EQUITY RETURN AND CONSUMPTION IN NIGERIA (1999-2014)

Aderounmu Busayo Olubunmi
Obafemi Awolowo University,
Ile-Ife, Nigeria
bjoy4real@gmail.com

Professor P. A. Olomola
Department of Economics,
Obafemi Awolowo University,
Ile-Ife, Nigeria
polomola@oauife.edu.ng

Professor S. I. Oladeji
Department of Economics,
Obafemi Awolowo University,
Ile-Ife, Nigeria

CITATION: Olubunmi, A., B., Olomola, P., A., Oladeji, S., I. (2018) Equity Return and Consumption in Nigeria (1999-2014). *International Journal of Economics and Finance*. Vol. 7 (1) pp 1 – 25.

ABSTRACT

This study examined the trend and pattern of equity return and private consumption in Nigeria between 1999 and 2014. The trend analysis of equity return and consumption showed that there was considerable fluctuation in equity return throughout the study period and which was as a result of trading activities in the stock market. The behaviour of asset prices affected equity and that the fluctuation in the market was attributed to a lot of factors like waning confidence of investors and impact of the global financial crises and economic meltdown, liberalisation of the market. The fluctuation of the growth rate of private consumption was also affected by the economic situation and global economic and financial crises in 2008, oil shock and various government policies put in place to encourage savings. Also, an increase in equity return will increase consumption while a decrease in equity return had little effect on consumption and the effects were not significant.

Keywords: Equity return, Consumption, Stock Market

1. INTRODUCTION

Understanding the empirical linkage between macroeconomic variables and financial markets has been the goal of financial economists because the impacts of financial markets on consumption affect the economy as a whole. Financial market can be defined as a range of markets for exchange of financial assets (such as shares, bonds, money and other commercial papers). The financial market is divided into money and capital markets (Nafooti et al., 2013). The money market is a market where the supply and demand for money interact with equilibrium representing its clearance i.e. a market for the short term funds. The capital market is an arrangement where people willing to invest their surplus funds interact directly or through financial intermediaries with those who wish to borrow funds for their investment. It is where financial assets such as shares, bonds are raised and traded (Audu and Apere, 2013). The capital market can be grouped into bond market, mortgage debt market and stock market (Nafooti et al., 2013). Nwangwu (2013) however posits that the major engine of a nation's economic growth and development is the stock market.

An overview of the Nigerian stock exchange equity market capitalization during the global financial crises in 2008 showed that there was 35% decrease in market capitalization during the year (SEC, 2008). The market capitalization fell from 13.88 trillion in February, 2008 to about 7.89 trillion by the beginning of November, 2010 (SEC, 2010). The capitalization of listed equities grew by 47.33% from N8.98 trillion in the last quarter of 2012 to N13.23 trillion last quarter of 2013 (NSE, Annual Report 2014).

The bullish run in the capital market that began in the second half of 2012 continued with greater impetus during the first quarter of 2013, and was sustained through most of the year except in the third quarter. Total market capitalization in 2013 rose from N14.80 trillion to N19.08 trillion leading to 28.92% increase by the last trading day of the year (NSE, 2013) while the equities market capitalization of the year ended at N13.23 trillion. The total equity market capitalization increased at the end of 2014 second quarter by 7.24%. By the end of second quarter in 2014 equity market capitalization was N14.03 trillion (NSE, Annual Report 2014). This surpassed that of the fourth quarter in 2008 which was 6.96 trillion by 101.58%, a significant milestone in the Nigerian capital market recovery from the 2008 economic financial meltdown. This made the Nigerian Stock Market to be rated as the worst performing in the world for the month of January 2009 (SEC, 2014).

The performance of the capital market especially the Nigerian Stock Market was low in 2009 due to the global financial and economic crisis with the exorbitant lending rate mounting pressure on the stock market as a result of massive borrowed fund in the market. Lending rate which was formerly 15.48% in 2008 rose to 18.36% by 2009 resulting to an increase of 2.88% in the lending rate (WDI, 2014). The rush by stock investors to liquidate their investment and the fall in share price (Adedokun, 2013) and the high public offers and private placements (Yahaya et al., 2011) caused Nigerian Stock Market to crash. These had prevented a good number of prospective investors and participants from being active players on the Nigerian Stock Market (Audu and Apere, 2013).

The origin of the global financial crisis in 2007, which became evident in the global world towards the middle of 2008, can be traced to United States of America and United Kingdom when there was standstill in the global financial market. This led to the fall of stock market worldwide, collapse of financial institutions and governments in even the wealthiest nations have to come up with rescue packages to bailout their financial systems. Consequently, Nigerians got to realize that the country has begun to take its share of the global financial crisis when the Nigerian Stock Exchange started to record unprecedented losses in the value of shares of companies listed on the market.

This development points to an important issue in the literature that financial market may influence household decision making on consumption and investment due to the fact that they are the key channels through which asset prices affect the real economy. The channel through which the financial market influences consumption and investment is called ‘‘wealth effect’’ which implies that individuals have the notion that their investment portfolio are valued more when security prices increases and therefore increase their consumption spending. Thus, returns from stock market affect investors’ wealth which directly and subsequently affects their spending. However, investors are not the only ones that make use of information on the behaviour of asset prices in the world, individual also make use of this information for their daily life. The belief an individual holds about the risks and returns associated with different forms of savings influences their choice between saving in form of cash and bank deposits or stocks. Understanding the effect of the rate of return from any investment is thus important to consumption analysis. Therefore, knowing the interdependence between risk and return is a crucial issue in financial economic research (Grobys, 2014).

2. LITERATURE REVIEW

Life Cycle Hypothesis

Life cycle hypothesis of Modigliani and Brumberg (1955) is based on the assumption that a typical individual has income stream which is low at the beginning of his life and at the end of his life span when his productivity is also low but has higher income during the middle of his life span. Individuals choose a lifetime pattern of consumption that maximizes their lifetime utility subject to their lifetime budget constraint. The individual might be expected to maintain more or less constant level of consumption that is, consumption at period ‘t’ is a function of the present value of income stream. This implies that as income increases, consumption increases. In life cycle hypothesis, consumer decision does not depend on the current real income alone but also on the weighted average of expected future income and the wealth. Planned consumption is a function of human and non-human wealth. It suggests that consumers accumulate assets during working life in order to have enough to spend during retirement. Saving and borrowing are thus used to smooth consumption over the life time.

Some of the important contributions of the life cycle approach include: the incorporation of agency into consumption theory thereby introducing utility maximization. This treatment reconciles macroeconomic consumption theory with microeconomic choice theory. Secondly, life cycle consumption theory includes lifetime income expectations in the budget constraint. Likewise, the constrained utility maximization framework introduces credit markets and borrowing and lending. Also, the effects of interest rates and time preference are introduced into consumption model and finally, life cycle theory incorporates a sociological dimension (e.g. age), explicitly recognizing that consumption expenditures may vary by stage of life.

The main differences between Permanent Income Hypothesis and Life Cycle Hypothesis are that Life Cycle Hypothesis recognises that the finite life of households could focus on those systematic variations in income and in needs which occur over the life cycle and they are able to incorporate all forms of donations (Emilio, 2004). Life cycle theory also emphasizes natural variations in earnings over a finite lifetime while permanent income emphasizes general variations in income over an indefinite time. However, Life Cycle Hypothesis as well as

Permanent Income Hypothesis are two theories of consumption that are easier to reconcile with microeconomic foundation of consumer choice.

However, the shortcomings of life cycle rest on the unrealistic assumption that individuals possess a definite vision about consumption plan and knowledge about future family size and life expectancy of each family member. The assumption of life cycle hypothesis is that individual knows exactly at what age he will die. Net savings is assumed to be zero as a result of the fact that savings done during years of working is being expended during the retirement age. It also fails to realise the importance of liquidity constraints in determining the consumption response to income. The difficulty of measuring wealth makes it difficult to perform a reliable test of the life cycle model.

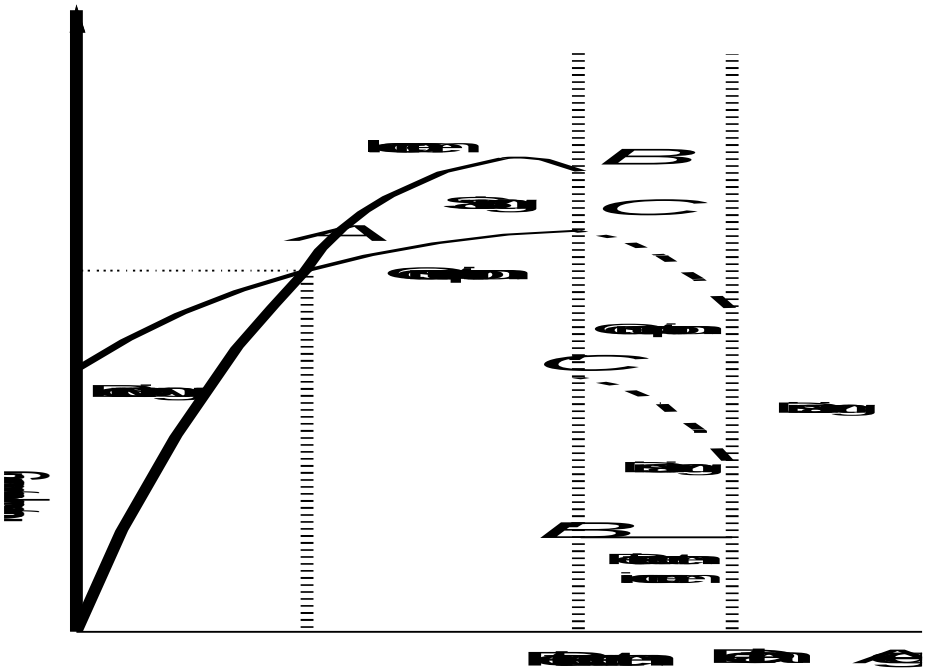


Figure 1: Income, Consumption and Savings curves

Source: Adapted from Agénor (2007, p.15)

The graphical illustration of life cycle model is depicted in Figure 1. This figure can be divided into three segments. The first segment covers the period between the origin on the horizontal axis (the period an individual was born) and point A (dependency age period where the individual is not working). During this period individual income is increasing but below consumption level. This is the early stage of the life of an individual before he started earning income. He financed his excess consumption over income by borrowing from others. The second stage is the working years of an individual. It is the stage between the years an individual is not working and the retirement age. At this stage, individual saves substantial part of his or her earnings to meet up with future expenses before and during his retirement age when his income is less than consumption. He builds assets or wealth with the savings. An

individual, however, dissaves at the third stage which is between retirement and death age. Accumulated wealth from the working years is used to meet dissavings in this period bearing in mind that there is no intention to leave any wealth for his children.

Risk and Return

In any investment undertaken, the major aim of the investor is to minimise risk and maximize return. This however led to the brief examination of risk and return concept.

Conceptual Clarification

Risk: Risk can be defined as the property of a set of random outcomes which is disliked by risk averters (a person with concave utility function) (Cummins, 1990). Risk is measured by the variability in returns and investors attempt to reduce that variability through the diversification of their investments. It is a measure of probability that something adverse will happen in the future (SEC, 2010). It is the probability of expected return not being realised (Nwude, 2012)

Return: This is the rate at which an investment generates cash flows above the purchase cost of the investment. It is a percentage measure of investment gain or loss relative to the amount invested. The change in price of the investment asset over the holding period can either be positive or negative (capital gain/loss). It is the difference between the beginning (purchase) price and the ending (sales) price at which the asset can be sold (Nwude, 2012). The total return from an investment is the sum of income and changes in price and this can be zero at any point in time for a given security.

The diagram below (Fig 2) describes the relationship between expected return and asset portfolio risk. The vertical axis shows the expected return represented by E(R) while the horizontal axis shows the portfolio risk represented by σ(R). The combinations of expected return and portfolio risk for risky asset that minimizes variance return at different levels of expectation is represented by curve abc in the diagram above. An investor who is expecting a high return on his portfolio is likely to be on point “a” while those with intermediate expected return with lower volatility will be at point T and in a situation where there is no borrowing and lending at risk free rate, only portfolios above point b along curve abc are mean-variance efficient. Investing all funds in risk free security makes the investor to be on point R_f. Adding risk-free borrowing and lending turns the efficient set into a straight line.

Since, an important concept in investment theory is the relationship between risk and return which drives the theoretical foundation, different market models and techniques are being used for taking suitable investment decisions. The urge by investors in estimating the existing risk behind their investments and return drives the theoretical foundation of many investment models. As a result of this, investors and financial analysts have taken up the task to calculate the risk existing behind their investments and thus have used different asset pricing models/theories for their calculation (Adedokun and Olakojo, 2012; Agarwal and Mangla, 2014).

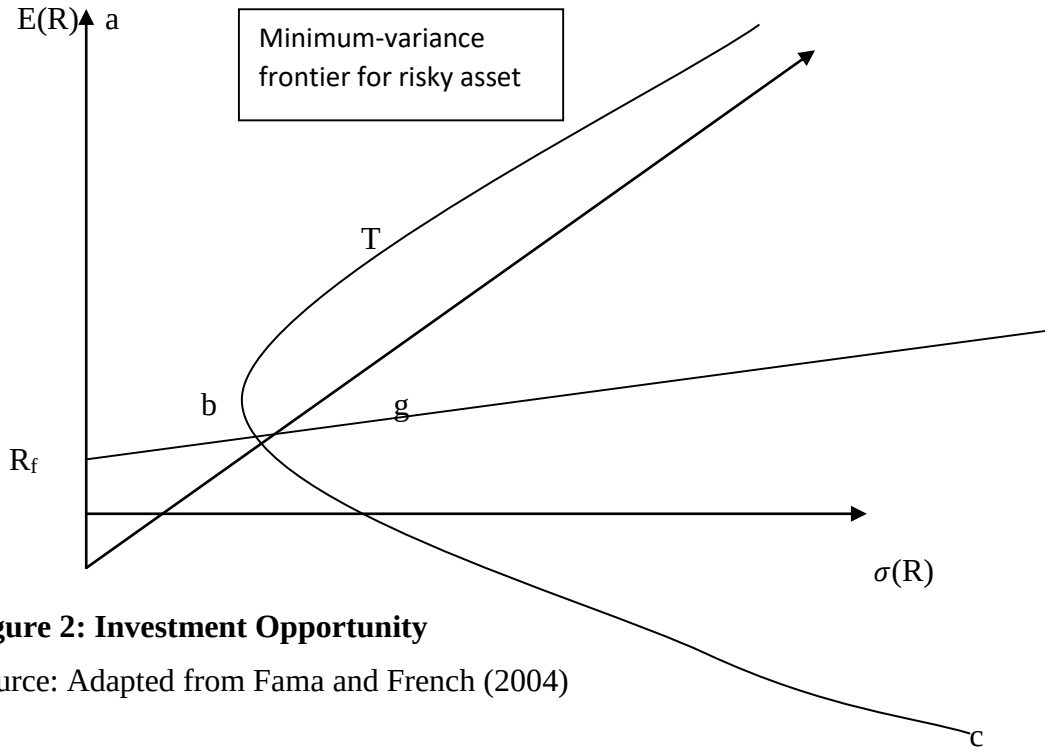


Figure 2: Investment Opportunity

Source: Adapted from Fama and French (2004)

Empirical studies on Consumption/Private Consumption and Investment in Risky Assets (Stock market)

Raut and Virmani (1990) examined the determinants of consumption and savings behaviour in twenty three developing countries with coherent available data of interest between 1970 and 1982. They observed that changes in interest rate, tax rate, money supply, government expenditure affected permanent income and subsequently consumption and savings when the changes were unexpected. In their analysis, Hall's random-walk hypothesis was rejected under fixed interest rate but accepted with flexible interest rate. This prompted the examination of the validity of Ricardian hypothesis using the same data set and they found that the evidence did not support the hypothesis for developing countries.

Ungerer (2003) investigated the relationship of the stock market and consumer spending in U.S. stock market between October, 1990 and April, 2002. In order to determine the effect of the stock market on consumer spending, she used Ordinary Least Square regression analysis. Her study established a positive relationship between consumer spending and the level of the stock market. However, her result showed that the magnitude of this relationship and the significance of the market on consumer spending differed from previous studies due to the choice of variables (measurement of variables).

Lettau and Ludvigson (2001), using U.S stock market quarterly data, studied the role of fluctuations in the aggregate consumption–wealth ratio for predicting stock returns. They found that fluctuations in the consumption–wealth ratio were strong predictors of both real stock returns and excess returns over a Treasury bill rate. They showed that these deviations from trend primarily forecast future movements in asset wealth, rather than future movements in consumption or labour income. Deviations in the shared trend among consumption, asset wealth, and labour income pick up fluctuations in the aggregate consumption–wealth ratio.

Ohiomu (2011) examined the influence of stock market fluctuations on consumer behaviour and the economy by focusing on wealth effects and consumption in Nigeria. After

reviewing the relevant theoretical framework and available empirical evidence, consumption functions were estimated for Nigeria including the influence of financial wealth. The resulting estimates of the marginal propensity to consume out of financial wealth were estimated, allowing for differences in stock market capitalization, and compared with ones obtained more directly from consumption functions that included stock market prices as an explanatory variable. The overall effects were found to be significant.

Kazmi (2015) examined the determinants of real private consumption in Pakistan between 1971 and 2012 using Autoregressive distributed lag model (ARDL). Real private consumption was significantly affected by income, and wealth which was proxied with quasi money, interest rate and unemployment rate in the long run while in short run income had negative impact on consumption.

Oduh, Oduh and Ekeocha (2012) examined the effects of consumer confidence on consumption in six geopolitical zones in Nigeria between 2009 and 2011 using panel fixed effect with generalised least square. They decomposed the data into monthly data and the result showed that savings did not influence planned spending alone but jointly with other determining factors that influenced household spending like current and expected income, prices of food and durables, nominal exchange rate, and deposit rate. A change in consumer confidence that induced changes in consumer expenditure caused aggregate expenditure to change. Their result also showed that consumers were more concerned with movements in the price of food items than durables, and the effect of income on planned expenditure deteriorated as they moved towards the long run. The impact of expected depreciation of Naira on the general price level also decreased planned spending. Consumers often prefer to reduce their consumption than increase consumption based on long period income uncertainties. Thus, short run marginal propensity to consumer is substantially larger than long run marginal propensity to consume.

Also, Davis (2010) investigated the effect of asset price on real non-residential fixed investment and a survey on consumption in 23 OECD countries using annual data from 1970 to 2008. He carried out his analysis using the total of 23 OECD countries, G7 and smaller OECD countries. He found, using unbalanced panel, that the main significant effects arising from asset prices came from the financial accelerator, credit channel and Tobin's Q in G7 countries and in the smaller OECD countries uncertainty; which was proxied by asset price volatility. The overall result showed that Q remains worthy of monitoring by policy makers and equity prices are more important determinants of investment.

3. METHODOLOGY

Descriptive analysis was carried out to examine equity return and consumption in Nigeria.

4. RESULTS OF EQUITY RETURN AND CONSUMPTION

Trend analysis of equity return in Nigeria

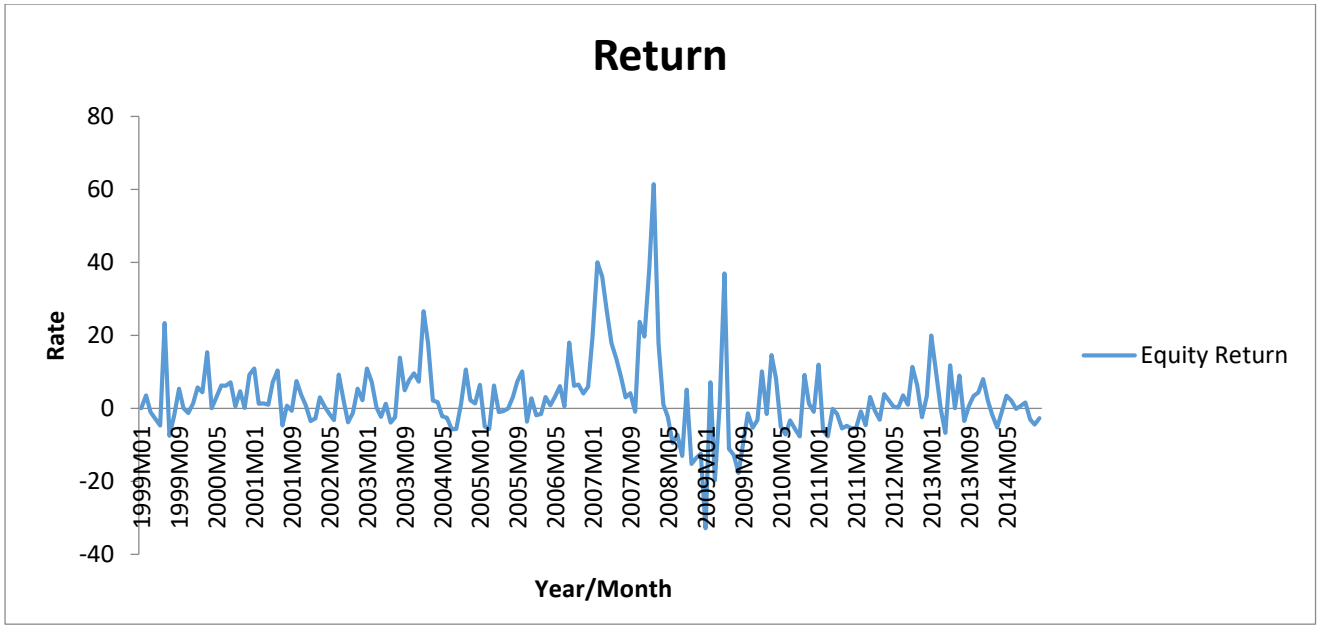
Equity return is the difference between closing and opening price of an asset (after adjusting for dividend) per period divided by the opening price of the asset. Equity return is very important and germane to both the individual and investors because investment is done generally for the purpose of getting a profitable return in exchange. However, people (investors) still behave and respond differently to investment yield which result in their different investment pattern. Higher rate of return often serve as a magnetiser to both local and foreign investors. This is because nobody will want to partake in any investment that has no

tendency of yielding return and investors always expect a higher return on investment done on more risky security or stock. Individual thus are concerned about the return expected from choosing to differ their present consumption to future date.

Figure 3 below showed the trend of equity return from 1999 to 2014. The figure showed a considerable swing throughout the years but this was more prominent between 2007 and 2009. Equity return of the Nigerian stock exchange market was highest in June 1999 with 12.46% return, January, August and December 2000 with 9.24%, 6.71% and 13.21% respectively. In Jan 2001, return was 8.42% and 7.95% by October of the same year. Jan 2004 with 12.84% return, August 2006 with 18.71% return, January 2007 with 10.83% return , early 2008 with 21.15% return which now fell sharply and became negative till mid of 2009. The most obvious highest return was seen in August 2006 with a return of about 18.71% and from January to May 2007. During this period, returns were doubled and earned by so many investors which created very high market awareness in 2007.

However, from 2009 to 2014, there were fluctuations in equity return. These changes overtime influences the investment position and confidence of individual investors. This indicated that there was higher return on equity prior to the financial crises period although there was swing in the behaviour of prices in the market, the high return motivated individual investors to invest in the market. Higher return attached to investment in equity is a result of lack of domestic participation or investment of individuals in the capital market. This return is therefore meant to motivate individual to be active savers preferring to differ current consumption to future date.

A summary of the graphical trend of equity return showed that the diagram can be segmented into three different sections. The first section comprises of period between 1999 and 2006. During this period, there was considerable swing in the trend of equity return in the country. This can be associated with the deregulation of the capital market in 1993 led to the openness of the Nigeria stock market to foreign investors which increases foreign participation in the locals market. However, the market is vulnerable to fluctuations in the world market as a result of the global integration of the markets. In the second segment between 2006 and 2007 there was an increase in return which can be attributed to the liberalisation of Nigeria capital market and the 2005-2006 banking reforms that led to the consolidation of the banks increased the awareness of the public in capital market investment. In order to motivate people to invest in the market, the return increases. The significant performance in the market prior the global economic crises can be attributed to liberalisation, the consolidation of banks etc. which attracted a lot of investors (local and foreign) to invest in the market (despite the fact that investors always avoid risky investment). However, the economic and financial crises in 2008 led to a drastic change in the return which caused the crash in the financial market. The last stage between 2009 and 2014 showed that the resultant effect of economic crises led to the initial increase in the rate of return in order to motivate investors to invest. This implies that the susceptibility of equity returns to fluctuations influences the value of asset and the general transaction in the stock exchange market. This calls for the examination of some activities in the Nigerian stock exchange market.



Source: Author's computation (2016)

Figure 3: Trend Analysis of Equity return in Nigerian Stock Exchange Market

Trend Analysis of some trading activities in Nigerian Stock Exchange Market –Market Capitalisation

The success or failure of an economy is based on the capacity of the financial system which depend on the structure of the capital market of such economy in which the Nigerian Stock exchange occupy a central position (Ikechukwu, 2013). The market witnessed a greater performance between 2003and 2007 before the decline and swing experienced between 2008 and 2014. The significant performance in the market prior the global economic crises can be attributed to the deregulation of capital market and consolidation of banks which attracted a lot of investors (local and foreign) to invest in the market (despite the fact that investors always avoid risky investment). Liberalization by the government also paved way for foreign investors. The Nigerian stock exchange market was however rated one of the world's fastest growing stock exchange with a growth rate of about 82.2 % in 2007. This boasted the confidence of investors and market capitalisation increased. The rise in market capitalization resulted mainly from new listings of equities and state government bonds coupled with price appreciation by equities.

The graphical illustration of market capitalisation in Nigeria stock exchange market is depicted below in figure 4. Market capitalisation was on the increase until 2005 when the fluctuation started in the market and the fluctuation experienced still continues till date. Market capitalisation trend increased steadily until in 2007 with a slight fluctuation during some months before the drastic fall in 2008. In 1999, market capitalisation increased from N247.6 billion in January to N294.1 billion in December, an 18.78% increase. The stock market capitalisation was on the until July 2004 when it drop by 7.1% to N1,919.3 billion only to recovered from it exactly a year after the fall. In July 2005, the market capitalisation was N1,951.3 billion and it maintained a continuous increase till February 2008 to N12,503.2 billion. There was unprecedented increase in the growth of market capitalisation by 104% as at December 2007 which occurred before the drastic fall in 2008.

By the end of the year 2008, market capitalisation had fallen by 34.93% to N6,957.5 billion. This decline experienced resulted from equity price losses during the period and the delisting of 46 securities. Many investors saw equity prices dropping off rapidly with billions of naira being wiped off the value of companies listed on the Nigerian Stock Exchange (NSE) resulting in major losses. There was fluctuation in the market capitalisation in 2009 as the market capitalisation increased in May by 38.42% but this was not sustained throughout the year as it latter drop by 0.17% N4,989.4 billion in December. The market capitalisation however increased by 9.06% N5,441.6 billion in January 2010 and by December it became N7,913.8 billion. The rise reflected increases in the prices of equities. There was 10.49% N8,744.2 increase by January 2011 but declined to 6532.6 in December. This shows about 25.29% decrease again in the year. However, there continued to be increase in the market capitalisation from 2011 to June 2014. Market capitalisation decreases by 0.91% in July 2014 and this decline continued to the end of the year which make market capitalisation to be N11,477.7 as at the end of the year (11.75% decrease in the year).

Source: Author's computation (2017)

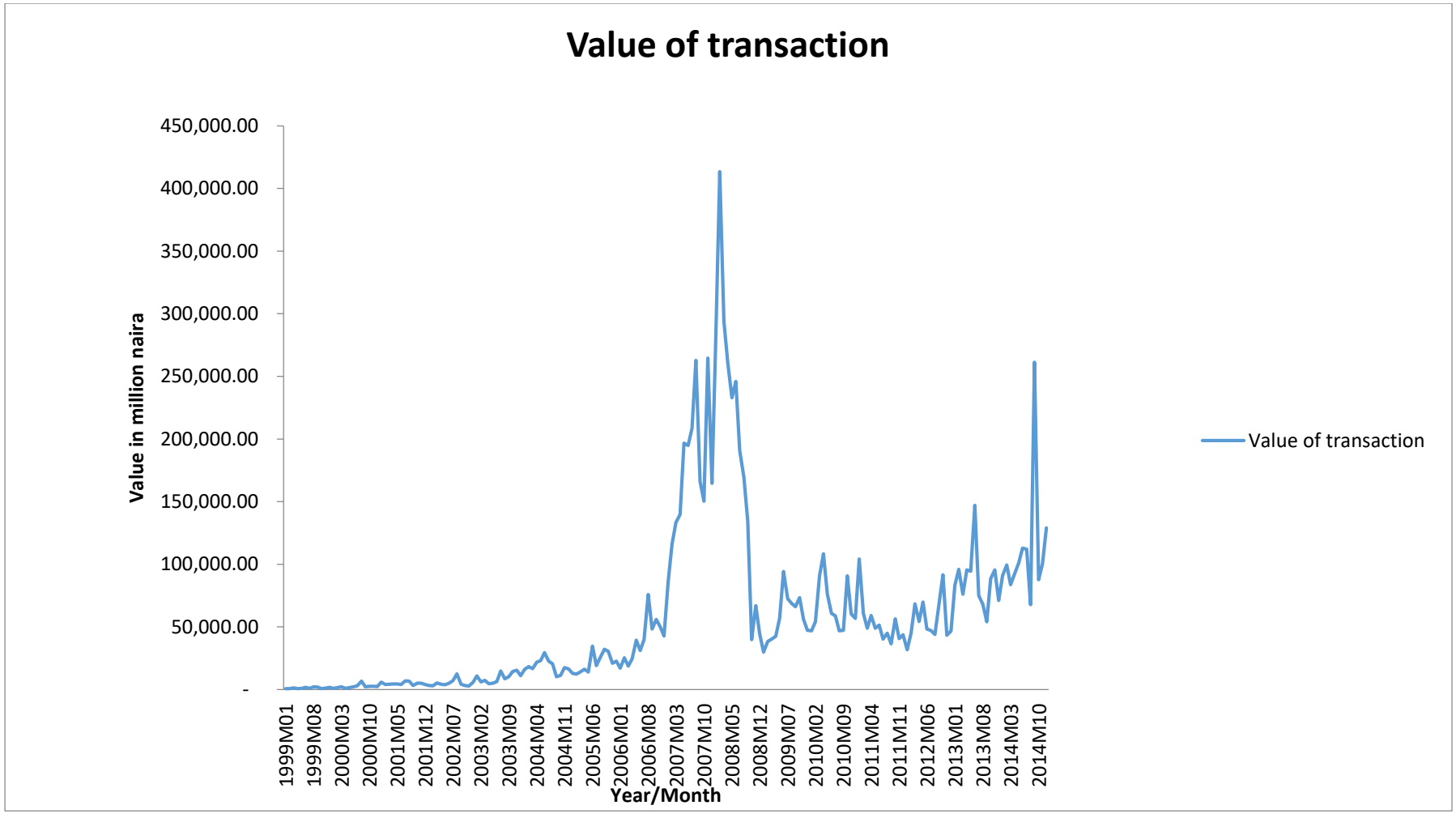
Figure 4 Graphical illustration of Trend of Market Capitalisation

4.4.2.2 Trend Analysis of some trading activities in Nigerian Stock Exchange Market- Value of Transaction

The graphical illustration of value of transaction and market capitalisation follow similar pattern. The value of transaction has been on the increase until 2009 when the market began to experience unprecedented fluctuation till date. The value of transaction traded in the market increased greatly in 2007 due to various economic policies which motivated both local and foreign investors to participate in the market. The market witnessed 101% increase in January 2007 and 76% increase between October and November 2007. The increase was still sustained till February 2008 where we recorded 46% increase in the value of transaction in the market. However, in March 2008 the values of transaction drop greatly by 28.89% and 70% in March and October respectively. The major stock market indicators recorded downward movements as a result of factors which include difficult economic environment, growing unemployment rate, waning confidence of investors and impact of the global economic meltdown. The market has however not been able to recover from the 2008 crises as the values of transaction in the market still fall below the values in 2007. This is graphically depicted in figure 5 below.

In conclusion, it is obvious that the Nigerian stock exchange market grew between 1999 and 2007 reaching unprecedented height. However the advent of the global financial crises caused the performance indicators (market capitalisation and value of transaction) to nosedive from 2008 due to repatriation of foreign funds from the market. This caused a quake in the market resulting in increased loss of confidence and which is still restricting some domestic investors from the market.

However, it has been suggested that stock market boom may increase consumption while a drastic decline in equity price or return may contribute to a slowdown in economic activity. That is, a rise in price today will automatically lead to a future rise in consumption. This makes it imperative for us to examine the trend of consumption in Nigeria.



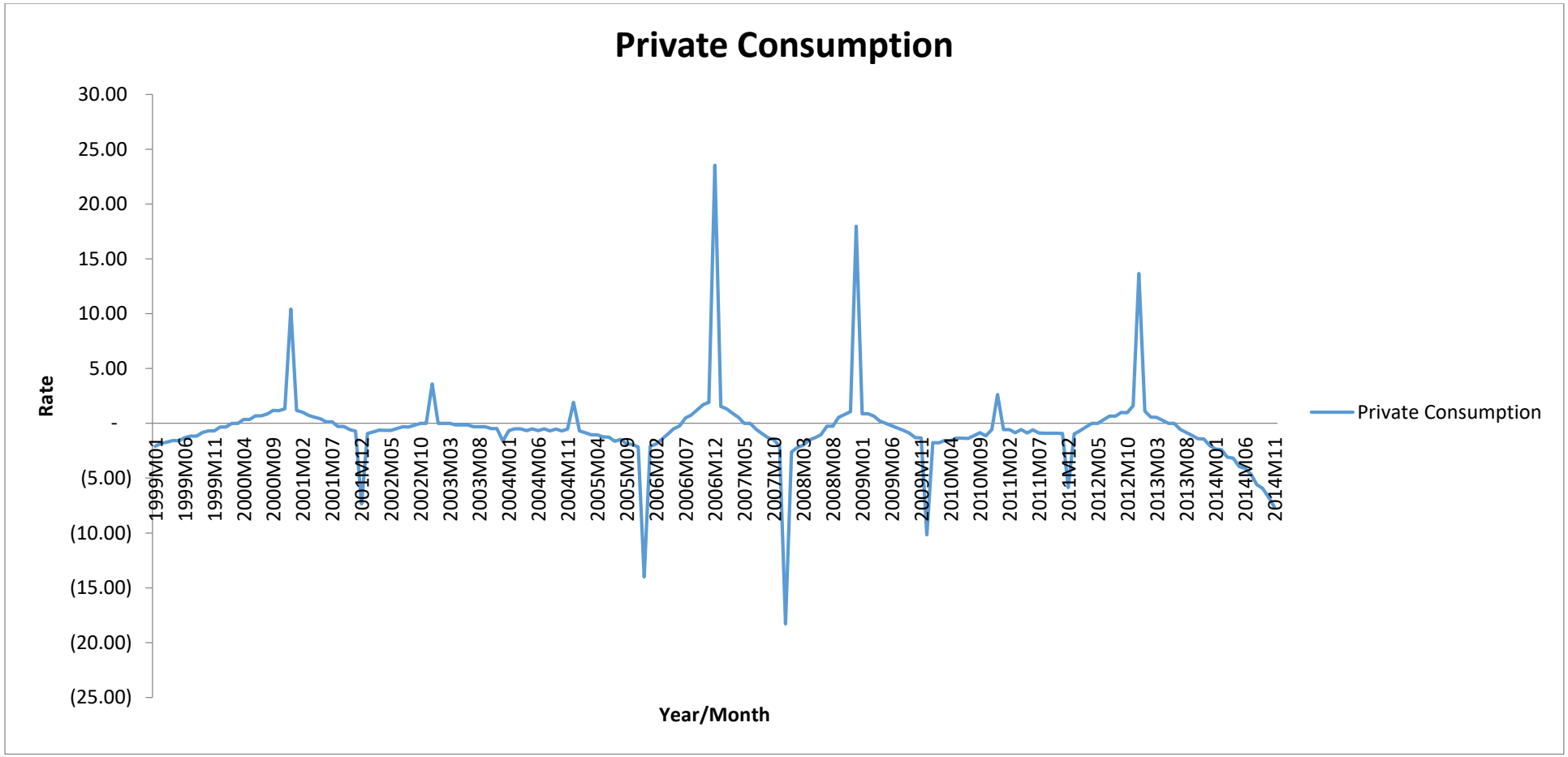
Source: Author's computation (2017)

Figure 5 Graphical illustration of Trend of Value of Transaction

Trend Analysis of Private Consumption

Consumption, a measure of development of a nation, is the total goods and services produced per time. It is a measure of the level of income and goods and services available to the population. One of the basic factors and determinants that influence consumption is the level of disposable income of an individual. Thus, consumption is the ability of a person to make purchases and it has gained attention as it is now seen to be damaging the resource base and aggravating inequalities both in the domestic economy and internationally. Consumption, the difference between income and saving decreases as savings rate increases when income still remained constant

Examining the trend of the growth rate of private consumption in figure 6 below shows that there was negative growth rate in 1999 with about 2.08% in February which decreased to 0.68 % in December. There was 0.35% positive growth rate in May 2000 which increased to 10.41% by January 2001 although this declined greatly to 1.18% in February 2001 which continued throughout 2002 but increased again by January 2003 by 3.59%. This fluctuation continues to 2006 when the growth rate became negative again with 14% in January. The sudden rise in the growth rate of private consumption expenditure in 2007 to 23.53% can be linked to the boom in the economy in 2007 before the start of the great recession. This recession however caused the growth rate of consumption to become negative again with 18.29% in January 2008. The trend analysis of consumption showed that has people invest or save a substantial part of their income (either in tangible or intangible assets) which implies that as they defer current consumption to future consumption, the level of their present consumption falls and the expectation of a future increase in income through wealth effect obtainable from their investment in financial assets increase their consumption level in the future.



Source: Author's computation (2017) and WDI (2014)

Figure 6 Trend analysis of Private consumption

In summary, the trend analysis of consumption can be divided into three segments. The first segment shows that growth rate of consumption was initially negative but gradually increased to a pick in 2001 before dropping to zero level in 2002. It also showed that growth rate of consumption increases a little in 2003 and fall till the middle of 2007. The reason behind this can be attributed to the fact that some reforms (like the interest rate deregulation and consolidation of banks) been enforced in the country which encouraged people to invest or save more while the increase experienced (consumption growth increases) signifies that as a result of the wealth effect and increases in price of oil, consumption increased due to the fact that investors anticipated higher level of income in the future (Millard and Power, 2004; Funke, 2002; Hau, 2011). However, in the second period between late 2005 and early 2010, there was drastic fall and rise in consumption growth. Nigerians experienced a sharp fall in their consumption growth between 2005 and early 2006, a rise between July 2006 and April 2007, fall between 2007 and March 2008, rise between August 2008 and January 2009 and a fall between June 2009 and January 2010. The prevalent economic situation in these periods caused the fluctuations in individual consumption growth and economic and financial crises caused individual to dis- save and consume more. The last segment constitute period after the economic and financial crises 2008 that is between 2010 and 2014 The effect of these crises still lingers in the country as growth rate of consumption is still on the increase until 2014 when it fell.

Trend Analysis of Equity return and Private consumption

An individual born at a particular period supplies labour when he or she is young and share the resulting labour income between his or her present consumption and saving/investment (which will be consumed with the interest earned on it in the future). The rational individual will rather chose to save at an exogenous interest rate than to consume all his or her wealth/income in the present period. Investment is done generally to increase investors' wealth at a specific time period and more specifically to secure the principal amount invested and receive substantial return. A risk averse investor always have the strong desire to transfer wealth from period with high consumption to period with low consumption. When the investment opportunity is stochastic, investors adjust their investment to achieve intertemporal consumption smoothing Campbell (2000).

Theories of economics have suggested that asset prices influences private consumption through wealth effect (Funke, 2002). Increase in the wealth of an individual may either cause the individual to increase his or her present consumption, save the excess wealth for future use or transfer or give the wealth to somebody. Equity return may affect consumption through various channels. The capital gains realised may have direct effect on private consumption while unrealised capital gain may have effect on current and future consumption as a result of anticipated future wealth expected.

From the analysis of the data the results showed that consumption as well as equity return has a negative trend during the period of this study. Consumption has a negative coefficient of -7.11% while that of equity return is -0.018%. Nigeria experienced a lot of economic downturn which affected the income and subsequently consumption and investment. The volatility of oil prices, the global financial crises, devaluation of naira, inflation to mention but a few are some of the determining factors that attributed in one way or the other to the fluctuations in equity return and consumption (Fifield et al., 2002). Nigeria depends majorly on crude oil production as her source of income. Oil products (majorly petrol, diesel and gases) serve as the engine of growth in the economy as it is being used for production activities in the economy. The volatility of oil prices caused an increase in cost of production, inflation which makes consumers or individual to differ their present consumption and investment to future date. Ogundipe and Ogundipe (2012) concluded in their work that oil price shock influences investment and savings which significantly affect real GDP (a proxy for income). Thus, oil

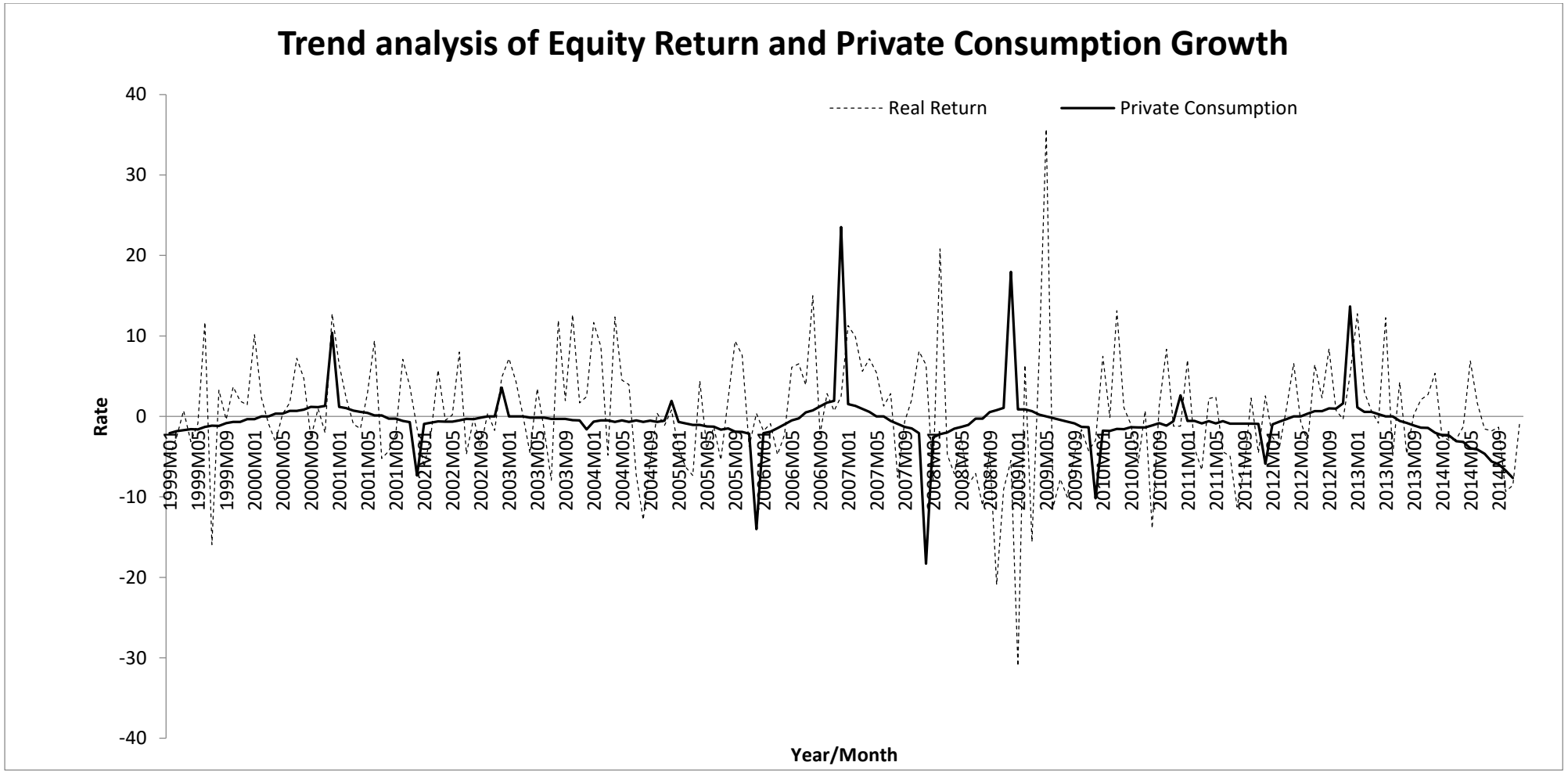
price could affect both the equity premium (due to the fact that it generates uncertainty) and future dividend growth (by influencing cost of production of the firms). The negativity of the growth in private consumption and equity return can thus be attributed to these factors especially the economic situation in the country and foreign impact on Nigeria economy.

Table 1: Trend of Equity Return and Private Consumption in Nigeria 1999-2014

		COEFFICIENT	STANDARD ERROR	t-VALUE	PROPABILITY
CONS	CONSTANT	1.010278	2.029039	199.4502	0.0000
	TREND	-7.11	4.54	-1.565425	0.1192
RM	CONSTANT	4.622497	1.527924	3.025345	0.0028
	TREND	-0.017889	-1.306301	-1.306301	0.1930

Source: Author's computation (2017)

The graphical depiction of the trend analysis of equity return and private consumption growth in figure 7 shows that both the growth rate of consumption and the returns were initially negative but growth rate of consumption subsequently became positive in 2000 as the rate of return became positive. The positivism of the rate of return can be attributed to government policies put in place to motivate both foreign and local investors to invest in the market while the positive growth rate of consumption may be attributed to wealth effect and some other factors. After the increase experienced in year 2000, the growth rate of consumption declined and even became negative at some points between 2001 and 2005 while the was considerable fluctuations in equity return. Between 2006 and 2007 growth rate of consumption increased rapidly and fall as well and became negative in 2008. The shock in Nigerian economy as a result of the great economic recession in 2008 caused individual to dis-save and increase their consumption of which recovery only boost investors' confidence to invest a little. This pattern follows throughout the entire study period which buttressed the fact that wealth effects have impact on consumption although the effect in the case of Nigeria is not significant. The implication of this can be attributed to the fact reactions of individual consumers' to stock market return in not that significant. This may be attributed to the fluctuations in the market which makes investors to be sceptical about investing in stock market. The volatility of the stock market hampers investors' confidence in relying on return from the market as a source of permanent wealth that can influence their consumption habit.



Source: Author's computation (2017)

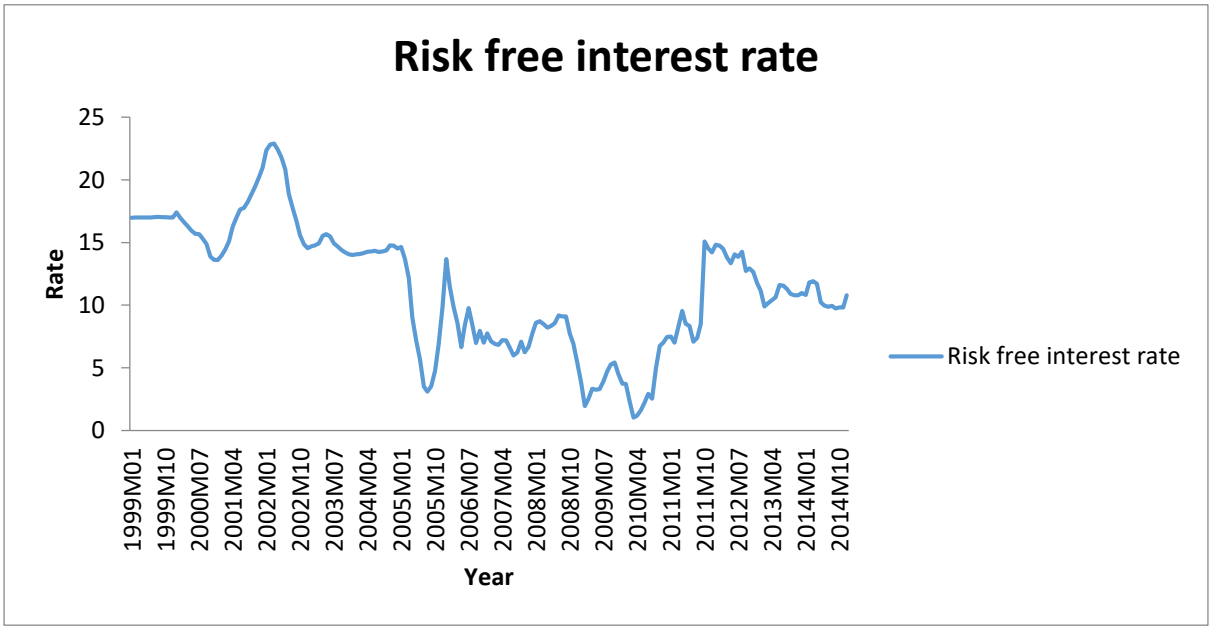
Figure 7 Trend analysis of Equity Return and Consumption

Trend Analysis of Government Treasury Bills Rate in Nigeria

Monetary policy can be used by the CBN to determine short-term interest rates which affect firms' returns in the capital asset pricing model. Indirect monetary policy and financial market however influences each other through the interest rate. The financial sector had been highly regulated before deregulation due to the fact that government needed fund to finance development, trade and exchange. The government monetary policy provided macroeconomic stability for all economic agents through the financial sector. However, deregulation of the financial sector caused interest rate to be free and credit move freely from one sector of the economy to another. This caused new entry of investors into the financial sector.

A look at the graph of the trend analysis of treasury bills rate in Nigeria which used as a proxy for risk free rate of return showed that treasury bills rate fell from 1999, and started to increase again from 2000 to a pick in 2002 however, there was a drastic fall from 2002 to 2010. In September 2010, treasury bills rate began to rise again until December 2012 when another fall was experienced. This implies that in order for the government to boost investment habit and to encourage people to invest in more risky assets (investment), treasury bills rate used as a proxy for riskless assets interest rate needed to be kept low. Thus, risk free interest rate continued to nosedive until after the global and financial crises when it began to increase again. The increase may be linked to the fact that in order for the government to stimulate the economic environment through investment which has decrease when investors lost confidence in investing, there was increase in risk free interest rate.

In summary, government had been in control of the financial system before the beginning of the Nigerian Stock exchange market. The decline in government treasury bills rate was to encourage participant to invest in more risky assets which will boost the investment capacity of the country.



Source: Author's computation (2017)

Figure 8 Trend analysis of Government Treasury Bill Rate in Nigeria

Existence of Equity Premium in Nigeria

Equity risk premiums are the key input in estimating cost of equity and capital in both corporate finance and valuation. It is the central component of every risk and return model. Since investors are risk averse and will always want to pay a lower price for risky than a riskless assets with the same expected value, equity premium thus come into play in order to determine the extent of investors wish to pay lower price. It is thus the premium that investors demand for average risk investment. Equity risk premium reveals our decision as to how much risk we observe in the market and the price we attach to it. This however affects the expected return and the value of every risky investment

There are three basic approach for estimating equity risk premium namely:-1) the survey approach which finds out from investors or managers what they require as premium for investing in equity relative to risk free rate; 2) the historical approach which examined the historical premium earned by stock investors as opposed to risk free investments; and 3) present approach which estimate equity risk premium from today's market prices (Damodaron, 2012, Nwedu, 2012). In finance, equity risk premium is one of the most critical figures although it is frequently mis-estimated as a result of the various ways by which it can be estimated (Jay, 2013). However, the most widely used approach of estimating risk premium is the historical approach where the estimated actual return earned on stocks over a period is compared to the actual returns earned on risk free rate usually proxy by government treasury bills rate.

Table 2 below shows the average monthly value of equity premium in Nigeria and its arithmetic mean. Both return on market and riskless asset are calculated on monthly basis and the annual average was estimated for the entire study period. The result indicated that equity premium does not exist in Nigeria as risk free interest rate value exceeded that of market return throughout the entire study period. This implies that activities in the money market still dominate the financial market in Nigeria.

The result of equity risk premium in Nigeria indicated that a monthly average of -11.09 equity premium was observed in Nigeria between 1999 and 2014. This is in line with (or support) the findings of Aro-Gordon (2015) who found a negative equity premium of -5.14% per annum in Nigeria. This study confirms that equity premium puzzle does not exist in Nigeria and the findings show a negative equity premium contrary to the findings of most studies (Mehra and Prescott, 1985; Rubens, 2006, Nader, 2011) that established the existence of equity premium puzzle.

Table 2: Equity Premium in Nigeria 1999-2014

YEAR	RM	RF	RM-RF Equity Premium	Arithmetic Mean of Equity Premium
1999	-0.44	17	-17.44	-17.44
2000	2.61	15.49	-12.88	-15.16
2001	1.35	17.49	-16.14	-15.4867
2002	-0.024	19.29	-19.314	-16.4435
2003	2.63	14.78	-12.15	-15.5848
2004	0.89	14.34	-13.45	-15.229
2005	-0.69	7.82	-8.51	-14.2691
2006	2.13	8.87	-6.74	-13.328
2007	4.33	6.81	-2.48	-12.1227
2008	-5.67	8.20	-13.87	-12.2974
2009	-3.28	3.82	-7.1	-11.8249
2010	0.74	3.65	-2.91	-11.082
2011	-2.15	9.66	-11.81	-11.138
2012	1.67	13.62	-11.95	-11.196
2013	2.75	10.84	-8.09	-10.9889
2014	-2.00	10.54	-12.54	-11.0859
Average	0.3029	11.389	-11.086	

Source: Author's computation (2017)

Theoretically, risk premium is meant to be positive because it is the extra return investors demand for investing in risky asset(s) instead of a risk free investment. A high equity premium signifies that investors are charging a higher price for risk and will pay low prices for the same set of risky expected cash flow. Equity premium reduces in a market where individuals are net savers than in a market where individual are net consumers. A rise in equity premium increases both the cost of equity and capital leading to a fall in the overall investment in the economy and reduces economic growth. Thus, equity premium is expected to increase as investors' preference for current consumption over future consumption increase.

From the perspective of Mehra and Prescott (1985), equity premium puzzle also does not exist in Nigeria. Table 3 below show the sample averages and covariance matrix of the equity rate, the risk free rate and the real per-capital consumption growth in Nigeria on monthly and percentage basis. The sample covariance of consumption growth and return (2.07419) is higher than the sample covariance on consumption growth and the return on risk free asset (-0.429719). This follow suit as the one presented by Mehra and Prescott (1985) that used percentage and the one by Ruben (2006) though their data were presented in decimal instead of percentage. The implication

of this is that the model does not account for the fact that return on equity (which pay more when consumption is higher) is observed to command a certain premium over the return on risk free rate of interest.

Using lognormality of return as it is well known in literature (Ruben, 2006)

$\log(1+\hat{r}_m) - \log(1+\hat{r}_f) = \delta(cov(\varepsilon_g, \varepsilon_r) - cov\left(\varepsilon_g, \varepsilon_{r_f}\right))$

Since $\log(1+x) \cong x$ for low (absolute) values of x the equation above allows us to use the sample values of $cov(e_g, e_r)$, $cov\left(e_g, e_{r_f}\right)$ and the mean values of r_m and r_f in order to obtain the implied risk aversion parameter. Approximating this covariance with the values from panel A in table 4.5 we obtained h= -4.4268 and using panel B, h= -73.22 (check appendix for details).

Table 3 Sample averages and covariance matrix of the equity rate, the risk free rate and the real per-capita consumption growth in Nigeria 1999-2014

Panel A: Sample Averages and Covariance				
	Mean	RM	RF	CONS
RM	0.304231	53.445241	2.4269996	2.0741899
RF	11.3886	2.426999	25.375002	-0.429719
CONS	-0.605367	2.0741899	-0.429719	12.906921
Panel B: Covariance matrix using logarithms				
		LOG(RM)	LOG(RF)	LOG(CONS)
LOG(RETURN)		1.099495	-0.167546	0.146226
LOG(RF)		-0.167546	0.258195	-0.005158
LOG(CONS)		0.146226	-0.005158	1.108770

Source: Author's computation (2017)

If we assume that the values of the covariance of the growth of consumption and risk free interest rate is equal to zero then h becomes -5.34 and -75.8. This confirms that equity premium puzzle does not exist in Nigeria. The implication of this is that in Nigeria, investment in government debt securities risk free interest rate has become higher yielding than other economic opportunities in the market due to the fact that the rate of return on government securities are relatively higher. This goes in line with table 3 which indicated that government treasury bills yield higher return than stock market return. The rate of return on government short term securities (treasury bills) increases from an average of 17% per annum in 1999 to 19.29% in 2002. However, there was a continuous decline in the rate from 14.78% in 2003 to 3.65% in 2010. It increased to 9.66% in 2001 to 13.62% in 2012, declined to 10.84% and 10.54% in 2013 and 2014 respectively. These rates are still higher than stock market return throughout this period.

Thus, risk free interest rate proxy by government treasury bills rate has a great implication on economic development as it serves as a benchmark for valuation in the financial market. A high level of risk free interest rate will discourage borrowers by implication private enterprises will crowd-out of the economy. This is because bank may decide to seek higher return from risk free interest rate rather than been a financial intermediary. The situation in this study showed the imbalance nature of the business environment which is affecting the country's desire for sustainable development, finance and economic transformation (Aro-Gordon, 2015). The Nigeria

capital market shows the prevalence of negative equity premium throughout the entire study period which is against the theoretical a priori expectation of a positive equity risk premium.

Implication of Trend Analysis

The trend of equity return and private consumption in Nigeria discussed above has some implications. There was great improvement in the Nigerian stock exchange market during the period 1999 to 2007 as a result of various reforms adopted from the NEEDS document. The government then enforced the Privatization, Commercialization, Deregulation and Liberalization of some sectors with the aim of improving the standard of living of the people by eradicating poverty. It also provided a conducive environment for investing in stock market. However, the global economic and financial crises of 2008 (which erupted with the meltdown of the United States subprime mortgage market in 2007) affected the activities in this sectors which was however revitalised in 2009 as a result of the movement of the economy towards achieving Sustainable Development Goals previously called Millennium Development Goal. Finally, the trend analysis revealed that equity return have effect on consumption though the magnitude of the effect is minimal. Also, the study also discovered that equity premium puzzle does not exist in Nigeria.

CONCLUSION

In conclusion, equity return fluctuated throughout the study period and it was affected by activities in the stock market. The behaviour of asset prices affected equity and that the fluctuation in the market was attributed to a lot of factors like waning confidence of investors and impact of the global financial crises and economic meltdown, liberalisation of the market. The fluctuation of the growth rate of private consumption was also affected by the economic situation and global economic and financial crises in 2008, oil shock and various government policies put in place to encourage savings. An increase in equity return increased consumption while a decrease in equity return had little effect on consumption and the effects were not significant. Developments in consumption and investment expenditures in Nigeria showed a considerable fluctuation as a result of various policies and government administration in the country.

REFERENCES

Adedokun, A. (2013). Global Financial Crisis and Nigeria Business Environment

Adedokun, A. J., & Olakojo, S. A. (2012). Test of Capital Asset Pricing Model: Evidence from Nigerian Stock Exchange. *Journal of Economic Theory, 6* (4-6), 121-127.

Adedeji, A. O., & Adegboye, A. A. (2013). The Determinants of Private Consumption Spending in Nigeria. *International Center of Science Education and Academic Research for Scholars,* 1(2). www.isearchscholars.com

Agarwal, R., & Mangla, J. (2014). Testing Practical Application of CAPM: A Study of Stocks of Automobile Sector Using CNX Auto Index in NSE. *International Journal of Advanced Research in Management and Social Sciences, 3*(1), 42-55.

Agénor, P. (2007). Consumption, Saving and Investment. World Bank

Ando, A., & Modigliani, F. (1963). "The 'Life-Cycle' Hypothesis of Saving: Aggregate Implication and Tests." *American Economic Review, 53,* 55-84.

Aro-Gordon, S. (2015). Equity Risk Premium in an Emerging Market Economy *Journal of Economics and Finance, 6*(6), 1-10. www.iosrjournals.org

Audu, N. P., & Apere, O.T. (2013). Factors Affecting the Efficient Performance of the Nigerian Capital Market. *International Journal of Research in Social Sciences, 3*(1), 1-15. www.ijsk.org/ijrss

Blanchard, O. J., & Fischer, S. (1989). Lectures on Macroeconomics. Massachusetts Institute of Technology, London England.

Campbell, J. Y. (2000). "Asset Pricing at the Millennium", Harvard Institute of Economic Research, *Discussion Paper Number* 1897, Harvard University, Massachusetts.

Central Bank of Nigeria (CBN) (2011), Statistical Bulletin

Central Bank of Nigeria (CBN) (2014), *Statistical Bulletin*

Central Bank of Nigeria (CBN) (2015), *Statistical Bulletin*.

Cummins, D. J. (1990). Asset Pricing Models and Insurance Ratemaking. The Wharton School of the University of Pennsylvania, Philadelphia, USA. Astin Bulletin 20(2).

Damodaran, A. (2012). Equity Risk Premiums (ERP): Determinants, Estimation and Implications. Stern School of Business

Davis, E. P. (2010). New International Evidence on Asset-Price Effects on Investment, and a Survey for Consumption. *OECD Journal: Economic Studies*

Emilio, F. (2004). Consumption Theory. Handbook of Centre for Central Banking Studies, Bank of England, London No. 23,1-48.

Fama, E. F., & French, K. R. (2004). The Capital Asset Pricing Model: Theory and Evidence. *Journal of Economic Perspectives 18*(3), 25-46.

Fifields, G. M., Power, D. M., & Sinclair, C. D. (2002). Macroeconomic Factors and Share Returns: An Analysis Using Emerging Market Data. *International Journal of Finance and Economics7,* 51–62 www.interscience.wiley.com

Funke, N. (2002). Stock Market Developments and Private Consumer Spending in Emerging Markets *IMF Working Paper*

Grobys, K. (2014). Essays on Empirical Asset Pricing

Hau, L. (2011). Stock Market and Consumption: Evidence from China. *Berkeley Undergraduate Journal, 24*(3).

Ikechukwu, O. I. (2013). Money Market on the Nigerian Economic Development. *Journal of Economics and Sustainable Development, 4*(5). www.iiste.org

Isenmila, P. A., & Dominic, O.E. (2012). Share Prices and Macroeconomic Factors: A Test of the Arbitrage Pricing Theory (APT) in the Nigerian Stock Market. *European Journal of Business and Management, 4*(15). www.iiste.org

Jay, L. (2013). A Review of the Equity Risk Premium. Mercer Investment Consulting, Inc. www.mercer.com

Kazmi, S. M. A. (2015). Real Private Consumption Expenditure Modeling an Empirical Study on Pakistan. *Journal of Economics and Sustainable Development, 6*(17), 36-47. www.iiste.org

Lettau, M., & Ludvigson, S. (2001). Consumption, Aggregate Wealth, and Expected Stock Returns. *The Journal of Finance, 3*.

Mehra, R., & Prescott, E. C. (1985). The Equity Premium A Puzzle. *Journal of Monetary Economics, 15*, 145-161.

Millard, S., & Power J. (2004). The effects of stock market movements on consumption and investment: Does the shock matter? *Bank of England Working paper no*. 236.

Modigliani, F. & Brumbergh, R. (1955). Utility Analysis and the Consumption Function: An Interpretation of Cross-section Data, in K. Kurihara (ed.), Post Keynesian Economics, London: George Allen and Unwin.

Nader, S. V. (2012). Equity Premium Puzzle: A Finnish Review. *International Journal of Economics and Finance, 4*(2), 44-55. www.ccsenet.org/ijef

Nafooti, M. N., Sharifi, N. M., Shomali, F. R., Pasandeh, H. G., Tadrisi, E., & Yousefi, M. (2013). Factors Affecting Risk and Return of Financial Stocks in Stock Exchange. *Singaporean Journal of Business Economics and Management Studies, 1*(1).

Nwangwu, M. O. (2013). An Analysis of the Economic Impact of Stock market on Nigeria Economy (1986-2010).

Nwude, C. E. (2012). Risk-Return Relationship in Equities: Evidence from the Automobile and Sector of the Nigerian Stock Exchange. *Research Journal of Finance and Accounting, 3*(6):138-148. www.iiste.org

Nwude, C. E. (2013). Estimation of Equity Risk Premiums (ERP) in an Emerging Stock Market: The Nigerian Case. *Global Journal of Management and Business Research Marketing, 13*(4).

Oduh, M. O., Oduh, M. O. & Ekeocha, P. C. (2012). The Impact of Consumer Confidence and Expectation on Consumption in Nigeria: Evidence from Panel Data. *European Journal of Business and Management, 4*(9). www.iiste.org

Ogundipe, O. M., & Ogundipe, A. A. (2012). Impact of Oil Price Shocks on Investment in Nigeria. Department of Economics and Development Studies, Covenant University, Ota, Ogun State, Nigeria.

Ohiomu, S. (2011). The Stock Market Fluctuations and Consumer Behaviour in Nigeria, *JORIND, 9*(2),193-201. www.transcampus.org.

Raut, L. K., & Virmani, A. (1990). Determinants of Consumption and Savings Behavior in Developing Countries. *The World Bank Economic Review, 3*(3), 379-393.

Rubens, P. C. (2006). Equity-premium puzzle: evidence from Brazilian data. *Economia Aplicada, 10*(2), 1-16.

Security and Exchange Commission (SEC), Nigeria (2008) Annual Report and Accounts

Security and Exchange Commission (SEC), Nigeria (2010) Nigerian Capital Market Statistical Bulletin1-74 Office of the Chief Economist and Research Division of the Research and Planning Department

Security and Exchange Commission (SEC), Nigeria (2014) Quarterly Capital Market Reports

The Nigerian Stock Exchange (NSE) (2013) Bolder Strides Annual Report and Accounts. pp. 1-147. www.nse.com.ng

The Nigerian Stock Exchange (NSE) (2014) Changing Times Enduring Values Annual Report and Accounts. pp. 1-140. www.nse.com.ng

Ungerer, R. (2003). The Effect of the Stock Market on Consumer Spending: October, 1990 – April, 2002. *Issues in Political Economy, 12*, 1-21.

World Bank Development Indicators (2014) www.worldbank.org/data

Yahaya, K. A., Abdulrahem, A. I., Sulu, B., Aliu, O. A., & Yisau, N. S. (2011). Financial Meltdown on the capital Market: A Study of the Nigerian Stock Market Exchange. *Academy of Taiwan Business Management Review, 7*(11), 78-86.