Rural Bank Credits and Deposits Mobilization in Nigeria

Muftau Adeniyi Ijaiya*

Abstract

The aim of setting up rural banks in Nigeria is to mobilize savings to improve rural bank credits to rural dwellers. Using the time series simple linear forecasting model, this paper examines the trend of rural bank deposits and its credit outreach, it then attempts a forecast of the amount of rural bank deposits that would be needed to guarantee an increase in rural bank credits in the next 10 years (i.e. between 2002-2012) in Nigeria, if certain policy measures are put in place.

Introduction

In Nigeria, industries and other economic and social overheads and infrastructures are concentrated in the urban centres to the neglect of the rural areas where majority of Nigerians reside, with perhaps not less than 70% of the total population. This inadequacy was even more profound in the provision of banking services as noted by Soyode and Oyejide (1975), Nwankwo (1980), Okigbo (1981), Ojo and Adewumi (1982). The reasons for this include low incomes of rural dwellers that limit their saving ability, lack of collateral securities, poor infrastructural facilities like roads, water, electricity, durable buildings and lack of quality personnel. (see Olashore 1979).

Given this situation, rural banks have not been able to mobilize enough deposit that would have increased their credit allocations to the rural dwellers.

The aim of this paper therefore is to determine the rural bank deposits needed in the next 10 years (2003-2012) that would guarantee an increase in credit allocations of rural banks to rural area within the same period, if certain policy measures are put in place.

The next section examines the relevant literature on rural banks credits and deposits mobilization. Section three discusses the data source and methodology. Section four discusses the results. The fifth section provides the conclusion and policy recommendations.

Conceptual Issues

Rural Bank Credits and Deposits Mobilization
Rural Banks Credits and Deposits Mobilization. Gregory and Smith (1988) defined rural area as a composition of a group of socially interacting individuals living together in a locality and constituting the only population. Agriculture is the dominant occupation, which is characterized by low productivity, and the consequence of this is rural poverty. Rural areas therefore display a picture of poverty and deprivation characterized by a paucity or total lack of infrastructures and other facilities (see also Okafor and Akinbode 1998).

Encarta Encyclopedia (2005) defines a bank as an organization that carries out the business of banking. While banking consist of safeguarding and transfer of funds, lending or facilitating loans, guaranteeing creditworthiness and exchange of money, with the aim of making profit by paying deposits a lower rate of interest than the rate the bank charges. (See the World Encyclopedia). While World Bank (1992) sees rural bank as a financial institution that provides credit to the rural people to smoothen their consumption and enhance their productive investments. This credit provided is the heart of banking because most of the banks income is derived from interest charged on it.

Credit is defined as a sum of money lend out with a number of conditions attached to the lending such as

*Accounting and Finance Department, University Of Ilorin, Ilorin, Nigeria.

when is the money would be repaid and the rate of interest to be charged. The Central of Nigeria CBN (1998) ces, equipment leasing and net inter-bank float in respect of call money, bills discounted and Naira promissory notes. The types of credit includes commercial credits which are extended to merchants to finance production and distribution of goods; investment credits are extended to business firm to finance the acquisition of plant and equipment; and bank credits consist of deposits, loans, and discounts of depository institutions.

Discussing the importance of credit Encarta Encyclopedia(2005) reiterates that it transfer money or other assets from those who own them to those who wish to use them, as in the granting of loans by banks to individuals who plan to initiate or expand a business venture. While World Bank (1997) said that rural bank credits contributes significantly to the welfare of rural communities by mitigating the impact of seasonality and natural disasters on their income, and also make lumpy investments affordable as well as allocate resources to potential investments with highest returns.

However, the amount of credit out-reach is usually determined by the amount of deposit a bank can mobilize (Osayameh 1986). The word deposit is used interchangeably with savings and it is defined as the amount of money people keep in a bank. Vogel (1984) sees it as the forgotten half of rural finance, because there was no policy formulated to encourage rural bank deposits in most places.

Paulson and Mc Andrews (1998) identified three types of deposits accounts, this includes pass book/ saving account which earns interest for the holder, current/ deposit account which is usually used for business, holders enjoy overdraft and withdrawal is through cheque books while time or fixed deposits enjoy interest payment according to the length of time. These types of savings are among the various deposits mobilization methods open to a bank.

Bascom (1952) said that rural banks could also mobilize deposits by harnessing the rotational and non-rotational credit associations' scheme of rural people by linking them directly to the rural banks. This he argued would improve deposit base of rural banks and also expand their credit outreach. (see also steel and Aryeetery 1994).

Discussing the importance of deposit mobilization of rural banks, Paulson and Mc Andrews (1998) posited that it allows rural people to safe guard their money and accumulate funds that could be used for productive investments such as working capital that could enables clients to earn a stream of profits which are capable of translating into economic growth and development of rural areas. Besides, it was also argued that deposits improve financial intermediation by providing source of funds for rural bank to improve their credit outreach. (see also Porter 1966, and Yaron, et al 1997). Citing cases where rural banks credits have improved rural areas growth, Binswanger and Khandker (1993) reported that India rural banks credits have removed severe constraints in their rural financial markets, which have led to significant rural financial deepening which had a high trade off in rural growth, employment, and welfare of the rural people. Also, the Grameen Bank in rural areas of Bangladesh has assisted in mobilizing deposits from the people, which are used to better their lots.

Trends of Rural Bank Credits and Deposits Mobilization in Nigeria

Given that about 70 percent of Nigerians reside in rural areas with 50.4 percent of total money supply in the economy in their possession, one would have expected an impressive deposits and credits out-reach figures in the rural areas. However only a little percentage of the total deposits in Nigeria is mobilized in the rural areas and the same thing goes for credit. For instance, in Table 1 between the year 1982 and 2002, none of the annual rural deposits exceeded 25% of the total deposits mobilized by commercial banks in the country. The reason for this low deposit might be because majority of the rural dwellers earn income in the informal sector, which is entirely cash-based and they fall outside the segment of the population courted by banks. Besides, there is no policy currently in the country that encourages deposits and deposit mobilization in rural areas . However, in Table 2, the rural banks deposits to rural banks credits outreach are quite impressive. For instance between the year 1982 and 2002 the ratio of rural bank deposits to loans disbursement increased from 32.14 per cent to 60.20 per cent respectively. The reason for this result may be due to CBN rural credit directives, which stipulates that all commercial banks rural branches should invest 50% of their total deposit in the rural areas. This presupposes that if the CBN can uphold this directive, then an increase in rural bank

deposits will automatically increase rural banks credits outreach

Data Source and Methodology

Data source: Time Series data for the period 1982 and 2004 on rural bank credits and deposits mobilization in rural areas were used. The data were obtained from the Central Bank of Nigeria (CBN) Statistical Bulletin of various years.

Methodology

The models: In specifying the model for this research, two sets of models on the future trends of the rural bank credits and rural bank deposits were used. The first model examines the expected rural deposits the rural banks will need to increase their credit outreach to the rural dwellers in the next 10 years.

The models are formulated as:

Model A1: $RBD = f(t_1)$

When transformed into a linear equation Model A1 becomes:

$$RBD = \beta_0 + \beta_1 (t_1) + U$$

Model A2: $RBD = f(t_1) + (t_1^2)$

When transformed into a linear equation, Model A2 becomes

$$RBD = \alpha_0 + \alpha_1 (t_1) + \alpha_2 (t_1^2) + U$$

where RBD = Rural Bank Deposits

β_0 and α_0 = intercepts

β_1 and α_1 and α_2 = parameters

t_1 and t_1^2 = coded time variables in the regression model.

U = error term.

The second model relates to the expected rural bank credits to the rural areas as a result of the rural bank deposits mobilized.

The models are formulated as:

Model B1: $RBC = f(t_2)$

When transformed into a linear equation, Model B1 becomes:

$$RBC = \beta_0 + \beta_1 (t_2)$$

And model B2 becomes:

$$RBC = f(t_2) + (t_2^2)$$

When transformed into a linear equations, Model B2 becomes:

$$RBD = \alpha_0 + \alpha_1 (t_2) + \alpha_2 (t_2^2) + U$$

where RBC = expected rural bank credits as a result of an increase in rural bank deposits.

β_0 and α_0 = the intercepts

β_1 and α_1 and α_2 = the parameters

t_2 and t_2^2 = coded time variables in the regression model.

U = error term.

Note that models A2 and B2 are second polynomial equation which is parabolic in nature. This is necessary because trends cannot always be described adequately by means of a straight line. Moreso, a parabolic trend will not only provide numerical values for the constants α_0, α_1 and α_2 but curves that will provide the best possible fit (Feund and Williams 1970).

As pointed out above, a time series data between the year 1982 and 2004 were used with the mean year of 1992. The degree of accuracy of the futures outlook of the model is evaluated by the use of their inequality of co-efficient techniques (U) defined as:

$$U = \frac{\sqrt{\Sigma (1/n)(P_i - A_i^2)}}{\sqrt{(1/n)\Sigma P_i^2} + \sqrt{(1/n)\Sigma A_i^2}}$$

where P_i = the predicted value of the dependent variables RBD

A_i = the actual value of the dependent variables RBD the value that the equality co-efficient is assumed to lie between 0 and α

Thus stipulating that the closer the value of the result to zero the better forecasting power of the future outlook model (Theil, 1971).

Empirical Results and Interpretation

The future trends of the model and the empirical results are represented in Table 3. As indicated in Table 3, the t-ratio and F- statistic are significant at 95% interval (i.e. 0.05). Hence, for the purpose of forecasting the future trends of the total rural banks credits (RBC) in Nigeria, Model (A2) is preferred to Model A1 because (i) it has a higher R^2 (0.49) than A1 with R^2 (0.47); and (ii) the test

of forecast accuracy shows that Model A2 has a Theil inequality co-efficient closer to zero (0.02) than Model A1 which as 0.05.

Similarly, for the forecast of future trend of rural bank deposits (RBD) in Nigeria, Model B2 is preferred because (i) it has a higher R^2 (0.50) as against Model B1 R^2 (0.48), and (ii) a Theil inequality co-efficient that is closer to zero 0.04 than Model B1 that has 0.05.

From the above analysis, Model A2 and Model B2 become the forecasting tools using 1992 as the mean year. Table 4, therefore, provides the projected rural bank credits based on the projected rural bank deposits. The table simply shows that as the rural bank deposit increases, rural bank credits also increases. For instance, as rural bank deposits increase from N26890.36 million in year 2003 to N46501.54 million in year 2012, the rural banks credits will also increases from N15566 million in year 2003 to N27431.9 million in year 2012. However, to reach this level, certain policy measures must be put in place by government and the banks alike.

Policy Measures and Conclusion

Rural bank deposits are powerful enough to increase rural bank credits outreach in rural areas of Nigeria. This is because; bank deposits are major determinants of credits disbursement. Therefore, our policy measures would be on how rural banks can mobilize more deposits so that they would be able to increase their credit outreach in rural Nigeria.

The existence of the rotating saving and credit associations (ROSCAS) in rural areas connotes that the success of an institution with interest-earning facilities is high. Members of these associations do not have access to interest-earning facilities where funds can be deposited and recipients of savings hoard funds or spend them immediately upon receipt. Therefore, the provision of a positive real deposit interest rates (which requires positive real on- lending interest rates) through the rural banks would encourage savings and members' returns on savings.

In addition, rural banks should also develop flexible and diversified savings instruments that would accommodate the informal saving associations. They should be allowed to open account for their associations with certain ts to the account. Loans can also be issued against accumulated savings. Such savings and loans instruments would safeguard their money, earn a return and enable them have access to additional funds.

Moreover, banks should also introduce mobile banking system in remote areas where they cannot set up a branch at all. This would bring deposit facilities closer to the rural people, and once they are sure that their money is safe, the customers and deposits of the banks would rise. However, bank would have to put in place corrupt malpractices prevention mechanisms, such as staff incentives (financial and non-financial rewards) that would enhance a high-level client confidence in the rural banks.

Government should also introduce social jobs in rural areas, this would pull out a substantial percentage of the rural dwellers from informal income earning sector. This would subsequently improve their income and consequently savings.

The successes of the rural banks in rural Nigeria are ascribed largely to deposit mobilization and credits disbursement. Their inability to mobilize enough savings calls for the above recommendations, which are capable of increasing their deposits base and their credits disbursements to the rural areas between the years 2002 to 2012.

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Table 1: Commercial Banks Total Deposits to Rural Bank Deposits.(=N= Million)

Year	*Commerical Bank Total Deposits*[a]	*Rural Bank Deposits*[b]	*Ratio*[c]
1982	12018.90	111.70	0.92
1983	13938.50	131.20	0.94
1984	15734.80	276.60	1.76
1985	17597.10	311.40	1.77
1986	18137.60	873.50	4.82
1987	23086.70	1229.20	5.32
1988	29065.10	1378.40	4.71
1989	27164.10	5722.70	21.06
1990	38777.30	8360.10	21.56
1991	53208.70	10580.70	19.88
1992	75047.70	4612.20	6.15
1993	110453.60	19542.30	17.69
1994	142537.50	4855.30	3.41
1995	178962.10	8807.10	4.92

(Contd.)

1996	214359.80	12442.00	5.80
1997	280028.70	19047.60	6.80
1998	314303.50	18513.80	5.87
1999	476350.90	15860.50	3.33
2000	702104.50	20640.90	2.94
2001	928326.90	16872.90	1.82
2002	1100710.30	14861.60	1.35
2003	1417069.00	65552.30	4.63
2004	1778713.00	64490.00	3.63

Source: a and *b*, CBN Statistical Bulletin (2004) and c author's computation.

Table 2: Deposits and Loans of Rural Banks in Nigeria.(= N = Million)

Year	*Deposits*	*Loans*	*Ratio*
1982	111.70	35.90	32.10
1983	131.20	44.20	33.70
1984	276.60	58.20	21.00
1985	311.40	114.90	36.90
1986	873.50	373.60	42.77
1987	1229.20	492.80	40.10
1988	1378.40	659.90	47.90
1989	5722.00	3721.10	65.00
1990	8360.10	4730.80	56.60
1991	10580.70	5962.10	56.30
1992	4612.20	1895.30	41.10
1993	19542.30	10910.40	55.80
1994	4855.20	1602.20	33.00
1995	8807.10	8659.30	98.30
1996	12442.00	4411.20	35.50
1997	19047.60	11158.60	58.60
1998	18513.80	11852.70	64.02
1999	15860.50	7498.10	47.28
2000	20640.90	11150.30	54.00
2001	16875.90	12341.00	73.10
2002	14861.60	8942.20	60.20
2003	65552.30	11251.90	54.70
2004	64490.00	34118.50	52.90

Source: CBN Statistical Bulletin (2004)

Table 3: Empirical Results of the Future Trend of the Models Rural Bank Credits and Deposits

Variables	*Modal A1*	*Modal A2*	*Modal B1*	*Modal B2*
Intercept	4927.60	5113.9	8779	9059.14
t-ratio	(2.48)	(0.01)	(2.9)	(0.16)
Time t_1	743.9	743.9	1314.12	1314.12
t-ratio	(2.3)	(3.3)	(2.7)	(3.9)
Time t_1^2		18.6		27.9
t-ratio		(0.16)		(1.0)
R^2	0.47	0.49	0.46	0.50
R^2 Adjusted	0.26	0.34	0.35	0.42
F	2.77	6.18	3.78	8.46
U	0.05	0.02	0.05	0.04

Source: Author's computation

Table 4: Projected Rural Banks Deposits and Rural Banks Credits (=N= Million)

Years	*Projected RBD*	*Projected RBC*
2003	26890.36	15566.00
2004	28646.10	16719.10
2005	30854.80	17928.00
2006	32925.22	19174.10
2007	35068.44	20457.04
2008	37227.40	21777.90
2009	39462.26	23134.60
2010	41752.90	24530.50
2011	43990.32	25962.60
2012	46501.54	27431.90

Source: Author's Computation