found that investors reported regrets about holding a losing stock too long than about selling a winning stock too soon.

Mental accounting (mean 3.2) was ranked second with 53% of the respondents saying sometimes they treat each element separate and 62% for selling a losing investment because the account shows a loss. These findings concur with Shiller (2000) who notes that investors tend to treat each element of their investment portfolio separately, which can lead to inefficiency, and inconsistency in making investment decisions. In addition Rockenbatch (2004) found that investors do not seem to make the connection between different investment possibilities, as is essential for arbitrage free pricing.

Lastly loss aversion (mean 3.02) ranked the lowest, where respondents indicated that they sometimes exhibit this behavioural factor. The findings are supported by Odean (1998b) who argues that loss aversion may be a common feature of investor behaviour, but it generally produces bad decision-making and directly affects investors' wealth. Other studies include, Lehenkari and Perttunen (2004), Shiller (1998) and Kahneman and Tversky (1979).

The findings on which Behavioural factors mainly influence the property investment decision making in the Kenyan property market discussed above suggest that heuristics theory are more dominant than prospect theory. This is supported by the mean score for heuristics theory at 3.74 against the mean score for prospect theory at 3.23. A further analysis using t-test indicates that there is indeed a significant difference between respondents who exhibited this behaviour.

In order to isolate the significant measures out of the 14 measures that had been included in the questionnaire and to determine the behavioural factors influencing investment decisions in the Kenyan property market a factor analysis was carried out using the exploratory factor analysis method. Because this study was exploratory, factor analysis was conducted with a primary aim of data reduction and to observe underlying dimensions of data set. The fourteen measures were factorized with Varimax rotation to determine their group compliance with the two behaviour theory perspectives

The result in table 4.4 below indicates that five out of the fourteen measures explained over 60.8% of the total variances. These five measures had Eigenvalues of greater than 1 (Nunnally, 1978)

Table 4.4 Total Variance on Behavioural Factors Affecting Investment Decisions in Kenyan Property Market

Component	Initial Eigen values			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.818	20.128	20.128	2.818	20.128	20.128
2	1.777	12.69	32.818	1.777	12.69	32.818
3	1.586	11.331	44.148	1.586	11.331	44.148
4	1.244	8.886	53.035	1.244	8.886	53.035
5	1.088	7.771	60.806	1.088	7.771	60.806
6	0.936	6.683	67.489			
7	0.887	6.334	73.824			
8	0.785	5.608	79.432			
9	0.69	4.927	84.359			
10	0.625	4.465	88.824			
11	0.52	3.715	92.539			
12	0.437	3.119	95.658			
13	0.361	2.576	98.234			
14	0.247	1.766	100			

Extraction Method: Principal Component Analysis,

The Kaiser criterion has been applied to retain the measures with Eigenvalues greater than 1. In essence this means that unless a measure had at least as much as the equivalent of one original variable it is dropped and thus the basis of retaining the five measures (Kaiser 1960). Varimax rotation was performed to aid in the interpretation of the components (Barac 2009) and to determine which of the five measures were attributed to each of the two behavioural finance theories. The rotated solution revealed the presence of a simple structure with variables loading on each of the two factors having some conceptual meaning (Thurstone 1947)

Using the first factor loadings, we determined that three out of the five main measures are attributed to the Heuristic theory while the remaining two measures related to Prospect theory. This is presented in Table 4.5 below.

Table 4.5 Commonalities and Rotated component matrix

Measures	Initial	Extraction	Factor 1 (First factor loading)	Factor 2 (First factor loading)
To what extent do property investors use past performance as an indicator of future performance and rely on this to make investment decisions?	1	0.755	0.71819	
To what extent do property investors use trend analysis to make investment decisions?	1	0.729	0.68190	
To what extent do property investors use predictive skills to time and outperform the market?	1	0.51	0.41224	
To what extent do property investors have high expectations on property returns beyond market expectations?	1	0.523	0.32191	
To what extent do property investors set the value of property basing on the recent selling/buying price?	1	0.648	0.53645	
To what extent do property investors use property purchase price as a reference point in trading?	1	0.655	0.47435	
To what extent do property investors normally able to anticipate the end of good or poor property market returns?	1	0.657	0.69779	
To what extent do property investors prefer to buy local property than trade in international property?	1	0.636	0.17447	
To what extent do property investors when faced with sure gain, are risk averse?	1	0.579		0.26083
To what extent do property investors when faced with sure loss, are a risk taker?	1	0.725		0.53870
To what extent do property investors avoid selling property that have decreased in value?	1	0.378		0.30101
To what extent do property investors sell property that has increased in value faster?	1	0.429		0.36089
To what extent do property investors tend to treat each element/account in their investment portfolio separately?	1	0.675		0.56331
To what extent are property investors willing to sell a losing investment because the account shows a loss?	1	0.611		0.15622

Extraction Method: Principal Component Analysis. *Note: The extracted measures are in bold*

To determine the main behavioural theory influencing investor decisions in Kenyan property market, the mean differences between the two groups were computed and compared as shown in Table 4.6 below.

Table 4.6: Mean differences between Heuristic theory measures and Prospect theory measures

Heuristics Theory measures	First Factor Loadings	Mean Score
To what extent do property investors use past performance as an indicator of future performance and rely on this to make investment decisions?	0.71819	4.10
To what extent do property investors use trend analysis to make investment decisions?	0.68790	4.07
To what extent do property investors normally able to anticipate the end of good or poor property market returns?	0.69779	3.06
Overall mean score		3.706
Prospect Theory measures	First Factor Loadings	
To what extent do property investors when faced with sure loss, are a risk taker?	0.53870	2.45
To what extent do property investors tend to treat each element/account in their investment portfolio separately?	0.56331	3.33
Overall Mean Score		2.829
Paired t-test for difference of means between Heuristics and Prospect theory measures (p-value) $t = 12.651$ (p < 0.0001)		

The findings confirm our earlier results that use of heuristics (mean Score= 3.706) is more predominant than Prospect Theory (mean score= 2.829) in Kenya ($t = 12.651$; $P > 0.000$).

Other studies that confirm our findings are Waweru et al (2008) who found 31

out that heuristics theory was the predominant behavioural factor that affect investment decision making by institutional investors at the Nairobi Stock Exchange.

4.4 Effect of Behavioural Factors Property Investment Decision

Having established the behavioural factors, which influence property investment decisions the study sought to establish the effect of behavioural factors in property investment decisions. To explore this aspect the respondents were asked to rank various variables in a five point Likert scale. Descriptive statistics which comprised measures of central tendency and dispersion were computed . The key to the scale index used in the five point Likert scale was as follows; 1= No impact, 2= Little Impact, 3= Moderate impact, 4= High impact and 5= Very High Impact. The study findings are as tabulated in Table 4.7 below.

Table 4.7 Effect of Behavioural Factors in Property Investment Decision

Effect of behavioural factors	Mean Score
Property price changes (increase/decrease)	4.65
Property market information (negative/positive)	4.53
Past trends of property	3.68
Fundamentals of property	3.53
Focus on popular property	3.84
Seasonal price cycles	3.40
Investors preferences	3.96
Over-reaction to price chances	3.36
Under-reaction to price changes	3.16

The findings indicate that property changes (mean 4.65) and property market information (mean 4.53) have the highest effect on property investment decision making. This is exhibited by the response rate where over 89% of the respondents indicated that price changes and property market information has a very high/high effect on their investment decisions. These findings are consistent with those of Waweru et al (2008) who concluded that market information and fundamentals of the underlying stocks impacted highly on investment decisions making at the Nairobi Stock exchange. In addition Odean (1999) had similar findings.

Investors' preferences ranked third with a mean of 3.96 followed by focus on popular property (mean 3.84). Fundamentals of property was ranked fourth (mean 3.53) with 53% of the respondents indicating a high impact on their investment decisions. Fundamentals of property ranks far below property price changes and property market information. This finding concurs with Gallimore and Gray, (2002) who concluded that investor sentiment rather than market fundamentals is an important factor in making property investment decisions. Other factors that were investigated as ranked in table 4.5 above are past trends of property (mean 3.68), seasonal price cycles (mean 3.40), over reaction to price changes (mean 3.36) and under reaction to price changes (mean 3.16). other studies with related findings include Genesove and Mayer (2001) who argued that seller characteristics could determine property price changes, De Bondt and Thaler (1985) and Lai et al (2001) who the influence of under-reacting and overreaction to news.

4.5 How Behaviour of Property Investors Affects Property Investments Decisions

Having established the effect of behavioural factors on investment decision the researcher-probed further to establish how the behaviour of property investors affects property investment decisions. The study adopted a point Likert scale to measure the various variables under study. Descriptive statistics which comprised measures of central tendency and dispersion were computed . The key to the scale index used the

five point Likert scale was as follows; 1 = Always, 2= Frequently, Seldom, 4= Never and Not applicable. The study findings are as tabulated in Table 4.8 below.

Table 4.8 How Behaviour of Property Investors Affects Property Investments

Decisions

How Behaviour affects property investment	Mean Score
Buying decisions	1.11
Selling decisions	1.36
Choice of property to trade	1.61
Length of time to hold property	2.14
Volume of property traded	1.93

The buying and selling decisions are always affected by property investor's behaviour. Over 87.9% of the respondents said buying decisions (mean 1.11) are always affected while 68% said selling decisions (mean 1.36) are always affected. These findings are consistent with studies done by De Long et al (1990), Bikhchandani et al (1992) and Caparrelli et al (2004) who argued on the herding mentality of investors. In addition Waweru et al (2008) also found that institutional investors made reference to the trading activities of their peers thus affecting buying and selling decisions in the Nairobi stock exchange. Other decisions investigated were choice of property to trade with a mean of 1.61; Volume of property traded which was ranked with a mean of 1.93 followed by decisions on length of time to hold property (mean 2.14) is mostly affected by the behaviour of property investors.

4.6 Property Information

After establishing how the behaviour of property investors' affects investment decisions, the researcher went, ahead to find out how property investors search for property information. The study adopted a five point Likert scale to measure the various variables under the study. Descriptive statistics which comprised measures of central

tendency and dispersion were computed . The key to the scale index used in the five point Likert scale was as follows; 1= Always, 2= Frequently, 3= Seldom, 4= Never and 5= Not applicable. The study findings are as tabulated in Table 4.9 below.

Table 4.9 Search for Property Information

Search for Information	Mean Scores
Previous experience	1.4
Personal inspection	1.54
Real Estate Agents	1.37
Reference groups	1.96
Government ministries	2.99
Newspaper advertisements	1.53
Website advertisements	1.53

The study findings indicates that over 90% of the property investors always/frequently use real estate agents, previous experience, newspapers advertisements, website advertisements and personal inspection as a source of property information. This implies that property investors use various ways to source for information for effective investment decision. Real estate agents were ranked first with a mean of 1.37. Indeed they are the most relied on to identify where there are properties for sale. This finding concurs with studies done by Schmidt and Spreng (1996), Bettman (1979), and Punj (1987).

Other notable sources of property information are newspaper and web advertisements with a mean of 1.53 followed by personal inspection (mean 1.54) reference groups (mean 1.96) and lastly Government ministries (mean 2.99). evident findings that property investors seldom use government ministries as a source for information as accounted by the 71 % who said they seldom use Government ministries. This implies

in Kenyan, property investors do not trust information from Government ministries and as such cannot be a good source for investment information for decision- making.

4.7 Factors That Property Investors Consider Before Making Investment Decision

Before making an investment decision, investors consider several factors. The researcher probed on the factors considered by the property investors before making an investment decision. The study adopted a five point Likert scale to measure the various variables. Descriptive statistics which comprised measures of central tendency and dispersion were computed. The key to the scale index used in the five point Likert scale was as follows; 1= Not important, 2= Less Important, 3= Neutral, 4= Important and 5= Very important. The study findings are as tabulated in Table 4.10 below.

Table 4.10 Factors That Property Investors Consider Before Making Investment Decision

Factors affecting decision	Mean Score
Price of the property	4.73
Location of the property	4.77
Nearness to the Central Business District	3.98
Annual property taxes and land rates	3.89
Rent of such properties over the last 10 years	4.12
Ability to meet mortgage interest and principal	4.63
The risk of property market failure	3.29

The findings indicates that most of the respondents said that it's very important before making an investment decision to consider the price of the property (mean 4.73), 36

location of the property (mean 4.77) and ability to meet mortgage interest and principal (mean 4.63) and rent of such properties over the last 5-10 years (mean 4.12) as accounted by over 80% of the respondents. This implies that these factors influence the property investor's decisions in the Kenyan property market. In addition, a significant number of the respondents said that it is important before making an investment decision to consider property nearness to the Central Business District (mean 3.98), annual property taxes and land rates (mean 3.89) as accounted for by over 60%. This implies that it is important for the property investors to consider property nearness to the central business district, before making an investment decision.

Lastly, most of the respondents were neutral on the view that property investor in the Kenyan market considers the risk of property market failure (mean 3.29) before making an investment decision. This implies that the risk of the property market failure do not affect property investors decision in Kenyan market.

CHAPTER FIVE: DISCUSSION OF FINDINGS, CONCLUSION AND RECOMMENDATION

5.1 Introduction

The final chapter begins with a discussion of the findings in relation to the study objectives where the main behavioural factors influencing investment decisions are discussed. The chapter further draws conclusions from the study findings and ends by making recommendation for further research.

5.2 Summary of Findings

This study investigated behavioural factors influencing decisions in the Kenyan property market. Further this study investigated the theory that predominantly explains the behaviour of property investors. Specifically the study sought to know which behavioural factors mainly influence the property investment decisions in the Kenyan property market and the effect of these behavioural factors to property investment decisions. Further the study sought to know the extent to which behaviour of property investors affect property investment decisions.

To achieve this objective data was gathered through survey questionnaires which were administered to all the 155 listed real estate's agents operating in Nairobi as per the official yellow pages 2010 Nairobi edition. These questions required the respondents to develop their answers. Out of the target population of 155 real estate agents 145 responded giving the study a response rate of 93.5%. Completed questionnaires were coded and analysed using both descriptive and inferential statistics.

5,2,1 Behavioural Factors Influencing Property Investment Decisions

This study found out that out of the two broad classifications of human cognitive illusions that are heuristics and prospect theory, heuristics influenced investors more. The key heuristic theory, that influence investors are anchoring, representativeness and availability bias. These findings concurred De Bondt and Thaler (1995) and Barberis (2001) who noted that people tend to relate events to a good occurrence and to overstress the importance of such a relation. Other studies with the same findings are

those of Lebaron (1999) and Evans (2002) who contend that investors assume that current prices are correct and they refer to this before making investment decision. Similarly, Shiller (1998) found that investors fix prices in relation to the last price.

Among the prospect theory regret aversion and mental accounting are the key theories that influence investor behaviour. This was consistent with other studies on regret aversion by Shiller (1998), Lebaron (1999), Odean (1999), Statman (1999) and Berry and Fogel (2006). Other studies with the same findings, are Tversky (1990), Shiner (1998), Thaler and Shefrin (1981) and Rockenbach (2004).

Studies done by Waweru et al (2008) also indicated that the mean number of respondents exhibiting heuristic behaviour is significantly greater than prospect theory behaviour. Wawem et al (2008) concluded that the heuristics theory is dominant in explaining the behaviour of institutional investors investing on Nairobi Stock Exchange listed securities.

5.2.3 Effect of Behavioural Factors on Property Investment Decision

The second objective of this study was to find out the effect of behavioural factors in property investment decision-making. The findings reveal that property price changes and property market information have very high impact on property investment decision. The other factors with moderate to high impact are investor preference and focus on popular property.

Property price change has a high impact/ very high impact on investment behaviour. This is consistent with the findings of Odean (1999) and Waweru et al (2008). Odean (1999) pointed out that change in stock price has an impact on investment decision making behaviour and may be interpreted as an attention-grabbing event in the market by investors. De Bondt and Thaler (1985) and Caparrelli et al (2004) proposed that changes or adjustments to prices due to anchoring and overconfidence by investors may ultimately lead to a revision of incorrect estimates of earnings and hence affect investment decision making of investors. However in the Kenyan property market prices continue to change triggering a rush to buy property. This is supported by the

work of Lakonishok et al (1992), which suggested that investors are herding animals and therefore tended to move in the same direction and ultimately exacerbate price movements, which further influenced their investment decision making behaviour.

The very high impact/high impact of property market information on investment decision making behaviour may be linked to the impact attention grabbing events in the Kenyan property scene. These findings are consistent with those of Odean (1999), Barber and Odean (2000, 2001a) which emphasized that investors are influenced by attention grabbing events in the market, which may or may not be relevant to the future performance of the investments in question. This in turn results in investors focusing on popular investments. Odean (1998b) also argued that many investors trade too much due to overconfidence about the quality of their information regarding the market or investments and hence have a high impact on their decision making behaviour. This concurred with the finding from this study.

5.2.4 How Behaviour of Property Investors Affects Property Investment Decisions

This study aimed to find out how behaviour of property investors affects property investment decisions. As such, the study investigated the extent to which buying decisions, selling decisions, and choice of property to trade, length of time to hold property and the volume of property traded affects property investment decisions. The findings indicate that always behaviour of property investors affects buying decisions, selling decisions, choice of property to trade and volume of property traded. . This finding are similar to Waweru et al (2008) who found that institutional investors made reference to the trading activities of their peers thus affecting buying and selling decisions in the Nairobi stock exchange.

5.2.5 for Property information

In order to achieve the main objective of the study regarding behavioural factors affecting investment decisions, the researcher sought to find the sources of property information in Kenyan property market. As such, the researcher sought responses on property investors searches information from previous experience, personal 40

inspection, real estate agents, reference groups, Government ministries, newspapers advertisements and website advertisements. The findings indicated that majority of the property investors always/frequently use real estate agents, previous experience, newspapers advertisements, website advertisements and personal inspection as a source of property information in the Kenyan property markets. The findings concur with studies done by Clark and Smith (1979), Talarcheck (1982) on the various sources of information. Investors seldom use Government ministries as they are deemed to have unreliable information.

Further, the researcher sought information on the factors that property investors may consider before making an investment decision. The factors considered were the price of the property, the location of the property, the nearness to the central business district, annual property taxes and land rates, the rent of such properties over the last 5-10 years, ability to meet mortgage interest and principal and the risk of property market failure. The findings indicated that most of the respondents said it is very important to consider the price of the property, the location of the property and ability to meet mortgage interest and principal.

As decision-making is influenced by several factors the findings concurs with other studies where the consumer must place limits on the alternatives considered. Engel, Blackwell, and Miniard (1995) refer to the reduced set of alternatives from which the consumer must make choices as consideration or evoked set.

5.3 Limitations the Study

This study chose to use estate agents as the respondents to represent the buyers and sellers. Whereas the estate agents may be buyers and sellers in their own capacities this study sought their response as estate agents due to their knowledge and role in property investment decisions. The choice of estate agents was influenced by role in property transactions as demonstrated by Matrara and Zabel (1995), Sawyer, Crowston, Wigand and Allbritton (2001) and Baryla and Zumpano (1995). Secondly it could not have been possible to pick property investors from the general public due to the time frame of this research.

The other limitation of this study is the use of questionnaires which may have captured the perceptions of the respondents. This however was mitigated by the high coverage which diluted any individual perceptions.

The other notable limitation is the fact that this study only covered Nairobi leaving out other urban areas of Kenya. It should be noted that most of the estate agents firms in Nairobi operate branch offices in other major urban towns and thus their response was deemed to reflect all the urban towns.

5.4 Conclusion of the Study

The main objective of the study was to investigate behavioural factors influencing investment decision in the Kenyan property market. From the findings, it can be concluded that investors in the Kenyan property market are influenced by behavioural factors. Commonly anchoring and representativeness are the most dominant influencing behaviours. Thus property investors in Kenya set their property prices basing on the recent buying /selling price and they use property purchase price as a reference point in trading. This explains why properties would trade beyond the expert's valuation. Equally investors use past performance as an indicator of future performance and rely on this to make investment decisions. Further, Kenyan property investors sometimes use predictive skills, have high expectations on property returns and uses property price as a reference point in trading.

The study also revealed that behavioural factors have an impact in property investment decision-making. The factors considered were property price changes (increase/decrease) and property market information (negative/positive). Further behaviours of property investors always affects buying decisions, selling decisions, choice of property to trade and volume of property traded. Majority of property investors in Kenya use real estate agents, newspapers advertisements and website advertisements as the sources for property investment information,

Property investors in Kenya consider the price of the property, location of the property and ability to meet mortgage interest and principal, and rent of properties over the last

5-10 years before making investment decisions. This implies that these factors influence the property investor's decisions in the Kenyan property market. Lastly, most of the respondents, were neutral on the view that property investor in the Kenyan market considers the risk of property market failure before making an investment decision. This implies that the risk of the property market failure do not affect property investors decision in Kenyan market.

5.4 Recommendations for Further Research

The study recommends further research on Behavioural Finance theory in the Kenyan property market targeting the buyers and sellers directly. Follow up research should investigate various investment decisions done by property developers and test their rationality using Behavioural factors. Further research on behavioural factors and the role of loss aversion should be applied to investigate the commonly known Kileleshwa phenomena where investors own flats with zero returns.

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APPENDICES

Appendix I: Questionnaires

Questionnaire

Part I: General Information

NAME OF ESTATE AGENT:.....

NAME OF RESPONDENT:.....

PART II: GENERAL REAL ESTATE AGENT PROFILE

Years of Experience in real estate

Between 1 – 5 year's

()

Between 6- 10 years

()

Between 11-15 years

()

Between 16 – 20 years'

()

Above 20 years

()

PART III: BEHAVIOURAL FACTORS AFFECTING INVESTMENT DECISION-MAKING BY PROPERTY INVESTORS

Please indicate your response to the following statement by ticking the appropriate corresponding choice.

1=Never, 2= Rarely, 3=Sometimes, 4= Often 5=Always

BEHAVIOURAL FACTORS	1	2	3	4	5
<i>Representativeness</i>					
To what extent do property investors use past performance as an indicator of future performance and rely on this to make investment decision?					
To what extent do property investors use trend analysis to make investment decisions?					
<i>Overconfidence</i>					
To what extent do property investors use predictive skills to time and outperform the market					
To what extent do property investors have high expectations on property returns beyond market expectations					
<i>Anchoring</i>					

To what extent do property investors set the value of property basing on the recent selling/ buying price?					
To what extent do property investors use property purchase price as a reference point in trading?					
<i>Gambler's Fallacy</i> To what extent do property investors normally able to anticipate the end of good or poor property market returns?					
<i>Availability Bias</i> To what extent do property investors prefer to buy local property than trade in international property?					
<i>Loss Aversion</i> To what extent do property investors when faced with a sure gain, are risk averse?					
To what extent do property investors when faced with a sure loss, are a risk taker?					
<i>Regret A version</i> To what extent do property investors avoid selling property that have decreased in value?					
To what extent do property investors sell property tha have increased in value faster?					
<i>Mental Accounting</i> To what extent do property investors tend to treat each element/ account in their investment portfolio separately?					
To what extent do property investors willing to sell a losin investment because the account shows a loss?					

PART 1V : EFFECT/IMPACT OF BEHAVIOURAL FACTORS IN PROPERTY INVESTMENT DECISION-MAKING .

Please indicate the effect/impact of the following factors on property investment decisions.
Please TICK the corresponding choice.

1=No impact, 2= Little impact, 3=Moderate impact, 4= High impact 5=Very High impact

	1	2	3	4	5
Property Price changes (increase/decrease)					
Property market Information (negative/ positive)					
Past trends of property					
Fundamentals of property(s)					
Focus on popular property					
Seasonal price cycles					
Investors preferences					
Overreaction to price changes					
Under-reaction to Price changes					

PART V: HOW BEHAVIOUR OF PROPERTY INVESTORS AFFECTS PROPERTY INVESTMENT DECISIONS.

Please indicate to what extent does the Behaviour of property investors affects property investment decisions regarding the following factors. Please TICK the corresponding choice

	ALWAYS	FREQUENTLY	SELDOM	NEVER	NOT APPLICABLE
Buying Decisions					
Selling Decisions					
Choice of property to trade					
Length of time to hold property					
Volume of property					

PART VI SEARCH FOR PROPERTY INFORMATION

Please indicate your response to the following statement by ticking the appropriate corresponding choice.

From your experience, indicate the source of property investment information as per the table below:

	Always	Frequently	Seldom	Never	Not Applicable
Previous experience					
Personal Inspection					
Real Estate Agents					
Reference Groups					
Government ministries					
Newspapers advertisements					
Website advertisements					
Other Please Specify					

The following are some of the factors that property investors may consider before making an investment decision. Please rate them in order of importance.

1=No important, 2= Less important, 3=Neutral, 4= Important 5=Very important

	1	2	3	4	5
The price of the property					
The location of the property					
The nearness to the central business district					
, Annual property taxes and land rates					
The rent of such properties over the last 5 -10 years					
Ability to meet mortgage interest and principal					
The risk of property market failure					
Other please specify					

Thank you for taking the time to answer the questions to the best of your ability. Your assistance is appreciated.