

IMPACT OF FINANCIAL LIBERALIZATION ON THE PERFORMANCE OF DEPOSIT
MONEY BANKS IN NIGERIA

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Abstract

It has been believed that financial liberalization can stimulate industrial growth, national output and strengthening of the banking system which may be translated into overall growth of the economy by efficient allocation of credit. The allocation generates investment opportunities by reducing the cost of investment, deregulations. This is long recognized in literatures to have become a stylized fact. This is because the market equates the supply and demand of national savings. Higher real interest rates increase financial intermediation, which in turn raises the rate of economic growth in developing countries. However, excessively high interest rates will have unfavorable economic effects. This can be avoided if nations practice financial liberalization of the banking system under appropriate conditions. In entering this argument, the current paper examines financial liberalization and performance of deposit money banks in Ghana, Kenya, Nigeria and South Africa. Using data from World Development Indicator we employ the Nigerian banks as sample representative from 2011 to 2019. The study used panel data framework to

estimate the dataset. Findings indicate a positive relationship between interest rate and assets. There is also evidence of a positive relationship between liquidity ratio and assets

of deposit money banks. The study concludes that financial liberalization has positive impact in the performance of deposit money banks in the region.

Introduction

One of the landmark achievements in the 1970s and 80s is the massive development of theoretical thoughts in finance. Financial liberalization continues to enjoy laudable appeal even in current literature (Baloch, Fatima, Ahmed and Noor, 2020; Gopalan, and Sasidharan, 2020; Wang and Giouvriss, 2020). Financial sector regulation theory, financial liberalization, Loanable fund theory, financial repression theory, and others emerged.

Within those decades economic development around the world was seen to be potentially depending on financial sector activities. On the other hand, economic crisis associated with exchange rate difficulties, balance of payment crisis loomed large everywhere in developing countries. Because the economy consists of several institutions the banking firms underperformed its responsibilities. One of the weaknesses was credit round tripping associated with the reliance on public sector deposits and investment of same in the government bond market. Forced determination of exchange rate created massive involvement and rebalancing of banking firm's business portfolio was necessary. Heavy financial sector reforms followed in sub-Saharan Africa (SSA thenceforth). Nigeria was not exempted including Ghana and other Surrounding neighbors.

Owusu-Antwi (2009) argues that such reform in Ghana as of early 1980s cuts across financial liberalization and institutional reforms. The government

relaxed command or policy determined rate of interest and supply of savings from the surplus spending unit to the deficit sector. The policy where demand for savings and supply thereafter is the practice of financial liberalization. According to Balassa (1989) McKinnon suggests that savings will increase, reflecting social and private time preference.

Both McKinnon and Shaw maintain that financial liberalization, involving the establishment of higher interest rates that equate the demand for and the supply of savings, will lead to increased savings (Balassa, 1989). McKinnon specifically believes that leaving interest rate to market forces will lead efficient credit disbursement that will improve growth. Jointly McKinnon-Shaw considers financial liberalization as a mainstay of economic reforms in developing countries. the argument for liberalization in finance is that prices for savings increase rates of saving, improve savings allocation, induce some substitution of labor for capital equipment, and assist in income equalization" (McKinnon, 1973).

Financial liberalization can influence the performance of deposit money banks in the Sub-Saharan Africa region. For instance, with the government of these countries giving-up their economic determining power and the authority to fix interest rate, the banks left with the choice to rely on the forces of demand and supply set by interest rate in the market develops competitive capacity to operate and grow profitably. For instance, in 1982 First Bank Nigeria Plc (FBN),

the largest in Nigeria made a working profit of N43.9 million which is a drop from N50.704million in 1981; loan increased by 11.25%. As the entire moved into full scale liberalization, the evident turns glaring as it's reflected on the income statement of First Bank Nigeria Plc. Working profit increased to N145.848 which is far more than the immediate past financial year's N82.944 million in 1985 (FBN, 1982, 1986).

Our responsibility in this study is to summarize available empirical evidence and to the best of our knowledge this aspect is not widely researched. We further the study with data analysis using 15 West African countries banking reports as a pilot for other banks in Sub-Saharan Africa. To be specific this analysis deals with financial liberalization and performance of deposit money banks in sub-Saharan Africa, however Nigeria is in the sub-Saharan Africa region hence the banking firms form the sample entities. The rest of this paper is structured as follows: section 2 is empirical review. Section 3 is data and methods. Section 4 is result analysis and lastly is chapter 5 as conclusions. First, we create the following hypotheses to expand the concept:

Hypothesis One: There is no significant relationship between bank loans and assets of deposit money banks.

Literature Review

The large empirical literature changes greatly in terms of both empirical approach and Country coverage. The McKinnon and Shaw hypothesis literally spawned hundreds of such Empirical studies across many different contexts, countries and time periods. The empirical literature, in general, suggests

Hypothesis Two: There is no significant relationship between liquidity and assets of deposit money banks.

Hypothesis Three: There is no significant relationship between interest rate and assets of deposit money banks.

Conceptual Framework of Liberalization

The early hypotheses of McKinnon and Shaw assumed that liberalization, which would be associated with higher real interest rates--as controls on these are lifted—would stimulate saving. The underlying assumption is, of course, that saving is responsive to interest rates. The higher saving rates would finance a higher level of investment, leading to higher growth. Therefore, according to this view, we should expect to see higher saving rates (as well as higher levels of investment and growth) following financial liberalization.

Bandiera, Caprio, Honohan, and Schiantarelli (2000) construct an index of financial liberalization on the basis of eight different components: interest rates; reserve requirements; directed credit; bank ownership; prudential regulation; securities markets deregulation; and capital account liberalization.

that the relationship between saving rates and real interest rates are at best ambiguous. Yet surprisingly, and somewhat perversely, financial liberalization also has a mixed track record regarding saving rates.

Indeed, in the studies reviewed here, in most of the cases liberalization appears to lead to a decline in the saving rate. In their recent analysis, Wang and Giouvris (2020) uses disaggregate measures

(foreign exposure index) to analyze how the entry of foreign banks affects domestic banks and the financial markets unlike previous studies which tend to employ aggregate measures (foreign banks number and foreign bank assets share). The results show that the entry of foreign banks has a significantly positive impact on the performance of domestic banks, which is in favor of the process of domestic financial liberalization. Baloch, Fatima, Ahmed and Noor (2020) examine the impact of financial liberalization on industrial response in manufacturing industry measured as new firm entry. Moreover, moderating effect of external finance dependence on the relationship of financial liberalization and firm entry is estimated. The authors estimate the model using generalized methods of moments and found that external finance dependence has a significant negative impact of new firm entry, while financial liberalization has a positive but insignificant impact on firm entry. Nevertheless, a statistically significant positive moderating impact of external finance dependence is documented which implies that the sectors which are more dependent on external finance gain disproportionate benefit from financial liberalization.

Gopalan and Sadisharan (2020) combine both disaggregated firm-level data from the World Bank Enterprise Survey (WBES) as well as country-data to construct a novel and comprehensive measure capturing firms' credit constraints as well as information verifiability for firms. Using a firm-level sample of 37,578 observations representing 60 EMDEs covering the time period 2006 to 2014, the paper employs an ordered probit model on cross-sectional data to understand empirically how foreign

banks affect firms' access to credit. The results show evidence for foreign bank presence tending to ease firms' credit constraints. The authors also find that firms with audited financial statements tend to experience a reduction in credit constraints. Finally, our results point out that for micro, small and medium firms, in relation to the large firms, greater information availability through audited financial statements jointly associated with greater foreign bank presence tends to ease firm credit constraints.

Owusu-Antwi (2009) investigated the pre- and post-reforms policies to determine whether those policies have helped to eradicate problems that have hindered the effectiveness of the financial system. The liberalization of Ghana's financial system has included the relaxation of interest rate controls, credit ceiling, partial privatization of the government's own banks, restructuring of public sector banks, capital markets developments, and deregulation of the prudential system.

Findings indicate liberalization of Ghana's financial system has included the relaxation of interest rate controls, credit ceiling, partial privatization of the government's own banks, restructuring of public sector banks, capital markets developments, and deregulation of the prudential system.

Gamariel (2015) investigates the effects of financial liberalization policies on bank profitability in selected countries in Sub Saharan Africa (SSA). The paper employs a two-step General Method of Moments (GMM) approach in a dynamic panel framework, to examine the impact of seven financial liberalization policies on different measures of bank profitability. The evidence presented suggests that some

liberalization policies that significantly impact on the competitive environment in which banks have a negative effect on bank profitability. However, an index for total liberalization does not seem to have operated in any explanatory power for bank profitability.

On the contrary, reforms on prudential regulation and bank supervision, as well as bank privatization significantly increase bank profit levels. Furthermore, the empirical results also highlight that bank specific, macroeconomic and institutional variables are important determinants of bank profitability in SSA.

Balassa (1989) makes summary of available empirical evidence indicating that higher interest rates increase the extent of financial intermediation while increased financial intermediation raises the rate of economic growth in developing countries.

Egbetunde, Ayinde, and Balogun (2017) considers a structural interaction of the interest rate liberalization-growth nexus; through the inclusion of financial development variables for sub-Saharan African economies spanning the periods 1980-2012. The authors employed both panel cointegration and panel error correction models were employed for empirical investigations. It is evident in the findings that other factors such as the openness on trade and price stability are much more significant for interest rate liberalization and economic growth in sub-Saharan African countries. The authors conclude that the study aligns with the McKinnon-Shaw hypothesis of interest rate-growth nexus.

Matthew and Olowe (2011) attempted to take a cursory look at the issue that an enhanced financial sectoral deregulation has been a major economic

tool in the agenda of most less developed economies and Nigeria by examining the impact of financial system liberalization on savings and investment and by extension growth and development in Nigeria between 1997 and 2008. Using analysis of variance (ANOVA). The study concludes that We conclude that there is significant difference on the impact of liberalized financial system on savings, investment, growth and development in Nigeria.

Many SSA countries have implemented series of reforms in the banking system. Many studies on this have been narrowly focused in their approach; however we widen and add to the existing body of knowledge in this regard. Against this backdrop a new research is necessary in covering larger number of countries in the region. We employ real interest rate determined by the market forces. This is further followed by access to financial services and products regressed against the assets size of deposit money banks in the region.

Data and Methods

We extract data from World Development Indicator of the World Bank. The data on real interest rate, Bureau de change, asset size and liquidity of the banks from 2011 to 2019. Sample countries are identified based on convenience. The current study follows series of research designs beginning from quantitative design approach through other related approaches. First, our study begins with quantitative design.

$$Y_{it} = \alpha + \beta x_{it} + \mu_{it} \quad (1)$$

Where;

Y_{it} is the dependent variable; μ_{it} implies the disturbance term; α is the constant and β represents the parameter for the explanatory variable.

- X_{it} is explanatory variable of a member subject (country) collected on the basis of time; α implies constant.

Where,

ASSET is assets of deposits money banks; LQDR means liquidity ratio; INTR interest rate; μ_{it} represents error term. $i = 1,2,3...$ (entities); $t = 1,2,3...9$ years. BDC is bureau de change.

$$\begin{aligned} \ln ASSET_{it} &= \alpha + \ln \beta_1 LQDR_{it} + \ln \beta_2 INTR_{it} \\ &+ \ln \beta_3 BDC_{it} + \mu_{it} \end{aligned} \quad (2)$$

Results and Analysis

Table I: Results of the Regression on Financial Liberalization Variables

Dependent Variable: ASSET
 Method: Panel Least Squares
 Cross-sections included: 15

Financial Liberalization					
Variables	beta	Std Error	t-statistic	p-value	
Intercept	-0.006866		0.113990	-0.060236	0.9521
AASET(-1)	0.980073		0.024352	40.24621	0.0000
LQDR	0.003545		0.002398	1.478086	0.1422
INTR	0.000472		0.010865	0.043427	0.9654
BDC	0.0000650	0.003125	0.020812	0.7813	

Notes: Number of observations = 36
 Prob > F = 0.000
 significant at 0.05 level. $F(8,15) = 1525.620$
 $Adj R^2 = 0.987158$

Table 1 is a pooled regression result which hypothetically assumes that all the banks in every country are a single whole without latent differences. On the table the betas of financial liberalization and the control variables have positive signs if we assume uniform coefficients across the banks. For instance, liquidity ratio in the Sub-Saharan region increases asset by approximately 0.000472%. interest rate is lower with 0.003545%, whereas bank

liquidity ratio is seen to have highest magnitude which is approximately 0.012221%. Beta of bureau de change is positive and insignificant with a value of 0.0000650 (p -value is 0.7813). This indicates that changes in the value of bureau de change does not lead to significant positive increase in assets of banks across the four countries' banking system. Other factors held constant, this result shows that bureau de change is not powerfully influential.

Conversely the beta of lags of per capita income of 0.980073% is both positive and statistically significant due to a t-statistic of $40.24621 > 2$ which implies strong acceptance of the alternate hypothesis. We therefore confirm that historical values of assets could explain assets in future.

In addition, given the statistical evidence which indicates that all the explanatory variables are not statistically different from zero, we do not have further sufficient evidence suggesting that financial liberalization variables are drivers of assets in the entire region when assuming absence of heterogeneity in all the 5 banks despite the reported positive economic sign. On the basis of sign the alternate hypothesis is accepted, but statistically rejected based on insignificance of the betas considering individual p -values of 14.22%, 96.54%, 60.82%, 42.89% and 27.76% which are highly insignificant at 5%.

Summary and Conclusion

Financial liberalization in Nigeria is a product of IMF advised measures for tackling balance of payment difficulties in a country. This took off in 1986 but at different years in other countries within the Sub-Saharan African states. On this basis we could not mark our data points from 1986 rather we selected a common denominator to accommodate for the differences.

Financial liberalization changed the tone of doing business in Nigeria and other areas as the market was allowed to determine the allocation of credits and demand for them. In our analysis we employed the balanced panel framework to accommodate time invariant factors across the four countries. This uniqueness was explained using the fixed effect method.

Among the robustness techniques produced in the result, there exists no evidence of cross sectional dependence.

The joint Wald test proves that the variables are not redundant in explaining the various changes. However, there are still other implications of the finding as suggested in the econometric test. The Akaike info criterion (AIC) guided the selection of our lag levels in the analysis. This is closely followed by the use of Schwarz info criterion (SIC). There exists no serial autocorrelation in the variables; hence our model is not spurious. It is also observed to be well identified without chances of suffering bias and overinflated beta and inefficiency problem. The $\text{Adj } R^2 = 0.987158$ shows that the model candidates explain approximately 98.71% of changes in the value of assets given condition that liberalization had taken effect in the Nigeria, Ghana, South Africa and Kenya. However, our model suffers some limitations due to the fact the historical dates of liberalizations are not in uniform status. We did not account for such finding limitation in the econometric framework we have adopted. Subsequent studies should look into such direction and enrich literature in that aspect.

This study analyzes banking sector liberalization and performance of deposit money banks in SSA. Recall we employed a system of analyzing banks in countries: Nigeria, Kenya, South Africa and Ghana. Of these class of countries South Africa is powerfully developed in terms of the banking system. From our analysis the liberalization adds positively to assets level of the banks. This complies with McKinnon hypothesis that fixing interest rate to a higher level equates the demand for deposit for supply of deposits. There is a

positive relationship between liquidity ratio and assets. There is also a positive

relationship between interest rate and assets.

Table 1 Analytical Data

year	country	Asset Size N'billion		BLOAN	Interest Rate %	Liquidity %
2011	Kenya	1370.707	299.5501	151.4211	2.672348	7.855723
2012	Kenya	1364.143	147.8733	154.601	4.374295	12.27064
2013	Kenya	1361.474	181.6659	154.373	4.407319	14.5166
2014	Kenya	1412.781	203.901	165.383	4.50741	10.02468
2015	Kenya	1465.227	222.104	244.7	4.83592	19.00852
2016	Kenya	1546.845	234.2586	232.395	5.209913	55.93679
2017	Kenya	1554.293	264.1901	216.571	5.581946	79.57098
2018	Kenya	1568.19	250.3518	224.483	5.510077	305.9739
2019	Kenya	1609.917	257.271	220.527	5.546012	192.7724
2011	South Africa	4924.329	80.34214	500.605	6.405199	32.53765
2012	South Africa	5017.172	87.27156	639.219	5.813443	30.07164
2013	South Africa	5219.897	104.7536	645.333	5.9007	35.00366
2014	South Africa	5494.303	130.8713	647.924	5.603656	20.07731
2015	South Africa	5540.384	130.5183	661.89	4.977607	20.82496
2016	South Africa	5336.289	154.9863	654.907	4.739802	13.34434
2017	South Africa	5203.011	147.2291	658.3985	4.435413	10.5002
2018	South Africa	5142.35	151.1077	656.6528	4.587608	11.92227
2019	South Africa	5172.681	149.1684	657.5256	4.51151	11.21124
2011	Ghana	2696.208	271.6259	131.998	4.436497	15.64031
2012	Ghana	2754.117	286.3732	131.131	4.651383	38.41888
2013	Ghana	2751.964	313.4404	148.6	4.561531	169.8485
2014	Ghana	2845.59	332.1936	162.939	4.6058	285.1123
2015	Ghana	2932.934	354.8265	159.743	4.925039	381.7139
2016	Ghana	3018.153	386.7007	181.788	4.962814	445.8792
2017	Ghana	1672.983	301.7874	153.121	2.672315	7.855723
2018	Ghana	1308.685	298.5332	150.6485	2.671273	7.855723
2019	Ghana	1228.001	300.1603	151.8848	2.671794	7.855723

2011	Nigeria	1360.415	299.3468	151.2666	2.671533	7.855723
2012	Nigeria	1381	299.7536	151.5757	2.673163	7.855723
2013	Nigeria	2741.463	245.4408	183.251	4.491633	86.08563
2014	Nigeria	2961.626	283.0924	200.068	4.66522	150.5311
2015	Nigeria	3126.456	369.3893	189.982	4.954466	255.51
2016	Nigeria	3291.388	404.2671	213.53	5.092911	295.0581
2017	Nigeria	3425.522	443.8633	201.756	5.248176	275.2841
2018	Nigeria	3571.873	424.0652	207.643	5.170544	285.1711
2019	Nigeria	3589	433.9643	204.6995	5.20936	280.2276

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