Investors' Behavioral Biases and the Nigerian Stock Market Returns (2002 – 2012)

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Abstract

The paper was intended to find other reasons, based on investors' behavior that may impact on the performance of the Nigerian stock market. The objectives were in three-fold: to examine the extent of behavioral biases among stock market investors in Nigeria; to determine the level of returns in the period using the Nigerian Stock Exchange All share index; and to examine the effects of behavioral biases on stock market return in Nigeria. This study was motivated by the fundamental explanations given for the causes of the 2008 collapse of the Nigerian Stock Market. This paper adopted a primary data approach based on survey research design to investigate the effects of behavioral biases on stock market return in Nigeria. The paper also used secondary data from the Nigerian Stock Exchange and employed questionnaire as instrument and the technique of correlation with Pearson Product Moment Coefficient to analyze a survey of 110 randomly selected investors in Nigeria stock market. The study found strong evidence that behavioral biases existed but not very dominant in the Nigeria stock market because a weak negative relationship existed between behavioral biases and stock market returns in Nigeria. The paper concluded that being aware of behavioral biases in the Nigerian stock market was a crucial first step in ensuring that investment decisions were properly controlled to avoid any negative impacts on the individual investors and on the stock market; again, behavioral biases might be of relevant consideration in portfolio construction in order to moderate these biases.

Key words: Behavioral, Biases, Investors, Portfolios, Stock Market, Return, All Share Index.

Introduction

Following the recent Nigerian stock market meltdown, it has been observed that prices of quoted equities on the Nigerian Stock Exchange (NSE) do not necessarily respond to the fundamentals of the company or the economy. The Nigerian capital market witnessed an unprecedented decline since its historic evolution from 1960 to date. Its market capitalization for the period plunge from an all time high of ₦13.5 trillion in March 2008 to less than ₦4.6 trillion by the second week of January 2009. Besides, the All-Share Index, a measure of the magnitude and direction of general price movement, has also plummeted from about 66,000 basis points to less than 22,000 points in the same period (Mmadu, 2012; Peter, 2012; Ifionu & Omojefe, 2013). The stock prices have experienced a free-for-all downward movement regime with more than 60% of slightly above 300 quoted securities on constant offer (supply exceeding demand) on a continuous basis (Godwin, 2010). Consequently many of the quoted stocks lost their liquidity as their holders are not able to convert them to cash to meet their domestic and other investment needs.

Interestingly, many of these companies have remained strong and continued to post good results and pay dividends. Nigerian economy remains the destination for many foreign investors. Thus, according to the predictions of traditional finance theory, the fundamentals of equity investments in Nigeria remain positive and attractive. But, contrary to the traditional finance expectations, the Nigerian stock market returns in the period remains weak and negative. A number of reasons have been advanced to try and explain this stock market anomaly, including the seeming collapse of the world economy, withdrawal of many foreign investors from the Nigerian market, banks short-term orientation imposed on long-term capital market, regulatory inconsistencies and pronouncements, poor corporate governance, poor credit appraisal before lending, amongst others. The best of these reasons is not satisfactory, particularly given that a number of them have been addressed yet the stock market crisis remains unresolved (Oke, 2013). Thus, researchers are inclined to ask whether there are other non-fundamental or non-technical factors that may be responsible for the weakening stock market in Nigeria in the study period.

Decade ago, the efficient market hypothesis was widely accepted by academic financial economists; for example, in Fama's (1970) influential survey article, "Efficient Capital Markets", it was generally believed that securities markets were extremely efficient in reflecting information about individual stocks and about the stock market as a whole. The accepted view was that when information arises, the news spreads very quickly and is

incorporated into the prices of securities without delay. Thus, neither technical analysis, which is the study of past stock prices in an attempt to predict future prices, nor even fundamental analysis, which is the analysis of financial reports such as company earnings, asset values, etc., to help investors select "undervalued" stocks, would enable an investor to achieve returns greater than those that could be obtained by holding a randomly selected portfolio of individual stocks with comparable risk.

It is known that in the recent decade, some of the modern finance assumptions, including the efficient market hypothesis, has been debated and challenged in behavioral finance studies. Two of them are investors' rationality and stock market efficiency (Fama, 1998; Oke, 2013). The economic principle of rationality suggests that individuals are rational in obtaining information and they tend to seek information without any bias and integrate the information in forming an investment strategy that may yield better investment performance. On the contrary, some studies suggest that stock price is determined by mental factors rather than fundamental variables. The behavioral finance literature assumes that investors are subject to behavioral and cognitive biases and attempts to explain the way investors determine asset prices and returns based on those biases. It is well accepted that decision makers are often influenced by multiple psychological biases that distort their decision making and economic outcomes (Barber & Odean, 2001; Kahneman & Riepe, 1998).

This study intends to determine how behavioral biases of the Nigerian stock market investors have affected the stock market returns. The periodic changes in the Nigerian Stock Exchange All-Share-Index are used as the measure of realized returns. The use of traditional theories of finance to explain the prolonged stock market meltdown that commenced in 2008 did not fully consider the observed behavior of ordinary investors who lost their life savings in the Nigeria stock market and who do not understand the mathematical relationships inherent in traditional finance models such as the Capital Asset Pricing Model (CAPM). This study therefore seeks to address the shortcomings in these explanations by considering the behavioral dispositions of investors and their possible effects on share prices as captured by the performance of the NSE All-Share-Index.

This study attempts to address the general question of why prices of shares in the Nigerian Stock market do not always react to company results and other macroeconomic fundamentals as predicted by the Efficient Market Hypothesis (EMH) in the traditional finance theory. The specific questions are:
1. What is the extent of behavioral biases of the Nigerian stock market investors?
2. What is the level of returns in the Nigeria stock market?
3. Are there any significant relationships between investors' behavioral biases and stock market returns?
The study progresses from the proposition of no significant relationship between investors' behavioral biases and stock market returns.

This study is structured into four (4) sections. Following this introduction is section two (2), which is the review of related literature. Methodology employed for the study is discussed in section three (3). Results and discussions is related in section 4 of the paper.

Review of Related Literature
Empirical findings by researchers suggested that there were significant linkage between external shocks and stock return in the most countries reviewed (Osisanwo & Atanda, 2012). In an elaborate search for the macroeconomic variables that have effects on stock returns, Chen, Roll and Ross (1986) identified interest rate, expected rates of inflation, and the spread between high and low-grade bond as the relevant variables. Chen, Roll and Ross (1986) tested the multifactor model in the United States of America by employing seven macroeconomic variables. They found that consumption, oil prices and the market index are not priced by the financial market. However, industrial production, changes in risk premium and twists in the yield curve are found to be significant in explaining stock returns.

Claire and Thomas (1994) examined the effects of 18 macroeconomic factors on stock returns in the UK. They discovered oil price, retail price index, bank lending and corporate default risk being important risk factors for the United Kingdom stock returns. Ibrahim and Aziz (2003) investigated the relationship between stock prices and industrial production, money supply, consumer price index, and exchange rate in Malaysia. Stock prices are found to share positive-term relationships with industrial production and CPI. One the contrary, he found that stock prices have a negative association with money supply and (Ringgist) exchange rate.

Kandir (2008) investigated the role of macroeconomic factors in explaining Turkish stock returns. He employed macroeconomic factor model from the period of July 1997 to June 2005. The macroeconomic variables considered are growth rate of industrial production index, change in consumer price index, growth rate of narrowly defined money supply, change in exchange rate, interest rate, growth rate of international crude oil prices and return on the MSCI World Equity Index. He found that exchange rate, interest rate and world market return seem to affect all of the portfolio returns, while inflation rate is significant for only three of the twelve

portfolios. Also, industrial production, money supply and oil prices do not appear to have significant effect on stock returns in Turkey.

Kyereboah-Coleman & Agyire-Tettey (2008) examined how macroeconomic indicators affect the performance of Ghana stock market using quarterly time series data covering the period of 1991 to 2005. They discovered that lending rates from deposit money banks have an adverse effect on stock market performance and particularly serve as major hindrance to business growth in Ghana. Inflation rate was found to have a negative effect on stock market performance. Nevertheless, attempts have been made by Nigerian researchers to investigate the relationship been macroeconomic variables and stock prices. Soyode (1993) tested the association between stock prices and such macroeconomic variables as exchange rate, inflation and interest rate. He found that the macro economic variables are co-integrated with stock prices are consequently related to stock returns.

Amadi, Oneyema and Odubo (2000) used multiple regression analysis to estimate the functional relationship between money supply, inflation, interest rate, exchange rate and stock prices. There study revealed that the relationship between stock prices and the macroeconomic variables are consistent with theoretical postulation and empirical findings in some countries. Though, they found that the relationship between stock prices and inflation does not agree with some other works done outside Nigeria. Nwokoma (2002), attempted to establish a long-run relationship between the stock market and some of macroeconomic indicators. His result shows that only industrial production and level of interest rates, as represented by the 3-month commercial bank deposit rate have a long-run relationship with the stock market. He also found that the Nigeria market responds more to its past prices than changes in the macroeconomic variables in the short run.

Ologunde, Elumilade and Asaolu (2006) examined the relationships between stock market capitalization rate and interest rate. They found that prevailing interest rate exerts positive influence on stock market capitalization rate. They also found that government development stock rate exerts negative influence on stock market capitalization rate and prevailing interest rate exerts negative influence on government development stock rate. Maku and Atanda (2009) examined the long-run and short-run macroeconomic shocks effect on the Nigerian capital market between 1984 and 2007. They examined the properties of the time series variables using the Augmented Dickey-Fuller (ADF) test and Error Correction Model (ECM). The empirical analysis showed that the NSE All Share Index is more responsive to changes in exchange rate, inflation rate, money supply and real output. Therefore, all the incorporated variables that serve as proxies for external shock and other macroeconomic indicators have simultaneous significant impact on the Nigerian capital market both in the short and long-run.

Psychological research has established that men are more prone to overconfidence than women while theoretical models predict that overconfident investors trade excessively. Barber and Odean (2001) found that men trade 45 percent more than women and thereby reducing their returns and concluded that this is due to overconfidence. Feedback in the stock market is ambiguous and this is all the more reason to expect men to be more confident than women about their ability to make common stock investments. Gervais and Odean (2001) developed a model in which investor overconfidence results from self-serving attribution bias. Investors in this model infer their own abilities from their successes and failures. Due to their tendency to take too much credit for their successes, they become overconfident.

Nofsinger and Sias (1999) concluded that institutional investors having positive feedback trade more than individual investors and institutional herding impacts prices more than do individual investors. This could be because the institutional investors trade in high volumes more than individual investors'. While both men and women exhibit overconfidence, men are generally more overconfident than women (Lundeberg, Fox, & Puncochar, 1994). Gender differences in overconfidence are highly task dependent (Ibid).

Barber and Odean (2001) tested whether men are more overconfident than women by partitioning investors on gender. The authors used data from a nationwide brokerage house for the period 1991-1996 by focusing on common stock investments of households. The authors defined overconfidence as annual turnover and find that women turn their portfolios almost 53% while men turn 77% annually indicating that men trade 24% more than women annually. Findings of Barber and Odean (1999), Chen, Kim, Nofsinger and Rui (2007), Acker and Duck (2008), Graham, Harvey and Huang (2009), Grinblatt and Keloharju (2009), Hoffmann, Shefrin, and Pennings (2010) also support the view that men are more overconfident than women.

Graham, Harvey, and Huang (2009) find that wealthier and highly educated investors are more likely to perceive themselves as competent, implying overconfidence. On the other hand, Ekholm and Pasternack (2007) confirmed that investors with smaller portfolios are more overconfident compared to investors with larger portfolios as these investors are more experienced and wealthier. Madrian and Shea (2001) found that men prefer default plan to a lesser degree than women and default contribution rate declines significantly with

compensation. These findings imply that women may have higher degree of status quo bias than men and more sophisticated and experienced individuals have lower degree of status quo bias.

Babajide and Adetiloye (2012) stated that most investors in the Nigerian stock market are men. They opined that although finance and investing is often seen as a male dominated field, women also invest in the stock market, but most of the stock market activities are carried out by men. Men are inclined to feel more competent than women do in financial matters (Prince, 1993). According to Babajide and Adetiloye (2012), most investors in the Nigerian stock market are within the economically active age group of 25 – 50 years. They also concluded that the educational qualification of the stock market investors is very important in determining the investors' interest in the stock market and portfolio management.

According to this work, the marital status of the investors is important to determine the extent of their susceptibility to behavioral biases. There are probably as many Christians as there are Muslims in Lagos State, and the investors in the Nigerian stock market cuts across diversified groups including civil servants, professionals in the field of accounting, banking, finance, engineering, medicine and stock brokering, and other non-sophisticated investors, including market men and women (Babajide & Adetiloye, 2012).

Methodology

This study employs survey research design. The study uses cross-sectional exploratory survey designs to answer the research questions and to determine the relationship, if any, between investors' behavioural biases and stock market returns. This study is done based on investors in Nigerian Stock Market which is represented by the Nigerian Stock Exchange (NSE) whose head office is located at 2/4 Customs Street, off Marina, Lagos Island, Lagos. The reason the study is narrowed down to Lagos is to ensure efficient management of the research process and be able to get to the area of research interest which is the Nigerian Stock Exchange (NSE) at a reasonable cost.

This study covered the period from January 2002 to December, 2012 and included all the stock market investors in Nigeria but with particular interest and focus on Lagos state. The survey instrument used in data collection is a Likert-type scale questionnaire designed to collect relevant qualitative information from the respondents and generate associated quantitative data on the basis of coded response options. Copies of the questionnaires were distributed to the 110 investors. The respondents were randomly and anonymously selected. The choice of each investor was on a voluntary basis. The completed questionnaires were returned to the researcher by hand or by post which ever means the respondent found more convenient. The questionnaire sought to identify the susceptibility of Nigerian stock market investors to behavioral biases.

There were 20 items of the biases which the respondents were required to rate on a 5-point scale: Very High (coded 5), High (coded 4), Moderate (coded 3) Very low (coded 2), and Very low (coded 1). The coding enhances conversion of qualitative responses to measurable quantitative data because through it the several replies are reduced to a small number of classes which contain the critical information required for analysis. The questionnaire was developed by adapting the standard questions used by professional portfolio managers for testing behavioral biases of investors. These questions have been used in practice over the years in many developed and emerging markets to assess the behavioral disposition of stock market investors.

The instrument is a Behavioral Bias Questionnaire (BBQ) developed by the researcher for the purpose of this study. Statements relating to the variables of research interest were close-ended with exhaustive response options. The questionnaire contained two (2) sections: A and B. Section A had 20 questions each testing the extent to which investors are susceptible to biases in making investment decisions. Section B collected information on bio-data of respondents. The questionnaire was accompanied with a letter of introduction soliciting the response of respondents.

The study relied on secondary data to capture the stock market returns. The instrument for the secondary data derives from the Nigerian Stock Exchange All-Share-Index (NSE ASI), which is the index that tracks the performance of all the equity shares listed on the Nigerian stock exchange. A formal letter was written to the Nigerian Stock Exchange requesting for data on the ASI monthly figures for the study period, 2002 to 2012, with relevant explanations that the data would be used solely for the research purpose.

A total number of One hundred and ten (110) questionnaire copies were administered to the sample drawn from investors in the Nigerian stock market which was our study population. Research assistants were engaged, with adequate training to facilitate administration of the questionnaire. Copies of the questionnaire were distributed to the respondents with instructions on how to fill them out. Responses to survey statements were extracted from dully completed and returned copies of administered questionnaire and collated to enhance categorisation of the respondents based on their responses. The data derived through the process was presented and used to anchor descriptive and empirical analysis.

The behavioral biases were analyzed in relation to the performance of the Nigerian Stock Exchange All-Share-Index (NSE All-Share-Index) as a proxy for the stock market returns. These returns were determined from the period-to-period (monthly) changes in the ASI. These changes represented capital appreciation (or capital loss) to investors in the market during the measurement period. This monthly figures of the ASI is obtained from the Nigerian Stock Exchange which means that a total of 120 months were used for the ten years of the study. Only ordinary shares (equities) are included in the computation of the index. The index is value-weighted and computed daily in response to changes in the quoted prices of equities. The ASI tracks the general market movement of all listed securities on the Nigerian stock exchange, including those listed on the Emerging Market board, regardless of capitalization.

Results, Findings and Discussions

Data generated from responses through the survey process were presented, analyzed and interpreted according to the research questions in the study. The data were analyzed using descriptive statistics and multiple regression methods. Further, data on relevant variables were operationalized to test the research hypotheses for acceptance or rejection.

R. Q. 1 - Extent of Behavioral Biases in the Nigerian Stock Market

The research question 1 intended to reveal the extent to which Nigerian stock market investors are susceptible to behavioral biases. Simple statistical charts were employed to describe the extent of these biases in the Nigerian stock market as shown in figures 4.1 and 4.2 below. From the Table A on the question what is the extent of behavioral biases in the Nigerian stock market 50 (45.5%) respondents indicated a very high extent while 44 (41.1%) respondents said high extent. This result confirms that there are high to very high extent of behavioral biases in the Nigerian stock market.

Table A: The Extent of behavioral biases in the Nigerian stock market

	Extent	Frequency	Percent	Valid Percent
Valid	Very High	50	45.5	46.7
	High	44	40.0	41.1
	Moderate	3	2.7	2.8
	Low	8	7.3	7.5
	Very Low	2	1.8	1.7
	Total	107	97.3	100.0
Missing	System	3	2.7	
Total		110	100.0	

This is illustrated in the charts shown below;

Figure 1
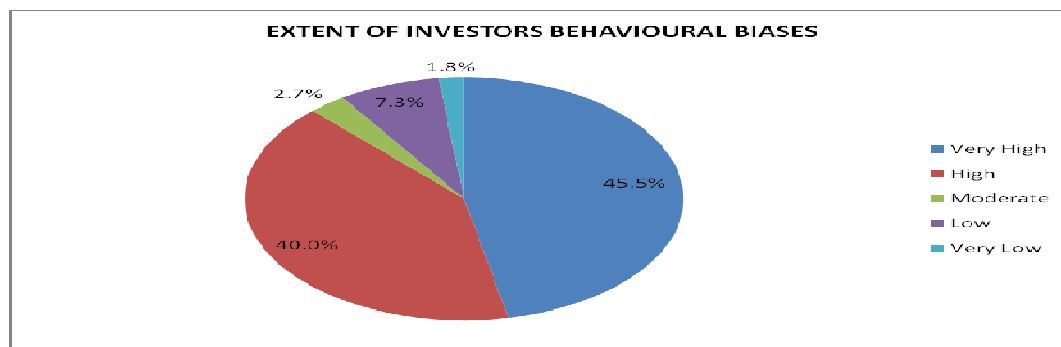
R. Q. 2 - The Level of Nigerian Stock Market Returns

The research question 2 seeks to determine the level of returns in the Nigerian stock exchange as represented by the NSE All Share Index. The study used eleven years data collected from the Nigerian Stock Exchange. Simple statistical tools like the mean, variance, and standard deviation were computed to describe the level of return in study period. The results are shown in Table B below:

Table B: Stock Market Return Returns and Risk for year 2002 - 2011

Year	Return (%) (EMVI-BMVI) ÷ BMVI	Mean Deviation(X-X")	Squared Mean Deviation(SMD)(X-X")2
2002	14	4.64	21.5
2003	51	44.64	1734
2004	5	-4.36	19
2005	4	-5.36	28.7
2006	40	30.64	938.8
2007	58	48.64	2,365.8
2008	-46	-55.36	3,064.7
2009	-45	-54.36	2955
2010	10	0.64	0.41
2011	-23	-32.36	1047.2
2012	35	25.64	657.4
	103		**12,832.51**

Table C: Summary of Stock Market Return Data

Mean Return (%)	Cum Return(%)	Annualized Return(%)	SD Return	VAR(at 5%) (%)
9.36	41.2	3.19	34.2	53.24

Table B and C indicate that for the period under study, the Nigerian stock market had a mean return of 9.36%, with a cumulative return of 41.2% from 2002 to 2012, and an annualized return of 3.19%. The Nigerian stock market return is associated with a standard deviation of 34.2% and Value-at-Risk VAR) of 53.2% (at 5%). While the standard deviation tells us the level (magnitude) of volatility in the Nigerian stock market during this period of study it may not state the direction of these movements in the market. The VAR, which is probability of losing the invested capital in the market during the period of study, helps to explain the magnitude and direction of the risk in the stock market in the period. This implies that there is a 5% chance that any portfolio

invested 100% in the Nigeria stock market will lose at least 53.24% in a year. In terms of currency unit, for every ₦100 invested in the market there is a 5% chance that it will lose ₦53.24 in a year.

R. Q. 3 – Relationship of Behavioral Biases and Stock Market Returns

This section of the study considers the research question 3 which examines the relationships between the investors' behavioral biases and Nigerian stock market return. The study used Pearson Product Moment Coefficient Correlation test to determine the direction and the significant levels of the relationships that exist between behavioral biases and stock market return, using the annual financial report as published.

The researcher was able to use statistical techniques of inference to test the hypotheses. This was primarily based on the software package SPSS 17. Statistical package for Social Sciences (SPSS) version 17 software is a comprehensive statistical tool for managing, analyzing and displaying information. Based on the distribution of the descriptive statistics for this study, a normal distribution was assumed and used to perform the inferential analysis. The table below depicts the findings of the foregoing.

Table D: Model Summary

Model Predictor	B	Beta	R	R^2	M^2	F Stat	Sig.
Behavioral Biases	-0.295	.807	.807	.651	4.385	64.030	.003

Dependent Variable – Stock Market Returns

The result obtained, shown in Table D above indicates that the model is significant at .003 level. The R^2 of the model shows .651 level of relevant. This means the model could itself could explain 65.1% of the total variance of the prediction. The table shows a correlation coefficient of -0.295, this implies that the more the investors display a high level of behavioral biases the lower the stock market returns. A high negative correlation between behavioral biases and stock market return, suggest a strong relationship. The directions of the relationship for both variables were positive. The Beta coefficient (*Beta* = .807) indicated a positive relationship between Investors Behavioral Biases and Stock Market Returns.

The hypothesis of the research was tested based on the response of the respondents who filled and returned the distributed questionnaires. The null hypothesis that state, there is no significant relationship between investors behavioral biases and stock market returns. Therefore, the null hypothesis which is there is no significant relationship between investors biases and stock market returns in Nigeria was rejected, while we accept our alternative hypothesis, that there is a significant relationship between behavioral biases and stock market returns in Nigeria. We conclude that investors' biases have a negative impact on stock market return in Nigeria. The result shows B = -0.295, n = 110, $p<$ .038, with low level of investors behavioral biases associated with negative low level of Nigerian stock market return.

Discussions

This paper used primary survey data combined with stock market All Share Index data and offered a detailed look at the extent of behavioral biases in the Nigerian security market, as well as the consequence of such biases on stock market performance. The paper has tested behavioral biases as identified by behavioral finance experts on stock market performance: the trading attitude of randomly selected investors in the market was tested, using descriptive and inferential statistics. The investors were selected across discipline and age strata reflecting a cross section of the market participant.

The study found strong evidence that behavioral biases exists in the Nigeria stock market to a very high extent. Although, it does not dominant the market because the result shows a low negative relationship, the resultant effect is that the market overreacts as investors exhibit behavioral biases; the stock market index would over appreciate or depreciate as a result prevailing biases exhibited by investors in the market. The result obtained is significant. This suggests that behavioral biases are exhibited by individuals from all sphere of life in their everyday trading activities in the market but most Nigerians do not trade directly on the market, they trade through their stockbrokers who are probably well trained to handle such behavioral biases.

Conclusions and Recommendations

The paper concludes that, being aware of behavioral biases is the crucial first step in ensuring that the decision making process is not adversely affected by them. Rational decisions are more likely when there is

sufficient information available to decision-makers and when that information is presented and analyzed to recognize common pitfalls. Investors should be aware of the potential impacts behavioral biases can have in their investment decision making process at all levels, either as individual or institutional investors trading on the floor of the stock market, and also investment managers, consultants and trustees. Market participants should enter the decision making process with the objective of using the information, education, and understanding at their disposal to derive a solution being dispassionate in decision making.

References

Acker, D. & Duck, N. G. (2008). Cross-cultural Overconfidence and Biased Self Attribution. *Journal of Socio Economics, 37*, 1815-1824.

Amadi, S. N., Onyema, J. I. & Odubo, T. D. (2000). Macro-economic Variables and Stock Prices: A Multivariate Analysis. *African Journal of Development Studies. 2*(1,2), 159-164.

Babajide, A. A. & Adetiloye, K. A. (2012). Investors' Behavioral Biases and the Security Market: An Empirical Study of the Nigerian Security Market. *Accounting and Finance Research, Sciedu Press, 1*(4)19 -229.

Barber, B. M. & Odean, T. (2001). Boys will be Boys: Gender, Overconfidence, and Common Stock Investment. *Quarterly Journal of Economics, 116*, 261–292.

Claire, A. D. & Thomas, S. H. (1994). Macroeconomic Factors, the APT and the UK Stock Market. *Journal of Business Finance and Accounting, 21*, 309-30.

Chen, G., Kim, K. A., Nofsinger, J. R. & Rui, O. M. (2007). Trading Performance, Disposition Effect, Overconfidence, Representativeness Bias, and Experience of Emerging Market Investors. *Journal of Behavioral Decision Making, 20*, 425-451.

Chen, N. F., Roll, R. & Ross, S. A. (1986). Economic Forces and the Macro Economy. *Journal of Finance, 6*, 529-554.

Ekholm, A. & Pasternack, D. (2007). Overconfidence and Investor Size. *European Financial Management, 14*(1), 82-98.

Fama, E. F. (1970). Efficient Capital Markets: A Review of Theory and Empirical Work. *Journal of Finance, 25*, 2, 383–417.

Fama, E. (1998). Market Efficiency, Long-Term Returns, and Behavioral Finance. *Journal of Financial Economics, 49*, 3, 283–306.

Gervais, S. & Odean, T. (2001). Learning to be Overconfident. *Review of Financial Studies, 14*, 1–27.

Godwin P. (2010). Why Hindsight can Damage Foresight, *The International Journal of Applied Forecasting*, 25, 5-7.

Hoffmann, A. O. I., Shefrin, H. & Pennings, J. M. E. (2010). Behavioral Portfolio Analysis of Individual Investors. *SSRN Working Paper*, No: 1629786.

Ibrahim, M. H. & Azeez, H. (2003). Macroeconomic Variables and the Malatsian Equity Market, Through Rolling Sub Samples. *Journal of Economic Studies, 30*: 6-27.

Ifionu, E. P. & Omojefe, G. O. (2013). The Capital Market and Performance of the Nigerian Economy: A Time Series Analysis. *West African Journal of Industrial and Academic Research Vol.8 No.1.*

Graham, J. R., Harvey, C. R. & Huang, H. (2009). Investor Competence, Trading Frequency and Home Bias. Management Science, 55(7), 1094-1106.

Grinblatt, M. & Keloharju, M. (2009). Sensation Seeking, Overconfidence and Trading Activity. *Journal of Finance, 64*(2), 549-578.

Kahneman, D. & Riepe, M. (1998). Aspects of Investor Psychology. *Journal of Portfolio Management, 24*(4), 52–65.

Kandir, S. Y. (2008). Macroeconomic Variables, Firm Characteristics and Stock Returns: Evidence from Turkey. *International Research Journal of Finance & Economics*; Issue 16, p35

Kyereboah-Coleman, A. & Agyire-Tettey, K. F. (2008). Impact of Macroeconomic Indicators on Stock Market Performance: The Case of the Ghana Stock Exchange. *Journal of Risk Finance*, Vol. 9 Iss: 4, pp.365 -378

Lundeberg, M. A., Fox, P. W. & Puncochar, J. (1994). Highly Confident but Wrong: Gender Differences and Similarities in Confidence Judgments. *Journal of Educational Psychology, 86,* 114–121.

Madrian, B. C. & Shea, D. F. (2001). The Power of Inertia in 401(k) Participation and Savings Behavior. *Quarterly Journal of Economics, 116*(4), 1149-1187.

Maku, O. E. & Atanda, A. A. (2009). Does Macroeconomic Indicators Exert shock on the Nigerian Capital Market? Retrieved from http://mpra.ub.uni-muenchen.de/17917/

Mmadu, R. A. O. (2012). Workability and Effectiveness of Assets Management Corporation of Nigeria Act 2010: Intervention in the Nigeria Banking Sector Crisis. *International Journal of Advanced Legal Studies and Governance*, Vol. 3, No. 3.

Nofsinger, J. & Sias, R. (1999). Herding and Feedback Trading by Institutional and Individual Investors. *Journal of Finance, 54*, 2263–2295.

Nwokoma, N. I. (2002). Stock Market Performance and Macroeconomic Indicators Nexus in Nigerian: An Empirical Investigation. *Nigerian Journal of Economic and Social Studies, 44*(2), 145 -150.

Oke, M. A. (2013). Appraisal of Change in Investors' Behavior During and After the Speculative Bubbles and Crashes of the Nigerian Capital Market, *J. of Business and Organizational Development, Vol.5, No.1, Pp. 1-25.*

Ologunde, A. O., Elumilade, D. O. & Asaolu, T. O. (2006). Stock Market Capitalization and Interest Rate in Nigeria: A Time Series Analysis. *International Research Journal of Finance and Economics*, Issue 4(7), 1259 -1270.

Osisanwo, B. G. & Atanda, A. A. (2012). Determinants of Stock Market Returns in Nigeria: A Time Series Analysis. *African Journal of Scientific Research Vol. 9, No. 1*

Peter, N. (2012). Global Financial Crisis: Relationship between the Mortgage Loan Rates and Dow Jones Industrial Average Stock Index and the Implication for the Nigerian Capital Market. *European Scientific Journal,* May edition vol. 8, No.9

Soyode, A. (1993). Nigerian Capital Market and Macroeconomic Variable: An Empirical Analysis. *Nigerian Journal Monetary Economics*, 8, (79-102).

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