

**THE INFLUENCE OF DEPOSITS ON LOANS GRANTED BY SELECTED BANKS IN
NIGERIA**

By

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Abstract

Financial intermediation is one of the primary functions of (commercial) banks and one of the beneficiaries of this function in Nigeria is the manufacturing sub-sector of the economy. But things appear not rosy for this sector of recent and the banks are being blamed for it. Manufacturers complain of lack of inadequate loan facilities from banks to expand their production capacity, Banks on their own appear helpless as the situation is blamed on deposits received from the surplus unit. Why is this so? How do bank deposits affect loans granted by Nigerian banks? The maturity profiles of bank loans and deposits were arranged along the following lines-under 1 month, 1-3 months, 3-6months, 6-12 months and over 12 months. Using Doubly Multivariate Repeated Measures Design on the maturity profiles of loans and deposits of seven Nigerian banks from 2000-2007, it was found that there is a significant difference in the maturity profiles of the two variables in all the banks examined over the period under review and no significant difference in their linear combinations, What this means in effect is that since: the bulk of bank deposits are of short term duration, manufacturing companies have to look beyond the banking sector to source for their much needed long term loans.

Key words: Loans, Deposits, Financial intermediation, Manufacturing capacity.

Introduction

One crucial reason banks are established by their promoters is to facilitate lending to their customers (Cottarelli et al, 2003). Banks are expected to support their immediate environments. with adequate supply of credit for all legitimate businesses (Udaka and Offiong, 2006). They are also expected to take care of customers' financial needs and to price credit reasonably in line with competitive determined interest rate (Gourinchas et al. 2001). Indeed, lending is the principal economic function of banks, to fund consumption and investment spending by businesses, individuals and the government (Mbat, 2006;

Udaka and Offiong, 2006). How well a bank performs its lending function has a great deal to do with the economic health of its environment, because bank loans support the growth of new businesses and job creation within the bank's territory and promote economic viability (Levine et al, 2000). Moreover, bank loan often seem to convey positive information to the market place

about a borrower's credit quality, enabling a borrower to obtain more and perhaps somewhat cheaper funds from other sources (Rose, 1999).

Bank loans are funds granted to individuals and organizations to meet their temporary or long-term deficit operations (Levine et al, 2000; Mbat 2006; Udaka and Olliong, 2000). Loans contribute significantly to the revenues and profits of banks. A commercial bank is essentially a borrowing and lending institution, that is, it borrows money as cheaply as it can, from one set of people and lends it to others at a higher rate. But how, one is tempted to ask is it possible for the bank to lend other people's money, which it is supposed to be holding in safe custody? What happens if the people who have money in the bank come along and demand payment, and the banks are unable to give them their money?

In the last few months, the public has been reading and listening with keen interest on the phenomenal growth of banks in the country. Analysis of value of earnings of top ten banks in the Nigerian banking industry reveals a new divergence and phenomenal growth in the after tax earnings of the banks within only two years of post-consolidation exercise which is part of the wider and on-going reforms in the financial sector.

As rightly observed by Zakari (2008), one of Nigeria's foremost financial institutions. Afribank Nigeria Plc recorded N11.04bn Profit Before Tax (PBT) in its third quarter ending December 2007. This represents some 207 per cent increase from the N3.59bn posted in the corresponding year from available records, Zenith Bank Plc announced a remarkable increase in gross earnings of 57.58 per cent for the half year ending December 31st 2007. Its unaudited results showed PBT of N20.14bn, representing 57.58 per cent over N12.83bn for the same period in the previous year. Oceanic Bank Plc had a 176% increase within three months, GT Bank Plc, an increase of 35% within six months, Diamond Bank Plc, an increase of 71% and United Bank of Africa Plc, an increase of 101% (Zakari, 2008). Intercontinental Bank Plc on its own had an increase of 95% Over the same period.

Meanwhile a detail analysis of the phenomenal profits declared by the selected banks in the banking industry above reveals a something unusual especially in an economy in which a larger percentage of its population lives below poverty line while the productive units are sub functional as they lack easy access to funds to finance their operations. As observed by Mutallab (2007), manufacturing sector capacity utilization (in 2007) fell to about 29.7%, representing points and 30.7 points lower than 47% and 53.4% recorded in 2004 and 2005 respectively. According to the Manufacturers Association of Nigeria (MAN), 30% of the country's manufacturing companies are moribund, and only 10% are currently operating with the remainder ailing.

What is responsible for this? Why do banks find it difficult to grant loans to manufacturing companies in the right proportions needed by the manufacturers? What, in a nutshell, is the relationship between deposits and loans granted by Nigerian bank?

It is an attempt to answer these and other similar questions that motivated this research work. The rest of the paper is divided into four sections. Section two is on review of related literature while section three is on research methodology and model specification. Section four is on findings and discussions while section five summarises and concludes it.

Review of related literature.

The classical school believes that whatever is not consumed is saved (Olusoji, 2003). Thus, saving is a residual, representing what is left of income after consumption is satisfied. Furthermore, it is generally agreed that the forces of supply and demand determine the price of factors of production in the market system. Savings constitute the major source of credit while investment is the outcome of demand for credit. Invariably therefore, what is saved becomes investment.

Olusoji (2003) identified three types of personal savings. These are forced saving contractual saving and voluntary saving. Forced saving includes tax and inflation. Contractual savings occur when the individual concludes voluntarily the contract of savings (eg, life insurance) Voluntary are those ones done voluntarily by households. That type of saving, according to Olusoji (2003) is mostly encouraged by monetary authorities. In Africa, the extent of personal savings is relatively low and possibility of saving is limited by the per capita income that is rising very (Ligeti, 1989).

Bank deposits as defined by Furness (1978), is the evidence of the debt that a bank owes its customers. The benefits to the economy as identified by him are numerous. Through bank deposits, banks are able to grant loans to customers, thus leading to an improvement in the standard of living. Another effect is that banks are able to make loans to businesses, which help them to finance plant expansion and production of new goods, thereby leading to increase in employment and economic growth.

Koleoso (2007) identified the roles of bank deposits to the growth of the Nigerian economy. According to him, saving (deposit) mobilization of commercial banks is a catalyst for capital formation, which is an essential ingredient for investment. In other words, bank deposits encourage investments, thus increasing the growth of the economy. Short term and medium term loans are useful for the development of the real or productive sector of the economy, while commercial banks, through their customers' deposits invest directly in the productive sectors of the economy through collaborative efforts and acquisition of shares in companies.

The theoretical framework often used to examine the relationship between savings and investments is the two gap-model (Sanni and Fagoyinbo, 2008). The model characterized by unfettered capital flows argues that countries with high level of investments need not rely on an equally high domestic savings. The gap between domestic savings and gross investment must equal the difference between imports and exports and is financed by external capital or foreign savings (Feldstein and Horioka, 1980) as quoted by Sanni and Fagoyinbo (2008). However, empirical evidence from their study contrasted with the sign of theoretical relationship. It was found that gross national savings and domestic investment rate are positively correlated for both developed and developing countries.

Samni and Fagoyinbo (2008) recognized that the demand for bank loan is a demand for credits. They contended that the demand for loans depend on time preference or taste which can be measured by the rate of interest. They also argued that the demand for credits depend on the productivity, which is the level of economic activities us, measured by Gross Domestic Product (GDP) or its components like investments and exports.

Efficient financial intermediation contributes to higher levels of output, employment, and income, which invariably enhance the living standards of the population (Mogboyin, 2008). The banking sector remains at the center of this process, even in economies with highly developed financial markets. Banks provide important positive externalities as mobilisers of savings, allocators of resources, and providers of liquidity and payment services, as well as a fulcrum for monetary policy implementation. Simply put, banks influence the savings-investment process in order to accelerate the rate of economic growth and poverty reduction. Towards this goal, the soundness of intermediation is as important as its volume, hence the need to have an efficient banking system.

The flow of credit results from factors that affect both supply of, and demand for credit. Such factors as cited in the literature include: total deposits with banks, lending rates, cash ratio, inflation and the level of productivity (Laffont and Garcia (1977), Sealy (1979), Ito and Beda (1981). In other words, there is an identification problem: the observed decline in the volume of credit may be the result of a weak demand for loans. In the relevant empirical work relating to

In this study, disequilibrium economic models have been used to establish the significance of credit crunch. The results of Laffont and Garcia (1977) for Canada, Sealy (1979) for the United States, and Ueda (1981) for Japan, Kugler (1987) for the former Federal Republic of German and Switzerland and Pazarbasioglu (1997) for Finland indicate large disequilibrium situations in the market for bank loans.

Studies on the flow of domestic credits to the private sector in Nigeria have not examined its determinants as well as their impact (Mogboyin, 2008). Nonetheless, a study by Ikhida (1988), who estimated a financial sector model for the Nigerian economy using data for the period 1968 to 1983 found that there was a significant inherent inclination by banks to supply loanable funds

for investment but that the level of lending rates at point heavily conditioned this inclination in time. On the demand for loanable funds, the study found the cost of credit wrongly signed and highly insignificant, but a very inherently growing demand for bank loans and advances. There are serious shortcomings in the demand and supply functions specified and. estimated for the study, if the empirical evidence is to serve as a departure point, then it could as well be regarded as indicative.

Research Methodology

Secondary data were used for this research work. They were of two types the maturity profiles of bank loans granted and the maturity profiles of bank deposits. The data were sourced from the published financial statements of seven randomly selected banks. These are: GT Bank, Afribank, Access Bank, UBA, Union Bank, First Bank and Wema Bank for a period of eight years (2000-2007). The limitation here is that since the banks were randomly selected, the conclusions may not be a true representation of the real situation in the banking sector. Again, the greater part of the period under review was before the 2005 banking consolidation exercise in Nigeria.

Doubly multivariate repeated measures design model was used to analyse the data. This is because each subject has multiple variables measured at multiple times (Alistair et al. 2003). For example, this would be the case if one has a repeated means design in which there is one or more independent variables and multiple dependent variables.

The model is stated below: $\text{Loans} = f(\text{Deposits})$.

$$Y\{1\} + Y\{2\} + Y\{3\} + Y\{4\} + Y\{5\} = X_1 + X_2 + X_3 + X_4 + X_5 .$$

Where:

$Y\{1\}$ = Loans maturing within 1 month.

$Y(2)$ = Loans maturing within 1-3 months.

$Y(3)$ -Loans maturing within 3-6 months.

$Y\{4\}$ = Loans maturing within 6-12 months.

$X\{1\}$ = Deposits maturing within 1 month.

$X\{2\}$ = Deposits maturing within 1-3 months.

$X(3)$ = Deposits maturing within 3-6 months.

$X\{4\}$ = Deposits maturing within 6-12 months

$X(5)$ = Deposits maturing after 12 months.

Hypotheses tested

Three hypotheses were tested. These are:

H_{01} : There is no significant difference in the linear combinations of loans and deposits across the five periods and the seven banks being examined.

H_{02} : There is no significant difference in loans across the five period and the seven banks.

H_{03} : There is no significant difference in deposits across the five periods and the seven banks.

4.0. Data analysis and presentation

This analysis will address on multivariate and two univariate questions. These questions are:

Is there a significant difference in the linear combinations of the two variables, loans and deposits across the five maturity periods and seven banks being examined?

Is there a significant difference in loans across the five maturity periods and the seven banks?

Is there a significant difference in deposits across the five maturity periods and the seven banks?

Table 1 simply summarises the design of the analysis.

Table 1: Within – Subjects Factors

Measure	Periods	Dependent Variable
Loans	1	Deposits 0-1 month
	2	Deposits 1- 3 months
	3	Deposits 3-6 month
	4	Deposits 6-12 month
	5	Deposits over 12 months
Deposits	1	Loans 0-1 month
	2	Loans 1-3 months
	3	Loans 3-6 months
	4	Loans 6-12 months
	5	Loans Over 12 months

Source: Computations using Doubly – Multivariate Repeated Measure Design

Table 2: Descriptive Statistics

		Mean (%)	Stand Dev.	N
Deposits	Deposits 0-1 month	70.7143	11.2800	7
	Deposits 1- 3 months	19.8571	11.2758	7
	Deposits 3-6 month	5.4286	3.2071	7
	Deposits 6-12 month	2.9286	3.0609	7
	Deposits over 12 months	1.0714	0.9322	7
Loans	Loans 0-1 month	44.4286	21.4387	7
	Loans 1-3 months	16.4286	9.3069	7
	Loans 3-6 months	11.7142	6.6702	7
	Loans 6-12 months	12.2857	4.6445	7
	Loans Over 12 months	15.1429	6.6940	7

Source: Computations using Doubly – Multivariate Repeated Measure Design

Table 2 allows us to see that question 2 above is asking if the mean of each of the deposits is significantly different from each other, that is, 70.71 for a month deposits, 19.86 for 13 months deposits, 5.43 for 3-6 months deposits, 2.93 for 6-12 months depots and 1.07 for over 12 months deposits.

Question 3 is asking if the mean of each of the loans is significantly different from each other, that is, 44-43 for 0-1 month loans, 16.43 for 1-3 months loans, 11-71 for 3-6 months loans, 12.29 for 6-12 months loans, and 15.14 for over 12 months loans.

The multivariate test table (Table 3) provides an answer to question 1. As the significant level of 0.078 is greater than 0.05, thus making it insignificant, we conclude that there is a significant difference in the linear combinations of the two variables across the five maturity periods and among the seven banks examined.

TABLE 3: Multivariate Tests

	Value	F	Hypothesis Df	Error df	Sig.
Pillai's trace	.998	96.851	6.000	1.000	0.078
Wilks' Lambda	.002	96.851	6.000	1.000	0.078
Hotelling's trace	581.109	96.851	6.000	1.000	0.078
Roy's Largest root	581.109	96.851	6.000	1.000	0.078

Each F tests the multivariate effect of PERIODS. These tests are based on the linearly independent pair-wise comparisons among the estimated marginal means.

Source: Computations using Doubly – Multivariate Repeated Measure Design

Because this design involves a repeated measures component, the analysis makes the assumption of sphericity. This assumption, according to Alistair et al (2003) that the variances of the differences between each period are not significantly different. Because this assumption was not met (Table 4), as the significance level of 0.000 is significant, the Greenhouse Geisser statistics in Table 5 was conducted. As the significance level of loans is still 0.000, the null hypothesis should be rejected for question 2. However, for deposits, the corresponding value is 0.020 indicates that the null hypothesis should be rejected. Therefore, it should be concluded that there is significant difference in the maturity periods of loans and deposits across the five periods and among the seven banks examined but there is no significant difference in the linear combinations of the two variables across the five periods and among the seven banks.

TABLE 4: Mauchly's Test of Sphericity

		Mauchly's W	Approx. Chi- Sq.	df	Sig.	Greenhouse-Geisser	Huynh – Feldt	Lower Bound
Within subjects	Measure							
PERIODS	LOANS	.001	33.515	9	.000	.337	.400	.250
	DEPOSIT	.001	33.560	9	.000	.311	.353	.250

Tests the null hypothesis that the error covariance matrix of the orthonormalized transformed dependent variables is proportional to an identity matrix.

- May be used to adjust the degrees of freedom for the averaged tests of significance. Corrected tests are displayed in the Tests of Within – Subjects Effect table.*
- Design: Intercept Within Subjects Design PERIODS*

Source: Computations using Doubly – Multivariate Repeated Measure Design

The findings here imply that banks should endeavor not to mismatch their funds, hence the need to finance short-term loans with short-term deposits and long- term loans with long-term deposits. In actual fact, the maturity period of 71 percent of bank deposits of the seven banks used as case studies fell under one month (see Table 1) while the maturity period of 44% (the highest) of bank loans granted also fell under one month (see Table 1). As the real sector relies in long-term loans to finance its activities most of the time, it follows therefore that it has to look elsewhere as banks may not be able to meet its aspirations under the present Circumstances.

As rightly pointed out by Talabi and Onanuga (2000), the duration of a credit facility has an important relationship with the banker's source of funds. If the term of a banker's source of loans is short, credit facility granted will be of short-term duration. If the term of deposit is of medium and long duration, the period of credit granted will be medium/long. If there is match of funds between deposit terms and credit terms, it may lead to problems for the banker to meet its maturity obligations to its depositors. In view of this, banks by tradition, as observed by Talabi and Onanuga (2000) believe that their credit facilities should be of short-term duration since their deposits are of short-term maturity. This view was shared by Horunsola (2007) when he observed that funds, which were made available for short-term use but turned into long-term

finance often end with disastrous consequences for the lender. He therefore suggested that advances should be for short-term durations and repayable on demand.

Summary and conclusion

The paper looked at the relationship between the maturity profiles of deposits and loans granted some Nigerian banks between 2000 and 2007. It discusses why people save and the benefits bank deposits to the economy. It also discusses the reasons for bank loans, their contributions and some of the factors affecting them. It was found that there is a significant difference in the maturity periods of loans and deposits in all the banks examined over the period under review and no significant difference in the linear combination of the two variables.

The limitations to the conclusions reached were pointed out. Firstly, the banks used as case study were randomly selected and not based on any scientific criteria. Secondly, it can be argued that the selection of seven banks from the existing 25 banks (though later reduced to 24) may be a true representation. Lastly, the greater part of the period under review was pre- liberalisation period in the banking sub-sector of the Nigerian economy.

TABLE 5: Univariate Tests

Source	Measure		Type III sum of square	df	Mean square	F	Sig.
PERIODS	LOANS	Sphericity Assumed	24038.071	4	6009.518	87.441	.000
		Greenhouse	17825.425		87.441		.000
		–Geisser	24038.071	1.349	15029.177	87.441	.000
		Huynh-Fedt	24038.071	1.599	24038.071	87.441	.000
		Lower-bound	24038.071	1.000			
	DEPOSITS	Sphericity Assumed	5328.857.857	1	1332.214	8.109	.000
		Greenhouse	5328.857.857	1.245	4279.120	8.109	.020
		–Geisser	5328.857.857	1.413	3771.950	8.109	.015
		Huynh-Fedt	5328.857.857	1.000	5328.857	8.109	.029
		Lower-bound					
	LOANS	Sphericity Assumed	1649.429	24	68.720		
			1649.429	8.091	203.856		
		Greenhouse					
		–Geisser	1649.429	9.597	171.877		
			1649.429	6.000	274.905		
	DEPOSITS	Huynh-Fedt					
		Lower-Bound					
		Sphericity Assumed	3943.143	24	164.208		
			3943.143	7.472	527.730		
		Greenhouse	3943.143	8.477	465.183		
	DEPOSITS	–Geisser	3943.143	6.000	657.190		
		Huynh-Fedt					
		Lower-bound					

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