

THE IMPACT OF CAPITAL FLOWS ON FINANCIAL SYSTEM STABILITY IN NIGERIA

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ABSTRACT: *The impact of capital flows on the financial system stability of the Nigeria economy was carried out using data from 1987 to 2017. This study attempted to find out the casual relationship between financial system stability variables and capital flows in Nigeria. The impact of financial stability on capital flows prompted the researchers to undertake this study so as to establish a linear relationship between foreign direct investment and other financial stability variables. The theoretical framework of risk was applied and the model specification variables and methodology applied in this study may have been overlooked by previous studies in Nigeria. The study found out that credit to private sector negatively affect foreign direct investment. The coefficient of determination in the study was high indicating that the explanatory variables (financial system stability variables) are captured by the capital flows variable (FDI). The study therefore recommends that the Nigeria government should adjust the model for credit to private sector so as to have a positive relationship with capital flows.*

KEYWORDS: Capital Flows, Foreign Direct Investment, Financial System Stability.

INTRODUCTION

Opinion differs among experts in economics and finance as to what constitutes capital flows and financial system stability in Nigeria but they all agree that it is an age long issue for which there do not seem to be any consensus in sight. Thus, as noted by Nwankwo (1991), the issue of what constitutes capital flows and financial system stability cannot be over emphasize. Finance analysts has cited by Harley et al (2017) are skeptical in analyzing financial system stability in Nigeria.

Regulators in Nigeria financial system are concerned with the safety of banks operations and the stability of financial markets. Once there is adequate capital for banks through inflows, this reduces the likelihood of failure and increases bank liquidity. Banks on the other hand would prefer to work with less capital - Koch (2004). The complexity of the problem brings to the fore the following questions: what are capital flows? What are its components? What is financial system stability? What are the variables that can be proxy for financial stability? What methodology is appropriate in measuring capital flows on financial system stability? However, the battle between the banks and regulatory authorities is centered after a prolonged period of recession and macro-economic instability. Hitherto, several studies have emphasized the importance of capital inflows and its impact on financial system stability and there is need to review related studies in order to gain more understanding of the subject.

The financial system provides an enabling environment for economic growth and development financial intermediation, capital formation and management of the payments system. With intermediation, savers lend to intermediaries, who in turn lend firms and other fund using units.

The saver holds claim against the intermediaries, in form of deposits rather than against the firm. These institutions provide a useful service by reducing the cost to individuals, of negotiating transaction providing information achieving information diversification and attaining liquidity. Capital flows are thought of as a mixed blessing for developing and emerging economies. While they bring in much-needed foreign capital to supplement domestic finances to support growth and improve resilience, they also expose the economic and financial systems to external shocks (Kim and Singal 2000). Whether on balance the vulnerability of an economy increases or decreases with capital movements remains an open empirical question despite a large body of literature (Kose et al. 2009). For example, the relationship between capital flows and macroeconomic volatility in emerging economies is ambiguous and may depend on the nature of flows (Hegerty 2011), on the level of financial development of the economy (Kose, Prasad, and Terrones 2003), or country characteristics (Milesi-Ferretti and Tille 2011; and Ahmed and Suardi 2009).

The effect of capital flows on financial stability in emerging markets has gained interest for its potential consequences for macroeconomic stability as recent crises have revealed (Erturk 2005; and Kaminsky). Some believe that financial liberalization in developing economies (domestic deregulation and opening of the capital account) is followed by instability and crises for reasons such as underdeveloped institutions and banking systems, and an increase in competition and risk-taking as the process of liberalization evolves (Daniel and Jones 2007). Others believe that financial openness fosters stronger and more stable financial systems owing to greater access to capital (Kaminsky and Schmukler 2008). Again, the evidence is inconclusive.

The literature on financial flows recognizes that unbundling the composite capital account adds richness to the analysis as flows are heterogeneous in nature and possibly in their impact. For example, portfolio debt and equity inflows are considered volatile because they are driven by speculative considerations. On the other hand, foreign direct investment (FDI) inflows are considered to be stability inducing, compared with portfolio and other investment flows, because they are less prone to fluctuations and reversals in the short term. Conventionally, FDI involves investment in fixed assets in an economy and is driven by long-term considerations. Hence, these flows are associated with continuity over a period of time. Accordingly, studies find evidence that FDI is the least volatile among financial flows in general and, particularly, during episodes of sudden stops in crises in developing and emerging economies (Sula and Willett 2009). But other studies show that FDI flows are as volatile as other flows, and may not always be stabilizing (Fernández-Arias and Hausmann 2000). One reason is that measured FDI does not reflect the “tied down” aspects of investment alone. Instead, it could represent incoming and outgoing flows that circumvent a country's capital controls and are merely substituting more volatile flows. Or they may be flows that pass through a particular country to reduce corporate tax liabilities or are used to obtain other funds holding physical assets as collateral. These aspects make FDI closer to portfolio debt flows that can fluctuate in the short term (Blanchard and Acalin 2016). Hence, countries have to be cautious about expanding their share of these flows without a deeper understanding of their interaction with other flows and the effects on stability (Brukoff and Rother 2007). On the contrary, portfolio and banking flows are thought of as relatively destabilizing, but some country-specific cases find that these foreign investments have had a positive effect on stability when supported by appropriate macroeconomic policies (Pruski and Szpunar 2008). The presence of mixed evidence in the literature, often with differing country experiences, suggests that stability effects of a particular component of capital flow in one country may not be the same for another.

LITERATURE AND THEORETICAL FRAMEWORK

Christopher et al (2017) shows five key financial indicators to proxy financial stability for sixteen emerging economy. The indicators are i. Deposits: Financial system deposits to gross domestic product (GDP) (%), ii. Domestic Credit: Domestic credit to private sector (% of GDP), iii. Net Interest Margin: Bank net interest margin (NIM) (%), iv. Non-performing Loan: Bank nonperforming loans to gross loans (%), and v. Liquid Assets: Liquid assets to deposits and short-term funding (%). The deposits-to-GDP ratio is traditionally used as a measure of size of the financial system relative to the economy and gives a sense of the extent of financial intermediation, especially through banks. The ratio also serves as an indicator of the availability of access to financial savings in countries where the financial structure is dominated by the banking system (IMF 2005). The ratio of domestic credit to the private sector to GDP is another measure of depth of the financial sector, from the asset side as it measures loans made to the private sector by financial institutions. It is also considered as one of the proxies for the level of financial development of an economy. In financial institutions, the NIM is the difference between interest income and interest expense, expressed as a ratio to the amount of their interest-earning assets. A wide margin typically reflects frictions in intermediation; so that a low value of NIM is considered a proxy for higher efficiency. A nonperforming loan (NPL) is one that is in or close to a default. Measured relative to total gross loans, this ratio shows the quality of banking sector assets and may indicate weak capitalization of the banking sector. The last ratio is the percentage of customer deposits and short-term funding that could be met if suddenly withdrawn. A higher ratio indicates more liquidity and lower vulnerability to a bank run. The Nigeria economic situation provides an interesting study of the issue at Hand Since 2010 after the global financial crisis, the government of Nigeria via the central bank of Nigeria has actively encouraged investment and capital inflows in Nigeria financial system and also ensure that the financial system is big strong and more resilient financial institutions but without much success. The risk in which the Nigeria financial system is face with is difficult to empirical analyze. Against this backdrop, the importance of capital inflows into the Nigeria financial system, economic stability had been negatively affected. The objectives of the study is to empirical find out the impact of capital flows on financial system stability using data from the Nigeria economy and noting variables indicated by Christopher et al (2017).

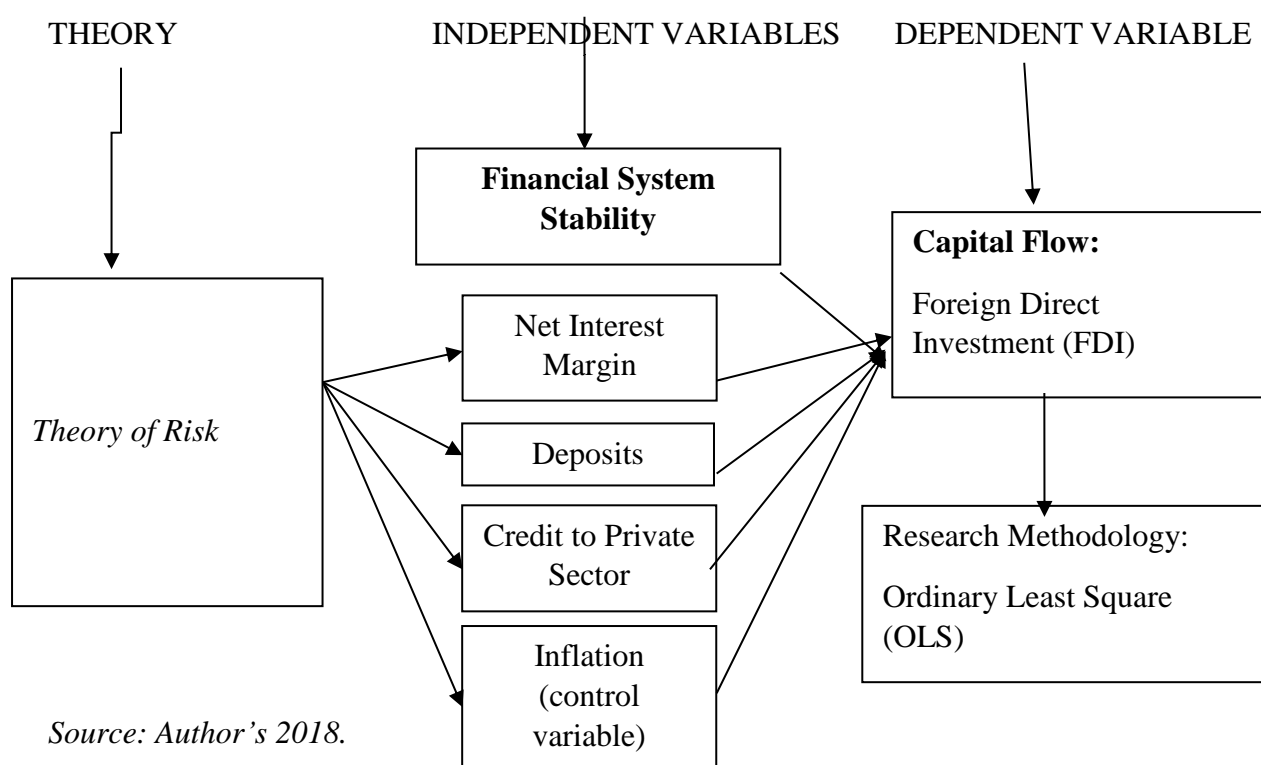


Figure 1 Theoretical Modelling of the Study

METHODOLOGY

The preoccupation of this study is the impact of capital flows on financial system stability of the Nigeria economy. It applies the Ordinary least square methodology based on the traditional determinants of financial stability distilled from the literature. The idea is to subject the variables to a linear model and test the impacts of financial stability variables on capital flows. We describe the indicators used, data sources, and the estimation technique applied in the empirical investigation of the relationship between capital flows and financial stability. For the time period 1987–2017, a set of financial indicators was used to measure financial system stability, gross capital flows, and a macroeconomic variable as control variable.

In order to account for the impact of capital flows on financial system stability of the Nigeria economy, the model for the study is hereby specified as follows:

Model Specification

$$FDI = f(NIM, DEP, CPS, INF) \dots \dots \dots \text{Model}$$

The above model is hereby written in linear form as:

$$FDI = b_0 + b_1NIM + b_2DEP + b_3CPS + b_4INFL + \mu \dots \dots \dots \text{Model}$$

Analytical Variables

Where:

* FDI = FOREIGN DIRECT INVESTMENT

This is proxy for capital flows and it is expected that FDI be should be positive

$$f^i(FDI) > 0$$

NIM = NET INTEREST MARGIN

It is expected that increase in interest margin should lead to increase in financial system stability

$$f^i(NIM) > 0$$

DEP = DEPOSIT

It is expected that increase in deposit should lead to increase in the Nigeria financial system stability

$$f^i(DEP) > 0$$

CPS = CREDIT TO PRIVATE SECTOR

$$f^i(CPS) > 0$$

It is expected that an increase in credit to the private sector should lead to increase in the Nigeria financial system stability

INFL = INFLATION RATE

$$f^i(INF) < 0$$

It is expected that high inflation rate will impede the Nigeria financial system stability

Table 1: Summary of Regression Result

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	1530.647	2308.942	0.662921	0.5132
NIM	232.8336	212.9757	1.093240	0.2843
DEP	-8.330007	6.020007	-1.384448	0.1780
CPS	-0.000140	5.580005	-2.513936	0.0185
INF	16440.34	14125.57	1.163871	0.2550
R-squared	0.358936	Mean dependent var		3267.369
F-statistic	3.639388	Durbin-Watson stat		1.569639

Source: Eview7.2018

RESULTS AND DISCUSSIONS

Table 1, shows the relationship between Capital inflow (FDI) and all financial system stability variables mentioned in model. The FDI represent the dependent variable and the independence variables are NIM, DEP, CPS and INF. The regression result shows the relationship between Net Interest Margin (NIM) and FDI. The relationship between NIM and FDI is positive of 232.8336. From the above regression result, we can deduce that the positive regression result means that one percent increase in NIM will lead to an increase in FDI. This positive relationship between NIM and FDI corroborate with the work of Christopher et al (2017) that if net interest margin (NIM) is proxy for financial system stability it will positively affect capital flows (FDI). The relationship between DEP and FDI is negative of 8.33007. This means that one percent increase in DEP will lead to a corresponding fall in FDI. In this result, we can also deduce that there is a negative relationship between CPS and FDI of 0.000140. The result of DEP and CPS does not corroborate with the work of Christopher et al (2017) that Deposit (DEP) and Credit to Private Sector affect capital flows negatively. Based on apriori expectation, INF has negative impact but, in this result, there is a positive relationship between INF and FDI. This means that one percent increase in INF will lead to a corresponding increase in FDI.

In the result, the coefficient of determination is fair. It shows that about 35.89 percent of the total variations in FDI are explained by all the independent variables in the model. The adjusted R^2 also indicates that about 26 percent of the total variations in FDI are explained by the model. The F-statistic is significant at 5 percent critical level. It indicates that the joint variations of the model are significant. However, the Durbin Watson value indicates a presence of positive serial correlation of 1.56. This however, may had contributed to the fair coefficient of determination. In this result. The F statistic of the model is 3.639388 while the probability of F-statistics is 0.017. This implies that a relationship exists in the model.

Test of Hypothesis Using T-Test Derived from The Regression Model Result.

The t-test value is assumed to be the average weighted and can be used to test hypothesis. We assume that T-tabulated is 5% (0.05).

We reject H_0 if $T\text{-calculated} > T\text{-tabulated}$. T-calculated can be obtained from the regression table above.

$$T\text{-calculated} = 1.093240$$

Research Hypothesis

Hypothesis I

H_0 : Net interest margin does not significantly affect foreign direct investment in Nigeria

The use of T-test to test hypothesis if the independent variable is statistically significant to the dependent variable. The variable to be tested here is NIM against FDI. The reason for the test is to validate the research objective stated. The T-calculated value is compared with that of 5% confidence interval. Since the T-calculated is 1.093240 which is compared to 0.05 i.e. $1.093240 > 0.05$ we reject the null hypothesis and accept the alternative hypothesis that net interest margin affect foreign direct investment. Therefore, one of the findings of this study is that financial system stability indicator (interest margin (NIM)) affect capital flows (FDI).

Hypothesis II

H₀: Deposits does not significantly affect foreign direct investment in Nigeria

The variable to be tested here is DEP against FDI. The reason for the test is to validate the research objective stated. The T-calculated value is compared with that of 5% confidence interval. Since the T-calculated is -1.384448 which is compared to 0.05 i.e. $-1.384448 < 0.05$ we reject the alternative hypothesis and accept the null hypothesis that Deposit does not affect foreign direct investment. Therefore, one of the findings of this study is that financial system stability indicator (Deposit (DEP)) does not affect capital flows (FDI).

Hypothesis III

H₀: Credit to private sectors does not significantly affect foreign direct investment in Nigeria

The variable to be tested here is CPS against FDI. The reason for the test is to validate the research objective stated. The T-calculated value is compared with that of 5% confidence interval. Since the T-calculated is -2.513936 which is compared to 0.05 i.e. $-2.513936 < 0.05$ we reject the alternative hypothesis and accept the null hypothesis that Credit to the Private Sector does not affect Foreign Direct Investment. Therefore, one of the findings of this study is that financial system stability indicator (Credit to the Private Sector) does not affect capital flows (FDI).

Hypothesis IV

H₀: Inflation does not significantly affect capital adequacy ratio in Nigeria

The variable to be tested here is INF against FDI. The reason for the test is to validate the research objective stated. The T-calculated value is compared with that of 5% confidence interval. Since the T-calculated is 1.163871 which is compared to 0.05 i.e. $1.163871 > 0.05$ we reject the null hypothesis and accept the alternative hypothesis that Inflation affect foreign direct investment. Therefore, one of the findings of this study is that financial system stability indicator (Inflation (INF)) affect capital flows (FDI).

CONCLUSIONS

In this study, we set out to empirically investigate the impact of capital flows on financial system stability of the Nigeria economy using data from 1987 to 2017. The study is borne out the need to ascertain the nature of impact of some variables likely to affect capital flows and financial system stability in this period where the Nigeria financial and political system is undergoing reforms. In this study, the capital flows were proxied by foreign direct investment and an appropriate indicator was proxy for financial system stability. The NIM variable was empirically proven to positively affect FDI indicating that financial system stability affects capital flows.

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