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Portfolio Capital Inflows and Banking Crisis in Emerging Market and Developing Economies (EMDEs): Bank-level Evidence from Nigeria.

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Abstract

The objective of the paper is to assess the effects of foreign portfolio capital surge on the banking sector in Nigeria from 2005 - 2018. Using a simple trend analysisin a static general equilibrium framework, the paper reveals that portfolio capital inflows, in the wake of monetary policy independence in Nigeria, led to portfolio capital surge which resulted to credit boom and speculative transactions in the Nigerian Stock Exchange (NSE) leading to assets price bubble. When the bubble burst during the global financial crisis (GFC) in 2007, and thereafter in 2014, portfolio capital inflows reversed and banking stocks prices declined sharply. This contributed to the high level of banks' non-performing loans (NPLs). The rise in NPLs resulted to poor assets quality of the banks which contributed significantly to banking crisis in Nigeria. Based on these findings, the paper recommends that CBN should review upward the existing macro-prudential regulationsin addition to taking someportfolio capital inflowscontrol measures toreduce banking crisis and promote banking stability in Nigeria.

Keywords: *Mundell–Fleming theory of impossible trinity, Capital account liberalization, Monetary policy independence, Portfolio capital inflows, Banking crisis, Nigeria.*

1.0 Introduction

The theoretical debate on the prospectsofforeign capital flows one conomic growth for emerging market and developing economies (EMDEs)is a long-standing one in the literature. According to the neo-classical theory, allowing the free flow of capital across countries would lead to a more efficient allocation of financial resources and welfare that is beneficial to both borrowers and lenders, in a manner similar to the liberalization of trade (BIS 2009). This argument is centered on the belief that free capital flows bring in capital investment, technology spillover and intense competition in financial markets for economic growth and enhanced welfare of the people. The contending view is based on the premise that free capital flows in the presence of other distortions that exist in emerging market and developing economies (market rigidities, asymmetries and imperfections) may not enhance welfare of the people (Stiglitz 2004).In practice, however, foreign portfolio capital flows appear to have been accompanied by increased vulnerability to crises particularly in EMDEs where portfolio capital surgehas put most of the EMDEs that liberalized their capital accounts and received large portfolio capital inflows in major financial difficulty. A number of studies like Li and Su (2016), Gupta and Manjhi (2011), Kamisky and Schmuklar (2003), among others, found evidence of multiple financial and banking crises in EMDEs that liberalized their capital accounts and received large capital flows.

Nigeria, like many other EMDEs that liberalized their capital account, experienced large portfolio capital inflows

since 2005. The trend in portfolio capital flows shows that it flowed gradually into the country to reach US$ 16.15billion in 2018 from US$ 883 million in 2005 (see Table 1 in appendix 1). Between 2005 and 2018, there had been unstable trend in the portfolio capital flows. The equity-based capital flows component was the most unstable, particularly during the Global Financial Crisis (GFC) in March 2008 when net equity in flows reversed to -959.79 million US$. In2012, portfolio capital and the equity-based component surged to reach US$ 17.20billion and US$ 10.03billion respectively. However, in 2015, net equity flows reversed and nose-dived to negative position, US$. -476.62 million

Since 2005, there are serious concerns about the weak assets quality of commercial banks in Nigeria (known as Deposit Money Banks (DMBs) as demonstrated by high proportion of the Non-Performing Loans (NPLs) to total loans. In 2009,the DMBs were exposed to the tune of N1.6 trillion margin loans in capital market and oil and gas sectors and the proportion of the NPLs to total loans was 33%(Sanusi 2010). After the purchase of the NPLs by Assets Management Corporation (AMCON) in 2012, which brought down the ratio of NPLs to 2.88% in 2014, the rising trend in NPLs continued in the post-AMCOM purchase period as the proportion of the NPLs to total loans escalated to 14.81% in 2017 and subsequently, 11.67% in 2018 (CBN Statistical Bulletin, Dec., 2018). According to Demirguc-kunt and Detragiache (1998), banking crisis exists when the ratio of NPLs to total loans exceeds 10% and the cost of rescue bailout is at least, 2% of the Gross Domestic Products (GDP). The implications of the banking sector crises could manifest in decline in GDP, escalating cost of banks restructuring and bailouts as well as bank failures which could retard the rate of growth of the Nigerian economy.

The phenomenal rise in NPLs and the corresponding fall in assets quality of the DMBs between 2005 and 2018 are suspected to be linked to portfolio capital surge and reversal in Nigeria. Given the swings in portfolio capital flows and the implications of the persistent banking crises in Nigeria, it is pertinent to investigate the relationship between the portfolio capital inflows, particularly the equity inflows and banking crises in the period under review, using static general equilibrium framework that links the banking sector with developments in the capital market, the Nigerian Stock Exchange (NSE) Market. Therefore, the main objective of the paper is to assess the effect of portfolio capital inflows on the banking sector in Nigeria using trend analysis in the period 2005 - 2018.The choice of this study is justified by the fact that most studies on capital flows in Nigeria are based on the total capital flows with little attention paid to the desegregated components like the portfolio component which has gained importance in terms of size, pattern and character in most EMDEs in the last 2 decades. This paper is also different from previous studies because it focuses on equity-based capital flows as the most unstable component of portfolio inflows that is potentially destructive to the stability of the banking sector in particular.

The paper is structured into 5, sections. Section 2, presents the literature review. Section 3, is the methodology while Section 4, analyses the effects of portfolio capital inflows on the banking sector. Section 5, concludes the paper.

2.0 Literature Review

2.1 Conceptual Review

(i) Portfolio Capital Inflows:

According to Eichengreen, Mussa, Dell'Ariccia, Detragiache, Milesi-Ferretti, and Tweedie (1999), international capital flows are divided into portfolio capital flows, foreign direct investment (FDI) and real estate investment between one country and other countries, which are recorded in the capital account of the balance of payments. Components of capital inflows include; foreign investments in home-country financial markets and property and loans to home-country residents. Capital outflows include; purchases of foreign assets and repayment of foreign loans by residents.The

composition of capital flows is important for monetary policy, management of liquidity as well as financial stability.

Obadan (2004) explained international capital flows in terms of movement of money or financial resources from one country to another for the purpose of investment in financial or real assets. The term includes different kinds of financial transactions; lending by foreign government and international financial institutions like the International Monetary Fund (IMF), commercial banks' lending, investment in equities, bonds (short term) and direct investment of productive capacity (FDI).

Portfolio capital inflows are purchases of domestic stocks, bonds, short term securities or notes. The instruments traded are liquid in the sense that investors can quickly change the investment in tandem with the perceived market risk. Portfolio investments are more volatile than other components of the capital flows because it is possible for a country that records high portfolio investment in one year to experience reversal of same investment the following year, if investors' expectations change adversely. The different types of securities traded under the portfolio capital inflows are important to the analysis of financial and banking instability in an open EMDE, like Nigeria. There are 2 major types of portfolio inflows; equity-based inflows and debt-based inflows (consisting of bonds, treasury bills and other money market instruments). Equity-based capital inflows typically involves proceeds from foreign investors buying equity from domestic investors by simply changing the composition of ownership of the company or foreign investors participating in the initial public offer (IPO) of a domestic company.

Equity- based capital flows are typically very volatile and sensitive to monetary policy rate of the central bank. For this reason, the study of portfolio capital inflows to EMDEs may find the equity-based flows more important and sensitive variable in analyzing financial and banking stability in those countries.

(ii) Banking Crises

Banking crisis is a financial crisis that can manifest largely from the various risks that exists in the banking system, which poses a great challenge to the banking institutions operations and survival. Banks are susceptible towide range of risks which include: credit risk, liquidity risk, operational risk, market risk and contagion or systemic risk. Banking crisis can be caused by bank runs. A bank run occurs when many bank account customers try to withdraw their deposits simultaneously in a manner that reflects fear of insolvency on the part of the customers.

Banking crisis can also be triggered by credit risk when value of banks assets significantly drops against its liabilities because borrowers are unable or unwilling to service their debt obligations. If loan losses exceed bank's capital requirement and reserves, the bank is said to be insolvent. When a large number of banks in the banking system experiences loan losses in excess of their capital, a systemic crisis occurs (Demirguc-kunt and Detragiache 1998). Therefore, a systemic banking crisis occurs when a large number of banks in a country face solvency issues simultaneously due to a common adverse effect of economic performance or a common external shock like the GFC of 2007-2009, or because distress in one bank spreads to other banks in the system.

According to the World Bank Global Financial Development Report (2016), a systemic banking crisis is a situation that reflects a country's corporate financial institutions experiencing a large number of financial problems that pose great difficulties in repaying financial agreements on time. This leads to sharp increase in NPLs which could reverse capital flows. One of the important causes of systemic banking crisis is large capital flows.

Demirguc-Kunt and Detragiache (1998) submit that banking crisis exists when the ratio of NPLs to total loans exceeds 10% and the cost of rescue or bailouts is at least, 2% of GDP. Banking crises have negative effects on the economy, resulting in financial

and economic crises in the economic system. Persistent banking crisis can lead to bank failures which disrupt the flow of credits to households and businesses, increasing unemployment and reducing consumption and investment which are the major components of aggregate demand (GDP).

2.2 Theoretical Literature Review

Mundell-Fleming (M-F 1963) theory is an important static general equilibrium approach that portrays the short-run relationship between nominal exchange rate, interest rate, and output in open EMDEs. The trilemma or impossible trinity asserts that in open EMDEs central banks can only pursue 2 of the 3 good objectives of macroeconomic policies simultaneously. These are: (i) Fixed (stable) Exchange Rate (ii) Independent (sovereign) Monetary Policy to address inflation and recession to achieve growth and stability in the economy (iii) Capital account deregulation, which makes country's economy open to international capital flows and encourages foreign investors to bring resources and expertise into the country for investment and growth. Under capital account deregulation, the domestic interest rate equals the world interest rate and so there is no possibility for independent monetary policy.The theory warns countries, particularly EMDEs that implement capital account deregulation policy to be cautious of the contradiction in pursuing the 3 macroeconomic objectives by choosing between potential stability provided by managed exchange rates and the advantagesoffered byan independent monetary policy.

Fischer (1997) contends that capital account liberalization is an inevitable step in development and thus cannot be avoided. It can bring major benefits to countries and government and generally, it leads to global economic efficiency, allocation of world savings to those who are able to use them most productively, and would thereby increase social welfare. Economic agents in countries with free capital movements could diversify their portfolios and increase their risk-adjusted rates of return. Likewise, business units in the private sector of these countries could raise capital in international markets at a lower cost. Based on these, liberalization leads to further development of a country's financial system which, in turn, enhances productivity in the real economy by facilitating transactions and by better allocation of resources. Critics of the efficient markets hypothesis like Stiglitz (2004) argued that liberalized financial markets are distorted by information asymmetry problems that transactions hardly yield outcomes that are generally beneficial to the welfare of all economic agents.

Grenville (1998: 1) articulated that:
open capital markets are part of the widely accepted Washington Consensus (i e deregulate and open the economy to outside world), which are endorsed by the IMF. The author contends that: “there is a strong *a priori* case that international capital flows are a Good Thing. The obvious analogy is with international trade………… Financial flows supplement domestic saving, allowing more investment to be done in those countries where returns are highest; ……..and, to complete the case for free capital flows, we should record the argument that even speculative capital flows can serve a beneficial purpose.

Prasad and Rajan (2008), Rajan and Subramanian (2005), Johnston, Darbar and Echeverria (1997), Prasad, Rajan and Subramanian (2007)and Singh (2002) submitted that in developing economies, where the financial system is underdeveloped, foreign capital flows are directed to easily investment areas like real estate, leading to asset price booms, with subsequent bursts thereby disrupting the economy. Similarly, in the foreign portfolio component of the flows, foreign investors are likely to patronize the shallow equity markets. This can also cause sharp increases in equities prices with the effect that assets price bubble would likely form and when there is any observed risk, divestment would follow which can lead to sharp decline in equities prices, spreading losses to domestic investors while increasing banks NPLs. In most cases,

massive unintended capital inflows could result in exchange rate appreciation, which can decrease exports. This problem becomes more glaring when the central bank sterilizes the inflows to check the exchange rate appreciation. Sterilization of foreign exchange inflows increases money supply, which leads to inflationary pressures.

According to Haberer and Lux (2012); Rajan and Subramanian (2005), the potential problems to free capital mobility are clustered around four issues. These are; (i) fear of currency appreciation in terms of currency exports competitiveness, causing decline in exports. Where the currency is defended by central bank to prevent appreciation, excess money supply can cause inflationary pressure, (ii) the 'hot money'. Sudden injection of capital, portfolio flows into small markets can cause initial dislocation. There is also the fear of sudden withdrawal which depreciates currency and destabilizes markets (iii) Fear of large inflows. Large volumes of capital inflows in search for higher yields cause dislocation of the financial system. It can also fuel assets price bubbles, encourage excess risk taking by commercial banks. (iv) The fear of loss of monetary policy. Exchange rate stability, monetary policy autonomy and capital account deregulation are not possible (Mundell-Fleming 1963). Giving up capital mobility might be attractive than surrendering monetary policy.

2.3 Empirical Literature Review

There is a vast empirical literature on portfolio capital flows to EMDEsand this can be grouped into 2 major contending views. One view contends that portfolio capital flows to EMDEs are associated with banking and financial crises. A number of country and cross-country studies using different methodological approaches published empirical findings that support thisview. For instance, Li and Su (2016) examined the influence of capital account liberalization on bank risks using bank-level data of 2,330 banks in 75 countries over the time period 1995-2013. The results of the study showed both bank individual risk and systemic risk tend to go up as a result of liberalized international capital transactions. The study concluded that capital account liberalization increases banks' individual risk-taking, systemic risk as well as leverage, return volatility and impaired loan ratio. Similarly, Gupta and Manjhi (2011) analyzed the control and management of foreign capital flows with respect to 'impossible trinity' in India over 3 decades. The study observed sharp reversal of net capital outflows in the emerging economies where private capital flows dropped from $1.3trillion in 2007 to $530 billion in 2009 and subsequently $746 billion in 2011.

The paper noted that capital inflows into developing countries after the global financial crisis were driven by high interest rate differential due to extremely low interest rates prevailing in most industrialized countries like the US, UK, Japan and Germany. These flows are likely to be reversed once monetary easing in industrialized countries is reversed. Kamisky and Schmukler (2003) examined the dynamic effects of domestic and external financial liberalization on financial markets of 28 mature and emerging market economies. The study using event study framework found that while financial liberalization may trigger financial excesses in the short-run, it also triggers changes in institutions, supporting a better functioning of financial markets. Garba and Garba (2002) examined the options for globalization of capital for Nigeria.

The study noted that capital account deregulation reform in a fragile economy like Nigeria must address certain fundamental requirements before implementation. These requirements are: sound domestic financial systems, adequate supervision and prudential regulation, good risk management capacities in banks and businesses, greater transparency and market discipline. In Nigeria, none of these requirements is available.

The study drew lessons from Thailand, Indonesia, Malaysia, Philippines, South

Korea, Russia and Brazil that regulators need to take adequate care and plan well before delving into globalization of capital and warned government and regulatory authorities that free capital flows can plant financial crises, regardless of the Nigeria's economic fundamentals.

Demirgue-Kunt and Detragiache (2001, 1998) investigated 53 countries during 1980-1995 and 65 market economies with annual data from 1980 – 1994 across the world using multivariate logiteconometric models. The studies found that banking crises are likely to occur in countries that liberalized their financial system and also financial crisis is more likely to occur where the financial system is liberalized. In EMDEs, where the banking systems are not sufficiently developed, capital account liberalization is likely to make banks vulnerable to external economic shocks. Kaminsky and Reinhart (1999) explored the links between banking crises, exchange rate crises and financial liberalization. In a sample of 24, of which 14 are developing countries, the study found a sharp increase in banking and currency crises since 1980.

Studies likePill and Pradhan (1997); Singh (2002); Mohan and Kapur (2009); Gupta (2011); Gupta and Majhi (2011) and Milne (2014)also found that portfolio capital flows played a major role in the East Asian banking and currency crises of 1997-1998 (countries involved are: Thailand, Indonesia, Malaysia, Philippines, South Korea and Hog Kong) as well as many developing countries in African and Latin America(countries involved include; Ghana, Tanzania, Chile, Argentina etc). The impact of these crises manifested in bank failures and escalated cost of banks restructuring and bailouts. For instance, in some developing countries in Africa and Latin America, cost of restructuring failed banks exceeds 5% of gross domestic products (GDP).

The second view on the impact of portfolio capital inflows to EMDEs is based on the argument that foreign portfolio capital flows to EMDEs stimulate domestic financial sector development by increasing the liquidity of domestic stock markets as well as more diversification that improves risk-sharing which enhances soundness of financial institutions, thereby enhancing economic growth and reducing the probability of crisis. The empirical literature supporting this view is rather scanty; very few studies established this link. For instance, the work of Minshkin(2005), among others, established that financial globalization is beneficial to developing countries and financial development is indeed a key element in promoting economic growth. More importantly, the study articulated that financial globalization (capital inflows) can play an important role in encouraging development of institutions and financial markets for allotting capital to its most productive uses. Other studies like Quinn (1997) and Bekaert, Harvey, and Lundblad(2001) also found positive outcomes in respect of capital inflows to EMDEs. Recent studies on Nigeria like: Williams and Titilayo (2018) found financial system stability affected capital flows; Ifeakachukwu (2015) found stock market development not significant in promoting capital inflows in Nigeria and; Okpanachi (2012) found monetary policy (sterilization) effective in reducing the effects of capital flows volatilities in Nigeria. In contrast, the works of Hamdi and Jlassi (2014) and Rodrik (1998) found that capital flows did not have any effects on growth or banking crisis in EMDEs.

A critical review of the empirical literature that found portfolio capital flows beneficial to EMDEs in the post global financial crisis (GFC) period suggests the effective role of unconventional monetary policies of the developed economies like the US, UK, Europe and Japan in realizing such outcome. In the wake of monetary normalization which has started in those developed economies, portfolio capital inflows to EMDEs would reverse and are most likely to cause banking crises and financial crises in EMDEs, owing to systemic risk or contagion risk. On the other hand, studies that found portfolio capital inflows positive to economic growth in EMDEs before the GFC were likely confined to the

traditional framework of micro prudential analysis. In the post GFC period, when stakeholders became more informed about the role macro prudentialrisk, the influence of systemic risk on capital flows to EMDEs cannot simply be ignored.

This paper contributes to the existing literature by introducing the equity-based capital inflows as a proxy for portfolio capital flows in the study of the effects of portfolio capital flows on banking sector in Nigeria. The paper also explored the role of interconnection of financial risks and hence the relevance of macro-prudential regulations in promoting banking stability in Nigeria.

2.4 Theoretical Framework

This paper adopts the Mundell-Fleming (M-F1963)as its theoretical framework. We situate the Nigerian economy in the context of macroeconomic policy framework under the trilemma. The CBN pursues the 3 basic macroeconomic policy objectives simultaneously, contrary to Mundell-Fleming (1963). First, the CBN maintains an independent monetary policy committee (MPC) to address inflation and recession. Second, the CBN pursues exchange rate stability objective (by maintaining 2 or more foreign exchange market rates to keep the naira exchange rate stable(rate for official transactions and the Nafex rate, for investors and exporters, called I & E window). These rates are being managed with regular CBN interventions to ensure exchange rate stability. Third, the capital account deregulation policy which opened up the Nigeria capital market and money markets for foreign investors without any restriction.

The basic argument advanced by Mundell-Fleming theory is that policy makers *must* face a tradeoff on the 3 macroeconomic objectives along the trilemma triangle. While it is justifiable to pursue multiple exchange rate regimes with some interventions in an EMDE, the free capital flows policy inbuilt in the capital account deregulation does not support monetary policy independence because domestic interest rate in open economies would be equal globally. According to the MF framework, If the central bank chooses exchange rate stability and monetary policy independence through the Monetary Policy Committee (MPC) (tightening and loosening) as it is in Nigeria today, it must control capital inflows (particularly portfolio equity and debt capital inflows) to avoid excessive inflows that would comprise financial stability. Sterilization of capital inflows, does not effectively address excess capital inflows in the capital market equity and debts trading on the floor of the NSE.

3.0 Methodology and Data Sources

The study used trend analysis to analyze macroeconomic variables of interest listed in table 1.The analysis is based on the *static general equilibrium (The static general equilibrium framework is graphical and tabular exposition of macroeconomic aggregates behavior linked to different sectors and markets in the economy) framework over the period 2005-2018.*The following are the variables of interest; their proxies and sources are indicated in the table below.

Table 1: Data and Sources

Variables	Proxies (Measurement)	Sources
Interest rate*	Monetary Policy rate (MPR)	CBN statistical bulletin (2005-2018 issues)
Portfolio Capital Flows**	Net Equity Inflows	World Bank Data, Dev. Indicators @ https://data.worldbank.org/indicator/BX.PEF.TOTL.CD.WD?page=2CBN statistical bulletin (2005-2018 issues)
NSE BKSI	Banking Share Index (BKSI)	CBN statistical bulletin (2005-2018 issues)
Banks NPLs	Ratio of Banks NPLs to Total Loans	CBN statistical bulletin (2005-2018 issues); CBN Financial Stability Report, Dec., 2018

*MPR = Monetary Policy Rate captures monetary independence
*Portfolio capital flows capture capital account deregulation (free capital flows)

In this analysis, Banking crisis, proxied by the ratio of banks NPLs to total loan is the dependent variable while Portfolio capital flows proxied by net equity inflows is the explanatory variable.

4.0 Analysis of Effects of Portfolio Capital Flows on Banking Sector in Nigeria.

The most important component of capital inflows that affects banking stability is the portfolio inflows (hot money). Portfolio Capital inflows to Nigeria, between 2005 and 2018, showed massive inflows in some years following CBN persistent *monetary tightening* as depicted by the MPR variable. The instability in the portfolio capital is clearly shown by the trend in ***net equity flows***, which had escalated to negative position in some years. The table 2 below gives the actual trend, reflecting capital surge and withdrawal.

Table 2: MPR, Trends in Net Portfolio Equity Investment and NPLs 2005 – 2018.

Year	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
MPR %	13	10	9.5	9.75	6	6.25	12	12	12	13	11	14	14	14
****Net Equity (M $)***	750.	1,769	1,447	-953	487	2,161	2,571	10,002	5,532	1,037	-486	325	2,924	na
Ratio of NPLs/TL	24.17	10.67	10.21	7.5	33	15.49	4.95	3.47	3.23	2.88	4.87	12.8	14.81	11.67

Sources: data.worldbank.org/indicator/BX.PEF.TOTL.CD.WD?page =2; CBN Statistical Bulletin 2018; Financial Stability Report Dec., 2018
**Net Equity Flows*

Effects of Capital Surge and Withdrawal on Banks NPLs:

Capital flows, particularly, portfolio inflows in Nigeria, was driven by CBN monetary policy (tightening) against the rest of the world from 2010 to 2014. The CBN increased the MPR by 100%, from 6.25% to 13% between 2010 and 2013 when the US Federal Reserve Bank (FED) pursued accommodative monetary policy with interest rate at 0%. At the same time, the Bank of England (BOE) and European Central Bank (UCB) pegged their rates at 0.5% and 0.05% respectively, in response to the global financial crisis. These developments attracted *hot money* inflows to Nigeria, leading to *capital surge.*

Capital Surge: There is evidence of capital surge between 2010 and 2012 in response to the CBN monetary tightening and exchange rate stability policy. 'Hot money' increased from net inflows of US$ -953 million in 2008 (following the global financial crisis) to an all-time high net inflows of US$ 10 billion in 2012. Figure 1 below shows the portfolio equity capital surge from 2010 to 2012.

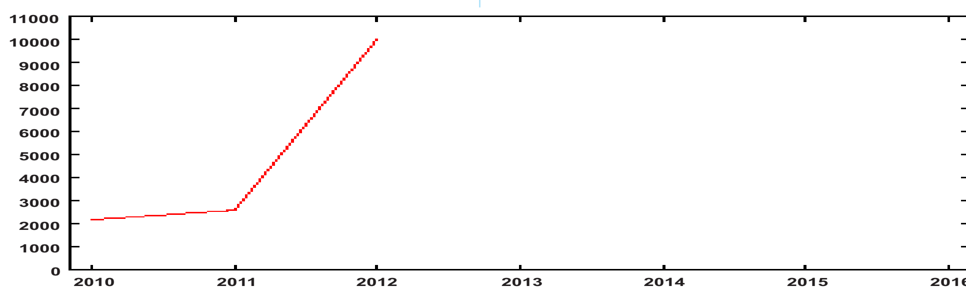

Fig.1: Portfolio capital surge

The surge in portfolio equity investment capital by foreign investors particularly in favour of banks stocks increased liquidity and the share price of the banking stocks which led to appreciation of the Bank Share Index (BKSI) by 61% from 272.86 in December 2011 to 439.03 in May, 2013 to support the booming market.

Capital Reversal:

In 2012, the domestic security challenges particularly in the South-South and North East geo-political zones became tensed. And, developments in the external sector revealed a sharp drop in the price of crude oil at the international oil market from $114.49 per barrel in December, 2012 to $37.80 per barrel in December, 2015. Furthermore, in the last quarter of 2015, the US Federal Reserve monetary policy committee's decision raised the FED interest rate from 0% to 0.25%, with the BOE and UCB maintaining their short-term interest rates at 0.5% and 0.05 % respectively. These domestic and external shocks increased uncertainty and market risk significantly rose to the extent that foreign investors felt unsafe and tilted their decision in favour of divesting their stake in the NSE to safer and more lucrative markets in the USA, Britain and Europe. This led to net outflow of portfolio equity capital totaling US$ - 477 million in 2015.

This downward trend in net equity flows is demonstrated in figure 2 below. This was accompanied with demand for foreign exchange that put pressure on the naira which depreciated consistently in the FOREX, in the wake of weak foreign exchange inflows from the massive decline in crude oil price per barrel (from $114.49 - $37.80).

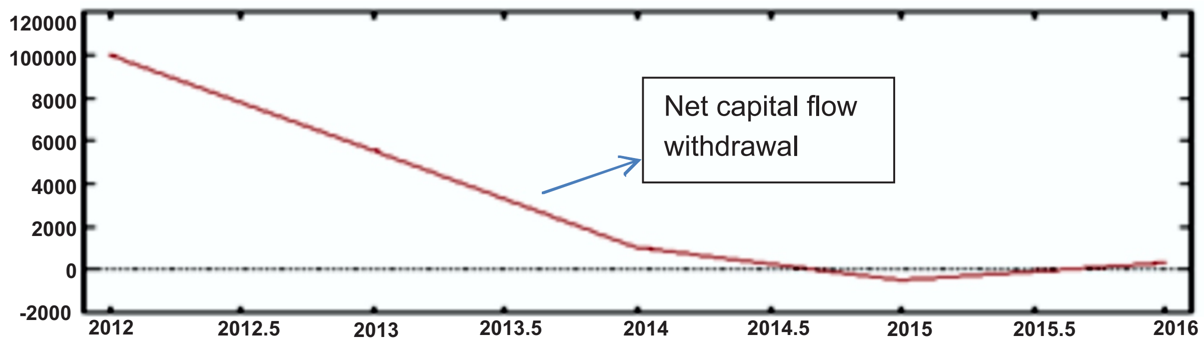

Fig. 2: Portfolio Equity Net Inflows Reversal

The swing shown in figure 2 also led to the sharp but gradual drop in stocks prices in the NSE particularly, the banking stocks which decreased the BKSI by 51% from 439.03 in May, 2013 to 215.47 in March, 2016. These valuation swings (capital surge and withdrawal) aptly describe the boom-bust cycle character of the BKSI in the NSE market in the period under reference. Figure 3 below shows the boom-burst trend of the BKSI in the NSE graphically.

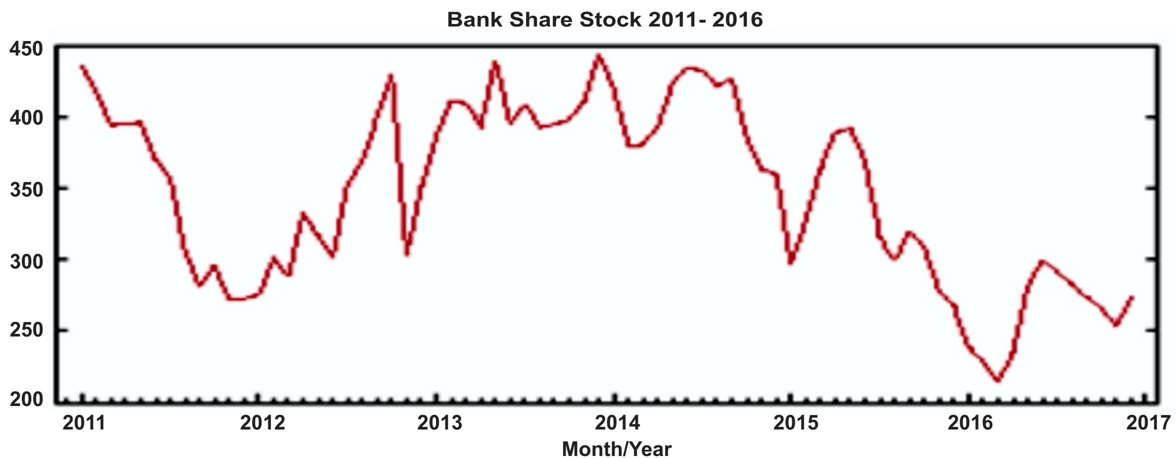

Fig.3. Boom-Burst Cycle Trend in BKSI

The sharp reversal of 'hot money' (net portfolio equity inflows), the sharp drop in crude oil prices and quantity, as well as speculative attacks of the naira in the FOREX led to massive depreciation of the naira exchange rate in the FOREX market (N 455.26 =$ @ BDC rate as at December, 2016). This, in turn, caused serious inflation in the import dependent economy (all items year on year 18.55% as at December 2016) and eventually economic recession (-1.51% decline in real GDP for the year 2016, see CBN Statistical Bulletin, 2018). These developments which compelled the CBN in 2016 to deregulate FOREX market initially, impacted negatively on assets quality of banks and contributed significantly to banking crisis money' created bullish trading in the market that led to a boom in the banking sub sector. The NSE, BKSI increased significantly as banks share prices appreciated well between 2012 and 2014. When foreign investors divested their interest following some internal and external shocks, the market experienced a burst and prices of banks shares crashed, leading to massive default in margin loans as well as banks loans that are secured by bank share certificates.

Figure 4 reveals the sharp decline in NPLs due to AMCONs intervention up to 2014. From 2014 to 2017, NPLs rose phenomenally. The rapid increase in NPLs was always preceded by ***portfolio equity net outflows (first in 2008 when net***

outflow was $-953 million and in 2015 when net outflow was $-486 million) as revealed by table 3 below. Figure 5 illustrates graphically the relationship between equity net inflows and the rise in NPLs.

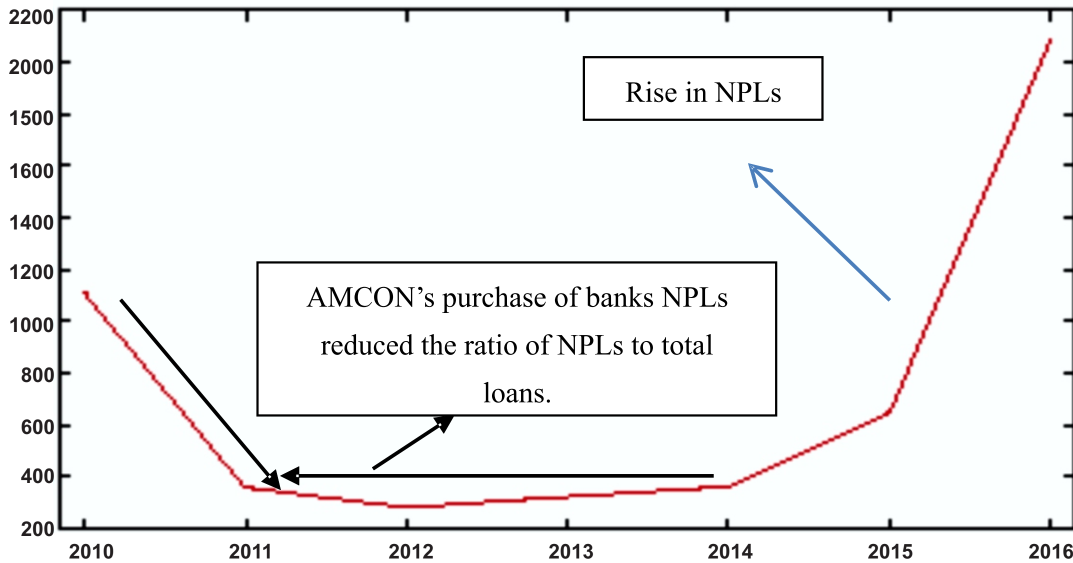

Fig: 4. Rise in NPLs

Table 3: Equity Net Inflows and Rise in NPLs (2005 – 2018)

Year	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
****Net Equity (M$)***	750.	1,769	1,447	-953	487	2,161	2,571	10,002	5,532	1,037	-486	325	2,924	na
Ratio of NPLs/TL	24.17	10.67	10.21	7.5	33	15.49	4.95	3.47	3.23	2.88	4.87	12.8	14.81	11.67

Sources: data.worldbank.org/indicator/BX.PEF.TOTL.CD.WD?page =2; *CBN Statistical Bulletin 2018; Financial Stability Report Dec., 2018 *Net Equity Flows*

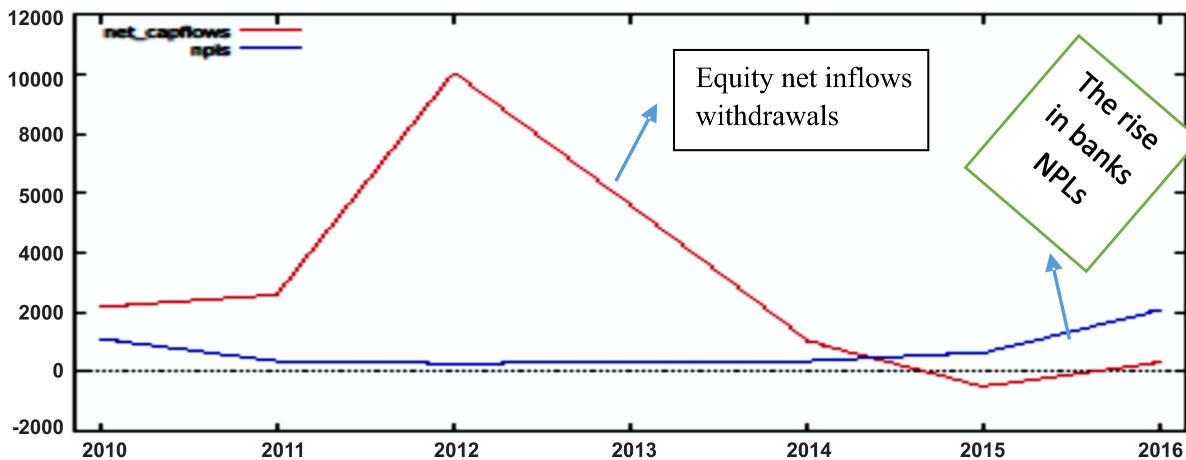

Fig. 5: Portfolio Equity Net inflows and Rise in NPLs (2010 – 2018)

The second link between capital withdrawal and rise in NPLs in Nigeria is through *currency depreciation*. The primary impact of *portfolio capital withdrawal* is on *currency depreciation*. Domestic currency depreciation affects banks directly in two ways: private domestic loans denominated in foreign currency and banks foreign borrowing. When currency depreciates, domestic loans denominated in foreign currency are extremely difficult to repay because more domestic currency is needed to repay the loan. This increases credit risk and defaults leading to deterioration in assets quality of banks. Currency depreciation also makes banks repayment of foreign loans difficult as banks have to raise more domestic currency in their balance sheet to repay the foreign loans in foreign exchange. This affects banks' balance sheet and can lead to insolvency. From these two ways, there is evidence that the depreciation of the Naira as a result of *capital withdrawal* as well as the CBN's introduction of flexible exchange rate have affected banks that utilized foreign loans and bonds. For example, Bloomberg (7/ 2016), reported that seven Nigerian banks were *undercapitalized* because of this problem.

In summary, Nigeria and EMDEs that liberalized their capital accounts and pursued monetary policy independence are prone to banking instability due to short-term portfolio inflows which cause *capital surge* and capital *reversal.*

The banking crises that resulted from portfolio capital surge and withdrawal led to high cost of banks restructuring and distress in Nigeria. For instance, between 1986 and 2004, 37 banks failed and CBN revoked their licenses. The losses incurred by depositors and shareholders have adverse consequences on consumption and investment through *wealth effect*. When failed banks were rescued by the CBN in 2009, there were high cost of bank rescue operations in Nigeria. For instance, the CBN spent N620 billion to bail out 6 'problem banks' that failed. The AMCON's purchase of NPLs engulfed an estimated cost of N3 trillion. Significant part of this amount is still outstanding in AMCON's balance sheet as at 2018. This has implications for the Nigerian economy which stakeholders are yet to understand. Table 4 depicts history of bank distress and failure in Nigeria since independence.

Table 4: Analysis of Bank Failures and Distress in Nigeria (1952-2018).

Phases of Banking Sector Reform	Banks Taken Over *(Failed/)/Liquidated)*	Total No. of Banks
(1952 -1959): Unregulated(free banking)	21	25
(1960-1985): Regulated period with government Indigenization Policy	-	28
(1986- 1998): Deregulation and re -regulation period*	32	54
(1999–2004): *Return of liberalization in full with Universal* Banking Model	5	89
(2005–2018): Consolidation/Capital Account Liberalization	29 ** 7***	23
Total	94	

**Re-regulation was a temporary control in interest and credit when bank distress was more pronounced in Nigeria. In this case, re-regulation is used specially to mean reversal of deregulation policy.*
*** 14 banks out of 29 failed as CBN revoked their licenses as a result of consolidation.*
**** 7 banks failed in 2011 and 2018 after portfolio capital inflows reversal.*
Sources: CBN Bulletins 2015-2018, NDIC Annual Reports (various issues); NDIC (2015) Closed Financial Institution.

From table 4, it is evident that there were widespread bank failures in Nigeria. This trend is likely to continue if it is not addressed. For instance, a number of banks are still harboring rising NPLs which deteriorated their assets quality in the last quarter of 2018. In addition, the CBN in June, 2016 took over the Skye bank and appointed new management team to address the rising level of NPLs and poor assets quality of the bank. By September, 2018, Skye bank failed and the CBN replaced it with Providence bank.

5.0 Conclusion

The paper examined the relationship between portfolio capital inflows and banking crises in Nigeria from 2005-2018 using trend analysis. The analysis showed that the pursuit of capital account liberalization, in the wake of monetary independence and exchange rate stability policies in Nigeria, had attracted large portfolio capital inflows particularly the equity flows from global investors.

The surge in equity capital inflows intensified market risk in the Nigerian Stock exchange Market (NSE), resulting to massive crash in banking stocks prices in the NSE. This led to the rise in banks NPLs and weak assets quality of the banks, connecting market risk in the NSE with credit risk in the banking system, and culminating to banking sector crises in 2009 and 2016.

These periods of banking crises were preceded by the net equity flows which were US $ -953 million and US $ -486 million in 2008 and 2015 respectively. The tendency for crisis in the banking system to persist looms high in the Nigerian economy with continued surge in portfolio capital inflows.

Policy Recommendations

The paper recommends that policy makers in Nigeria and indeed in other EMDEs that pursued free capital flows (capital account deregulation) policy should reflect quickly on the Mundell-Fleming Theory to reduce the risk of banking and financial crises. One effective way to achieve this is to introduce some equity capital flows control measures in the NSE. In fact, after the global financial crisis of 2007-2009, the IMF had publically shifted position in favor of regulating capital flows in EMDEs (Gallagher and Tian 2017).

The point is that the NSE, like other stock exchange markets in EMDEs, is still a shallow market, which may not absorb external shocks from large portfolio inflows (given monetary tightening and the risk of reversal of unconventional monetary policies in advanced market economies like the US, UK, Europe and Japan,).

It is also true that the NSE's capacity to absorb shocks from sudden capital reversal is limited and this stimulates market risk to rise significantly and interact with credit risk in the banking system. Going forward, the CBN should review the current macro-prudential policy with a view to reducing systemic risk (contagion risk) in the banking system. This will reduce banking crises in Nigeria.

References

Bekaert, G., Harvey, C. R&Lundblad C.(2001) “Does Financial Liberalization Spur Growth?”NBER Working Paper No. 8245. Cambridge, Massachusetts: Na-tional Bureau of Economic Research.

BIS (2009)“Capital Flows and Emerging Market Economies”. Report by the Committee on Global Financial System. CGFS Papers No. 33
BIS (2011)“The Transmission Channels Between the Financial and Real Sectors:

A CriticalSurvey of The Literature” Basel Committee on Banking Supervision BCBS Working Paper No. 18http://www.bis.org/publ/bcbs_wp18.htm
Bloomberg (10/6/2014) “What If the Fed Has Created a Bubble?”

https://www.bloomberg.com/view/articles/2014-06-10/what-if-the-fed-has-created-a-bubble
Bloomberg (10/10/ 2016) “Nigerian Banking Industry Seen in 'Full-Blown' Credit Crisis”https://www.bloomberg.com/news/articles/2016-10-10/nigerian-banking-industry-seen-in-full-blown-financial-crisis
Caprio, G. Jr., &KlingebielD. (1996) “Bank Insolvencies: Cross-country Expe-rience”. The World Bank, Policy Research Working Paper 1620. Washington, DC:
CBN (2012; 2013;2014; 2015Dec., ;Dec., 2016, 2017Dec. and Dec., 2018) Finan-cial Stability Reports.
www.cenbank.org
CBN (2015) Annual Report.

Demirguc-Kunt, A., (1989) “Modeling Large Commercial Bank Failures: A simul-taneous Equation Analysis: IMF Working Papers 8905 Federal Reserve Bank of Cleveland.

Demirguc-Kunt, A., &Detragiache,E. (1998) “The Determinants of Banking Crisis in Developing and Developed economies”. IMF Staff Papers Vol. 45 No. 1
Demirguc-Kunt, A., & E. Detragiache (2001) “Financial Liberalization and Financial Fragility”in G. Caprio, P. Honohan, and J. E. Stiglitz (eds) Financial Liberalization: How Far, How Fast ?Cambridge University Press, PP 96-122.

Eichengreen, B., M., Mussa, Dell'Ariccia, G., Detragiache, E., Milesi-Ferretti, G. M., &Tweedie, A. (1999) 'Liberalizing Capital Movements: Some Analytical Issues'
https://www.researchgate.net/publication/233667486/download
Fischer, S. (1997) “Capital Account Liberalization and the Role of the IMF”,PaperPresented at the seminar Asia and the IMF, held in Hong Kong, China, on September 19, 1997. IMF, September 1997.
Frydl, E. J. (1999) The Length and Cost of Banking Crises.IMF WP/99/30
Gallagher, K. P &Tian Y. (2017)”Regulating Capital Flows in Emerging Markets: The IMF and the Global Financial Crisis”. Review of Development Finance 7 (2017) pp. 95-106.

Garba A. G.&GarbaP. K. (2002)“The globalization of finance: policy challenges and options for Nigeria”. An unpublished written paper presented at staff seminar series.
Grenville S. (1998). Speech: “The Asia Crisis, Capital Flows and the International Financial Architecture”. A Talk to Monash University Law School Foundation Mel-bourne – 21 May 1998. Online access @ https://rba.gov.au/speeches/1998/sp-dg-210598.html
Gupta, A. S., &Manjhi G.(2011)“Capital Flows and the Impossible Trinity: The In-dian Experience”. Centre for International Trade and Development School of International Studies Jawaharlal Nehru University Discussion Paper No. 11-02, April.

Haberer, L. S.,&. Lux N (2012)"The Pros and Cons of Capital Controls". Group 4 Economic Policy Paper. Online access @http://www.parisschoolofeconomics.com/benassy-quere agnes/Enseignement/Poleco2013-presentation7.pdf
Hamdi, H.&. JlassiN. B (2014) "Financial Liberalization, Disaggregated Capital Flows and Banking Crisis: Evidence from Developing Countries". MPRA Paper NO. 55779 May, 2014.pp 1-19

IMF (2012) "Liberalizing Capital Flows and Managing Capital Outflows – Back-ground Paper IMF, Washington D C March 16, 2012.

IMF(2016) "International capital flows and financial vulnerabilities in emerging market economies:analysis and data gaps. Note submitted to the G20 International Financial Architecture Working Group by Nikola Tarashev, Stefan Avdjiev and Ben Cohen. IMF
Johnston, R. B.,Darbar, S. M. and. Echeverria C, (1997) "Sequencing Capital Ac-count Liberalization: Lessons from the Experiences in Chile, Indonesia, Korea and Thailand"IMF Working Paper WP/97/157. Online access @
https://www.imf.org/en/Publications/WP/Issues/2016/12/30/Sequencing-Capital-Account-Liberalization-Lessons-From-the-Experiences-in-Chile-Indonesia-2413
Joseph, M. T., G., Edson, F., Manuere, M., Clifford& Michael K. (2012) "Non-Performing Loans in Commercial banks: A case Study of CBZ Bank Limited in Zimbabwe".Interdisciplinary Journal of Contemporary Research in Business.Vol. 4, No. 7, November.

Kaminsky, G. L.&ReinhartC M (1999) "The Twin Crises: The Causes of Banking and Balance-of-Payments Problems." American Economic Review, 89(3):473-500.
Kaminsky, G.L,&. Schmukler S. L (2003) "Short- run Pain, Long- run Gain: The Effects of Financial Liberalization."IMF WorkingPaper.WP/03/34.https://www.imf.org/external/pubs/ft/wp/2003/wp0334.pdfL i, X. & Su D. (2016) "Capital Account Liberalization and Bank Risk: Bank-level Evidences" On-line access @ https://editorialexpress.com/cgibin/conference/download.
cgi?db_name=RESConf2017&paper_id=956 on 6th December, 2018
McKinnon, R. (1973) Money and Capital in Economic Development.Washington:

The Brookings Institute Mishkin F. S. (2005) "Is Financial Globalization Beneficial"? NBER Working Paper No. 11891 December 2005 Mohan, R. &KapurM. (2009) "Managing the Impossible Trinity: Volatile Capital Flows and Indian Monetary Policy".Stanford Center for International Development Working Paper No. 401.

Mundell, R.A. (1963) "Capital Mobility and Stabilization Policy Under Fixed and Flexible Exchange Rates". Canadian Journal of Economics and Political Science, 29, pp.475–485
Ifeakachukwu, N. P (2015) "Financial Market Development and Capital Inflows in Nigeria: The Role of Stock Market Development"Journal of Investment and Man-agement2015; 4(6): pp. 369-376

Obadan, M. I. (2004) Foreign Capital Flows and External Debt:Perspectives on Ni-geria and the LDCs Group. Broadway Press Limited, Lagos.

Obiechina, M. E., (2010) "Capital Flows and Financial Crises: Policy issues and Challenges".CBN Economic and Financial Review Vol. 48/1 March 2010

Okpanachi U. M (2012) "An Assessment of Monetary Policy Response to Capital Inflows in Nigeria.CBN Journal of Applied Statistics Vol.3 No.2. pp. 75-98

Prasad, E, K.Rogoff,S-J Wei&KoseM. A (2003) “Effects of Financial Globalization on Developing Courtiers: Some Empirical Evidence. IMF Occasional Papers No. 220

Prasad, E. S., R. Rajan, & Subramanian A. (2007) “Foreign Capital and Economic Growth.”Brookings Papers on Economic Activity, 2007(1): 153-230.

Prasad, E S. &Rajan R. (2008) “A Pragmatic Approach to Capital Account Liberali-zation” NBER Working Paper No. 14051Available http://www.nber.org/papers/w14051.pdfZ

Quinn, D (1997) “The correlates of change in international financial regulation”, American Political Science Review, vol. 91(3), pp 531–551.

Rajan, R. G., & Subramanian A. (2005)“What Undermines Aids Impact onGrowth?" IMF Working Paper 05/126.

Rapp, D. (2014)Bubbles, Booms, and Busts: The Rise and Fall of Financial Assets Second Edition. Springer New York, Heidelberg ordrecht London

Rodrik, D, (1998) “Who Needs Capital-Account Convertibility?,” Essays in Interna-tional Finance, No. 207 .Princeton: Princeton University.

Sanusi, S. L. (2010). “Global Financial Meltdown and the Reforms In The Nige-rianBanking Sector. Being The Full Text of a Public Lecture Delivered at the Con-vocation Square, AbubakarTafawaBalewa University, Bauchi, Friday, 10th Decem-ber, 2010.
Singh, A. (2002)“Capital Account Liberalization, Free Long-Term Capital Flows, Financial Crises and Economic Development”

Stiglitz, J. E. (1998) “Knowledge for Development, Economic Science, Economic Policy, and Economic Advice” in Boris Pleskovic and Joseph E. Stiglitz (Eds), An-nual World Bank Conference on Development Economics. Washington DC: The World Bank. PP9-58.
Stiglitz, J. E. (2004) “Capital- Market Liberalization, Globalization and the IMF” Oxford Review of Economic Policy Vol. 20 No. 1 pp 57-71.

Waweru, N. M., and KalaniV. M. (2009) “Commercial Banking Crises in Kenya: Causes and Remedies”. African Journal of Accounting, Economics, Finance and Banking Research Vol. 4 No. 4. Williams, H. T., &TitilayoA. A., (2018) “The Impact of Capital Flows on Financial SystemStability In Nigeria” African Journal of Accounting and Financial Research Vol.1, No.1, pp.1-8, 2018

World Bank (2016) Global Financial Development Report https://www.worldbank. org/en/publication/gfdr/gfdr-2016/background/key-terms-explained

Appendix 1

Table 1: Capital Flows in million US$ 2005 to 2018

Year	Total Portfolio
2018	16150.77
2017	8530.77
2016	1887.69
2015	2535.20
2014	5292.77
2013	13652.16
2012	17200.49
2011	5192.80
2010	3747.90
2009	481.69
2008	1334.30
2007	2665.50
2006	2825.59
2005	883.00