



PERCEIVED LOAN RISK AND EX POST DEFAULT OUTCOME: ARE THE BANKS' LOAN SCREENING CRITERIA EFFICIENT?

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ABSTRACT

Prospective borrowers from commercial banks are usually made to pass through stringent lending procedure. The screening procedure is intended to forestall likely default intents and reduce credit risks. Banks, through the analysis are able to predict the inherent risk level in the loans they administer and avoid risky borrowers. The recent rise in defaults rates and the size of non-performing loans among the Nigerian commercial banks therefore puts to question the efficiency of the banking system screening criteria. An efficient screening technique is expected to approximate the estimated and the ex post default risk outcome. Disparities between the two reflect the extent by which the assessment of risks by banks was inefficient. This paper provides evidence that bank screening criteria do not effectively foreclose total default risk, and affirm that perceived and ex-post default risks differ. Using data obtained from a survey of investment loans made to 210 borrowers between 2000 and 2012 among 15 commercial banks in Nigeria, this study observed that the banks' screening criteria was limited by the presence of information asymmetry. Adverse selection and moral hazard were observed to persist in the loan markets irrespective of the stringency of the banks' screening measures. The observed difference between estimated and ex-post default risk incidence arise because of the presence of information asymmetry.

Keywords: Loan assessment, Lending efficiency, Loan screening, Default risk, Credit risk

JEL Classification Numbers: E44, G14, M14

INTRODUCTION

Owing to the importance of loan making to the banks¹, risk management and assessment have

¹Among all others, lending action constitutes the key function and source of revenue to the commercial banks.

become important operations embarked by banks to check excessive exposure to credit risks. Adequate risk assessment is at the heart of safe banking and banking efficiency. As a result, the quality of risk management and control of any bank goes a long way to safeguard the deposits entrusted to it by the public.

Risk assessments are made for a number of reasons. Proper loan assessment is fundamental to the reduction of bad debts and non-performing² loan incidence in banks. The occurrences of the phenomena have become prevalent in the banking industry recently, and constitute early signs of deterioration in the asset quality of the affected banks. Secondly, risk assessment is important because of the uncertainties of the parameters upon which bank base their loan decisions. Improper assessment of borrowers' characteristics puts the bank in a disadvantaged position to adequately protect itself in the event of default consequences. Bank's assessment helps to ascertain the concentration of risks and default probabilities³ of prospective borrowers, precedent to the granting of the loan. This action is important because borrowers' incentives tend to vary with that of their lending bank once loans are availed. A timely assessment of risk is a veritable measure towards reducing the undesirable consequences of adverse selection and/or moral hazard, which are both inherent in every lending action.

Default risk poses the greatest threat to the survival of banks in Nigeria. This is because recovery cost and litigation procedure may be too cumbersome. Defaults from lending have been at the root of most bank distresses occurrences in the country (Onwumere, 2005). High incidence of loan default in the banking industry can be linked to poor and improper assessment of loan risks. The accuracy of risk assessment is dependent on a number of factors, of which complete information disclosure is important. Imperfect information disclosure and asymmetry arise because of the unavailability of well developed information sharing institutions. The information bureaus act as the storage centers where details of individual borrowers can be accessed.

Aside the inherency of information asymmetry in the banking system, lending contract are mostly designed in a way that all relevant information from the borrower may not be fully ascertained as at the time of seeking the loan. The commonest possibility is that the borrower is always at information advantage⁴. This is because As a result, it is the role of the bank to adequately contract

²The total bank non-performing loans as a ratio of the total loans recorded its decade highest value of 29.1 in 2009, up from the 0.3 in 2008. While the introduction of a number of reforms in 2010 force the ratio to 17.20 in 2010. Emerging evidence shows that the ratio was still increasing (see table4).

³ Default probability is calculated as the ratio of the number of times an individual has failed with respect to total loans.

⁴ This leads to the typical case of borrower-advantaged asymmetry. See Edelberg, W., 2004. Ogun, O. and C.C. Ofonyelu, 2012. Sharpe, S.A., 1990. Asymmetric Information, Bank Lending and Implicit Contracts: A Model of Consumer Relationships. Journal of Finance, 45: 1069-1087.

the borrower's incentive to ensure repayment (Myer and Majiluf, 1984). In an efficient case, it is expected that the ex post default outcome should approximate that of the estimated risk post-priori. Incomplete and/or imperfect disclosure of information during loan consideration widens the gap between the expected and actual default risk outcome of the borrowers. Lending efficiency essentially requires that the gaps between estimated and actual default outcomes are narrowed. The efficiency of banks' risk assessment exercise depends on how well it is able to foreclose default loss, and/or protect the bank in the event of default occurrence.

The trend of default incidence in Nigeria suggests that a combination of factors is responsible for the loan defaults occurrence in Nigeria. A recent study by (Ogun and Ofonyelu, 2012) showed that default risk incidence has become pervasive and asymmetric. In most of the loan situations considered, it was observed that loans which were adjudged to be potentially safe ex- ante eventually turned bad. While probability of loss is inherent in every loan, proper loan appraisal is made difficult when information is asymmetric. Even as increase in risks provides opportunity for banks to charge higher prices for the use of their funds, rise in interest rate worsen the chances of borrowers repaying their debt. Since lending is primary to the existence of banks, loans are made within acceptable threshold of risk in view of the recoupable return. The key essence of loan assessment is to evaluate the extent (and likelihood) of default of loans. Inability to reduce default risks is the reason for the adoption of non price approaches, such as collateral requirement (see Bester (1985 and 1987).

The rest of this paper is organized as follows: section 2 provides a brief trend of the default risks in Nigeria. Section 3 highlights the key features of banking loan appraisal and the relevance of the lending party's perspectives on the eventual outcome of the loan. Section 4 is the methodology. Section 5 presents the result with a conclusion as section 6.

STYLIZED FACTS ABOUT THE TRENDS OF DEFAULT RISKS IN NIGERIAN BANKS

The trends of default risks in Nigeria have followed the general economic environment of banking. The period between 1892 and 1951 was generally referred to as the free banking era (Nwankwo, 1980) as there was virtual absence of any law that governed the management of banks during the period. The two episodes of distress within the period were mainly attributed to inadequate capital, fraudulent practises and bad management (Okigbo, 1981). With the introduction of a banking ordinance in 1952, the banking system became fully regulated, until the introduction of a structural Adjustment programme (SAP) in 1986, which was meant to liberalize the economy. The adjustment programme was introduced to position the banks for a new era in the wave of a general

economic deterioration which began in the first half of the 1980s. The economic recession in the period worsened the credit worthiness of the borrowers and precipitated a severe economic situation which exposed the fragile state of the Nigerian banking system. For instance, while inflation (and maximum lending interest rate) rose by 23.22 and 40.71% (11.5 and 13%) respectively in 1983 and 1984, loan to deposit ratio of commercial banks still stood as high as 83.8 and 81.9% respectively (see table A-1).

The banking system success has been related to the business cycles. The boom of the early 1970s became unsustainable as the prices of crude oil crashed in early 1980s, culminating to recession. The need for a new economic reform that will strengthen the financial sector included as part of the reason for the introduction of SAP. The introduction of SAP was an economic strategy aimed at allowing the markets forces to drive banking activities (Soyibo, 2008). The introduction of market forces became problem for some of the banks who were not accustomed to conducting business in competitive market environment. In the midst of the wild interest rates fluctuations, loan defaults incidence (and the size of non-performing loans) increased subsequently; culminating to heavy distress burden for the banks as their deposits became eroded.

As result, a number of banks became entangled in the zero-sum web of lending to survive at the detriment of safe banking practices. While banks may generally be conservative about lending in recessionary period, most of the loans made in such period were likely to fail. The cumulative burden of default arising from the loans granted during the decades lead to the collapse and subsequent closure of many banks during the 1990s. By the end of 1998, 27 ailing banks had been liquidated; narrowing the total number of banks at the end of the decade to 89. While the downsizing was able to reduce the incidence of distress in the financial market, it however left the challenge of how to manage the burden of the inherited assets and liabilities of the liquidated banks. One area where many banks suffered greatly was in the recovery of the loans extended before the liquidation. With a merging environment, there became changing incentive to repay and/or default in loans as many borrowers explored available loopholes from the system to default on payment. As many loans became taken over, the incentives to repay further weakened, coupled with the fact that many of such loans had been made under very volatile economic environments⁵. The 1990s decade was generally marked by economic instabilities, much that the loan market suffered high defaults. The dismal performances of the banks in the post SAP years led to the re-introduction of interest rate regulation in 1993, and a number of reforms that became eventually adopted (see table A-2). In part, the country began a systematic adoption of Basel 1 specification in a bid to reduce credit risk in the system. The

⁵Inflation and interest rates had fluctuated wildly around during these times while exchange rate depreciated massively. These trends continued through into the year 2000. For instance, inflation rose by 72.8, 29.3 and 10.7 for the years 1995, 1996 and 1997 respectively (CBN, 2010). Weighted average prime lending rate for the period had stood at 20.18, 19.74 and 13.54 for the respective years.

development subjected a number of the banks to serious problems in attracting deposits as many opted for the use of non-price instruments in order to gain market share. As a furtherance of the reforms, the role of the banks became streamlined to remove the dichotomy between merchant and commercial banks with the introduction of universal banking (Udendeh, 2009). This created a level playing ground for the banks as well as provided greater opportunity for banks to engage in other forms of banking business. The introduction of the universal banking concept, however, was not able to reduce the prevalence of credit risk in the system. In part, credit risk constituted the main cause of banks' erosion of assets. The total non-performing loans as a ratio of total loans thus recorded its decade highest value of 29.1 in 2009, up from 0.3 in 2008 (see table A-3). While the introduction of a number of reform measures in 2010 forced the ratio down to 17.20 in 2010, the rate is still considered as being too high for the financial system.

The foregoing suggests that the crisis in the banking sector is intricately linked to poor loan decisions (resulting from the assessment criteria). There is need to reconsider the efficiency of the bank lending appraisal methods, or the reasons why loans fail. The succeeding section gives a brief description of the way banks screen customers seeking for loans.

BANKING LOAN APPRAISAL METHODS IN NIGERIA

A number of factors are evaluated by banks before loans are availed. The considerations are usually made with respect to the nature, size and type of business for which loan is sought for. However, when loans are large, each of the considerations becomes very important. Bank's credit analysis is used to refer to the complex process of assessing the credit worthiness of a (prospective) borrower via investigation of the records of the financial statements. The essence of the exercise is to find out the extent to which the borrower could honour its financial obligations in the face of an eventual default. Credit analysis involves a wide variety of financial analysis techniques, including ratios and trend analysis as well as the creation of projections and a detailed analysis of cash flows. It may sometime include an examination of the collateral and other sources of repayment as well as credit history and management ability of the borrower. Since most of the loans covered by the sample survey are not essential large loans⁶, the appraisal conditions for the very large firms do not become fully covered by this study.

A typical measurement of repayment ability of the borrower is the debt service coverage ratio (DSCR). This measures the cash to be generated by the business (before interest expense and excluding depreciation and any other non-cash or extraordinary expenses) are charged. It is a popular benchmark used in the measurement of the borrower's ability to produce enough cash to

⁶ The maximum loan size in the sample is 10 million naira, and loans exceeding 5 million naira only constitute 12 per cent of the total loan studied.

cover its debt payments. The higher this ratio is, the easier it is to obtain a loan. The ratio is important in commercial banking and may be expressed as a minimum ratio that is acceptable to any lender, and serve as an important loan condition or covenant. Breaching a DSCR covenant can be used as an early sign of impending default. The main essence of the ratio is to enable the bank to be sure that the borrower is not already in too much debt. The size of the ratio in most cases is determined by the credit policies of the individual banks. Based on the existing laws guiding lending, a business can only service loan as much as half of the volume of the turnover. For salary earners and consumer loans, the labour law stipulates that 33.3 per cent of the salary as the maximum debt service ratio of any worker.

The other consideration by banks before loans are disbursed is otherwise referred to as the 7Cs of lending⁷. The bank evaluates the borrower based on the availability and adequacy of each of the lending criteria, with the primary emphasis being the cash flow of the borrower. While each of the C categories is important, collateral charged on loans is calculated from the shrinkage value of the loan which is deducted from the actual market value of the asset. It is expected that the value of the loan do not exceed 66½% of the value of the pledged collateral. Aside a customer being capable and of suitable standing in a loan consideration, collateral security is the single most important means of conditioning the borrower to repayment.

The theoretical source of default risk in lending in the financial market is credit risks. Credit risk refers to the likelihood that a borrower will default on a debt or fail to meet a contractual obligation, such as the repayment of a debt. Default risks in the financial sector arise as a result of the presence of information asymmetry and uncertainties of some of the parameters that are used in the pricing of the loans. While information asymmetry may cause banks to select wrong borrowers and projects to fund, uncertainties of natural phenomena such as floods, storms and insurgency have been instrumental to some loan default cases recently⁸.

Aside information asymmetry and uncertainties, a number of factors may also cause potentially safe loans to default. They include poor analysis of project viability, inadequacy of collateral security/equitable mortgage against the loan, mismanagement and wilful diversion of loans by the borrower, loan overpricing, unrealistic terms and schedule of payment, lack of follow up measures, labour problems, insider's dealing, neglect of laid down procedure for lending and wilful refusal to pay by recalcitrant borrowers.

⁷Which connotes character, capacity, capital, cash flow, collateral, conditions (external)/connection, and (other) considerations.

⁸ For instance, Nigeria from early July, 2012 experienced a high level of disastrous flood which subdued investments and crippled economic activities in over 12 states of the federation. It is certainly clear that any of such investment that is bank funded will default.

The decision by any borrower to renege on loan is related to the borrower's perception about the stringency and damages that the default could cause him. For a borrower who values integrity and character, the damage to his personality is enough incentive to foreclose default. However, for a high standing and influential person in the society, default may result even with repayment capability. What essentially commits the borrowers to repayment when the loan become due depends on the strength of the institutional legal system for ensuring contract compliance? A number of loans that falls into this category in Nigeria are made to high standing politicians. High cost of litigation against default and delays in delivery of justice compounds recovery of loans.

Viewed from the perspectives of both the bank and the borrower, there may be differences between the sources of default on loans that has been availed. From the perspective of the bank, it views a borrower as giving incomplete information when the necessary details required for its loan consideration are not fully made available. But on the part of the borrower, the information supplied is complete. Viewed from another perspective, a borrower views the lending bank as being asymmetric if he finds out that charges are debited to him outside the terms of the loan's offer letter, or is introduced after the loan transaction is initiated⁹. However, the divergences in perspectives have been found not to affect default risk incidence (Ogun and Ofonyelu, 2012). The important question for consideration is, whether default risks are essentially the same ex-ante and ex post to the loan consideration. This forms the crux of this paper.

METHODOLOGY

Assume a competitive loan made to a borrower to finance projects whose payoffs depends on the outcome of an investment that has been assessed to yield high quality net positive returns. We essentially assume that the loan is collateralized such that contracts are fully enforceable to the letters of the lending. In such situation, default risk from the loan will relate directly to interest rate, ex-post default probability, borrower's perception, loan size and inversely with the level of information disclosure.

$$\text{Risk}_i = \beta_i + \beta_i\tau + \beta_i\omega + \beta_i\rho + \beta_i z - \beta_{i\Phi} \quad (1)$$

Where τ , ω , ρ , z and Φ represent interest rate, default probability, borrower's perception, loan size and indicators of asymmetry respectively. The occurrence of risk_i implies that each of the determining factors must have been engendered. Full information disclosure implies a reduction in the incidence of risk. The default risk is measured as a dummy which takes 1 in the default case and zero if the loan under consideration is adjudged to be not likely to default. Information disclosure and the borrower's perception are also measured as dummies. Each take 1 in the disclosure is full or information is perceived to be fully disclosed, and 0 if otherwise.

⁹ This excludes all cases which is stated in the loan contract but of which the borrower is ignorant of.

Using the standard correlation test methodology, it is expected that there will be a positive relationship between the default variables and the likelihoods of default based on the standard correlation test methodologies (Chiappori and Salanié, 2000). The test implies in statistical terms, a positive correlation between two (conditional) distributions. The positive correlation test estimates the correlation between the amount of loan an individual purchases and his risk characteristics, conditional on the observable features that are used in the pricing of the loan. If the size of the loan is divided into sub-categories, such that we allow for specific interactions of the default variables on each size categories, the results from the correlation tests are presented in the next section.

RESULTS

Table 1 and 2 presents the relevant results for our discussion. Table 1 present the risk status of the borrowers before they were availed various sizes of loans (while the loan was applied for). Table 2 is the ex-post default realization (when the loan has been released). Categories a – d represent borrowers who applied for or was availed less than N500,000; N500-N2million; N2-5million; and more than N5million naira respectively in tables 1 and 2.

Table-1. Correlations between loan size sought and benchmark risk variables

	Loan Sizes			
	(a) Amount Applied <N500,000	(b) Amount Applied (N500,000- N2m)	(c) Amount Applied (N2m- N5m)	(d) Amount Applied (>N5m)
Default risk variables				
Incomplete info. Disclosure	0.2192*	0.2758*	-0.1007	-0.0049
Hide information	-0.2335	0.1687*	0.0313*	0.1394*
Succeeded on the loan?	0.0044*	0.1002*	0.0256*	-0.2050
Took asymmetric action?	-0.3206	0.3544*	-0.0820	0.0429*
Viewed bank rate as too high	-0.1259	0.0692*	-0.1578	0.2174*
Bank as being stringent enough to foreclose default?	0.0802*	-0.0546	0.0093*	-0.0658
5-10% of fund spent on other things	-0.0420	-0.0265	-0.0943	0.1869*
10-20% of fund spent on other things	0.0203*	0.0455*	0.0629*	-0.1593
20-30% of fund spent on other things	-0.0647	0.0847*	0.1348*	-0.1044
>30% of fund spent on other things	0.0816*	-0.0671	-0.0634	-0.0031
Spent some part outside the project	-0.1180	0.0258*	0.0431*	0.1620*
Scot free with the bank loan?	-0.2997	0.2601*	0.2631*	-0.0312
Had failed in a loan in the past	-0.1639	0.2385*	-0.1160	-0.0381

Source: Authors' computation

Note: * refers to items that are positively correlated.

The risk characteristics were observed not to differ significantly among the states of the borrowers. The ex-ante and ex-post characteristics of the borrowers are different in terms of the incidence of default. While default risks was observed to be more likely among borrowers of categories c and d ex-ante, the default incidence became more prevalent with the category and b after the loans were availed. Borrowers' incentive to repay debts was observed to change after they had been availed loans. Requiring borrowers to commit high collateral ratio (3:1) was observed to be very useful in conditioning borrowers in category (a) and (d). The incidence of information asymmetry (as measured by adverse selection) was observed to be lowest for the borrower belonging to the category (c). The extent in which borrowers mismanage part of their loans do not effectively determined their default incidence. A number of borrowers who misallocated their loans were observed to be able to repay. This outcome can be attributed to the fact that a number of exogenous factors affect individual's ability to pay. What is perhaps more interesting about the results is that while the likelihood of adverse selection is larger, the stringent bank's screening criteria was not able to eliminate information asymmetry. Rather, the structure of information asymmetry among the various categories of loan application was altered as a result of the screening measures adopted by the borrowers. The incidence of moral hazard reduced from larger borrowers (e.g. category c), and became concentrated to lesser categories (e.g. b). While the structure of the loan contract permits many risky borrowers to be included in the pool, the resulting adverse selection appears not to be affected by the ex-post success history of the borrowers as well as the size of the loan that was disinvested. This implies that the loan screening criteria was indeed impactful. However, it was not able to screen out a number of risky borrowers. The outcome indicates that a number of important information about borrowers do remain unobservable (or uncertain) to the lending banks while loans are availed. Moral hazard was observed to persist among the various categories of borrowers.

Table-2. Correlations between loan sizes disbursed and benchmark risk variables

Default risk variables	Loan Sizes			
	(e) Amount Released <₦500,000	(f) Amount Released (₦500,000- ₦2m)	(g) Amount Released (₦2m- ₦5m)	(h) Amount Released (>₦5m)
Incomplete info. Disclosure	0.0708*	0.0055*	-0.0322	-0.1126
Hide information	-0.1860	0.1897*	-0.0574	0.0991*
Succeeded on the loan?	-0.1560	0.2145*	-0.0673	0.0104*
Took asymmetric action?	-0.1134	0.2679*	-0.0699	-0.1572
Viewed bank rate as too high	-0.1290	0.1428*	-0.0718	0.0821*
Bank as being stringent enough to foreclose default?	0.0107*	0.0585*	-0.0969	-0.0204
5-10% of fund spent on other things	-0.2736	0.2367*	0.0658*	0.066*
10-20% of fund spent on other things	0.0841*	-0.0399	-0.0056	-0.0893
20-30% of fund spent on other things	0.0909*	-0.0964	-0.0071	-0.007

>30% of fund spent on other things	0.1239*	0.1187*	-0.0203	-0.020
Spent some part outside the project	0.0016*	0.0432*	0.0426*	0.0431*
Scot free with the bank loan?	-0.1878	0.2206*	-0.0492	0.1656*
Had failed in a loan in the past	-0.1560	0.0272*	0.0880*	0.0044*

Source: Authors' computation

Note: * refers to items that are positively correlated

CONCLUSION

Credit risk constitutes a threat to the survival of any bank in Nigeria. This is because it portends the greatest risk to the safe-guarding of the depositors' funds. The risks arise from the likelihoods of loss which may result from expected and unexpected events which were not certain as at the time of making the loan. The bank's screening criteria provides a veritable means of checking exposure to the risks. Based on its knowledge about the characteristics of the borrowers, banks scrutinize the borrowers' records to examine their risk level. The efficiency of the screening approach depends on the extent to which it is able to foreclose risky borrowers from securing loans and minimize defaults. The findings from the study shows that the estimated and ex-post default risk incidence differ (though not significantly). The cause of the differences is attributed to the impact of the information asymmetry and other uncertainties in the pricing of loans.

REFERENCES

- Chiappori, P. and B. Salanié, 2000. Testing for asymmetric information in the insurance markets. *Journal of Political Economy*, 108(1): 56-78.
- Edelberg, W., 2004. Testing for adverse selection and moral hazard in consumer loan markets. Federal Reserve Working Paper.
- Myer, S. and N. Majiluf, 1984. Corporate financing and investment decisions when firms have information that investor doesn't have. *Journal of Financial Economics*, 13: 187-221.
- Nwankwo, G., 1980. *The nigerian financial system*. London: Macmillan Press Ltd.
- Ogun, O. and C.C. Ofonyelu, 2012. Determinant of asymmetric risks in nigerian loan market: Any dichotomy between the banks and borrowers' perspectives. *African Journal of Economic Policy*, 19(2): 27-40.
- Okigbo, P.M., 1981. *Nigeria's financial system*. Longman Group.
- Onwumere, J.U.J., 2005. Banking industry reforms and developing the nigerian economy. *The Nigerian Banker*.
- Sharpe, S.A., 1990. Asymmetric information, bank lending and implicit contracts: A model of consumer relationships. *Journal of Finance*, 45: 1069-1087.

Soyibo, A., 2008. Banking sector reforms in africa: Effects on savings, investment and financial development. African Development Review, 9(1): 52-76.

Udendeh, G.I., 2009. Banking reforms: Any end in sight? . The Nigerian Banker, 3: 21-27.

APPENDIX

Table-A-1. Interest rate spreads in the Banking Industry (1970-2010)

Year	Saving deposit		Prime lending rate	Maximum Lending Rate	Int. rate spread*	Int. rate spread**	Inflation Rate	Total Comm. Bank loans (N'million)
	Rate	MRR /MPR						
1970	3	4.5	7	8	4	5	1.75	351.5
1971	3	4.5	7	10	4	7	1.65	502
1972	3	4.5	7	10	4	7	9.41	619.5
1973	3	4.5	7	10	4	7	4.61	753.5
1974	3	4.5	7	10	4	7	13.53	938.1
1975	4	4	6	9	2	5	33.93	1437.5
1976	4	3.5	6	10	2	6	21.1	2123
1977	4	4	6	6	2	2	21.48	4313.5
1978	5	5	7	11	2	6	13.3	4114.9
1979	5	5	7.5	11	2.5	6	11.65	4630.4
1980	6	6	7.5	9.5	1.5	3.5	10	6349.1
1981	6	6	7.75	10	1.75	4	21.42	8582.9
1982	7.5	8	10.25	11.75	2.75	4.25	7.16	10275.3
1983	7.5	8	10	11.5	2.5	4	23.22	11093.9
1984	9.5	10	12.5	13	3	3.5	40.71	11503.6
1985	9.5	10	9.25	11.75	-0.25	2.25	4.67	12170.2
1986	9.5	10	10.5	12	1	2.5	5.39	15701.6
1987	14	12.75	17.5	19.2	3.5	5.2	10.18	17531.9
1988	14.5	12.75	16.5	17.6	2	3.1	56.04	19561.2
1989	16.4	18.5	26.8	24.6	10.4	8.2	50.47	22008
1990	18.8	18.5	25.5	27.7	6.7	8.9	7.5	26000.1
1991	14.29	14.5	20.01	20.8	5.72	6.51	12.7	31306.2
1992	16.1	17.5	29.8	31.2	13.7	15.1	44.81	42736.8
1993	16.66	26	18.32	36.09	1.66	19.43	57.17	65665.3
1994	13.5	13.5	21	21	7.5	7.5	57.03	94183.9
1995	12.61	13.5	20.18	20.79	7.57	8.18	72.81	144569.6
1996	11.69	13.5	19.74	20.86	8.05	9.17	29.29	169437.1
1997	4.8	13.5	13.54	23.32	8.74	18.52	10.67	385550.5
1998	5.49	14.31	18.29	21.34	12.8	15.85	7.86	272895.5
1999	5.33	18	21.32	27.19	15.99	21.86	6.62	322764.9
2000	5.29	13.5	17.98	21.55	12.69	16.26	6.94	508302.2
2001	5.49	14.31	18.29	21.34	12.8	15.85	18.87	796164.8
2002	4.15	19	24.85	30.19	20.7	26.04	12.89	954628.8
2003	4.11	15.75	20.71	22.88	16.6	18.77	14.03	1210033.1
2004	4.19	15	19.18	20.82	14.99	16.63	15.01	1519242.7
2005	3.83	13	17.95	19.49	14.12	15.66	17.85	1976711.2
2006	3.14	12.25	17.26	18.7	14.12	15.56	8.24	2524297.9
2007	3.54	9.25	16.94	18.36	13.4	14.82	5.38	4813488.8

2008	3.21	9.75	15.94	18.79	12.73	15.58	11.6	6885597.7
2009	3.01	7.44	18.62	22.8	15.61	19.79	12.6	8791800.9
2010	2.2	6.06	17.59	22.51	15.39	20.31	13.8	10395823

Source: CBN Statistical Bulletin (various Issues)

Table-A-2. Major Reforms in the Banking Industry

S/N	Reform Type	Period	Time Span (yrs)
1	Free banking era (Nwankwo, 1980)	1892-1951	59
2	Regulated era	1952-1991	39
3	Liberalized regulation era with specialist roles	1991-2000	9
4	Liberalized regulation era with universal roles	2000-2005	5
5	Regimented regulation/consolidation	2005-2009	5
6	Regimented regulation/ownership dilution	2009-2011	2
7	Regimented regulation with specialist role	2011-date	15 months

Source: Adapted from Udendeh (2009), and updated by the author

Table-A-3. Ratio of non-performing loans to total loans

Years	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Non-performing loan to total loans (%)	22.6	19.7	21.4	20.50	21.60	18.10	9.30	9.50	0.30	29.10	17.20

Source: International Monetary Fund, Global Financial Stability Report (various years)