

## Financial Crises and Economic Growth of Nigeria

<sup>1</sup>Ogbebor, Peter I.,  
<sup>2</sup>Awonuga, Adesola R.,  
<sup>3</sup>Ezenwa, Anthony C. &  
<sup>4</sup>Oamen, Gregory E.

<sup>1,2,3&4</sup>Department of Finance, School  
of Management Sciences,  
Babcock University, Ilishan –  
Remo, Ogun State, Nigeria

**Article DOI:**

10.48028/iiprds/ijarsmf.v8.i1.02

**Keywords:**

Financial stress  
index, Inflation,  
Liberalization,  
Money supply, real  
gross domestic  
product, Trade  
openness

*Corresponding Author:*

Ogbebor, Peter I.

### Abstract

The effects of financial crises on economic growth of countries are destabilizing and research interests in this area in the case of Nigeria has not be sufficiently exhibited, hence, this study. The study examined the effect of financial crises on economic growth in Nigeria using time series data that covered a period from 1986 to 2019. For data analysis, the major empirical tools utilized are Autoregressive Distributed Lag (ARDL) Co-integration and ECM techniques, following the result of the unit root tests that revealed mixture of I(0) and I(1). The ARDL Co-integration result revealed that long run relationship exists among the selected variables of interest in this study. Furthermore, ECM technique revealed that Financial Crises have negative and significant effect on Economic growth in Nigeria both in the long run and short run. Also, the effect of current value of Inflation was found to be negative and significant in the long run and that of Trade openness was positive and statistically significant in the short run. Also, the study found that there are long run and short run positive and significant impacts of Liberalization on Economic growth. Finally, the findings revealed that the current year values of Money Supply have negative and significant impact on current Economic growth; however, its past value has positive impact. The study concluded that a long-run relationship existed between financial crises and economic growth; specifically, such crises have negative and significant effects on economic growth of Nigeria. The government in general should tinker with the current policy prescription regarding the establishment of financial institutions especially those that cannot qualify for the status of domestically systematically important to avert recurring crises in the financial sector that have impacted the macro-economy negatively.

### **Background to the Study**

Economic growth of a country is desirable for any country whether developed, developing and under-developed as it is usually a desirable outcome of a people, a measure of performance of leaders and a global measure of standard of living. It has formed the fulcrum of research efforts by scholars and an important tool for projection by national economies and policy rethink. In the case of Nigeria as a developing country, there is acute need to understand how financial crises have affected economic growth.

Anyanwu (2015), stated that economic growth is the increase in the amount of goods and services produced in an economy which is measured by positive changes in a country's gross domestic product. Economic growth is the increase in national income, as reflected in the capacity for production of goods and services regardless of whether the increase is on a larger or small scale.

Ogbebor (2018), described economic growth as the increase in per capita gross domestic product (GDP) or other measures of aggregate income, typically reported as the annual rate of change in the real GDP. Economic growth is primarily driven by improvement in productivity, which involves producing more goods and services with the same inputs of labour, capital, energy and materials. Furthermore, Palmer (2016), noted that economic growth refers to an increase in the productive capacity of an economy as a result of which the economy is capable of producing additional quantities of goods and services. The author emphasized that Gross Domestic Product is a measure of the value of the goods and services produced in the economy irrespective of who owns the factors of production used to produce those goods and services. Considering the above description, it turns out that a major way of ascertaining economic growth would be to calculate it as a numerical value. Therefore, economic growth can be calculated as a percentage increase in the Real Gross Domestic Product (RGDP) of a given economy.

According to Rauf, Iram, Rabia, Muhammad, Ahmed and Javed (2011), financial crises refers to a mixture of conditions in which few financial organizations or assets rapidly lose the big division of their worth. One of the implications of the crises, according to the authors, is inflation and debt overhang which is measured by financial stress index, thus, the economies which face crises have unreliable and crises prone banking system. The authors further emphasized that the responsible factor for financial crises are interest rates, inflation rate and increase in the amount of foreign debt. Kwack (2000), explained that financial crises result past paced exchange rate depreciation or sharp fall in international reserves. Inflation rate is also a main contributor to financial crises. Inflation rate naturally has a negative relationship with banking sector development and stock market development.

Furthermore, Kouki, Rym and Monia (2017), argued that financial crisis denotes an attack against the national currency significantly reducing the national foreign currency reserves and leading to a sharp depreciation or a nominal devaluation of a country's currency. The consequences manifest in a deterioration of economic conditions of the country.

Incidentally, consumption, investment and economic prosperity decline absolutely, hence, a major cause for concern. The failure of banks has very serious consequences on both households, businesses and governments as it increases the rate of unemployment, a source of financial dis-intermediation, resulting in shallow financial depth, weak capital accumulation and a general decrease in purchasing power.

Ogbebor (2018) argued that liberalization refers to lessening of controls and stated that financial market liberalization is thus the application of the general principles of liberalization to financial markets and systems which consists of both the capital and money markets. The author further asserted that with liberalization, there is a linkage of the domestic economy with the global economy by opening up the domestic economy to the entire global economy for investment and other purposes. In tandem with the study of Ogbebor (2018), Ranciere, Tornell and Westerman (2016) noted that financial liberalization and trade openness significantly increase the probability of financial fragility and crises. This implies that real exchange rate over-valuation, inflation and openness to trade are associated with higher probability of financial crises. Ogbebor, Okolie and Siyanbola (2020), noted that there are several different characterizations of liberalization which include official government policies that focus on deregulating credit as well as interest rate controls, removing entry barriers for foreign financial institutions, privatizing financial institutions and removing restrictions on foreign financial transactions.

Dell'Arricia and Marquez (2014) argued that financial liberalization leads to rapid lending development driven by a reduction in banks' screening incentives. In their model, banks' incentives to screen potential borrowers come from adverse selection among banks. Therefore, when financial markets are liberalized and many new and untested projects request funding, banks do not have strong incentives their pool of applicants and rapid credit expansion ensues. In this case, financial liberalization increases investment and growth but also leads to a deterioration in the quality of average banks portfolio that will lead to financial crises. Similarly, at the macro- economic level, as negative shocks occurs, it will give way to financial crises and output losses.

In empirical literature, there are many characteristics of financial crises in the economy which includes inflation rates, stock market crashes, currency devaluation, banking crises, increase in the amount of foreign debt, decreasing foreign reserves and slow growth rates. The exact relationship between financial crises and economic growth has generated diverse opinions in the empirical literature, a number of studies have shown conflicting results (Ejike, Anah and Onwuchekwa, 2018; Sheida and Taggert, 2015; Ranciere, Tornell and Westerman, 2016; Dell'Arricia and Marquez, 2014). Furthermore, previous studies such as Kouki, Rym and Monia (2017) identified that the impact of financial crisis on African economies is felt through two main channels: financial system channel and trade channels. Noting that the impact of crisis was felt more through trade channels than the financial channel, Allen and Giovanneti (2011), argued that this can be traced to low level of financial development in Africa which protected the countries from

direct impact of the crises. On the other hand, Aryeetey and Ackah (2016), singled out capital markets and the banking sector as direct channels through which financial crisis had an impact on African economies. The authors argued that financial crisis in African economies is as a result of opening the markets/integrating the markets with international financial market. Thus, this study examined the effect of financial crises on economic growth in Nigeria by examining the key variables of financial crises measured by financial stress index, liberalization, inflation, trade openness and money supply while economic growth was measured by real gross domestic growth.

## **Review of Related Literatures**

### **Real Gross Domestic Product**

Ogbebor, Oguntodu and Olayinka (2017), described economic growth as the increase in per capita gross domestic product (GDP) or other measures of aggregate income, typically reported as the annual rate of change in the real GDP. Economic growth is primarily driven by improvement in productivity, which involves producing more goods and services with the same inputs of labour, capital, energy and materials. Real Gross Domestic Product is an economic indicator providing overall picture of the economy and its performance. It is a measure of the value of economic output produced by an economic system, adjusted for inflation and price changes (Aiguh, 2013). Also, Real Gross Domestic Product measures the actual increase in goods and services and excludes the impact of rising prices

### **Liberalization**

Kaminsky and Schmukler (2015), opined that liberalization consists of the deregulation of the foreign sector capital account, domestic financial sector and the stock market sector. Ogbebor (2018), pointed out that liberalization could be beneficial if it results in greater savings and reduction in cost of capital. Theoretically, financial liberalization is expected to lead to higher real interest rates and stimulate savings. In return, a higher level of savings would be expected to finance a higher level of investments, therefore, leading to higher economic growth. From this definition, the author put forward that financial liberalization occurs when at least two of the three sectors which comprises of the foreign sector capital account, domestic financial sector and the stock market sector are fully liberalized and the third one is partially liberalized. Ogbebor, Okolie and Siyanbola (2020), argued that liberalization has both a domestic and foreign dimension. In general, liberalization focuses on introducing or strengthening the price mechanism in the market, as well as improving the conditions for market competition thereby leading to economic growth. In the literature, several arguments in favour of liberalization have been put forward. Most of these arguments implicitly start from the neoclassical perspective, which assumes that markets are most efficient in allocating scarce resources.

### **Inflation**

Uwubanmwun and Eghosa (2015), defined inflation as a persistent increase in prices of goods and services over a period of time in the economy. In other words, when the level of price increases, each unit of currency buys fewer goods and services, hence the purchasing power of money is said to be eroded. Ogbebor and Siyanbola (2018), argued



that rising inflation rates is one of the factors that could derail the economy of any nation. The rate of inflation in an economy reflects the economic performance and stability in prices of any country and this affects the economic performance on the international market. Reddy (2012), also gave the definition of inflation as a situation whereby more money chases few goods in the economy. This means that when there is an excess supply of money available it is able to purchase less goods and services. This simply reveals that more money chases few goods and services. Hence, there is no real growth in output and in the economy during inflationary period.

### **Trade Openness**

Ogbebor (2018), argued that trade openness is a multi-dimensional concept which implies that a country can choose to be opened or slightly opened with respect to the capital or financial market that could be based on technology, culture, science, culture, inward and outward orientation. Moreover, a country can strategically and simultaneously decide to be open in an aspect such as trade and not too open in another aspect such as foreign direct investment just to reduce foreign ownership. Trade Openness is a measure of the extent to which a country is engaged in the global trading system. Trade openness is usually measured by the ratio between the sum of exports and imports and gross domestic product (GDP). Kim (2011) supports that trade openness could be synonymous with the idea of neutrality, the indifference between earning a unit of foreign exchange by exporting and saving a unit of foreign exchange through import substitution. International trade openness is a channel through which FDI, capital inputs, goods and services flow to host countries or regions (Tahir and Omar, 2014).

### **Money Supply**

Money supply is measured as the total stock of money circulating in an economy. The circulating money involves the currency, printed notes, money in the deposit and in the form of other liquid assets (Ogbebor and Okolie, 2018).

## **Theoretical Review**

### **Theory of Financial Liberalization**

The theory of financial liberalization was propounded by the seminal works of McKinnon (1973) and Shaw (1973). According to financial liberalization theory, deregulating the domestic financial market and allowing the market to define the interest rate and controlling the capital that is, credit, will help in macroeconomic stability and economic growth of countries. Financial development can be defined as improvement in quality, quantity and efficiency of financial intermediary services. In this respect, financial development refers to how efficiently intermediaries and financial markets are functioning, and it depends on the financial structure of the economy (Ogbebor, 2018).

In support of this theory, Ogbebor Okolie and Siyanbola (2020), argued that liberalization includes official government policies that focus on deregulating credit as well as interest rate controls, removing entry barriers for foreign financial institutions, privatizing financial institutions, and removing restrictions on foreign financial transactions. Hence,

the theory of liberalization has both a domestic and foreign dimension. In general, liberalization focuses on introducing or strengthening the price mechanism in the market, as well as improving the conditions for market competition thereby leading to economic growth.

Critiques of this theory such as Stiglitz (2000), Boot (2014), and Hellmann (2014), argued that financial liberalization has led in many cases to disappointing results and in some cases lead to economic and financial crises. First, Stiglitz (2000), pointed out that financial liberalization as such does not solve the problem of asymmetric information which may prevent financial intermediation from becoming more efficient in a liberalized market. Similarly, financial liberalization may actually aggravate information problems. Also, Boot (2014) noted that more competition in financial markets may also imply a reduction in profit margins and an increased financial fragility of financial intermediaries such as banks. Hellmann (2014) emphasized that liberalization reduces the franchise value of banks, which makes them more prone to financial disruption and stimulates risk taking in order to try to increase profits under the pressure of falling interest rate margins. Reduced margins may also stimulate banks to economize on screening and monitoring efforts, and they may be more willing to opt for a gambling strategy when allocating loans, that is, putting less emphasis on risk and more on profit. Thus, financial liberalization may trigger financial crises if it leads to excessive risk taking under the pressure of increased competition. The theory is thus applicable to this study as it provides the link between liberalization and financial crises.

### **Theory of Financial Development**

The theory of financial development was developed by Robinson in 1952 and was coined by Patrick in 1966. According to Patrick (1966), there exist two theoretical links between financial development and economic growth. The first link is called “demand following”, and it involves the measurement of the growth in demand of financial services which depend on the growth of real economic output and the process of commercializing and advancement of agriculture, industry and other sectors. In other words, economic growth causes financial development. The faster growth of real national income, the larger will be the demand by firms for external funds and also among different sectors or industries, the need for financial intermediation will be more sensible for transferring savings to fast growing sectors from slow growing sectors and from individuals. The second theoretical link between financial development and economic growth is called “supply leading”. Supply leading works in two ways: First, by transferring the resources from old low growth sector to the modern high growth sectors and, second, by stimulating the enterprises response to the modern sectors (Banam, 2010). Therefore, financial repression policies hinder financial development and, hence, are theoretically expected to have a negative impact on a country's economic growth. Therefore, it is theoretically expected that financial development will lead to economic growth, whereas, financially repressive policies such as interest ceilings, high reserve ratios and credit programs alike, will lead to lower savings, lower investments and will ultimately have a negative impact on economic growth.

In support of the supply leading hypothesis, Ogbekor, Ajibade and Awonuga (2020), noted that financial development leads to growth, which implies that an improvement in the efficiency of capital accumulation or an increase in the rate of savings enhances financial sector development which thereby leads to economic growth. Specifically, the authors is opined that as entrepreneurs have new access to the supply leading funds, their expectation increases and new opportunities/horizon materializes which fuels economic growth due to access to private sector credit which is an important indicator of deepening of the financial sector.

Critiques of this theory such as Thanvegelu (2014), argued that the causal relationship between financial development and economic growth depends on the stage of economic development. In the early stages of economic development, the supply-leading view can stimulate real capital formation. The development of new financial services creates new opportunities for savers and investors and causes an increase in economic growth. The supply leading view becomes less important as financial and economic development continue, and gradually the demand-leading view start to dominate. This theory is germane to this study as it shows the relationship between financial sector development, financial crises and economic growth.

### **Wicksell's Theory of Financial Crises**

The Wicksell's approach to financial crises was propounded by Knut Wicksell in 1898. Wicksell's approach serves as a suitable framework to explain financial crises. It stresses the character of capitalist development as a sequence of cumulative expansion and contractions which affect the whole economy. A cumulative expansion period is triggered exogenously. An expansion will lead to increasing instability and fragility and must sooner or later come to an end. It makes place for a cumulative contraction phase. A sharp enough contraction will lead to systemic problems in the financial system. The vision Wicksell develops is an economy which switches from cumulative expansion to cumulative contraction whereas the end of the cumulative processes cannot be explained endogenously in any strict sense (Detzer and Hansjorg, 2014).

In support of this theory, Mauro (2013), explained that the Wicksell's theory of financial crises provides an appropriate framework of cumulative processes which includes expansion and contractions and its effect on triggering financial crises in the long run. Laider (2009) criticized the Wicksell's theory of financial crises on the ground that Wicksell's characterization of monetary neutrality was internally inconsistent under some circumstances in growing economy where zero credit creation would imply falling prices. Thus, the theory focused majorly on the deviation of the market rate of interest from its neutral level while neglecting the price level behaviour. This theory is relevant to this study as it explains the key effect of capitalist development in triggering financial crises in the economy. This study is therefore hinged on Wicksell's theory of financial crises.

### **Empirical Review of Related Studies**

Several studies have examined financial crises and economic growth in both developed and developing economies using different methodologies. Kouki, Rym and Monia (2017), examined the effect of financial crises on GDP growth of a sample of 28 emerging and developed countries over the period 1980-2011. By considering a comparative analysis of the impact of the three types of crises, the study found that the effect of banking crises is more expensive and deep than monetary crises on GDP growth. As for the twin crisis, with a simultaneous occurrence of a monetary and a banking crisis, the effect seems to be more serious and more persistent than the other types of crises. This negative effect is more pronounced when variables related to the status of the financial system, liberalization, and the level of institutional development is considered.

Rauf, Iram, Rabia, Muhammad, Ahmed and Javed (2011) investigated the causal relationship between major indicators of financial crisis which includes inflation rate, interest rate, volume of foreign debt and economic growth in Pakistan. This study also highlights the stability of the relationship between indicators of financial crisis and economic growth. The annual time series data ranging from 1972 to 2010 was used for the analysis. Johansen's co-integration test was used to check the stability of long run equilibrium relationship between the variables used in the study. The results indicated the presence of long run stable equilibrium relationship between the three components of financial crisis and economic growth in Pakistan. The estimates based on pair-wise Granger Causality test showed the presence of bidirectional causal relationship between each indicator of financial crisis and economic growth.

Ito (2014) sought to determine the effect of different financial crises across countries having an open capital account and those imposing restrictions on capital mobility. The study examined a sample of sixty-two (62) countries consisting of twenty-two (22) industrialized countries, forty (40) less developed countries and twenty-nine (29) emerging countries. The author found that liberalization reduces, on the one hand, financial crisis probability in developed countries and increases this probability for the less developed and emerging countries, on the other hand. He found also that financial liberalization tends to mitigate the negative impact of the crisis in developed countries. Moreover, a further opening of the financial markets allows these countries to stream up quickly their growth path and therefore regain an initial growth level before the crisis. For emerging countries, the results appear to be less optimistic as financial liberalization only aggravates the recessionary effect of the crisis. In this regard, the crisis lasts longer and its impact is deeper.

In another study, Angkinand (2008), sought to evaluate the role of regulation and banking supervision in explaining the severity of banking crises. His study focused on a sample of thirty-five (35) developed and emerging countries over the 1970-2003 periods. By detecting forty-seven (47) banking crises episodes, they showed that loss in production - calculated as the difference between current GDP level and potential GDP level - is relatively low in countries that provide deposit insurance coverage and which apply strict quality assets and capital adequacy requirements. However, banking supervision does not significantly explain the severity of the crisis.



The study of Cecchetti, Kohler and Christian (2009), which used a different method, confirmed the above results. The authors examined a sample of thirty-five (35) countries; the authors detected forty (40) systemic banking crisis episodes. First, they studied the duration, depth as well as production cost associated with these crises. The authors concluded to a strong shrinkage in output because of systemic crises. Second, they examined the determinants of production losses. To this end, initial conditions, financial structure, growth rate, policy responses as well as external conditions were taken into account. Their results indicated that costs are higher when banking crises are accompanied by a monetary crisis, and when growth is low before the outbreak of crises. They also showed that systemic crises are less intense when they are accompanied by a sovereign debt default. Sheida, and Taggert. (2015) showed that currency crises are accompanied by a drastic loss of foreign exchange reserves and a significant long-term production decline. The results indicated that the resumption of production after the currency crises takes, on average, a U-shaped production curve that entirely recovers its pre-crisis level in three years.

## **Data and Methodology**

### **Data**

The data used in this study were collected from Central Bank of Nigeria Statistical Bulletin, the Nigerian Stock Exchange Annual Reports, National Bureau of Statistics (NBS) and World Bank Development Indicator databases in the period from 1985 - 2019. The series that are considered for this study are Real Gross Domestic Product Growth rate (GDPG) for measuring Economic Growth and Financial Stress Index (FSI) for measuring Financial Crises. Liberalization (LIB), Inflation (INF), Trade Openness (TOP), and Money Supply (M2) are the other domestic and external factors which might influence economic growth concurrently as suggested by relevant theories and previous empirical studies. Following the approach of Ishrakieh, Dagher and El Hariri (2020) financial stress index (FSI) (a proxy for financial crises) in this study measured stress in the banking sector, the equities market, and the foreign exchange and other markets. The approach was proposed by Balakrishnan, Danninger, Elekdag and Tytell (2011) and Cardarelli, Elekdag and Lall (2009, 2011). The main method of aggregating the stress indices from the three (3) financial sectors mention earlier is Variance Equal Weight (VEW). This method is the most regularly used method of weighting in the extant literature.

### **Financial Stress Index computation**

The Ishrakieh et al., (2020) FSI approach is a modified version of Balakrishnan et al. (2011), Cardarelli et al., (2009, 2011), Sadia and Yasin (2011) approaches and it that considered ten (10) standardized indicators, each having an equal weight of one and cover all the necessary aspects of financial stress most especially from a developing country's angle. However, for the purpose of this study; we used eight (8) standardized indicators each having an equal weight of one and cover all the necessary aspects of financial stress from a developing country's perspective. This is because we could not obtain 3 months and 6 months treasury bills rates series that extends back to 1985. The detail of the computation is provided below:

**a. Banking Sector**

- i. **Beta of banking sector (BETA):** The beta of the banking sector is measured using the standard capital asset pricing model (CAPM) beta which is association (12 months rolling window) between the total returns of the banking-sector stocks and the market return divided by the variance (12 months rolling window) of the market return. To achieve this; monthly stock price was used to compute year-over-year banking or market returns. The beta is computed as:

$$\beta_t = \frac{COV(B_t^r, M_t^r)}{\sigma_{t,M}^2}$$

Where  $\beta_t$ ,  $B_t^r$ ,  $M_t^r$  and  $\sigma_{t,M}^2$  are banking sector beta, banking return, market return and variance of the market return.

- ii. **Loans from Central Bank to commercial banks:** is measured as the annual percentage change in Central bank's loan to commercial bank.
- iii. **Interest rate spread:** is measured as lending rate minus deposit rate and it is
- iv. Expressed in percentage (%).

**b. Equity Market**

- i. **Stock Market Volatility:** is obtained from GARCH (1,1) specification using year-over-year return such that higher volatility indicates higher stress
- ii. **Stock Market Return:** is measured as the growth rate of year-over-year market return multiplied by -1 such that increasing stock market return indicates falling market stress.

**c. Foreign Exchange Market and Other Markets**

- I. **Exchange market pressure index (EMPI):** in computing EMPI we considered exchange rate depreciations and declines in external reserves and is computed as:

$$EMPI_t = \frac{(\Delta EXR_t - \mu_{t,\Delta EXR})}{\sigma_{t,\Delta EXR}} - \frac{(\Delta RESV_t - \mu_{t,\Delta RESV})}{\sigma_{t,\Delta RESV}}$$

Where  $\Delta EXR_t$ ,  $\Delta RESV_t$ ,  $\mu_{t,\Delta EXR}$  &  $\mu_{t,\Delta RESV}$  and  $\sigma_{t,\Delta EXR}$  &  $\sigma_{t,\Delta RESV}$  year-over-year change in exchange rate (in %), year-over-year change in external reserve, (in %), mean & standard deviation of percentage change in exchange rate and mean & standard deviation of percentage change in external reserve respectively.

- ii. **Financial dollarization:** is measured as a ratio of the total deposit in foreign currencies to the total deposit of residents and non-residents. An increase in the ratio indicates increase in economic or political unrest.
- iii. **Debt in foreign currencies over total debt:** this is a debt risk ratio which is measured as ratio of total external debt to total debt.

Overall, each series standardized by subtracting the mean and dividing by its standard deviation after which we sum the standardized series to form a series called Financial Stress Index (FSI). However, it is pertinent to stress here that a value above zero or a higher positive value of the FS Index indicates stress episodes, while zero or negative value indicates calm episodes.

## Methodology

To empirically investigate the effect of Financial Crises on Economic growth in this study autoregressive distributed lag (ARDL) bounds co-integration and ECM techniques were used. The approach was developed by Pesaran and Shin (1999) and Pesaran et al. (2001). One of the advantage of the approach that makes it useful for this study is that it allows a mixture of I(1) and I(0) variables. However, prior to the estimation of our model, the chosen variables of interest were summarized using mean, median, minimum, maximum and standard deviation as the descriptive statistical tools. In addition, we examined the unit root property of our series using Augmented Dickey-Fuller (ADF) and Phillips-Perron (PP) unit root tests. The structural lags are established for our model using minimum Akaike's information criteria (AIC). After estimating the ARDL models, the Wald test (F-statistic) is computed for Bound Co-integrating test with the null hypothesis of no long-run relationship. The computed F-statistic value is evaluated with the critical values. Thus, if the computed F-statistic is greater than the upper bound value, then series share a long-run level relationship. However, if the computed F-statistic falls between the lower and upper bound values, then the results are inconclusive. Accordingly, the augmented ARDL  $(p, q_1, q_2, \dots, q_k)$  can be written as:

$$\alpha(L, p)y_t = \alpha_0 + \sum_{i=1}^k \beta_i(L, q_i)x_{i,t} + \varepsilon_t \quad \dots 1$$

Where  $\alpha_0$  is a constant,  $y_t$  denotes the dependent variable,  $L$  is a lag operator,  $x_{i,t}$  is the vector of regressors (where  $i = 1, 2, \dots, k$ ) and  $\varepsilon_t$  is the disturbance term.

The long run relationship models are:

$$GDPG_t = \alpha_0 + \alpha_1 FSI_t + \alpha_2 LIB_t + \alpha_3 INF_t + \alpha_4 TOP_t + \alpha_5 M2_t + \varepsilon_t \quad \dots 2$$

The short run relationships are;

$$\Delta GDPG_t = \alpha_0 + \sum_{i=1}^p \gamma_i \Delta GDPG_{t-i} + \sum_{i=0}^{q_1} \delta_i \Delta FSI_{t-i} + \sum_{i=0}^{q_2} \delta_i \Delta LIB_{t-i} + \sum_{i=0}^{q_3} \delta_i \Delta INF_{t-i} + \sum_{i=0}^{q_4} \delta_i \Delta TOP_{t-i} + \sum_{i=0}^{q_5} \delta_i \Delta M2_{t-i} + \rho ECM_{t-1} \quad \dots 3$$

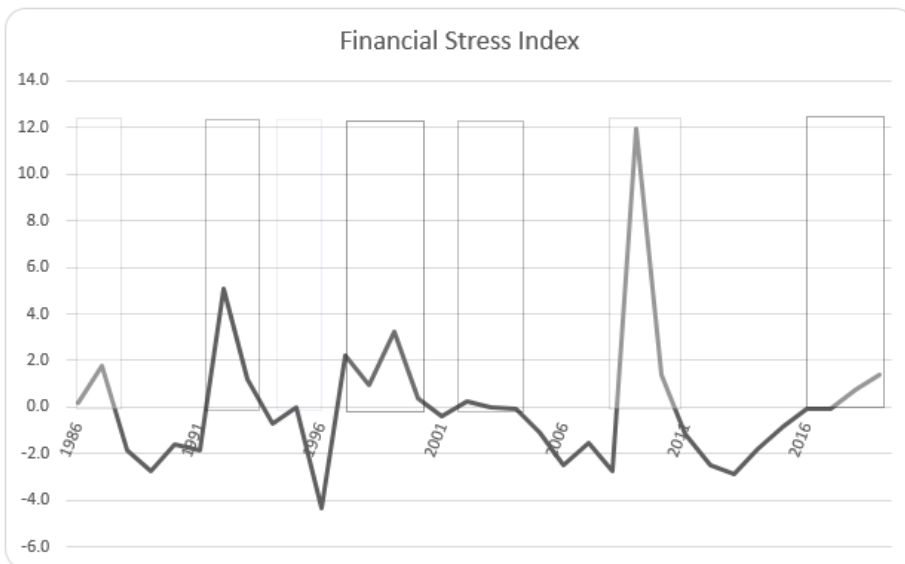
Where

$\Delta$  = the first-difference operator and  $ECM_{t-1}$  is an error correction term,  $GDPG$  = Real Gross Domestic Product growth (in %).  $FSI$  = Financial Stress Index (index that covers the relevant components of the three main channels; financial sectors through which crisis in spills over to the developing economies),  $LIB$  = Liberalization (measured as percentage growth rate in foreign ownership; in percentage),  $INF$  = Inflation Rate (measured as percentage change in annual consumer prices),  $TOP$  = Trade Openness (measured as the sum of export and import values divided by gross domestic product) and  $M2$  = money supply.

## Descriptive Statistics

### Trend of Financial Stress Index

In this subsection we, present and discuss the cycles of the Financial Stress Index computed in this study and briefly relate them with the major events such as financial, economic and political events that took place during the period under review. As stated earlier, a value above zero or a higher positive value of the FS Index indicates stress episodes, while negative value indicates calm episodes. As in Figure 1, we found a total of seven (7) stress episodes that edge up in 1987, 1992, 1995, 1997 - 1999, 2002 - 2004, 2009 and 2016 -2019. Interestingly, the years coincide with the years of financial stress in Nigeria triggered by political, economic or financial events. For instance, during the most severe stress episode (2009) which is the highest positive spike as depicts in Figure 1, Nigeria witnessed a financial crisis which coincided with the global asset bubble, resulting in illiquidity and insolvency for some banks in Nigerian and at the same time undermining investors' confidence.



**Figure 1:** Financial Stress Index

### Descriptive Result

The result of the descriptive analysis that refers to the way the data used in this study are structured is presented in Table 1.



**Table 1:** Descriptive Result

|          | GDPG   | FSI    | LIB      | INF     | TOP    | M2       |
|----------|--------|--------|----------|---------|--------|----------|
| Obs.     | 34     | 34     | 34       | 34      | 34     | 34       |
| Mean     | 4.381  | 0.000  | 1054.91  | 19.698  | 32.454 | 6571.08  |
| Median   | 4.418  | -0.097 | 394.05   | 12.386  | 34.057 | 1729.44  |
| Max.     | 15.329 | 11.939 | 10858.10 | 72.8355 | 55.573 | 27678.35 |
| Min.     | -2.037 | -4.347 | 38.55    | 5.388   | 7.598  | 23.81    |
| Std.Dev. | 3.895  | 2.846  | 2109.93  | 18.060  | 10.144 | 8543.54  |

**Source:** Author's computations, 2020.

From the Table 1, the average annual growth rate of GDP (GDPG) in Nigeria between 1986 and 2019 stood at 4.38% with the highest and lowest values of 15.33% and -2.037% respectively. The Financial Stress Index (FSI) has a median value which is -0.097 (negative) and an average value of approximately 0. These indicates that the country has relatively witnessed calm periods during the period of this study This is because negative values of the stress index indicate calm periods while high positive values indicate stress periods. Besides, the average (1054.91%) value of Liberalization (LIB) indicates that foreign ownership on average significantly grew by 1,054.91% during the period under review. During the period, Inflation and Trade openness were also found to edge up at 72.84% and 55.57% with average values of 19.70% and 32.45% respectively. For Money Supply, the average amount of currency and other liquid instrument available in Nigeria economy during the period 1986 - 2019 is N6, 571.08b.

### Stationarity Test

The results of the stationarity tests carried out to investigate the time series properties of the series carefully chosen for this study are presented in Table 2.

**Table 2:** Stationarity Test Result

| Variables | Test-stat. | ADF      |                              | PP       |                              | Order of Int. |
|-----------|------------|----------|------------------------------|----------|------------------------------|---------------|
|           |            | @ Level  | @ 1 <sup>st</sup> Difference | @ Level  | @ 1 <sup>st</sup> Difference |               |
| GDPG      | Stat       | -2.298   | -3.731                       | -3.460   | -10.756                      | I(1)          |
|           | P-value    | 0.423    | 0.036***                     | 0.061    | 0.000***                     |               |
| FSI       | Stat       | -5.202   | -8.506                       | -5.202   | -8.506                       | I(0)          |
|           | P-value    | 0.001*** | 0.000***                     | 0.001*** | 0.000***                     |               |
| LIB       | Stat       | -0.963   | -10.198                      | -2.748   | -10.973                      | I(1)          |
|           | P-value    | 0.934    | 0.000***                     | 0.225    | 0.000***                     |               |
| INF       | Stat       | -4.617   | -6.843                       | -3.588   | -4.978                       | I(0)          |
|           | P-value    | 0.004*** | 0.000***                     | 0.046**  | 0.002***                     |               |
| TOP       | Stat       | -3.564   | -4.330                       | -3.564   | -7.856                       | I(0)          |
|           | P-value    | 0.049**  | 0.010**                      | 0.049**  | 0.000***                     |               |
| M2        | Stat       | 0.600    | -5.633                       | 0.101    | -4.466                       | I(1)          |
|           | P-value    | 0.999    | 0.000***                     | 0.996    | 0.006***                     |               |

**Note:** \*\* and \*\*\* indicate 5% and 1% significance levels respectively.

**Source:** Author's computations, 2020.

The Augmented Dickey Fuller (ADF) and Phillips-Perron tests (PP) in their levels and first differences as presented in Table 2 clearly show that except Financial Stress Index (FSI), Inflation (INF) and Trade Openness (TOP) all the series are integrated of order one (I(1)). This simply means that the test statistic for Real Gross Domestic Product growth (GDPG), Liberalization (LIB) and Money Supply (M2) under both the ADF and PP are only significant at first difference suggesting that the null hypotheses of unit root are rejected at levels but accepted at first difference. Therefore, the series have to be first differenced to achieve stationarity. On the other hand, Financial Stress Index (FSI), Inflation (INF) and Trade Openness (TOP) are found to be integrated of order zero (I(0)) owing to the fact that their test statistics are significant at level. On the account of the mixed orders of integration (I(0)) and (I(1)), we proceeded to Bound co-integration test approach to investigate whether long run relationship exists among the variable.

### Bounds Co-Integration Test

Following the time series properties of the series as revealed by ADF and PP unit root test results, we employed Bounds Co-Integration test developed by Pesaran, Shin and Smith (2001)

**Table 3:** Bounds Co-Integration Test

| <i>Significance Level</i> | <b>10%</b> | <b>5%</b> | <b>2.50%</b> | <b>1%</b> |
|---------------------------|------------|-----------|--------------|-----------|
| <b>I0 Bound</b>           | 2.26       | 2.62      | 2.96         | 3.41      |
| <b>F-statistic</b>        | 3.871**    |           |              |           |
| <b>I1 Bound</b>           | 3.35       | 3.79      | 4.18         | 4.68      |

**Note:** \*\* and \*\*\* indicate 5% and 1% significance levels respectively.

**Source:** Author's computations, 2020.

In Table 3, we can see that the computed F-statistic value of 3.871 is above the upper critical bound value of 3.79 suggesting the rejection of the null hypothesis of no co-integration at 5% level of significance. Therefore, we conclude that there is existence of long-run relationship among the variables, the dynamic short-run relationship between the variables can be represented with and error correction model as reported in Table 4.

### Short run and Long run Models

Again, following the Bound co-integration test' result in the preceding subsection; we estimated the ARDL(1, 2, 0, 1, 2, 2) with the following parameters that indicate good fit and confirm the validity of the models and the results are presented in Table 4: F-statistics = 3.221; P - value = 0.012; R-squared = 0.699; Adj. R-squared = 0.482. Besides, the Durbin-Watson stat = 2.350; Serial Correlation LM Test [P - val] = 0.906 [0.424]; Heteroskedasticity Test [P - val] = 1.426 [0.258]; Ramsey Reset Test [P - val] = 1.410 [0.273] further indicate that the models are free from, Auto Correlation, Heteroskedasticity and misspecification problems.

**Table 4:** Short run and Long Run Models

| Variable                             | Coefficient   | Prob.  |
|--------------------------------------|---------------|--------|
| Long Run Coefficients                |               |        |
| FSI                                  | -0.8028**     | 0.0470 |
| LIB                                  | 2.4703**      | 0.0230 |
| INF                                  | -0.2859***    | 0.0003 |
| TOP                                  | -0.2457       | 0.0992 |
| M2                                   | -1.0322**     | 0.0274 |
| C                                    | 11.4262**     | 0.0488 |
| Short Run Coefficients               |               |        |
| FSI                                  | -0.6090***    | 0.0029 |
| FSI(-1)                              | 0.2404        | 0.1086 |
| LIB                                  | 1.6070**      | 0.0112 |
| INF                                  | -0.0664       | 0.1181 |
| TOP                                  | 0.0711        | 0.2065 |
| TOP(-1)                              | 0.2686***     | 0.0013 |
| M2                                   | -2.7038***    | 0.0001 |
| M2(-1)                               | 2.5591***     | 0.0001 |
| CointEq(-1)                          | -0.6505***    | 0.0000 |
| R-squared                            | 0.699         |        |
| Adj. R-squared                       | 0.482         |        |
| F-statistics                         | 3.221         |        |
| P - value                            | 0.012         |        |
| Durbin-Watson stat                   | 2.350         |        |
| Serial Correlation LM Test [P - val] | 0.906 [0.424] |        |
| Heteroskedasticity Test [P - val]    | 1.426 [0.258] |        |
| Ramsey Reset Test [P - val]          | 1.410 [0.273] |        |

**Source:** Author's computations, 2020.

**Note:** \*\* and \*\*\* indicate 5% and 1% significance levels respectively. The dependent variable is the annual percentage change in Real Gross Domestic Product

It can be understood from Table 4 that the coefficient of error correction term [Coint Eq (-1) = - 0.651; P - val = 0.000] of the model has the expected sign and it is statistically significant at 1% level of significance. This further supports the bound co-integration test's result by confirming the existence of a long-run relationship between the dependent variable and the independent variables. Besides, it indicates a relatively high speed of adjustment (65.05%) from short run disequilibrium to equilibrium in the in the long-run.

As in the Table, the coefficient of Financial Stress Index (FSI) is found to be negative and statistically significant at 5% level [ $\beta = -0.803$ ; P - val = 0.047]. This is suggesting that in the long run; Financial Crises has negative and significant effect on Economic growth in Nigeria during the period of this study. Similarly, the coefficient of the current FSI is negatively signed and statistically significant at 1% level [ $\beta = -0.609$ ; P - val = 0.003] in the short run. This also suggests that the effect of Financial Crises on Economic growth in the

short run is negative and statistically significant. On the contrary, the coefficient of Liberalization (LIB) is seen to be positive and statistically significant at 5% level [ $\beta = 2.470$ ;  $P - val = 0.023$ ] suggesting that in the long run; Liberalization (LIB) has positive and significant effect on Economic growth in Nigeria during the period under review. Equally, the coefficient of the current LIB is positively signed and statistically significant at 5% level [ $\beta = 1.607$ ;  $P - val = 0.011$ ] in the short run indicating that Liberalization (LIB) has positive and significant influence on Economic growth in the short run. The coefficients of Inflation (INF) are seen to be negatively signed both in the long run [ $\beta = -0.286$ ;  $P - val = 0.000$ ] and short run [ $\beta = -0.066$ ;  $P - val = 0.118$ ] but statistically significant at 5% level in the long run. This means that INF has negative effect on Economic growth particularly in the long run. Trade Openness (TOP) at lag 1 is observed to be having positive and significant effect on Economic growth; given the positive and significant coefficient [ $\beta = 0.269$ ;  $P - val = 0.001$ ] at 1% level. Furthermore, the current values of Money Supply (M2) both in the long run [ $\beta = -1.032$ ;  $P - val = 0.027$ ] and short run [ $\beta = -2.704$ ;  $P - val = 0.000$ ] have negative and significant effects on Economic growth at 5% level. However, the effect of the previous year (M2 (-1)) on Economic growth is seen to be positive and statistically significant at 1% level.

### **Discussion of Findings**

The study examines the effect of financial crises on economic growth in Nigeria using time series data that covers a period from 1986 to 2019. For data analysis, the major empirical tools utilized are Autoregressive Distributed Lag (ARDL) Co-integration and ECM techniques, following the result of the unit root test that revealed mixture of I(0) and I(1). The ARDL Co-integration result revealed that long run relationship exists among the selected variables of interest in this study. Furthermore, ECM technique revealed that Financial Crises has negative and significant effect on Economic growth in Nigeria both in the long run and short run. This corroborates the findings of Moriyama (2010) who studied the impact of financial stress in five Middle East and North American (MENA) countries which are Morocco, Egypt, Tunisia and Pakistan and found that Financial Stress Index (FSI) is negatively and significantly associated with growth rate in the MENA region. Also, the effect of current value of Inflation is found to be negative and significant in the long run and that of Trade openness is positive and statistically significant in the short run. The negative and significant effect of Inflation on Economic growth conform with findings in the previous studies such as the study conducted by Taiwo, (2011), who investigated the impact of inflation and investment on economic growth in Nigeria and found negative and significant impact on economic growth. In the same way, the positive and statistically significant of Trade openness in the short run is similar to the findings of Lawal, Nwanji, Asaleye and Ahmed (2016), who used ARDL approach to investigate the relationship between trade openness and Economic growth in Nigeria and find a negative long-run impact of trade openness on economic growth but a positive growth effect in the short run. In this study, we also found that there are long run and short run positive and significant impact of Liberalization on Economic growth and the positive effect is consistent with that of Ejike, Anah and Onwuchekwa (2018), who reported that liberalization has positive and significant effect on economic growth in



Nigeria, with an evidence of a long-run relationship. Finally, we observed that the current year values of Money Supply have negative and significant impact on current Economic growth however, it's past value (-1) have positive impact. The negative effect attests the findings of Suleiman, (2010) and Gatawa, Akinola and Olarinde (2017), who investigated the impact of money supply, inflation on economic growth in Nigeria and found negative impacts.

### **Summary, Conclusion and Recommendations**

Based on the result of the analysis, the ARDL Co-integration result revealed that long run relationship exists among the selected variables of interest in this study. Furthermore, ECM technique revealed that Financial Crises has negative and significant effect on Economic growth in Nigeria both in the short run and long run. Also, the effect of current value of Inflation is found to be negative and significant in the long run and that of Trade openness is positive and statistically significant in the short run. Also, the study found that there are long run and short run positive and significant impacts of Liberalization on Economic growth. Finally, the findings revealed that the current year values of Money Supply have negative and significant impacts on current Economic growth; however, their past values have positive impact.

The study concluded that a long-run relationship existed between financial crises and economic growth; specifically, such crises have negative and significant effects on economic growth of Nigeria. The study recommended amongst other things, government in general, should tinker with the current policy prescription regarding the establishment of financial institutions especially those that cannot qualify for the status of domestically systematically important to avert recurring crises in the financial sector that have impacted the macro-economy negatively.

### **References**

- Aiguh, L. A. (2013). The impact of capital market on the economic growth of Nigeria, *International Journal of Economics and Finance*, 1 (2), 97-115.
- Allen, F. & Giovanneti, G. (2011). The effects of financial crisis on sub-saharan Africa, *Review of Development Finance*, 1 (1), 1-27.
- Angkinand, P. (2008). Output loss and recovery from banking and currency crises, *Research of Social Science*, 1 (2), 76-95.
- Anyanwu, B. O. (1993). *Enhanced service delivery as strategy for Bank stability and growth: Growth and stability of Nigeria's financial services industry*, Lagos: FITC, 56-72.
- Anyanwu, J. C. (2015). Stock market development and economic growth in Nigeria, *The Journal of Business Perspective*, 2 (1), 33-38.
- Aryeetey, E. & Ackah, W. (2016). Global financial crises in developing and emerging economies, *Journal of African Business*, 20 (3), 339-357

- Balakrishnan, R., Danninger, S., Elekdag, S. & Tytell, I. (2011). The transmission of financial stress from advanced to emerging economies, *Emerg. Mark. Finance Trade* 47 (2), 40-68.
- Banam, K. (2010). Impact of financial liberalization on economic growth in Iran, *Journal of Finance*, 3 (2), 87-96.
- Boot, A. (2014). Financial development, financial liberalization and social capital, *Journal of Applied Economics*, 50 (11), 1268-1288
- Cardarelli, M. R., Elekdag, S. & Lall, M. S. (2009). Financial Stress, Downturns, and Recoveries No. 9-100. International Monetary Fund.
- Cardarelli, R., Elekdag, S. & Lall, S., (2011). Financial stress and economic contractions, *J. Financ. Stabil.* 7 (2), 78-97.
- Cecchetti, G., Kohler, M. & Christian, U. (2009). Financial crises and economic activity, *National Bureau of Economic Research, Working Paper Series*.
- CBN/NDIC (1995). Distress in the Nigerian financial services industry: A CBN/NDIC Collaborative Study. Page Publishers Yaba, Lagos.
- CBN (2011). Publications/BSD/CBN supervisory intervention guideline, Bank Supervision Department/Financial Policy & Regulation Department. February, 2011.
- Dell'Arricia, G. & Marquez, R. (2014). Information and bank credit, *Journal of Financial Economics*, 72(1), 185-214.
- Detzer, D. & Hansjorg, H. (2014). Theories of financial crises, *Journal of Finance*, 3 (2), 76-85.
- Ejike, C., Anah, S. A. & Onwuchekwa, F. C. (2018). Trade liberalization and economic growth in Nigeria, *International Journal of Business Management*, 1 (1), 68-81.
- Gatawa, N. M., Akinola, A. & Olarinde, M. O. (2017). Impact of money supply and inflation on economic growth in Nigeria, *IOSR Journal of Economics and Finance (IOSR-JEF)*, 8(3), 26-37.
- Hellmann, N. (2014). Financial liberalization and economic growth, *Journal of International Business Research*, 7 (3) 121-135
- Ishrakieh, L. M., Dagher, L., & El Hariri, S. (2020). A financial stress index for a highly dollarized developing country: The Case of Lebanon, *Central Bank Review*. 20, 43 – 52. <http://doi:10.1016/j.cbrev.2020.02.004>

- Ito, H. (2014). A forensic analysis of global imbalances, *Oxford Economic Papers*, 66 (2), 465-490
- Kaminsky, G. & Schmukler, S. (2015). Financial liberalization and emerging stock market stability, *IMF Working Papers*.
- Kim, D. (2011). Trade growth and income, *The Journal of International Trade & Economic Development*, 20 (5), 677-709.
- Kouki, M., Rym, B. & Monia, C. (2017). Impact of financial crises on GDP growth in developed and Emerging Countries, *International Journal of Economics and Financial Issues*, 7 (6), 212-227.
- Kwack, S. (2000). Historical transformation and prospects of the Korean economy, *Economic Planning*, 358-393.
- Laidler, D. (2009). Financial stability, monetarism and the Wicksell connection, *Review of Economic Analysis*, 1 (1), 60-79.
- Lawal, A. I., Nwanji, T. I., Asaleye, A., & Ahmed, V. (2016). Economic growth, financial development and trade openness in Nigeria: An application of the ARDL bound testing approach, *Cogent Economics and Finance*, 4, 1-15.
- MacKinnon, J. C. (1973). Analysis of energy flow and production in an unexploited marine flatfish population, *Journal of the Fisheries Research Board of Canada*, 30 (11), 1717-1728
- Mandel, B. (2009). Financial Liberalization and Inequality in Latin America, *Michigan Journal of Business*, 2(3), 57-96.
- Mauro, W. (2013). Financial sector reforms after crisis, *Journal of Finance*, 3 (2), 98-112
- Moriyama, K. (2010). The Spill over effects of the global crisis on economic activity in MENA emerging market countries – An analysis using the financial stress index, IMF Working Paper WP/10/8. Middle East and Central Asia Department.
- Ogbebor, P. I. (2018). The relationship between financial market liberalization, stock market performance and economic growth, *UNILAG Journal of Business*, 4, 189-204.
- Ogbebor, P. I. & Okolie, O. (2018). Macroeconomic indicators and stock market performance, *Nigeria Journal of Business and Management Sciences*, 2, 67-89.
- Ogbebor, P. I. & Siyanbola, T. (2018). Financial development and economic nexus in Nigeria: The role of the stock market, *International Journal of Research and Methodology in Social Science*, 4 (3), 29-36.

- Ogbebor, P.I., Ajibade, A. & Awonuga, A. (2020). Financial deepening and income of selected deposit money banks listed in Nigeria, *International Journal of Management Sciences and Business Research*, 9(3), 51-63.
- Ogbebor, P.I., Oguntodu, A. & Olayinka, M. (2017). Financial liberalization and stock market development: Evidence from emerging equity market of Nigeria, *Journal of Association Professional Bankers in Education*, 1 (1), 19-25.
- Ogbebor, P. I., Okolie, O. & Siyanbola, T. (2020). Market opening and economic growth in Nigeria, *Journal of Economics and International Finance*, 12(1), 20-28.
- Olofu, A. & Ironbar, V. E. (2017). Training the adult facilitator for improved productivity in the 21st century: A case study of the federal capital territory, Abuja. *International Journal of continuing education and development studies (IJCEDS)*, 5 (1), 165-170
- Palmer, K. (2016). Economic Growth in Developing Economies, *Journal of Economic Perspective*, 2 (3), 78-105.
- Patrick, H. T. (1966). Financial development and economic growth in underdeveloped countries, *Economic Development and Cultural Change*, 14 (2).1-31.
- Pesaran, H. & Shin, R. (1999). Pooled mean group estimation of dynamic heterogeneous panels, *Journal of American Statistical Association*, 9 (4), 621-634.
- Pesaran, M. H., Shin, Y. & Smith, R. J. (2011). Bounds testing approaches to the analysis of level relationships, *Journal of Applied Econometrics*, 16 (3), 289-326.
- Ranciere, R., Tornell, A. & Westerman, A. (2016). Financial liberalization, Debt Mismatch, allocative efficiency and growth, *American Economic Journal*, 8 (2), 1-44.
- Rauf, A., Iram, B., Rabia, I., Muhammad, I., Ahmed, A. & Javed, A. (2011). Financial Crises and Economic Growth in Pakistan, *Middle- East Journal of Scientific Research*, 9 (3), 425-430.
- Reddy, D. V. L. (2012). Impact of inflation and GDP on stock market returns in India, *International Journal of Advanced Research in Management and Social Sciences*, 1 (6), 120-136.
- Sadia, M. M. & Yasin, M. J. (2011). *The impact of recent financial crisis on economic growth and youth employment in South Asia*, Centre for Research on Economic and Social Transformation (CREST). Available at SSRN: <https://ssrn.com/abstract=1761129> or <http://dx.doi.org/10.2139/ssrn.1761129>
- Shaw, E. S. (1973). *Financial Deepening in Economic Development* (Oxford University Press, New York).
- Sheida, S. & Taggert, A. (2015). Output cost of currency crisis and banking crisis, *Journal of Comparative Economic Studies*, 61 (1), 81-102.



- Stiglitz, E. (2003) Finance and growth in developing economies, *Asian Journal of Empirical Research* . 15, 132-141.
- Suleiman, D. M. (2010). The impact of money supply on economic growth in Nigeria (1970-2007), *European Journal of Scientific Research*, 41 (2), 314-322.
- Taiwo, M. (2011). Impact of inflation and monetary policy stabilization on economic growth performance in Nigeria, *Journal of Economics and Sustainable Development*, 2 (8), 26-38.
- Tahir, M. & Omar, A. (2014). Trade openness and economic growth: A review of the Literature, *Asian Social Science*, 10 (9), 137-143.
- Uwubanmwun, A. & Eghosa, I. L. (2015). Inflation rate and stock returns: Evidence from the Nigerian stock market, *International Journal of Business and Social Science*, 6 (11), 155-167.