An Analysis of the Effects of Insecurity on Capital Market and Economic Growth of Nigeria

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ABSTRACT
This study adopts an ex-post facto research design to empirically examine the effect of insecurity on capital market performance and economic growth on Nigeria. Using data on peace index (PINDEX) and Peace Score (PSCORE) as proxy for insecurity, market capitalization as proxy for capital market performance and gross domestic product (GDP) as proxy for economic growth and total of listed equity and government stock as control variable collected from the global peace index (GPI), central bank of Nigeria (CBN) annual report, Securities and exchange (SEC) annual report and Nigerian Stock Exchange (NSE) annual report for a period of five years from 2007 to 2011. The multiple regression results indicate that there is a negative relationship between capital market performance, economic growth, and insecurity. Peace index is statistically significant to capital market performance while peace Score is not. However, peace score is statistically significant to economic growth while peace index is not statistically significant. The study recommends that government at all level should not rest until peace is restore in the country so as to enable the capital market contribute positively to economic growth, at the same time help in the attainment of vision 2020.

KEY WORDS
Insecurity, capital market performance, Economic growth, and peace index of Nigeria

JEL CODES
D90, D99

1. Introduction
The capital market institution is critical to the economic growth of any nation. The capital market is a network of specialized financial institutions, series of mechanisms, processes and infrastructure that, in various ways, facilitate the bringing together of suppliers and users of medium to long-term capital for investment in socio-economic developmental projects (Al-Faki, 2006). The capital market is subdivided into the primary and the secondary market. The primary market or the new issues market provides the avenue through which government and corporate bodies raise fresh funds through the issuance of securities which is subscribed to by the public or a selected group of investors. The secondary market provides an avenue for sale and purchase of
existing securities. Sule and Momoh (2009) found that the secondary market activities have impacted more on Nigeria per capital income by tending to grow stock market earnings through wealth than the primary market. Aremu et al. (2011) and Donwa and Odia (2011) argued that the capital market has been identified as an institution which contributes to the socio-economic growth and development of emerging and developed economies. This is made possible by the intermediary role played by the capital market in mobilizing funds from surplus units to deficits units to be invested into projects with positive net present value (NPV) which may enhance economic growth of the nation. According to Aremu et al. (2011) the roles of the capital market in the development of the economy includes: to provides opportunities for companies to borrow funds needed for long-term investment purposes, provides avenue for the marketing of shares and other securities in order to raise fresh funds for expansion of operations leading to increase in output/production, provides a means of allocating the nations real and financial resources between various industries and companies. They further stressed that through the capital formation and allocation mechanism the capital market ensures an efficient and effective distribution of the scarce resources for the optimal benefit to the economy. It also reduces the over reliance of the corporate sector on short term financing for long term projects and also provides opportunities for government to finance projects aimed at providing essential amenities for local investors. The capital market can aid the government in its privatization programme by offering her shares in the public enterprises to members of the public through the Stock Exchange. It also encourages the inflow of foreign capital when foreign companies or investors invest in domestic securities, provides needed seed money for venture capital development and acts as a reliable medium for broadening the ownership base of family-owned and dominated firms.

There are various studies that have shown that there is a link between capital market performance and economic growth (Aremu et al. 2011; Donwa and Odia, 2011; Okafor and Arowoshegbe, 2011; Ewah et al., 2009; Demirguc-Kunt and Levine, 1996). However, Shortage of accumulated capital for investment and developmental purposes has been identified as one of the major obstacles to the economic growth of many developing countries, including Nigeria. To enhance economic growth and development, capital formation and accumulation through mobilization of domestic savings must be seen as a strategic imperative (Oluwa, 2012 and Adeyanju, 2010). However, this is threatened with the growing level of insecurity in the country today.

The growing level of insecurity is inform of political and religious crises, terrorism, frequent cases of bombings, wars and financial crises globally and Nigeria in particular, which is believed to have some effects on the performance of the capital market and economic growth. This is because the market is situated within the environment and whatever happens to it whether good or bad, have a way of influencing the market and economic growth. The level of insecurity may hamper investors’ confidence in the country, resulting in high level of capital flight (Oteh, 2012) and that no business can thrive in an environment that the security of life, business, and properties cannot be guaranteed. It is therefore imperative to look at the effects of insecurity on capital market and economic growth.

This study seeks to examine the extent of the effect of insecurity on capital market performance and economic growth, ascertain if there is any difference in the performance of capital market and economic growth when security was relatively stable and in the period of insecurity, and the impact of insecurity on capital market and the economic growth of Nigeria using most recent data covering a period of five years from 2007 to 2011. This study is important
because it is a modest attempt aimed at adding to the extant literature on the impact of insecurity on capital market and economic growth in Nigeria, thereby aiding to the attainment of the Nigerian vision 2020 goal of being one among the top 20 largest economies in the world by the year 2020.

2. Review Literature

Security means the activities involved in protecting a country, building or person against attack, danger and so on (Hornby, 2010). Insecurity refers to a situation where people, business and their properties are not fully secured and protected, thereby resulting to the absence of relative peace and unity in a place. These may be caused by factors such as political and religious crises, terrorism, frequent cases of bombings, wars and financial crises. Where ever there is interplay of these factors in any place or country there is bound to be lack of relative peace thereby resulting to insecurity.

The Global Peace Index (CPI) was developed in consultation with an international panel of peace experts from Peace Institutes and think tanks with data collected and collated by the Economic Intelligent Units. The list was launched first in May 2007, and then continued from May 2008 and annually up to June 2012. It is claimed to be the first study to rank countries around the world according to their peacefulness. It ranks 158 countries (up from 121 in 2007). The study is the brainchild of Australian entrepreneur Steve Killelea. The index, which is published by the Institute of Economics and Peace (IEP), measures peacefulness using 23 indicators, including a nation’s level of military expenditure as a percentage of its Gross Domestic Product, its relations with neighboring countries, the level of perceived criminality, likelihood of violent demonstrations, level of organized conflict, terrorist acts and the level of respect for human rights (Okpi, 2012). The index is launched each year at events in London, Washington DC, the United Nations in New York and in Brussels. The CPI index indicates that countries appearing in green are more peaceful and those in red are less peaceful. The index for green is less than 1599 to 1899 scores using the 23 indicators stated above. Any index above these is not peaceful. It therefore means that countries faced with security challenges there peace index will be high.

The index shows that Nigeria was ranked 117th out of 121 countries in 2007; 129th out of 140 countries in 2008; 129th out of 144 in 2009; 137th out of 149 in 2010; and 142nd out of 153 in 2011, and 146th out of 158 in 2012. Nigeria dropped four places to 146th out of 158 countries in the recently released 2012 Global Peace Index, signifying a decline in peace and stability in the country in the past one year (Okpi, 2012). A critical look at this shows that from 2007 to date, Nigeria has consistently ranked at low position in the index compared to other countries, signifying worsening state of the nation in terms of peace and security in the past five years. According to Okpi (2012) the factors that may have contributed to country’s low score include incessant bomb attacks that had killed many people especially in the north, the resurgence of militancy in the Niger Delta, kidnappings in different parts of the country, and the increased government expenditure on security.

In spite of the decline in peace (risen insecurity level) in Nigeria and some other countries, especially in Africa and Middle East, year 2012 index showed that the world had become more peaceful for the first time since 2009. Iceland remained the most peaceful country in the world, followed by Denmark and New Zealand while Somalia remained the least peaceful followed by Afghanistan and Sudan. In West Africa, despite dropping from 42nd to 50th, Ghana remained the most peaceful country in West Africa, followed by Sierra Leone in the 52nd position; Burkina Faso...
in the 56th position. Nigeria was the least peaceful in the sub-region, followed by Cote d’Ivoire in the 134th position and Mauritania in 125th position on the global list (Okpi, 2012).

The capital market comprises of the complex institutions and mechanisms through which intermediate term funds and long-term funds are pooled and made available to business, government and individuals (Josiah et al, 2012). They also assert that the capital market comprises the process by which securities already outstanding are transferred. The definition explains the fact that capital market has no fixed location and deals with medium and long-term funds, has government, individual, and business firms as participants and ensures liquidity as it provides market for both new and old securities. The central task of the capital market is the mobilization of funds in the hands of individuals who save pool and channel such funds into productive uses (Aliile, 1986). This has the power of enhancing economic growth. Since the market operates on trust and confidence and unlike other businesses it cannot operate effectively where there is no security (no relative peace) of live and properties. Therefore, whenever, the level of security cannot be guaranteed in any country thereby posing a threat to the operation of capital market, the economy also will be affected. Hence, the capital market does not operate in isolation of the environment, whatever affects the environment will directly or indirectly affect the performance of the capital market and economic growth.

According to Ashamu and Abiola (2012) the global financial crisis started in the United States of America in August 2007 with sub-prime mortgage crisis as households faced difficulties in making higher payments on mortgages. Sanisu (2011) asserts that due to the connectivity of the financial system also known as the contagion effect, most economies were affected. The impact of the crisis started to show by mid-2007 with the fall of major stock market prices. The crisis entered a new phase with the collapse of Lehman Brothers in September 2009 and spread across economic sectors in advanced, emerging and developing economies, Nigerian inclusive. Sanisu (2011) further argued that like other African countries, the Nigerian economy was initially perceived to have been isolated from the financial crisis because Nigerians total share of stock market capitalization stood at only 1.81 per cent of the global market. However, the effects began to show by end-March 2008 with the crash in the capital market and some banks having expanded their businesses outside the shores of Nigeria, the contagion effect of the crisis hit the Nigerian economy.

Donwa and Odia (2010) empirically analyze the impact of the Nigerian capital market (market capitalization, total new issue, volume of transaction and total listed equities and government stock) on her socio-economic development (proxy by the gross domestic product-GDP) from 1981 to 2008. Using the ordinary least square it was found that the capital markets indices have not impacted significantly on the GDP.

Ewah et al (2009) appraised the impact of capital market efficiency on economic growth (proxy by GDP) in Nigeria, using time series data on market capitalization, money supply, interest rate, total market transaction and government development stock between 1961 to 2004. Using the multiple regressions and ordinary least squares estimation techniques to analyze data and the result indicates that all the variables are with positive apriori were statistically significant except total transactions and money. This means capital market in Nigeria has the potential of growth inducing but it has not contributed meaningfully to economic growth of Nigeria. This is due to low market capitalization, low absorptive capitalization, illiquidity, misappropriation of funds among others.
Ologunde et al. (2006) examined the relationships between stock market capitalization rate and interest rate. Time series data obtained from Central Bank of Nigeria (CBN) and Nigeria Stock Exchange (NSE) were analyzed using regression. Results showed that the prevailing interest rate exerts positive influence on stock market capitalization rate. Government development stock rate exerts negative influence on stock market capitalization rate and prevailing interest rate exerts negative influence on government development stock rate. The study further revealed information as very important to capital market development. It was therefore recommended that the operators of the Nigeria capital market should raise the level of awareness so that investors will be abreast with the happenings in the market.

Aremu et al. (2011) examined the impact of the Nigerian capital market operations on Local investments in Nigeria. The main objectives highlighted, was to empirically analyze the impact of the Nigerian capital market operations on local investment. The relevance of the capital in the encouragement of local investment and economic development were highlighted. The paper concluded with recommendation to stem up investors confidence and activities in the capital market so that it could contribute significantly to the growth of local investment in Nigeria.

Karolyi and Martell (2010) examined the stock price impact of terrorist attacks. Using an official list of terrorism-related incidents compiled by the Counterterrorism Office of the U.S. Department of State, they identified 75 attacks between 1995 and 2002 in which publicly traded firms are targets. An event-study analysis around the day of the attacks uncovers evidence of a statistically significant negative stock price reaction of -0.83%, which corresponds to an average loss per firm per attack of $401 million in firm market capitalization. A cross sectional analysis of the abnormal returns indicates that the impact of terrorist attacks differs according to the home country of the target firm and the country in which the incident occurred. Attacks on firms attacked in countries that are wealthier and more democratic are associated with larger negative share price reactions. Most interestingly, they found that human capital losses, such as kidnappings of company executives, are associated with larger negative stock price reactions than physical losses, such as bombings of facilities or buildings. They discussed the implications of these findings for existing research on terrorism, terrorism-related investing strategies and for the current policy debates regarding terrorism re-insurance programs.

Chen and Siems (2004) used the event study methodology to assess the effects of terrorism on global capital markets. Examining the U.S. capital market’s response to 14 terrorist/military attacks dating back to 1915 and global capital markets’ response to two recent events—Iraq’s invasion of Kuwait in 1990 and the September 11, 2001 terrorist attacks. U.S. capital markets are more resilient than in the past and recover sooner from terrorist attacks than other global capital markets. Evidence suggests that this increased market resilience can be partially explained by a stable banking/financial sector that provides adequate liquidity to promote market stability and minimize panic.

Panagiotis and Spyridon (2010) investigated the reaction of Greek banks’ stocks to three major international terrorist events (September 11 2001 attacks in New York, Madrid train bombing in March 11, 2004 and London train bombing in July 7, 2005). Using event study methodology and market model, this study found out that of the three terrorist attacks, only September 11th resulted in significant abnormal returns in the Greek bank stocks. Positive and negative excess returns indicate that the Athens Stock Exchange may have overreacted to the terrorist attacks and pre-event negative excess returns may have driven by expectation of an
impending anomaly. Several reasons may be responsible for these results but September 11th was more catastrophic due to the dominant position of USA economy worldwide.

Gul et al. (2010) study is an effort to estimate the impact of terrorist activities on the financial markets in Pakistan over the period of two years i.e. 2006 to 2008. It found out the extent and direction of relationship between the terrorist activities and three financial markets of Pakistan, which are the Karachi Stock Exchange, the FOREX market and the interbank market. After collection of the primary data for the terrorist activities on daily basis and the secondary data on the indicators of the three markets, by using the OLS model it attempts to quantify the impacts of various types of terrorists’ activities on financial markets. They have found during analysis that the terrorist activities adversely affect the financial markets under study but the significance varies for different markets. Along with terrorist activities many other stochastic activities are responsible for the adverse performance of financial markets which have not been taken into account. The study recommended the policy stance on institutional development regarding investment in the innovative security industry and providing rosier environment for investors by altering the money supply and interest rates.

Okafor and Arowoshegbe (2011) examined the impact of the Nigerian Capital Market performance (proxy by All Share index, Market Capitalization, Value of transactions, Volume of Transactions and Number of listed Companies) on the economic development (proxy by the Gross Domestic Product GDP and Gross Fixed Capital Formation- GFCF) using the data obtained from Central Bank of Nigeria Statistical Bulletin, Nigerian Stock Exchange Fact books, annual reports and Statement of accounts (various years) of quoted companies and other relevant publications from 1993 to 2007. The results of the data analyzed using Ordinary least square (OLS) and multiple regression shows that market capitalization, All share index, number of listed companies were positively related and capable of influencing Gross Domestic Product; while volume of transaction and Market Capitalization were positively related to Gross fixed Capital Formation. The results have proved that the performance of the capital market impacts positively on the economic development of Nigeria.

Josiah et al. (2012) looked at the impact of capital market in the development of the Nigerian economy using Ordinary Least Square (OLS) technique and analyzed the data collected from Nigerian Statistical Bulletin from 1992 to 2007. This revealed that capital market has not contributed positively to the development of Nigerian economy.

Ogboi and Oladipo (2012) examined stock market-economic growth nexus in the Nigerian economy. It specifically investigates the effects and the causal relationship between the two variables in Nigeria. This was with the view to providing empirical evidence for stock market operation to stimulate economic growth with maximizing the welfare of the people. The study employed annual time series data from 1981 to 2008 collected from various issues of Central Bank of Nigeria’s Statistical Bulletin and Annual Report and statement of Account of Nigeria Stock Exchange 2009 edition. An Error Correction Mechanism (ECM) Model was adopted in the analyses of the interaction between stock market and economic growth. The granger causality pair wise test was conducted in determining the causal relationship among the variables.

The empirical results showed that, there was unidirectional causality between stock market and economic growth, which ran from economic growth (GDP) to stock market (MCAP) at 5 percent significant level., stock market has negative effect on economic growth in the short run but positive effect in the long run with (t=1.6, P>0.05) and (t =4.6, P<0.05) respectively. However, the effect was statistically significant at 5% level of significance only in the long run. The study
concludes that, the Nigerian stock market is no exception to other developing countries which are working towards reforming and deepening their financial systems through the expansion of its stock markets in order to improve their ability to mobilize resources and efficiently allocate them to the most productive sectors of the economy so as to enhance economic growth.

A careful look on the works reviewed indicates that the results on the impact of capital market and economic growth are mixed and the researcher did not come across any study that empirically analyzed the impact of insecurity on capital market performance and economic growth of Nigeria. Therefore the need for such a study in Nigeria is imperative.

3. Methodology of research

This study adopts an ex-post facto research design to examine the impact of insecurity on the performance of capital market and economic growth in Nigeria. Data collected from the Central Bank of Nigeria statistical bulletin, Securities and Exchange Commission (SEC) and the Nigerian Stock Exchange (NSE) annual report on economic growth proxy by Gross Domestic Product (GDP) and capital market performance (CM Perf) proxy by market capitalization (MCAP), total of new issue (TNI), total value of transaction (VLS) and total listed equities and government stock (TLS) for a period of five (5) years (i.e. 2007 to 2011) were collected. Also insecurity (proxy by peace index (PINDEX), peace score (PSCORE) and Dummy variable for (INSEC)) data were collected from Global peace index and the dummy variable one was given for years of insecurity otherwise zero. The period covered in this study is that of democratic government, and when we are experiencing security challenges in Nigeria. The study period (i.e. year 2007-2011) relates to the period of insecurity in Nigeria. The study used descriptive and multiple regression to analyze the data collected. The descriptive Statistics was used to ascertain the extent of the performance of capital market and economic growth in Nigeria within periods of insecurity and the multiple regression analysis to test the impact of capital market performance on economic growth of Nigeria.

4. Hypothesis

The hypothesis for this study was stated in a null form thus;

\( H_{01}: \) The capital market performance of Nigeria is not significantly influenced by the level insecurity in Nigeria.

\( H_{02}: \) The economic growth (proxy by gross domestic product-GDP) of Nigeria is not significantly influenced by the level of insecurity in Nigeria.

5. The study Model

The models for this study are thus:

\[
CM \text{ Perf}=f(\text{PINDEX, PSCORE, TLS})
\]  

\[(1)\]

Where:

CM per = capital market performance (proxy by Market Capitalization) as dependent variable.
PINDEX= Peace Index as independent variable.
PSCORE= Peace Score as independent variable.
TLS= Total of listed equities and government stock as control variable.
GDP = f(PINDEX, PSCORE, INSEC) \tag{2}

Where:
GDP = Gross Domestic Product as dependent variable.
PINDEX = Peace Index as independent variable.
PSCORE = Peace Score as independent variable.

6. Data presentation, Analysis and Discussions

The results presented below are based on the data collected from CBN Statistical bullion, SEC and NSE annual reports. The data collected is used to established the impact of insecurity on capital market performance and economic growth of Nigeria. The analysis was done using the statistical package for social sciences (SPSS) version 16.0 to enhance the accuracy and robustness of the results. The results indicate $R^2$ of 99 percent for model 1 (see, Table 1). This implies that 99 percent of capital market performance (proxy by market capitalization) is influenced by the variables in the model only 1 percent is for factors outside the model. In an attempt to detect for multicollinearity, the variance inflation factor (VIF) and tolerance level (TOL) statistics were computed (see, table 1). The VIF of all the independent variables were consistently smaller than 10 (rule of thumb) and the TOL values are consistently smaller indicating complete absence of multicollinearity among the variables (Gujarati and Sageetha, 2007). This shows the appropriateness of fitting of the model of the study. The results also indicate that an increase in insecurity (PINDEX) of a country will lead to decrease in Capital market performance (market capitalization). Capital market performance (MCAP) of Nigeria is statistically influence by the level of security (PINDEX) where as PSCORE does not statistically influence capital market performance of Nigeria at 5 percent (See, table 1).

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>T-Stat</th>
<th>Sig</th>
<th>Tolerance</th>
<th>VIF</th>
<th>R-square</th>
<th>Sig f-change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>-</td>
<td>-528.230</td>
<td>.001</td>
<td>-</td>
<td>-</td>
<td>.99</td>
<td>.001</td>
</tr>
<tr>
<td>PINDEX</td>
<td>.091</td>
<td>141.103</td>
<td>.005</td>
<td>.578</td>
<td>1.73</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PSCORE</td>
<td>-.061</td>
<td>-71.152</td>
<td>.009</td>
<td>.326</td>
<td>3.06</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TLE</td>
<td>.890</td>
<td>891.943</td>
<td>.001</td>
<td>.241</td>
<td>4.15</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Dependent variable: MCAP

Source: SPSS Statistics

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>T-Stat</th>
<th>Sig</th>
<th>Tolerance</th>
<th>VIF</th>
<th>R-square</th>
<th>Sig f-change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>-</td>
<td>-.917</td>
<td>.456</td>
<td>-</td>
<td>-</td>
<td>.92</td>
<td>.082</td>
</tr>
<tr>
<td>PINDEX</td>
<td>.101</td>
<td>.447</td>
<td>.699</td>
<td>.808</td>
<td>1.23</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PSCORE</td>
<td>.998</td>
<td>4.423</td>
<td>.048</td>
<td>.808</td>
<td>1.23</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Dependent variable: GDP

Source: SPSS Statistics
The results in table 2 shows an $R^2$ of 92 percent for model 2 (see, Table 2). This implies that 92 percent of economic growth (proxy by GDP) is influenced by the variables in the model only 8 percent is for factors outside the model. In an attempt to detect for multicollinearity, the variance inflation factor (VIF) and tolerance level (TOL) statistics were computed (see, table 1). The VIF of all the independent variables were consistently smaller than 10 (rule of thumb) and the TOL values are consistently smaller indicating complete absence of multicollinearity among the variables (Gujarati and Sageetha, 2007). This shows the appropriateness of fitting of the model of the study. The result also indicates that an increase in insecurity (PINDEX, PSCORE) of a country will lead to decrease in economic growth (GDP). Economic growth (GDP) of Nigeria is statistically influence by the level of security (PSCORE) where as PINDEX does not statistically influence economic growth of Nigeria at 1 percent (See, Table 2).

7. Conclusion and Recommendations

This study empirically analysed the impact of the current security challenges faced by Nigeria on capital market performance and economic growth. The study found that statistically capital market performance and economic growth of Nigeria is significantly influenced by insecurity. There is a negative relationship between capital market performance, economic growth and insecurity in Nigeria. The implication of this result is that if the level of security challenges being faced by the country is not properly check it has serious effects on negatively affecting capital market, economic growth, and delay in the attainment of vision 2020. The study recommends that all stakeholders in the capital market and economy should take step to ensure security. The federal and State government whose major task is to ensure security of live, property, and business should not rest until security is guaranteed in the country.

References


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