

# INFLUENCE OF ANCHORING BIAS ON INVESTORS' DECISION MAKING IN PROPERTY MARKET IN PLATEAU STATE, NIGERIA

<sup>1</sup>DASHOL ISHAYA USMAN, <sup>2</sup>Dr. Willy M. Muturi, <sup>3</sup>Dr. Florence S. Momba

<sup>1,2</sup>Department of economics accounting and finance, Jomo Kenyatta University of Agriculture and Technology, Kenya

<sup>3</sup>Department of Business Administration, Jomo Kenyatta University of Agriculture and Technology, Kenya

---

**Abstract:** The limitation of fundamental knowledge of cognitive biases that motivates investment behaviour has been one of the problems facing investors in the Nigerian property market. Thus, this study was aimed at establishing the cognitive biases influencing investment decision-making in property market in Plateau State, Nigeria. The objective that guided the study was the influence of anchoring bias on investment decision making in property market in Plateau State, Nigeria. Descriptive research design was used in the study. The study population comprised of property agents who were investment traders at the property market in Plateau State and currently registered and licensed to operate in Plateau State property market in Nigeria. The target population comprised of 1650 registered property investors trading at the property market in Plateau State and currently licensed to operate in Plateau state property market in Nigeria. Property investors were targeted. Multi-stage sampling procedure was used in the selection of representative sample comprising of purposive sampling and the normal approximation to the hyper-geometric distribution to select the sample size. The final sample size was thus comprised of 312 respondents. Primary data was collected using standard questionnaires with both closed and open ended questions. Cronbach's Alpha Test was used to test the internal consistency reliability of measurements. The study employed both descriptive and inferential statistics to allow presentation of data in a more meaningful way and thus simpler interpretation of data. Normality test was done for qualitative data to test for normal distribution for all dependent and independent variables. Jarque bera test was used to examine normality. The regression analysis results further confirmed that there was a significant positive linear relationship between anchoring bias on investment decision making in property market in Plateau State in Nigeria. The study concluded that anchoring bias effect in making investment decisions, is solely determined by years of experience as an investor. The positive coefficient on these variables was consistent with expectations that more experienced investors used more personal judgment in making decisions. The main recommendation for investors is to make constant attempts to increase their awareness on behavioral finance by educating themselves on the field. Studying about the biases, and reflecting on their decisions are likely to help achieve better self-understanding of the extent and manner to which they gets influenced by emotions while making financial decisions under uncertainty. Even after satisfactory awareness is achieved it is highly recommended that they maintain a chart of the behavioral biases they are likely to be vulnerable to.

**Keywords:** property market, investment traders, Property investors, making decisions.

---

## 1. INTRODUCTION

Investment in property is viewed as an engine of sustainable growth (Ahn & Hemmings, 2000). However, in less developed countries (LDCs) the national level of savings is very low (Javorcik & Smarzniska, 2004). Thus, there is a wide gap between the required rate of investment in property market and the existing rate of such investments (Asiedu, 2006).

The Brussels Declaration enclosed 30 worldwide development goals for LDCs, together with the realization of an investment to GDP ratio of 25 per cent and an annual GDP growth rate of at least 7 per cent in order to attain sustainable progress and poor quality reduction in LDCs (United Nations, 2010).

Property investment is largely regarded as a potential basis of supporting growth and development of the developing and developed nations (Blomstrom & Kokko, 2003). According to the Global Property Guide (GPG) and the Global Housing Watch (IMF, 2015), strategies of attracting investment in the property market turned out to be a greatly used technique of many governments all over the world to advance their economies. As a result of this, several studies were dedicated to the techniques of how best to do it. One such study is the United Nations (2000) millennium development goals (MDGs), a survey of property development in a number of countries with strategies to attract investments for the development of affordable housing for all citizens.

Further, the United Nations Industrial Development Organization (UNIDO) reported that the stream of foreign direct investment (FDI) internationally reached a towering level of USD 1.3 trillion in the year 2000. Investment promotion agencies (IPAs) in several parts of the globe, particularly in the well advanced economies of Europe and North America, and also the flourishing Asian economies of China, recorded great volumes of property market business and celebrated great triumph in attracting fresh investment to their countries. Generally this investment flow, however, was concentrated in the well-developed parts of the European Union, the United States and Japan which jointly accounted for 71% of global inflows from the Foreign Direct Investors (UNIDO, 2008).

Jensen and Malesky (2010) affirmed that irrespective of broad uncertainty about the gains of globalisation, the majority of U.S. states had offered rewarding opportunities to draw investments in property. Accordingly, the African share of world investment fell from its initial one percent to a further low of a meagre 0.67%. As a result, African countries were encouraged and supported to establish Investment Promotion Agencies (IPAs) so as to “promote” their attractions and fashion a one-stop-shop and to facilitate the passageway for external investors in the property market. In contrast, in the year 2006, Nigeria formed an Investment Promotion Agency, (Nigerian Investment Promotion Commission (NIPC) to provide a “one-stop-shop” to facilitate the course and eradicate impediments in front of inward investments in other sectors including investment in the property market.

According to (Somil, 2007), behavioural finance is the study of how human psychology, thoughts, feelings and attitudes (such as confidence) influence financial decisions and behaviours. Behavioural finance is based on psychological factors and contends with market efficiency and investors’ rationality. According to (Shiller, 2007) behavioural finance is the study of the influence of psychology on the behaviour of financial practitioners and the subsequent effect on market.

Behavioural economists attribute the imperfections in property markets globally to certain biases. These biases include cognitive biases such as overconfidence, overreaction, representative bias, information bias, and various other predictable human errors in reasoning and information processing. These have been researched by psychologists such as Kahneman (1979), Tversky (1979), Thaler (1994), and Slovic (2000). A cognitive bias is a systematic discrepancy between the “correct” answer in a judgmental task, given by a formal normative rule, and the decision makers and experts' actual answer to such a task (Gilovich, Griffin, Kahneman, 2002).

Decision makers also tend to make judgments based on an initial assessment as anchor, but fail to make sufficient adjustments later on. It is the tendency to rely on one trait or piece of information when making decisions. Virine and Trumper (2008) categorized several cognitive biases into four types: (i) behavioural biases and biases related to perception; (ii) biases in estimation of probability and belief; (iii) social and group biases; and (iv) memory biases and effects.

The growing interest in the Nigerian Market is due to high demand raised by the increase in urban population and change in shopping culture among the increasing population. These factors have resulted in the upspring of numerous shopping malls. The Nigerian property market remains attractive with numerous opportunities in the following sectors of the market; Retail Real Estate, Office blocks and Serviced Apartments (FHA, 2015). The city of Abuja is located in the country’s Federal Capital Territory (FCT) and is home to the Federal Government Executive, Legislative and Judiciary. As such all the other operations, both public and private, that are related to Federal Government activities are also present in the region.

According to the Federal Housing Authority (2015), approximately 7,343 establishments make up the real estate sector in Nigeria. Lagos State and the Federal Capital Territory (FCT), Abuja dominate, with 2,342 and 1,677 establishments respectively, making a combined total of over 50% (31.89% and 22.84% respectively) of all real estate establishments in

Nigeria. Proportionally, Abuja has a far greater number of establishments per capita, and a higher real estate value than Lagos. The third greatest number is Rivers State, with 422 establishments, at a much lesser 5.75% of the total. Both Borno and Jigawa states have the fewest Real Estate Establishments, with 7 each, representing less than 0.10% of the total, yet these are two of the states where property registration is easiest.

**Objective of the study:**

The objective of this study was to determine the role of anchoring on investment decision making in property market in Plateau State, Nigeria.

**Research Hypothesis:**

To achieve this objective, the study was guided by the following research Hypothesis:

**H0<sub>1</sub>:** Anchoring does not significantly influence investment decision making in property market in Plateau State, Nigeria.

## **2. REVIEW OF RELATED LITERATURE**

**Anchoring Bias and Investors' Decision Making:**

Anchoring bias is the tendency to rely too heavily, or anchor on a past reference or one piece of information when making a decision. Anchoring refers to individual's tendency to base their estimates and decisions on familiar positions, known as 'anchors', with an adjustment relative to the starting point, known as reference points. This fixation is called anchoring (Mangot, 2008). A reference point is the property price that investors compare to the current property price. The brain's choice of a reference point is important because it determines whether the investor feels the pleasure of obtaining a profit or the pain when experiencing loss (Benartzi & Thaler, 1995).

Pompian (2006) in a study on Behavioural Finance and Wealth Management in USA found that investors exhibiting anchoring bias are likely to be influenced by these anchors while answering key questions like 'Is this a good time to buy or sell the stock?' or 'is the stock fairly priced?' The concept of Anchoring can thus be explained by the tendency of investors to "anchor" their thoughts to a logically irrelevant reference point while making an investment decision.

Andersen (2010) shows the involvement of Anchoring in decision making of market participants by using an existing trading algorithm. The algorithm was applied to real market data of the Dow Jones Industrial average and CAC40 stock index to look for arbitrage possibilities. The model returned out-of-sample profit even while considering transaction costs on the CAC40 and thus provide evidence that Anchoring had a role to play in the weekly price fixing of the Dow and CAC40.

In a study on Anchor points, reference points, and counteroffers in negotiations, Kristensen and Gaerling (1997) used 377 responses to test the hypothesis that "in negotiations counter-offers are generated through an Anchoring-and-adjustment process leading to an effect of the anchor point. Those counteroffers are influenced by changes in reference point which in turn determine whether the anchor point is perceived as a gain or a loss." The negotiation process was simulated with the help of business administration undergraduate students. The results showed that the participants treated the proposed selling price as an anchor.

Parikh (2011) studied on anchoring in behavioural science in India using a sample size of 390. The findings were that, anchoring causes valuations to be biased towards an initial starting estimate. It was first shown in a real estate context by who describe that listing prices anchored pricing decisions of students as well as real estate agents. After more than a decade of research, demonstrations of anchoring by appraisers cover a broad spectrum of experimental settings. Further finding was that, even negotiators who are trained as deal makers and provided with rich and accessible information are anchored in the negotiation process.

Monti and Legrenzi (2009) studied on investment decision-making and anchoring Bias. The findings were that property prices of today are often determined merely by those of the past. Anchoring can lead investors to expect a property 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 usually form an opinion about an item and they become unwilling to change their mind-set despite that there is new information that has huge significance and may be contrary to what they presently believe. Investors also tend to become more optimistic when the market rises and more pessimistic when the market falls.

**Research Design:**

The study adopted a descriptive survey research design. This is a type of non-experimental research design for collecting and analyzing data in order to describe the problem in its current status. Descriptive surveys design was used in preliminary and exploratory studies to allow researchers gather information, summarize, present and interpret for the purpose of clarification (Orodho, 2004). This method is appropriate due to its capacity to establish how cognitive biases influence the decision making framework and behaviour of investors in reality and how it is consistent with the existing theories of finance.

**Target Population:**

The study population comprised of property investors who are investment traders at the property market in Plateau State and currently registered and licensed to operate. The focus was on registered office and rental residential properties in a sample of the seventeen Local Government headquarters of Plateau state. In this study, the target population comprised of a list of 1650 registered property agents which is the total number of registered property agents in the property market in Plateau state who have been licensed to operate in all the Local Government headquarters including the capital city of the state (Lands and Survey, 2015).

**Sampling Frame:**

The sampling frame was comprised of a list of 1650 property investors extracted from the official records of Ministry of Lands and Survey in Plateau State, Nigeria.

**Sampling Technique:**

The study employed Multi-stage sampling procedure in the selection of representative sample. Purposive sampling was used to select the capital city of the state and some selected towns among the seventeen Local Government headquarters.

To determine the sample size for small populations, the normal approximation to the hyper-geometric distribution was used due to its ability to estimate sample sizes from small populations accurately. The sample size formula for small (hyper-geometric) populations is shown as follows:

$$n = \frac{NZ^2pq}{\{E^2(N-1)+Z^2pq\}} \dots\dots\dots\text{Equation (1)}$$

Where; n= is the required sample size

N= is the population size (1650 individual investors)

Z= is the level of confidence of the sample size (set at 95%) thus Z=1.96

P and q are the population proportions (Each set to 0.5).

E sets the accuracy of the sample proportions (set to 0.05).

Therefore;

$$\frac{1650 \times 1.96^2 \times 0.5 \times 0.5}{\{0.05^2(1650-1) + 1.96^2 \times 0.5 \times 0.5\}}$$

n = 1584.66 ÷ 5.0829

The final sample size thus comprised of 312 respondents.

**Data Collection:**

Primary data was collected using a questionnaire where a standard questionnaire with both closed and open ended questions were administered to capture the important information about the population. The selected individuals were given the questionnaire to fill where those with any difficulties were guided by a research assistant who also assisted in disseminating and collecting the questionnaires. The questionnaire incorporated two sections with the first section enquiring respondent’s background information, while the second part consisted of the study objective. A 5-point Likert

scale was utilized asking the individual investors to indicate their opinions on the aspects of cognitive biases on their investment decision making. The 5 points in the scale was respectively range from 1 to 5: 1: Never, 2: Rarely, 3: Sometimes, 4: Often, 5: Always.

**Data Analysis and Presentation:**

The study employed both descriptive and inferential statistical techniques to allow presentation of data in a more meaningful way and thus simpler interpretation of data. Responses from open ended questions were coded, interpreted and their frequencies determined through cross-tabulation on differences between respondents and the central tendencies of respondents to each factor.

**3. RESULTS**

**Anchoring Bias:**

**The objective of the study:** To determine the role of anchoring on investment decision making in property market in Plateau State, Nigeria.

**Hypothesis of the study: H0<sub>1</sub>:** Anchoring does not significantly influence investment decision making in property market in Plateau State, Nigeria

The descriptive findings are presented in Table 1.

**Table 1: Anchoring Bias**

Statement	Never	Rarely	Sometimes	Often	Always	Mean	Std Dev
Property investors set the value of the property based on the recent selling price	3.6%	4.0%	9.8%	43.5%	39.1%	4.11	0.98
Property investors use property purchase price as a reference point in trading	2.5%	3.3%	6.5%	42.0%	45.7%	4.25	0.91
Property investors set the value of the property based on the recent buying price	4.3%	4.7%	6.9%	44.6%	39.5%	4.10	1.02
Investors use a reference point to compare to the current property price	4.0%	3.6%	5.8%	42.8%	43.8%	4.19	0.98
Investors attach their thoughts to a logically irrelevant reference point	2.5%	3.3%	9.8%	44.6%	39.9%	4.16	0.91
The highest price the investor has perceived also becomes a reference point	2.5%	4.0%	7.6%	39.9%	46.0%	4.23	0.94
Investors wait for the property price to reach a reference point before trading	5.8%	4.0%	8.3%	43.5%	38.4%	4.05	1.07
Trained negotiators and real estate brokers are anchored in the negotiation process	3.6%	4.3%	10.1%	39.1%	42.8%	4.13	1.01
Property prices of today are determined by those of the past	4.3%	3.3%	5.4%	46.4%	40.6%	4.16	0.98
Investors tend to become more optimistic when the market rises	5.1%	2.9%	6.2%	41.3%	44.6%	4.17	1.03
Investors tend to become more pessimistic when the market falls	4.3%	5.4%	5.4%	44.9%	39.9%	4.11	1.03

The study sought to find out from the respondents whether the property investors in Plateau State set the value of the property based on the recent selling price, the statement had a mean response of 4.11 and a standard deviation of 0.98. This was an indication that majority of the respondents agreed that property investors often and always set the value of the property based on the recent selling price. The study further sought to determine whether property investors used property purchase price as a reference point in trading, the statement also had a mean of 4.25 implying that majority of the respondents agreed with the statement. On whether, property investors set the value of the property based on the recent buying price, the results revealed that majority of the respondents agreed as shown by the mean of 4.10 and standard deviation of 1.02.

The study further sought to establish whether property investors used a reference point to compare to the current property price, the result showed that the statement had a mean response of 4.19 and standard deviation of 0.98 which also implied that majority of the respondents indicated always and often. The study asked the respondents whether property investors



in Plateau State attached their thoughts to a logically irrelevant reference point; the statement also had a mean of 4.16 which implied that majority of the respondents indicated that investors often and always attached their thoughts to a logically irrelevant reference point. Similarly, the results indicated that majority of the respondents indicated that the highest price the investor had perceived was used as a reference point.

The study also sought to establish whether investors wait for the property price to reach a reference point before trading, whether trained negotiators and real estate brokers were anchored in the negotiation process, whether property prices of today are determined by those of the past, investors tend to become more optimistic when the market rises, and finally whether investors tend to become more pessimistic when the market falls. The results revealed that all the above statements had a mean of above 4 which implied that property investors in Plateau State wait for the property price to reach a reference point before trading, trained negotiators and real estate brokers were anchored in the negotiation process, property prices of today were determined by those of the past, property investors become more optimistic when the market rises and finally investors tend to become more pessimistic when the market falls. These findings implied that property investors in Plateau State used anchoring bias in investment decision making. The findings of this study are consistent with those of Parikh (2011) and Ngoc (2013) who found that even negotiators who are trained as deal makers and provided with rich and accessible information are anchored in the negotiation process. Similarly, Kim and Nofsinger (2008) findings suggested that agents are heavily influenced by anchoring and adjusting.

### **Pearson Correlation Results:**

According to Kothari (2014), the correlation coefficient can range from -1 to +1, with -1 indicating a perfect negative correlation, +1 indicating a perfect positive correlation, and 0 indicating no correlation at all. A linearity test was conducted as evidenced by the Pearson correlation coefficient. Kothari (2014) further stated that the importance of correlation is to determine the extent to which changes in the value of an attribute is associated with changes in another attribute. To ascertain the association between cognitive biases and investment decision-making in property market in Plateau State, Nigeria, the study carried out a Pearson's correlation test.

### **Anchoring Bias and Investment Decision Making:**

The results of correlation analysis indicated that anchoring bias had a positive and significant correlation with investors investment decision making ( $r=0.682$ ,  $p=0.000$ ). The findings imply that increase in anchoring bias would result in increase in investors' investment decision making. The findings of this study are consistent with those of Parikh (2011) and Ngoc (2013) who found that even negotiators who are trained as deal makers and provided with rich and accessible information are anchored in the negotiation process. Similarly, Kim and Nofsinger (2008) findings suggested that agents are heavily influenced by anchoring and adjusting.

**Table 2: Anchoring Bias and Investment Decision Making**

		Anchoring Bias	Investment decision Making
Anchoring Bias	Pearson Correlation	1	.682**
	Sig. (2-tailed)		.000
	N	276	276
Investment Decision Making	Pearson Correlation	.682**	1
	Sig. (2-tailed)	.000	
	N	276	276

\*\* . Correlation is significant at the 0.01 level (2-tailed).

### **Regression Results:**

#### **Univariate Regression Result for anchoring Bias and Investors' Investment Decision Making:**

The objective of the study was to determine the role of anchoring bias on investors' investment decision making in property market in Plateau State, Nigeria. Under anchoring bias, the study sought to find out the effect of recent selling price, recent buying price and purchase price biases on investment decision in property market.

**Table 3: Model Summary for Anchoring Bias**

Model	1
R	.663a
R Square	0.439
Adjusted R Square	0.433
Std. Error of the Estimate	0.46587
F (Sig.)	71.077 (0.000)

The results indicated that the model had R-square of 0.439 which implied that recent selling price, recent buying price and purchase price anchoring biases jointly explained 43.9% of the variation in investment decision making. The F-statistic obtained was 71.077 with a p-value of 0.000 which further confirmed that there was a significant relationship between recent selling price, recent buying price and purchase price; anchoring biases and investment decision making.

**Overall Regression Result for anchoring Bias and Investors' Investment Decision Making:**

The results showed a relationship  $R = 0.682$ , indicating a strong positive association between anchoring bias and investors' investment decision making.  $R\text{-squared} = 0.466$  indicated that 46.6% of variation in the investors' investment decision making can be explained by anchoring bias while the remaining percentage of 53.4% is explained by other variables not in the model.

**Table 4: Model Summary for Anchoring Bias and Investment Decision Making**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.682 <sup>a</sup>	.466	.464	.45315

a. Predictors: (Constant), Anchoring Bias

F-test was carried out to test the null hypothesis that there is no significant impact of anchoring bias and investors' investment decision making in property market in Plateau State in Nigeria. The results of ANOVA test show that the F value is 238.852 with a significance of p value = 0.000 which is less than 0.05, meaning that null hypothesis is rejected and conclude that there is a relationship between anchoring bias and investors' investment decision making in property market in Plateau State in Nigeria.

**Table 5: ANOVA Result for Anchoring Bias and Investment Decision Making**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	49.048	1	49.048	238.852	.000 <sup>b</sup>
	Residual	56.265	274	.205		
	Total	105.313	275			

a. Dependent Variable: Investment Decision Making

b. Predictors: (Constant), Anchoring Bias

The results on the beta coefficient of the resulting model showed that the constant  $\alpha = 1.438$  was significantly different from 0, since the p-value = 0.000 was less than 0.05. The coefficient  $\beta = 0.64$  was also significantly different from 0 with a p-value = 0.000 which was less than 0.05. The results imply that a unit change in anchoring bias would result in 0.64 units change in investment decision making in property market in Plateau State in Nigeria. This further confirmed that there was a significant positive linear relationship between anchoring bias and investors' investment decision making in property market in Plateau State in Nigeria.

**Table 6: Coefficient for Anchoring Bias and Investment Decision Making**

	B	Std. Error	Beta	t	Sig.
(Constant)	1.438	0.174		8.261	0.000
Anchoring Bias	0.64	0.041	0.682	15.455	0.000

a Dependent Variable: Investment Decision Making

The findings of this study were consistent with those of Parikh (2011) and Ngoc (2013) who found that even negotiators who are trained as deal makers and provided with rich and accessible information are anchored in the negotiation process. Similarly, Kim and Nofsinger (2008) findings suggested that agents are heavily influenced by anchoring and adjusting.

#### **4. DISCUSSION OF RESULTS**

##### **Summary of Findings:**

The main objective of this study was to establish the influence of cognitive biases on investment decision-making in property market in Plateau State, Nigeria. The study specifically sought to determine the influence of anchoring bias on investment decision making in property market in Plateau State, Nigeria. The study used both quantitative and qualitative research approaches.

##### **Anchoring Bias and Investors' Investment Decision Making:**

The objective of the study was to determine the role of anchoring bias on investors' investment decision making in property market in Plateau State, Nigeria. The results of correlation analysis indicated that anchoring bias had a positive and significant correlation with investors' investment decision making. The regression analysis results further confirmed that there was a significant positive linear relationship between anchoring bias and investors' investment decision making in property market in Plateau State in Nigeria meaning that null hypothesis was rejected and concluded that anchoring bias played a significant role in investors' investment decision making in property market in Plateau State in Nigeria. In the multivariate regression model, anchoring bias was found to have a positive but significant relationship with investors' investment decision making in property market in Plateau State, Nigeria.

#### **5. CONCLUSION**

The study established that anchoring bias had a significant influence on investment decision making. The study therefore concluded that investors should establish the type of anchor that is likely to influence their investment decisions making. The study further concluded that investors in property markets must consult widely before making decisions in order to overcome the anchoring bias.

Although investors cannot avoid all biases, they can reduce their effects. This requires understanding one's cognitive biases, resisting the tendency to engage in such behaviours, and developing and following objective investment strategies and trading rules. Investors also need to invest for the long-term, identify their level of risk tolerance, determine an appropriate asset allocation strategy, and rebalance portfolios at least yearly. Because many experienced and seasoned investors have learned that success often comes from reining in emotions and overcoming their biases, they often avoid making the same mistakes as many new investors.

##### **Recommendations of the Study:**

Anchoring describes the tendency that people's evaluation on certain event is usually based on the initial value that has been given out. Therefore, this study recommends that property investors should adjust their predictions enough to reflect new information, and they should not be conservative to the initial reference point. Similarly, investors should be aggressive when they face new information, to avoid overestimating the influence of new information.

##### **Suggestions for Further Research:**

This study focused on establishing the influence of cognitive biases on investment decision-making in property market in Plateau State, Nigeria. The findings provide evidence that various cognitive biases influence investors' investment decision making in the property market. The variable was restricted to anchoring bias. The study could be extended in details to other behavioural biases that could have an impact on investors' investment decision.

#### **REFERENCES**

- [1] Agarwal, A.K. & Panwar, V. (2014). Impact of behavioural finance theories on individual investor's decision making. *Masters International Journal of Management Research and Development (MIJMRD)* 2 (92), 1.
- [2] Andersen, A. Jorgen, F. & Vitting, B. (2010). Detecting Anchoring in Financial Markets. *Journal of Behavioural Finance* 11(2): 129 – 133.



- [3] Aregbeyen, O., & Mbadiugha, S. O. (2011). Factors Influencing Investors Decisions in Shares of Quoted Companies in Nigeria. *The Social Science*, 6 (3): 205 – 212.
- [4] Banerjee, A. (1992). A simple model of Herd Behaviour. *Quarterly Journal of Economics*, 107, 797-817.
- [5] Bikhchandani, S., Sharma, S. (2001). Herd Behaviour in Financial Markets. IMF Staff Papers, *International Monetary Fund*, 47(3), 279–310.
- [6] Bikhchandani, S., Hirshleifer, D., Welch, I. (1992). A theory of fads, fashion, custom and cultural change as informational cascades. *Journal of Political Economy*, 100, 992–1026.
- [7] Binder, N. J. (2005). *The Ultimate Guide to Buying and Selling Coops and Condos*. New York City.
- [8] Birau F. R. (2012). *The impact of behavioural finance on stock markets*. University of Craiova, Faculty of Economics and Business Administration Craiova, Romania.
- [9] Brooks, M. (2008). *Behavioural Finance: Theories and Evidence*. Alistair Byrne, CFA University of Edinburgh.
- [10] Chira, I., Adams, M. & Thornton, B. (2008). Behavioural Bias within the Decision Making Process. *Journal of Business & Economics Research* 6(8): 11 – 20.
- [11] Cooper, D.R. & Schindler, P.S. (2008). *Business Research Methods (9th Ed.)*. New York, USA: The Irwin/McGraw-Hill Series.
- [12] Diaz and Hansz (2001). Risk aversion, Anchoring and Personality type. *Journal of Behavioral Finance*, 6 (4), 170–180.
- [13] Dhar, R. & Zhu, N. (2006). Up, close and personal: An individual level analysis of the disposition effect, *Management Science*, 52, 726–740.
- [14] Fagerström, S. (2008). *Behavioural Finance: The psychological impact and Overconfidence in financial markets*. Skövde: University of Skövde.
- [15] Fares, A. R. F. & Khamis, F. G. (2011). Individual Investors' Stock Trading Behaviour at Amman Stock Exchange. *International Journal of Economics and Finance*, 3(6), 128 – 134.
- [16] FHA (2015). Federal Housing Authority of Nigeria. *Annual Report*.
- [17] Federal Housing Authority (2015). Federal Ministry of Housing Development in Nigeria. *Annual Report*.
- [18] Gilovich T, Griffin DW, Kahneman D. (2002). *Heuristics and Biases: The Psychology of Intuitive Judgement*. Cambridge: Cambridge University Press.
- [19] Gitau, G. M. (2011). Effect and extent of behavioural factors and their influence on property decisions in Kenya. *Journal of entrepreneurship*, 2 (1) 3-5.
- [20] Henderson, T. (2012). Does prospect theory explain the disposition effect? *Journal of Behavioural Finance*, 3 (11), 4-7.
- [21] Javorcik, B. S. (2004). “Does Foreign Direct Investment increase the Productivity of Domestic Firms? In search of Spillovers through Backward Linkages, *American Economic review*, 94(3) 605-627.
- [22] Jensen, N. M., & Malesky, E. J. (2010). FDI incentives pay-politically. *Columbia FDI Perspectives*, No. 26.
- [23] Kafayaat, A. (2014). Interrelationship of biases: effect investment decisions ultimately. *Theoretical and Applied Economics*, 6 (595), 85-110.
- [24] Khim, T. B. (2008). Behavioural factors influencing real estate investment satisfaction and reinvestment intention in Penang, Malaysia. *Research report in Master of Business Administration, University Sains Malaysia*.
- [25] Kim, K., & Nofsinger, J. (2008). Behavioural finance in Asia. *Pacific-Basin Finance Journal*, 16(1-2), 1–7.
- [26] Kishore, R. (2004). Theory of behavioural finance and its application to property market: A change in paradigm, twelfth annual pacific rim real estate society conference, Auckland, *New Zealand*, 1-17.

- [27] Kothari, C. R. (2008). *Research methodology, research and techniques*. New Age International publishers. Second revised edition.
- [28] Laing, G. K. (2010). Impact of Cognitive Biases on Decision Making by Financial Planners: Sunk Cost, Framing and Problem Space. *International Journal of Economics and Finance*, 2 (1) 1-3.
- [29] Lands and Survey ( 2015). Plateau State Ministry of Lands and Survey, Jos. *Property Agents in Plateau State*.
- [30] Liu, Y., Wu, A. D., & Zumbo, B. D. (2010). The Impact of Outliers on Cronbach's Coefficient Alpha Estimate of Reliability: Ordinal/Rating Scale Item Responses. *Educational and Psychological Measurement*, 70 (1), 5–21.
- [31] MacMillan, J.H. & Schumacher, S. (2010). *Research in Education-Evidence based inquiry International Edition*. Boston: Pearson Education incl.
- [32] Magi, A. (2008). Disposition effect and mutual fund performance, *Applied Financial Economics*, 22:1, 1-19.
- [33] Mwangi, G. G. (2011). *Behavioural factors influencing investment decisions in Kenyan Property market*, Strathmore University, Kenya.
- [34] Nigerian Real Estate Sector, (2005). *Summary Report: 2010-2012*. National Bureau of Statistics.
- [35] Odusote, O. (2015). Stimulating Nigeria's Emerging Real Estate Markets: Investment Opportunities Through the Public Sector. *Massachusetts Institute of Technology*.
- [36] OECD. (2008). OECD Benchmark Definition of Foreign Direct Investment: Fourth Edition 2008. Paris: OECD.
- [37] Okumagba, A. (2012). Nigeria's Capital Market: Roadmap for Recovery (1). *Journal of Applied Business Research*, 2 (3), 44-48.
- [38] Pompian, Michael M. (2006). *Behavioural Finance and Wealth Management*. USA: John Wiley & Sons.
- [39] Payne, J. W., Bettman, J. R., & Johnson, E. J. (1993). *The adaptive decision maker*. New York: Cambridge University Press.
- [40] Rabin, M. & Weizsacker, G. (2008). *Narrow Bracketing and Dominated Choices*. London School of Economics, mimeo.
- [41] Rockenbach, B. (2004). The behavioural relevance of mental accounting for the pricing of financial options, *Journal of Economic Behaviour and Organization*, 53 (4), pp. 513–527.
- [42] Reyna, V. F., & Brainerd, C. J. (1991). Fuzzy-trace theory and framing effects in choice. *Journal of Behavioural Decision Making*, 4, 249–262.
- [43] Sairafi, K., Ståhl, T., & Selleby, K. (2008). *Behavioural Finance; the Student Perspective*. Jönköping International Business School, Jönköping University.
- [44] Shafi, M. (2004). Determinants influencing individual investor behaviour in property market: a cross country research survey. *Arabian Journal of Business and Management Review (Nigerian Chapter)* 2, (1).
- [45] Schulze, S. (2004). Views on the combination of quantitative and qualitative research approaches. *Progression*, 25(2), 8-20.
- [46] Shenton, A.K. (2004). The analysis of qualitative data in LIS research projects: a possible approach. *Education for Information*, 22, 143-162.
- [47] Tabassum, S. & Pardhasaradhi, S. (2012). An empirical analysis of factors influencing Indian individual equity investors' decision making and behaviour. *European Journal of Business and Management*, 4(18), 50-61.
- [48] Thaler, H. (2006). *Beyond greed and fear: Understanding behavioural finance and the psychology of investing*, New York: Oxford University Press.
- [49] Vijaya, E. (2014). Influential factors on investment behaviour of individual investors: a review of empirical evidences from various countries, *International Research Journal of Management and Commerce* 1, (5) 23-24.

- [50] Von Winterfeldt D, Edwards W. (1986). *Decision Analysis and Behavioural Research*. New York: Cambridge University Press.
- [51] Wang, (2005). Behaviour and performance of individual investors in the Shanghai Stock Exchange (SHSE). *Journal of Accounting and Economics*, 3 (1) 12-13.
- [52] Waruingi, K.V. (2011). A survey of behavioural factors influencing individual investors choices of securities at the Nairobi securities exchange; *Unpublished research project*, University of Nairobi.
- [53] Welman, J. C., Kruger, S. J., & Mitchell, B. (2008). *Research Methodology* (3 Ed.). Cape Town, South Africa; Oxford University Press.
- [54] Yosra, M. R. & Younes, B. (2013). Determinants of Institutional Investors' Behaviours: Evidence from Tunisian Stock Market. *IOSR Journal of Business and Management (IOSR-JBM)* e-ISSN: 2278-487X. 8, (2) 109-119.