

THE EXTENT OF RISK IN COMMERCIAL BANKS' LENDING TO AGRICULTURE IN NIGERIA: SOME EVIDENCE

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1. Introduction

The issue of the extent of risk in commercial banks' lending to agriculture in Nigeria has been a controversial one. In the past fourteen years (1972-85), the government has insisted that the commercial banks should commit a prescribed percentage of their total loans and advances to agricultural sector for several reasons (discussed in Section 2). But the commercial banks argue that the agricultural sector possesses a greater investment risk vis-a-vis other sectors of the economy; therefore they have been unwilling to comply fully with the government directives. Though the banks have always pressed their views strongly and loudly, they have not backed their contention with any empirical evidence. Similarly, the government has not bothered to confront the commercial banks with hard facts to fault the banks' belief.

Thus, the objective of this paper is to x-ray the principal argument or contention of the commercial banks, namely: that agricultural sector lending is fraught with greater risks than lending to other sectors of the Nigerian economy. For this purpose, one of the leading banks in Nigeria, the United Bank for Africa Limited (U.B.A.) was selected, and the structure of its loans and advances to agriculture and the rest of the economy is analysed over five-year period (1980-1984). The sources of data were various issues of the Bank's Annual Report and Accounts, as well as published materials from its Agricultural Credit Department.

The hypothesis tested in this study is that there is no significant difference between risk involved in lending to the agricultural sector on one hand, and the rest of the sectors of the Nigerian economy on the other, over the period under review. Risk is generally defined as the existence of a probability of a random or chance loss (Hornby, 1974; Hillier and Lieberman 1974). In the same vein, risk in commercial banks' lending could be defined as the probability of loss to the bank arising from default in loans and advances given by the bank. Because actual figures on the bad and doubtful debts of the bank were not available, the provisions for « bad and doubtful debts » were used as a proxy for total losses to the bank arising from loan defaults. Consequently, our operational definition of risk in this study is the ratio of the provision for « bad and doubtful debts » to loans and advances for each year. These ratios are computed for five years, and the chi-square technique and t-tests were used to test for significance.

2. Government and banks' positions

For greater understanding and appreciation of the problem, details of the positions of the government and banks as well as the effect of the controversy are reviewed.

2.1. Government Position

The government has maintained that the banks should supply the prescribed percentage of their loans and advances annually to the agricultural sector. In the past ten years, the prescribed levels rose from 5% in 1975 to 10% in 1983 and 1984. The government and some economists argue that agriculture is the bedrock on which other sectors are built (Okorie, 1985a). Thus, agriculture must be adequately funded for it to fulfil its classical functions of providing:

- a) food and fibre for the fast growing population (urban and rural);
- b) raw materials for the industries especially the agro-oriented ones, thereby providing a solid foundation for industrial take-off;
- c) release of labour to the non-agricultural sector; and;
- d) facilitate other intersectoral exchanges.

Furthermore, government would like commercial banks to regard agricultural lending as a social responsibility taking cognisance of the role agriculture plays in economic and national stability by the provision of raw materials for industries as well as food for the people. In pursuing this argument, the government urges the commercial banks not to regard profitability as the sole criterion for investment in agriculture.

While these arguments may be laudable, especially to the government and welfarist economists, the commercial banks in Nigeria being profit maximizers as other business concerns all over the world, have not bought the idea. Rather, from observation, the banks seem to prefer to pay the penalty of depositing the difference between the prescribed and their actual loans and advances to agriculture, with the Central Bank without interest¹ rather than invest in what they consider « insecure » projects in agriculture.

1 The commercial banks are required by the Act establishing the Agricultural Credit Guarantee Scheme (ACGS) to deposit such difference with the Central Bank; and the funds are in turn transferred to the Nigerian Agricultural Cooperative Bank (NACB) as loan capital for farmers in different parts of the country.

2.2. *Commercial Banks' Position*

Commercial banks argue that the agricultural sector is fraught with risk due to high loan defaults arising from, *inter-alia*:

- government inconsistent policies in the agricultural sector;
- natural disasters such as flood, drought, fire outbreaks, out-break of diseases and pests, etc.;
- poor management of projects;
- diversion of funds to other uses (in many cases, non-productive);
- poor project evaluation by banks;
- untimely disbursements;
- lack of or poor supervision and monitoring of projects;
- calculated out-right dishonesty and fraud by loan beneficiaries; and,
- general government economic policies such as those affecting inputs, spare parts, labour, etc. (Lot, 1985, p. 13).

They argue that commercial banks should not be compelled, as is the current practice, to channel their scarce investment funds to agriculture. They believe that the determination of their investment portfolio is their prerogative as private commercial enterprises and profit-maximizers.

2.3. *The Effect of the Controversy*

As a result of this unresolved controversy, among other factors, the banks are reluctant to lend to the agricultural sector, which is manifested in preponderant shortfalls between the prescribed and actual loans and advances to the agricultural sector (See Table I). Between 1975 and 1984, all commercial banks loans and advances to the Nigerian economy totalled N 64.2 billion, out of which agriculture accounted for N 464.2 million (or 7.2%). Thus, over this period of ten years, there was a total shortfall of N 617.5 million in the funds which was expected to be channelled into the agricultural sector. The annual shortfalls ranged from N 22.6 million in 1978 to N 169.6 million in 1983.

Table 1

COMMERCIAL BANKS LOANS AND ADVANCES TO AGRICULTURE,
NIGERIA, 1975-1984

Year	Total Loans to all Sectors	Total Loans to Agric. Sector (Actual Share)	Prescribed Share of Agric. in Sector	Shortfall in Prescribed Share of Agric. in Total Loans	Actual Share of Agric. in Total Loans	Prescribed Share of Agric. Sector in Total Loans	Shortfall in Agric.'s Prescribed Share
	N Millions			%			
1975	1,537.3	37.4	92.2	— 54.8	2.4	6.0	—3.6
1976	2,122.9	79.6	127.4	— 47.8	3.8	6.0	—2.2
1977	3,974.6	139.1	238.5	— 99.4	4.5	6.0	—1.5
1978	4,109.7	224.0	246.6	— 22.6	5.5	5.0	—0.2
1979	4,824.2	329.6	277.5	+ 52.1	7.1	6.0	+1.1
1980	6,349.1	462.2	507.9	— 45.7	7.3	8.0	—0.7
1981	8,582.9	590.6	686.6	— 96.0	6.9	8.0	—1.1
1982	10,275.3	786.6	822.0	— 35.4	7.7	8.0	—0.3
1983	11,100.0	940.4	1,100.0	—169.6	8.0	10.0	—2.0
1984	11,503.5	1,052.0	1,150.4	— 98.0	9.1	10.0	—0.9
Total 1975-84	64,179.5	4,641.5	5,259.1	—617.5	7.2	—	—
Annual Average	6,418.0	464.2	525.9	— 61.8	7.2	8.2	1.0

Source: Okorie, Aja (1985b): « Role of Commercial Banks in Funding Agriculture in Nigeria, 1960-1984 ». Paper presented at the 21st Annual Conference of Agricultural Society of Nigeria, 4th - 7th August, 1984 held at Moor Plantation, Ibadan.

Reasons for these shortfalls are many and varied in nature. The major ones as perceived by commercial banks themselves include: lack of adequate security by farmers, illiteracy of farmers, poor management of funds by farmers, inadequate banking facilities in rural areas, and high rate of loan default by farmers (Okorie, 1985b, p. 14). Other reasons often advanced for the shortfalls include: high administrative cost of loan delivery to numerous small-holder farmers, the relatively low interest rate in the agricultural sector imposed by the central monetary authorities, and inadequate relevantly trained manpower within the banks to carry out the necessary activities (Okorie, forthcoming). These reasons or factors are highly related, thus, can be summarized by saying that commercial banks regard lending to agriculture as a "risky" business. In other words, that farmers or borrowers in the agricultural sector tend to default and generate much more bad and doubtful debts than borrowers in the other sectors.

3. The structure of the UBA limited's lending, 1980-84

3.1. Volume of Lending

The volume and distribution of loan and advances of the bank between 1980-1984 is shown in Table 2. Over the period of five years under consideration, its loans and advances to all sectors of the Nigerian economy, grew from N 864.8 million in 1980 to N 1.6 billion in 1984. Also, in 1980, loans and advances to agriculture accounted for 8.3 percent of all loans and advances to the economy, and rose from N 71.4 million in 1980 to N 164.4 million (or 10.6 percent) in 1984, which indicates that the bank accomplished the prescribed level of agricultural funding. The loans and advances to other sectors rose from N 793.4 million to N 1.4 billion, which also indicates definite upward trend in overall business transactions.

Table 2

STRUCTURE OF LENDING OF THE UNITED BANK
FOR AFRICA LIMITED, 1980 - 1984

S/NO.	Sectors	Cumulative (*) Amounts, N '000					Total
		1980	1981	1982	1983	1984	
1.	Loans and Advances for all Sectors	864,836	1,161,294	1,519,246	1,619,691	1,553,263	—
2.	Loans and Advances for Agric. Sector	71,403	71,073	92,521	119,396	164,355	—
3.	Loans and Advances for other Sectors excluding Agriculture	793,433	1,090,221	1,426,725	1,500,295	1,388,908	—
4.	Provision for bad and doubtful debts for all Sectors	2,335	6,073	14,812	17,997	21,700	—
5.	Provision for bad and doubtful debts for Agric. Sector	27	348	1,556	1,387	260	—
6.	Provision for bad and doubtful debts for other Sectors, excluding Agric.	2,308	5,725	13,256	16,610	21,440	—
7.	Profit before taxation (*)	41,367	42,865	52,410	55,969	56,266	248,877
8.	Profit after taxation (*)	20,036	22,715	26,602	29,279	31,482	103,512

(*) Except for profit figures which are on annual basis (that is, rows 7 and 8), others are cumulative.

Sources:

1. United Bank for Africa Limited - *Annual Report and Accounts*, Various Issues, 1980-1984.
2. Lot, C., « Agricultural Credit Administration by Commercial Banks: The U.B.A. Experience ». A Paper presented at the First National Agricultural Finance and Credit Training Workshop, 10 - 12th September, 1985, held at University of Nigeria, Nsukka.

The provision for bad and doubtful debts for all sectors rose sharply from N 2.3 million in 1980 to N 21.4 million in 1984. For other sectors except agriculture, the trend was similar; but for agriculture, the provision for bad and doubtful debts fluctuated, reached a peak in 1982 (N 1.6 million) and fell to N 0.3 million in 1984. The poor returns in 1982 and 1983 were not peculiar to the agricultural sector, but are attributable to unfavourable global and national economic environments during these years (U.B.A., 1982 and 1983).

3.2. *Operating Results*

Irrespective of what looked like risky investment climate, there were off-setting good operating results, namely:

- i) the bank expanded its offices and maintained a total dividend of N 7 million annually on the average;
- ii) the annual growth of over-head expenses was held below the general rate of increase in prices over these years;
- iii) total assets excluding (contra items) hit N 3.4 billion in 1983;
- iv) the loans and advances rose to N 1.6 billion in 1983; and,
- v) recorded profit before taxes grew to 22% in 1982 and 15.5% in 1983.

Earnings per share (adjusted) increased from 44.5 kobo in 1980 to 64.0 kobo in 1984. Also, dividends per share (adjusted) rose from 13.3 kobo in 1980 to 15.5 kobo in 1984. All these are evidence of overall good business operating results (UBA, 1984).

4. **Empirical evidences**

4.1. *Risk Ratios*

The indicators of risk in agricultural and non-agricultural lending for the UBA in the last five years are presented in Table 3. The ratio of the provision for bad and doubtful debts to profit before and after taxation are shown in rows (4) and (5).

Table 3

INDICATORS OF RISK IN AGRICULTURAL AND NON-AGRICULTURAL LENDING
IN NIGERIA FOR UNITED BANK FOR AFRICA LIMITED, 1980 - 84

Risk Indicators	Years					Mean (1980-84)
	1980	1981	1982	1983	1984	
1. Ratio of bad and doubtful debts to loans and advances for all sector (4/1)	0.27	0.52	0.97	1.11	1.40	0.85
2. Ratio of other sectors, bad and doubtful debts to loans and advances in other sectors (excluding Agriculture) (6/3)	0.29	0.53	0.93	1.11	1.54	0.88
3. Ratio of Agric. bad and doubtful debts to loans and advances for Agriculture (5/2)	0.04	0.49	1.68	1.16	0.16	0.71
4. Ratio of bad and doubtful debts to gross profit before taxation for all sectors (4/7)	5.64	14.17	28.26	32.16	38.57	23.76
5. Ratio of bad and doubtful debts to net profit after taxation for all sectors (4/8)	11.65	26.74	55.68	61.15	68.93	44.83

(*) Ratios in brackets show the rows of Table 2 used in the computation.

Source: Computed from Table 2.

A ratio of bad and doubtful debts to profit before taxation for all sectors ranged from 5.64% in 1980 to 38.57% in 1984; while the ratio of bad and doubtful debts to profit after taxation ranged from 11.65% to 68.93% respectively. The figures for the last three years appear large and probably constitute the basis for the Bank's complaints about the need for it to be free to shuffle its investment portfolio. Furthermore, the ratio of bad and doubtful debts to loans and advances for all sectors of the Nigerian economy shows a steady increase over the five years under consideration. But these are aggregate figures for the entire economy, thus, do not give any indication of the individual sector's contributions.

A clearer picture is obtained when we disaggregate the risk between agricultural and non-agricultural sectors of the economy as shown by ratios in rows (2) and (3) of Table 3. The ratio for other sectors (except agriculture) combined rose from 0.29% in 1980 to 1.54% in 1984, showing an identical rise over these years with the entire economy. But the magnitudes of the ratios for the agricultural sector provide a new evidence, as they were lower than those for the other sectors in 1980, 1981 and 1984; which indicate that lending to other sectors is relatively riskier in those years. It was only in 1982 and 1983 that the risk ratios for agricultural lending appeared substantially higher than

for the other sectors. Therefore to obtain a more conclusive evidence, these indicators were subjected to statistical tests.

4.2. *Tests of Significance*

When the risk indicators in rows (2) and (3) of Table 3 were subjected to chi-squared analysis, it was found that there is no significant difference between risk in lending to agricultural sector vis-a-vis lending to other non-agricultural sectors of the Nigerian economy. Also, paired t-test and two-group t-test confirmed that there is no significant difference between risks involved in U.B.A. lending to agriculture on one hand and the rest of the sectors on the other.

The summary of the results of the tests is given below:

Analysis of Variance	Test of Means (2 Group Test)	Paired t-test
$\chi^2_{cal} = 1.47$	$t_{cal} = 0.46$	$t_{cal} = 0.50$
$\chi^2_{tab} = 9.49$	$t_{tab} = 2.31$	$t_{tab} = 2.78$
Level of Significance = 5%	Level of Significance = 5%	Level of Significance = 5%

From the above, it can be concluded that in all the tests, the table value is greater than the calculated value, thus, we accept the null hypothesis, that there is no significant difference between lending to agriculture on one hand, to lending to the other sectors of the Nigerian economy on the other; at 5% level of significance.

5. **Conclusion**

The contention of commercial banks that agricultural lending involves greater risk is shaky and not sustainable by empirical evidence. In three out of the five years considered for the U.B.A., risk inherent in lending to other sectors of the Nigerian economy was higher than for the agricultural sector. Also, the tests for significance between risks in agricultural and non-agricultural sectors over the five year period, showed conclusively that there is no significant difference between these at 5% level.

Furthermore, given the high level of profits of the banks, which for the U.B.A. totalled N 248.9 million (before taxation) and N 103.5 (after taxation) in five years (1980-84), the commercial banks could regard their investment in agriculture as their own "contribution" to the growth and development of the economic reservoir from where they draw their profits. The sole criterion of profit-maximization in commercial banking operations in developed economies should be modified to multi-criteria objective in a developing economy setting to incorporate social services and sustenance of the country's economy as a whole. This « wholistic » approach could be further strengthened if the commercial banks strengthen the monitoring and supervision of agricultural lending operations, thereby reducing the risk content of their transactions in that sector.

Nonetheless, this conclusion is based on a case study of one of the four leading commercial banks in the country, and one of the twenty banks² compelled to devote a prescribed level of their total loans and advances to agriculture, under the Agricultural Credit Guarantee Scheme (ACGS). Thus, while we are reasonably confident that the result is indicative and representative of the nature of risk in agricultural and non-agricultural lending in Nigeria, it is possible that a re-enforcing evidence or otherwise may emerge when a larger sample is analyzed.

References

1. Hillier, F.S. and G.J. Lieberman (1974): *Operations Research*. Holden-Day Inc. (Second Edition). San Francisco 1974, p. 603.
2. Hornby, A.S. (1974): *Oxford Advanced Learner's Dictionary of Current English*. The English Language Book Society and Oxford University Press, Third Edition (Low Price Edition), 1974, p. 747.
3. Lot, C. (1985): « Agricultural Credit Administration by Commercial Banks: The U.B.A. Experience ». A Paper Presented at the First National Workshop on Agricultural Finance and Credit Workshop for Top Managers held at the University of Nigeria, Nsukka, 10th - 12th September, 1985.
4. Okorie, Aja (1985a): « Conclusions and Recommendations of the First National Finance and Credit Administration Training Workshops, held at the University of Nigeria, Nsukka (for Top and Middle Managers), September 10-28, 1985.

2 There are twenty-seven commercial banks operating in Nigeria as at December, 1985, out of which well-established twenty participate in Agricultural Credit Guarantee Scheme.

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5. Okorie, Aja (1985b): « Role of Commercial Banks in Funding Agriculture in Nigeria, 1960 - 1984 ». Paper Presented at the 21st Annual Conference of Agricultural Society of Nigerian Conference, held at Moor Plantation, Ibadan, August 4 - 7, 1985.
 6. Okorie, Aja: « Nigerian Government Prescribed Allocation to Agriculture: A Case Study of the Performance of the Trading Banks ». *Savings and Development Quarterly Review* (forthcoming). Finafrica Foundation, Milano, Italy.
 7. Oti, A.O.G. (1980): « The Role of Financial Institutions in National Development: A Background », in *The Bullion*, Vol. 5, No. 3, July/September, 1980, pp. 30-40.
 8. United Bank for Africa Limited. *Annual Report and Accounts*, Various Issues, 1980-1984. U.B.A., Lagos (Printed by Times Press, Apapa), Lagos.

L'ETENDUE DU RISQUE DES PRETS DES BANQUES COMMERCIALES POUR L'AGRICULTURE AU NIGERIA: RESULTATS EMPIRIQUES

RESUME

Cet article analyse l'argument le plus couramment utilisé par les banques commerciales au Nigéria contre les prêts au secteur agricole. Les banques prétendent que dans l'agriculture le risque des investissements est plus élevé que dans les autres secteurs économiques. Cette conclusion n'est pas démontrée par l'analyse empirique ici présentée, analyse basée sur des données concernant une des quatre banques commerciales les plus importantes du pays. En effet, on a trouvé que le risque concernant les prêts à l'agriculture n'était pas tellement différent des risques concernant les secteurs non-agricoles. Prenant en considération les profits généralement élevés des banques et d'autres aspects socio-économiques cet article partage avec le gouvernement l'opinion que les banques commerciales doivent adopter dans leurs activités des objectifs multicritères. Cette règle de gestion facilitera aux banques commerciales la concession des prêts au secteur agricole.