DISTRESS IN THE NIGERIAN FINANCIAL INDUSTRY: AN EMPIRICAL ANALYSIS

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CERTIFICATION

This piece on "Distress In The Nigerian Financial Industry: An Empirical Analysis", meets the requirement for the award of Master of Business Administration (MBA) degree in Banking and Finance of Ahmadu Bello University and is approved for the contribution to knowledge and literary presentation.

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DEDICATION

FATIMA/ABUBAKAR

&

MEMBERS OF MY FAMILY.

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ABSTRACT

The history of financial industry (banking) dates back to the colonial era when the African Banking Corporation (ABC) was established in 1892, to distribute currency notes of the Bank of England for the British treasury. The development of this ABC or what was later on called British Bank for West Africa (BBWA) by 1894, later became Standard (SB) and subsequently First Bank of Nigeria (FBN) to date, was informed by the colonial entrepreneurs who needed banking services to back their trade transactions in Africa. And in the same vein, to address the credit needs of antagonist, Nigerians later ventured into banking business initially through private individual initiatives and later through government policy.

Problem of distress in the Nigerian financial industry (banking) as well as outright bank failure dates back to 1930, when the first bank failure was reported. Indeed between 1930 and 1958 when the Central Bank of Nigeria (CBN) was established are twenty-one (21) bank failures were reported or recorded. However the degree of intensity and scope of the distress has never been as serious as has been observed since June 1989 when government and other public sectors deposits were withdrawn from commercial banks to Central Bank, in government's bid to deregulate the economy under Structural Adjustment Programme (SAP). This directive, exposed the weak financial conditions of most of these banks, thus increasing the number of distressed banks, and the severity of the distressness. This distressed condition has been traced to a wide range of causes some of which include, macro-economic shocks/instability, effects of financial reforms, changes in prudential regulations and how the authorities of the affected countries respond to crises, as does Nigerian authorities.

Since 1987 when the then government initiated a wide range of reforms aimed at promoting efficiency in the Nigerian financial industry, various write-up by the relevant supervisory and regulatory agencies (CBN/NDIC) were collected and analysed for this study. That is both CBN/NDIC quarterly and economic review publications, journals and some public dailies (newspapers) were the sources and methods used in bringing out this study right from 1989 to date. All these materials are what constitute secondary data that make possible the compilation.

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DECLARATION

I hare by declare that this thesis has been written, thus I am responsible for any error of omission and/or commission therein.

All materials and articles used have been properly acknowledged in the reference section.

Thanks

Name Abu-Bakari S-H.

Sign Abu Bakari

Date 25/11/2000.

CHAPTER ONE

1.0 INTRODUCTION

The establishment of modern financial industry, (banking) in Nigeria dates back to the colonial era when the African Banking Corporation (ABC) was formed in 1892 to distribute currency notes of the Bank of England for British Treasury. Colonial entrepreneurs who needed banking institutions services to back up their trade encouraged this development. Later, indigenous entrepreneurs ventured into the banking business, initially through private individual initiative and later through deliberate government policy.

1.1 STATEMENT OF THE PROBLEM

The problem of distress in the financial industry, (banks and other finance institutions) including outright bank failure has been a general world-wide phenomenon. In Spain, between 1979 and 1982, twelve (12) out of one hundred and ten (110) banks were in crises. United States of America (USA) experienced savings and loans crises in 1979 and banking crisis in 1982. That is between 1979 and 1982, 1,506 Thrift Banks merged, 111 terminated and 65 liquidated. United Kingdom (UK), tasted these bank crises between 1973 to 1976 when 18 "Fringe Banks" were reconstituted or merged into other companies and 8 of the Banks were liquidated. Other countries that have experienced distress in the financial industry and outright bank failures include, Columbia, in which between 1982-1987, 6 out of 26 banks collapsed. Chile between 1985 and 1987, confirmed 13 out of 25 domestic banks failed. The story is not all that smooth in Thai where 5 banks went under between 1983 and 1987. While Philippine

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second USA in the number of failed banks recording about 182 failed banks between 1981 and 1987. The story in Malaysia was that about 10.4% of the country's total deposit was affected in what could be termed loss between 1985 to 1988. Lastly in foreign scene, Guinea, confirmed 6 government owned banks were closed down and others like that.

In Nigeria the issue of failed banks dates back to 1930. Indeed between 1930 and 1958 when Central Bank of Nigeria (CBN)was established over 21 banks were recorded failed. However, the degree, the intensity and the scope of the distress has not been as serious as observed since June 1989. This could partly be due to the withdrawal of Federal Government's deposit from commercial banks to Central Bank. This indeed exposes the weak financial positions of most of these commercial banks and since then the number of distressed banks (institutions) and severity of distress problems have progressively increased.

1.2 THE OBJECTIVE OF THE STUDY

Since 1986 when the word distress raised its monster head amidst the players or the operators in the Nigerian financial industry (banks) various ad-hoc distress resolution strategies have not been able to achieve significantly the desired objective, in terms of safety, soundness and stability in the industry. It is however hoped that at the end of this thesis, one will be able to objectively determine the real causes of the current distress in the financial industry, thereby reassessing various distress resolution strategies already embarked upon, and try to develop a more comprehensive framework for prompt and efficient resolution of the crisis. It is also aimed that the following specific objectives would be addressed:-

i) Undertake a comprehensive review of the developments in the industry, particularly during the period 1986-1994 for necessary insights into the operation of the industry.

ii) Assess the extent and the depth of the distress situation in the industry.

iii) Objectively determine the causes of the present distress condition in the industry.

iv) And based on findings attempt to propose a comprehensive and effective policy package that would ensure a comprehensive resolution of the distress problems in the industry.

1.3 SCOPE OF THE STUDY

For the purpose of this research studies, we by coverage, defined financial industry to include all financial agents whose operations and or transactions determine the financial flows (from savings surplus to savings deficit) of the economy. Or operators at both the short-end (money) and long-end (capital) segments of the financial market. Specifically they include the banks (commercial, merchant, community and People's Banks of Nigeria) the non-bank financial institutions (finance houses, primary mortgage institutions and insurance companies) and the capital market operators (stock brokers, issuing houses and investment companies). The scope however is defined by the issues examined, which are limited by the overall objectives stated earlier.

1.4 SIGNIFICANCE OF THE STUDY

The distress in financial industry is a global phenomenon seen or witnessed in countries like USA, UK, Chile, Columbia, Malaysia and Philippines to mention but few.

the resolution and or rehabilitation strategies adopted by these countries that solved distress problems are brought to our finger tip with the aid of computer and even by expertise and or even academic study groups, associations, or relationships.

The Nigerian financial industry distress is far from being resolved despite relentless efforts by both the government the supervisory and regulatory agencies Nigerian Deposit Insurance Corporation (NDIC) and Central Bank of Nigeria (CBN) respectively. Based on this problematic distress issues and the complexity of Nigerian society I felt interested to significantly undertake this research work using the objective of the study precisely to achieve or propound a further resolution and rehabilitation strategies not only for the purpose of this academic environment but for further ensuring, safety, soundness and stability in Nigerian economy at large.

1.5 RESEARCH METHODOLOGY

Since the study is empirical in nature, efforts would be made to provide a comprehensive picture of the nature, causes, extent and depth of the distress condition in the industry, using only secondary data due to the time constraints on this thesis. Those secondary data include all categories of banking institutions, reports, their clients both (corporate and individual and the governments) as well as their various supervisory and regulatory agencies. that is basing the data on most articles, journals, annual reports and quarterly publications from the following authorities or institutions.

1) Central Bank of Nigeria (CBN)
2) Nigerian Deposit Insurance Corporation (NDIC)
3) Federal Mortgage Bank of Nigeria (FMBN)
4) National Board for Community Bank (NBCB)
5) National Insurance Supervisory Board (NISB)

6) Securities and Exchange Commission (SEC)

7 Nigerian Stock Exchange (NSE)

In this wise, we will clearly and reasonably give a modest description of the causes of distress, review some theoretical underpinning on measures and concepts of distress in the financial system, generally peculiar to banks.

1.6 LIMITATIONS OF THE STUDY

Assessing this topic of study, (Distress in the Nigerian Financial Industry, An Empirical Analysis) in its entirety it looks global in nature. And to be able to objectively address the issues involved considering various operators (banks/financial, institutions) in this industry a pretty length of time, a huge amount of money and both technical and or academic consultancies should be handy.

By limitations, this thesis is an academic exercise. That is time and cost are not to the advantage of this research work, since the whole concept of this study is pegged at one year. As such I will limit my research to various submissions by academicians, professionals and consultants aimed at resolving this global issue of distress. Both government and her agencies (NDIC and CBN) are not left out on their numerous publications on the same subject of this discussion or write-up.

A further justice is hoped since the whole thesis, that is chapter one introduces the topic in its entirety, chapter two reviews the literature on concepts, chapter three gives a general overview of the industry, chapter four presents and analyses the data and chapter five summarises the findings, recommends and conclude the study.

CHAPTER TWO

2.0 LITERATURE REVIEW ON CONCEPTS

2.1 INTRODUCTION

This chapter highlights some relevant theoretical and empirical studies aimed at providing an analytical framework for the study of distress in the financial industry. Unlike issues as investment, interest rate, demand for credit and risk analysis, to mention a few, that have received a great deal of attention from economic and financial analysts world-wide, there is generally, a dearth of materials (theoretical or empirical) for analysing distress, since most analysis of the performance of financial institutions are done on micro-basis, using optimization models in most cases. Recently studies by West 1984, Platt and Plat 1990, Crouthy and Galari 1991, and Espahbodi 1991 on early warning models for distinguishing between "healthy" and "unhealthy" financial institutions, are also being used in analysing distress in the financial system. In Nigeria, studies by Jimoh 1993 and Nyong 1994, have helped to establish formal empirical bases for analysing distress. It is upon these studies this thesis wished to further develop an analytical framework capable of explaining the causes of distress. However, efforts will be made to define distress, how it is measured and some available resolution strategies and measures.

2.2 EVOLUTION OF FINANCIAL INDUSTRY

Going by existing literature, critical developments in the evolution of the Nigerian financial industry (banking) could simply be classified into the following four phases:

a) The Era of Free Banking 1892 - 1951:- Commercial banks came first on the scene, thus making the early stages of Nigerian financial industry synonymous with commercial banking. However, the added dimension in the Nigerian case was owing to our colonial heritage, the pioneer commercial banks were not only foreign origin, but the banking system was designed to facilitate colonial business interests of commerce, as against direct investment in productive activities. This period is usually referred to as era of "free banking" or "banking boom" because, apart from the complete absence of any laws governing the establishment and running of the banks, the setting up of banks was not related to the capacity of the economy to effectively absorb the sharp growth in financial assets. Most of the banks were hurriedly established and also went into voluntary liquidation or closed down by the police hurriedly.

As early as 1892, African Banking Corporation (ABC) was established. In 1894 ABC operations was taken over by British Bank for West Africa (BBWA) which later became Standard Bank (SB) and subsequently First Bank of Nigeria (FBN). Later, several other foreign and a host of indigenous banks were established. These indigenous banks came up initially based on nationalistic consciousness rather than the existence of relevant resources like skilled manpower and capital. Hence, these indigenous banks collapsed in rapid succession due to inadequate capital, fraudulent practices and bad management (Okigbo 1981). the few known non-bank financial intermediaries in existence at that time included the Post Office Savings Bank, Lagos Building Society (later known as Federal Mortgage Bank of Nigeria {BMBN}), Federal and Regional Loans boards; Cooperative Societies and thrift institutions. Characteristic of this era is the complete absence of any legislation to guide both the operations and orderly developments of the financial industry.

b) Emergence of Banking Regulation 1952 -1958:- The rapid rate of bank failure led to the first efforts directed at regulating the banking system, thus enabling banking ordinance in 1952, which represent also the watershed between the era of experimental and extreme laissez faire banking and that of modern banking. The Ordinance provided for licensing requirements as well as procedures and standards for the conduct of banking business. It prescribed prudential requirements for capital and reserves. the major success of this Ordinance were the limitation of banking business to establishment holding valid licences, prevention of the establishment of unviable banks, and the introduction of more orderly commercial banking practices, even though it did not prevent the collapse of badly managed banks.

c) Era of Consolidated Growth following the Establishment of the Central Bank of Nigeria 1959 - 1985:- The appreciation of the developmental role of a stable and efficient financial industry was demonstrated by the concerted efforts to have a central bank despite the reluctance of the colonial authorities. The CBN Act was enacted in 1958 and the bank started operations in July 1959. The CBN introduced short-term government instruments (Treasury Bills) in 1960, aimed at ensuring an orderly development of Nigerian economy, in addition to its traditional role. This treasury bills also supplement commercial papers already in the market thereby encouraging the development of money market. Call money scheme introduced in 1962, to aid banks, liquidity management, treasury certificates in 1968, certificate of deposit in 1975 and bankers' unit funds and stabilization securities in 1976.

On capital market, CBN plays a two-fold role, ensuring the mergence of the securities market (primary and secondary markets) and promoting the establishment of development banks. In 1960 Lagos Stock Exchange was established, or constituted into

Nigerian Stock Exchange in 1977 with branches in Ibadan, Kano, Kaduna, Port-Harcourt and Onitsha, Trade in both government long term securities, shares and debentures of public companies boosted. The other integral part of capital market was the development of development institutions like Nigerian Industrial Development Bank (NIDB) in 1964, Nigerian Bank for Commerce and Industry (NBCI), Nigerian Agricultural and Cooperative Bank (NACB) both in 1975 and the Federal Mortgage Bank of Nigeria (FMBN) in 1977. Some regional companies like Northern Nigerian Investment Limited, Eastern Nigerian Development Corporation and Odua Investment Limited came into existence. Non-bank financial institutions seen in this era are Nigerian Provident Fund (NPF) now Nigerian Social Insurance Trust Fund (NSITF) in 1961. It should be noted that Banking Ordinance was reviewed in 1952 and this led to enactment of the 1969 Banking Act. And these together with Company Act 1968, constituted the legal instruments guiding the banking system. It should be noted that the 1968 Companies Act was subsequently replaced in 1991 with Companies And Allied Matters Decree after a carefully appraising the current trends in the corporate existence of companies in order to fit into international legal scene. Capital Issues Committee was established in 1962, and later became Commission in 1973 and Securities and Exchange Commission (NSEC) in 1978. The SEC, served as the apex regulatory institution for the capital market while Nigerian Stock Exchange (NSE) remained an important, self-regulatory organ in the capital market.

The Nigerian financial industry retained these characteristics up till 1985 when minor fine tuning was done in response to both domestic and international macro-economic developments, like the indigenization of the Nigerian economy including the

financial sector. This however led to the demise of the purely foreign banks as well as a new generation of private banks.

d) Era of Financial System Deregulation 1986 to Date:- Following the adoption of Structural Adjustment Programme (SAP) in 1986 some major structural changes were witnessed in line with severe distortions that characterized Nigerian economy since 1982. The central focus of this economic reform programme was dismantling of the controls in the economy including financial sector that will play a pivotal role in the reform process. Most significant policy changes were witnessed apart from the introduction of measures and instruments to deregulate banking practices, the techniques and the range of products offered by the industry that also changed. The major objective of deregulation of banking industry was to enhance, economic efficiency and effective resource allocation through service-driven competition, improved quality and spread of banking services. The key measures introduced include:

i) Relaxation of the conditions for licensing new banks which led to phenomenal growth from 41 in 1986 to 119 by 1991 and number of non-banking institutions also increased; resulting in several challenges thereby forcing government to put embargo on licensing new banks in April, 1991.

ii) The introduction of Inter-Bank Foreign Exchange Market (IFEM) and Foreign Currency Domiciliary Accounts. It should be noted that large exchange rate premium between the official and parallel markets provided great incentive for the establishment of new banks. This made many people who had no business in banking to become bank owners and directors.

iii) Interest rate deregulation resulting in unprecedented rise in lending rates which was a disincentive for long-term investment but encourages significant increase in savings mobilization.

iv) The establishment of the Nigerian Deposit Insurance Corporation (NDIC) by Decree 22 of 1988, New CBN, Banks and other financial Institutions (BOFI) Decrees 24 and 25 of 1991 were welcome development. NDIC was to safeguard customers deposit and promote banking stability, while CBN was to promote banking stability, while CBN was to strengthen the regulatory and supervisory capacity to banks. It is worthy of noting that in April 1997, Central Securities Clearing System (CSCS) was established as a settlement and custodian mechanism to enhance the delivery and settlement period.

v) Licensing of discount houses to enhance efficiency in money market operations and reintroduction of stabilization securities as instruments for checking excess bank liquidity were done.

vi) Open Market Operations (OMO) was introduced to influence level of liquidity in economy in place of inefficient direct control through credit ceiling. Also in place is inter-bank settlement system, to enhance market transactions and efficiency in payments.

vii) Finally, the Failed Banks (Recovery of Debts) and Financial Malpractice in Banks Decree 18 of 1994 was in place to sanitize the financial services industry.

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Insolvency refers to a condition in which the sum of assets of an institution is less than the sum of its liabilities, a situation which prevents it from honouring its obligations to depositors and other shareholders. Illiquidity, on the other hand describes the problematic cash-flow position of a firm. It is important to note that a technically insolvent bank could remain sufficiently liquid long after it became insolvent, especially if it has a large and stable deposit base. A bank could run into liquidity problems as a result of mismatch between the maturity profiles of its assets and liabilities. Illiquidity if unassisted by monetary authorities, can turn into insolvency if the institution has to sell its assets at distressed price or pay above market rates on deposits in a desperate scramble for liquidity, (Glaessner and Mas 1995).

Distress in the financial industry will occur when a fairly reasonable proportion of financial institutions are unable to meet their obligations to their customers, owners and the economy as a result of weakness in their financial, operational and managerial conditions which rendered them either illiquid and or insolvent. Thus, financial industry distress can be described as a situation in which a sizeable proportion of financial institutions have liabilities exceeding the market value of their assets which may lead to runs and other portfolio shifts and eventual collapse of some financial firms. Better put, distress is a sharp reduction in the value of financial institutions' assets, resulting in apparent or real insolvency of many financial institutions accompanied by some runs and possibly the collapse of some institutions (Federal Reserve Bank of San Francisco 1985).

2.4 THE CAUSES AND MEASURES OF DISTRESS

The Causes: The issue of the causes in the financial industry of an economy is an empirical one. This was Balinio's (1991) observation when discussing banking crises

in Argentina, Chile, Malaysia, The Philippines, Spain, Thailand and Uruguay. That "the diversity of experiences with distress owing to cross-country differences in macro-economic conditions, the regulatory framework, the intensity of the crisis and the approaches used to deal with it, makes it difficult to generalized and develop stylized descriptions or standardized prescriptions". However, available literature has identified a long list of potential causes of distress to include; weak management, inadequate capital base, fraudulent and corrupt practices of owners and managers, poor asset and liability management, macro-economic instability, political and interference and inadequate legal framework and structures. Others include delayed supervisory action towards insolvent institutions economic recession and inadequacy of the regulatory framework. Analyzing distress in some developing countries, researchers identified causes to include, macro-economic shocks, instability, effects of financial reforms, changes in prudential regulations and the authorities response to crises. For instance, it was discovered that in Argentina, Chile Malaysia, Japan, Thailand and Uruguay, the crisis periods were closely associated with periods of strong reductions in real output, down-turn in investment, adverse external shocks and balance of payments difficulties. It should be appreciated that the effects of the overall macro-economic problems on financial distress are of varying degrees, what is established is that it is difficult to separate distress in the financial industry of a country from the severity of the recessions witnessed by the economy (IMF 1991), because it is only resilient economy that can provide the primary guarantee for stability in the financial system. This position was corroborated by Balino (1991) while analysing Argentina banking crisis that the main cause was the deterioration that stemmed in part from developments in the general economic environments and their effects on business conditions.

On the issue of the financial sector reform and distress it is difficult to establish causality between the two. Like in Argentina, Uruguay and Chile, their financial industries reform was between mid and late 70s while distress in their financial industries was in early 1980s. In Spain, it was between 1977 and 83, Philippines it was in 1981 immediately after the deregulation of the financial sector. This however shows that the analysis of relationship between the reform and distress reveals the underlying macro-economic environment of an economy. That is, weaknesses of distress institutions started well long before noticed by supervisory agencies as it was usual for distress institutions to conceal relevant information about their true financial condition (de Juan 1987 and Long 1988).

Deregulation lead institutions with vulnerable liability structures to engage in distress borrowing which typically leads to serious difficulty problems of individual institutions, aggravating the financial crises of the financial system. Hence, where the sequencing of financial reform does not accord the required priority to the existence of an appropriate macro-economic environment and supervisory and regulatory apparatus to match the likely developments in the system after deregulation, distress may quickly occur (Banco Central de la Republic Argentina 1980), World Bank 1993, Espabhodi 199, Ologun 1994, CBN 1993, Gomos 1994 Ebhodagbe 1993, and Nyong 1994 opined detailed expositions on the causes of distress.

In Nigeria some of the above factors have been identified as possible causes of distress in the system, however, no consensus on the effect of the regulatory factor. Gomos 1994 deduced that the primary responsibility of ensuring a stable and healthy financial system is vested in the CBN and CBN Decree 24 of 1991. By this reasoning the effectiveness of the CBN in the discharge of this responsibility can be assessed vis-

a-vis the prevailing financial condition of the operators in the system. The CBN however absolved itself of blame saying that the affected banks were victims of institutional factors like inept management, board room infighting, guessed and unprofessional practices. The 1991, BOFI decrees permits CBN to take prompt and decisive actions and to provide clear guidelines for sound safe and efficient financial system. Undue bureaucracy and political interference made timely intervention by the apex institution very difficult, since the alternate decision on what and when to do it with the distressed institutions rests with the president. This limited the effectiveness of the provisions of the two decrees.

Thus, what constitute the matrix of factors that cause distress in the Nigerian Financial industry can only be empirically determined. This is so, since most early work on, distress used cross-sectional data to analyze, the effects of many of the above mentioned causes like regulatory, economic and political factors could not be directly captured, but not that they (factors) influence the operational results of the banks on which the performance ratios were computed. For a detailed policy oriented study of distress it is necessary to complement the analysis based on the use of secondary data with a survey of affected institutions to empirically establish causes of distress. It is noted that the response of researchers faced with cross tabulated data is to compute chi-squared test of independence for each sub-table. This procedure is fraught with problem and don't normally result in a systematic evaluation of the relationship among the variables. The classical chi-squared also don't provide estimates of the effects of the variables on each other, its application to tables with more than two variables is complicating. Regression analysis and analysis of variance (ANOVA) techniques also don't help matters for categorical data where observations are not from population that

are normally distributed with constant variance. A special statistical techniques called long-linear model is formulated for the analysis of categorical data (Huberman 1978 and Bishop et al 1975). The models are useful for uncovering the potentially complex relationships among the variables in a multi-way cross-tabulation.

The Measures:- Sinkey 1980, West 1985, Egbhodaghe 1993 and Nyong 1991 all agreed that, the categorization of a financial organisation as a "problem" or "distressed" institution is usually based on the CAMEL (Capital Adequacy, Asset Quality, Management, Earnings and Liquidity) rating system. Under this the regulatory and supervisory authorities assess a financial institution's performance in the five above mentioned areas, based on the development of appropriate financial ratios. According to Ebhodaghe, 1993, a financial institutions in distress is usually one where the evaluation depicts poor condition in all or most of the five following performance factors namely:-

a) Gross under-capitalization in relation to the level of operation

b) High level of classified loans and advances

c) Illiquidity reflected in the inability to meet customers cash withdrawals

d) Low earnings resulting from huge operational losses

e) Weak management as reflected by poor credit quality, inadequate internal controls, high rate of frauds and forgeries, labour turnover etc.

In using these parameters, the financial institution is assessed against some standard benchmarks like minimum capital inadequacy ratio and ratio of non-performance credits to shareholders' funds in order to be able to make pronouncement about the health status of the institution when these ratios deviate negatively from the predetermined critical level, the institution is said to exhibit symptoms of distress. It

thresholds to describe the level of distress. For instance, institution that has not met the minimum capital adequacy ratio of 30% and liquidity ratio of 40% specified in 1999 budget, may have manifested some symptoms of distress without providing a good measure of extent of distress. Consequently, to make for a more effective measure of distress using CAMEL parameters a weighted average approach is under developmental consideration, in which the weighted parameters sum to unity or 100%. There exist some reasonable degree of agreement on the critical indicators of good and bad banking practices. That is the proportion of banks total assets that is income generating (earning assets) is universally accepted as an indicator of its asset quality. Although complemented by an indicator of the proportion of deficient credits in the banks credit portfolio which is a subset of the earning assets, which constitute the single largest chunk.

The measure of asset quality can be combined in a manner reflective of this complementarily and be appropriately weighted. Thus the arbitrariness will be narrowed reflecting predominant peculiarities of each country. The general consideration in this wise informed the weighting of CAMEL parameters and explains the variations observed across countries using such rating. Recently CBN/NDIC jointly initiated rating systems for banks in order to classify them as shown below, given their composite scores.

TABLE I
CLASSIFICATION OF BANKS BASED ON THE PROPOSED RATING SYSTEM

CLASS	COMPOSITE SCORE (PERCENT)	RATING
A	86 - 100	Very sound
B	71 - 85	Sound
C	56 - 70	Satisfactory
D	41 - 55	Marginal
E	0 - 40	Unsound

This table above shows the range of composite scores for each rating, and if a threshold is agreed upon, it could enable the authorities determine those banks that are distressed whether marginally or terminally. The details of weights and the financial ratios used for assessing each CAMEL factor are shown in table 2 that follows:

TABLE 2

PROPOSED FACTOR/COMPONENT WEIGHTS

	Factor	Component	Component Weight %	Total Weight %
1.	Capital	(a) Capital to Risk-Weighted Assets Ratio	15	
		(b) Adjusted Capital Ratio	5	
		(c) Capital Growth Rate	5	25
2.	Asset Quality	(a) Non-performing Risk Assets to Total Risk Assets	15	
		(b) Reserve for Losses to Non-performing Risk Assets	5	
		(c) Non-performing Risk Assets to Capital and Reserves	5	25
3.	Management	(a) CAEL/85	5	
		(b) Compliance with Laws and Regulations	10	15
4.	Earnings	(a) Profit Before Tax to Total Assets	5	
		(b) Total Expenses to Total Income	5	
		(c) Net Interest Income to Total Earning Assets	5	
		(d) Interest Expenses to Total Earning Assets	5	20
5.	Liquidity	(a) Liquidity Ratio	10	
		(b) Net Loans and Advances to Total Deposits	5	15
	Total			100

Table two is self-explanatory, except "management factor that is based on their performance in other factors. Management factor is the sum of weighted scores in other factor divided by 85 showing a weight of 5, because, management quality is reflected in the other factors and that the quantitative indicators of management performance can fit into one or more of the other CAMEL factors. Augusto and Co has also shown strong initiative in developing rating system, using a group of financial ratios to measure banks performance in respect of certain factors, summing to 100% and using composite score to rate banks. The main object of this is to assist bank counterparts and depositors assess the risk involved in doing business with these banks.

TABLE 3

AUGUSTO'S RATING SYSTEM IN CLASSIFYING BANKS

CLASS	COMPOSITE SCORE (PERCENTAGE)	RATING
i.	At least	Superior risk
ii.	70 - 79	Good risk
iii.	60 - 69	Acceptable risk
iv.	50 - 59	Deteriorating/weak risk
v.	Less than 50	Very weak risk
vi.	---	Unclassified

SOURCE: Augusto & Co. 1994/CBN-NDIC October, 1995.

Note that the unclassified risk is in respect of the banks on which timely or adequate information could not be obtained, for meaningful analysis and rating.

TABLE 4

AUGUSTO'S FACTORS & ASSIGNED WEIGHTS

	COMMERCIAL BANKS	MERCHANT BANKS
Capital adequacy	10	15
Track Record & Profitability	10	10
Asset Quality	25	24
Liquidity/Liability Generation	15	15
Market share	10	5

SOURCE: Augusto & Co. 1994.

Different factor weights are assigned to capital adequacy and market share for commercial and merchant banks as shown above. The important points of departure in these two initiative are in respect of:

i) The factors, their component ratios and weights

ii) The treatment of the main equipment factor.

As already mentioned, there exists a consensus on the critical factors to consider and to a reasonable extent, on the relevant financial ratios. Disparities seen are in factor weighting and component weighting. It should be kept in mind that the bases for assessing and probably improving on these initiatives are:-

i) How comprehensive these factors are in capturing good banking practices

ii) The complementarily of the components in adequately assessing the factors

iii) The complementarily and analysis of the qualitative variables under the

management factors.

Table four shows the Augusto's model factors. The Regulatory Authority Rating Model (RARM) uses CAMEL factors. This coincide with former except market share that is more useful in macro-analysis of the market structure. This factor may reveal the market resilience of individual bank and the extent to which a bank can take the market for a ride". In Nigeria it is believed that big and older banks are safer rightly or wrongly, and this make market share a critical factor for the Nigerian environment.

On point (ii) above, it appears the RARM proposal is superior to the Augusto model and should be preferred. Also it is believed that the RARM proposal for scoring component factors reflect monetary authority's opinion and experiences of what constitute good banking practices, with Nigerian peculiarities and global supervisory standards. Lastly, management factor in private initiatives is very helpful in two ways. First, use of questionnaire asking for information on some critical but qualitative aspect of management, like in Malaysia that have adopted this approach for assessing management. Such questionnaires are administered once or twice yearly to capture any changes in the results during rating period. Second, by capturing relevant qualitative management factors, it provides a more valid basis for the assignment of a higher weight as done in Augusto Model, since management is universally accepted as critical factor while difficulties associated with its assessment compelled a not-so-high weight for it. There is strong merit in adopting Augusto model. Furthermore, the various financial ratios used in computing the composite score rating would be a veritable set from which significant discriminating variables for more rigorous analysis of the distress phenomenon could be selected.

2.6 EARLY WARNING MODELS FOR IDENTIFYING POTENTIALITY DISTRESSED BANKS

The achievement of an appropriate balance between risk taking and the preservation of comfortable margins of safety with respect to earnings, capital and liquidity is a goal, that bankers and regulatory authorities have a vital stake in pursuing. From this point of view it should be recognised that bank regulators wished to achieve this balance through an off-site analysis programme and on-site examinations which provide accurate insight into developing as well as actual problems in banks. It has however been observed that financial deterioration typically does not occur overnight. A decline in components of CAMEL as reflected in poor internal control and auditing procedures develop over a period of time. Regular schedule bank examinations by the supervisory agencies would uncover these adverse development, since these agencies depend in part on the results of on-site and the banking system as a whole. On-site examinations are expensive, and scheduling is often difficult. Examining healthy or sound banks frequently means wasting valuable resources and not examining problem banks often enough possibility of failure in may increase.

There are varieties of multivariate statistical techniques that can be used to predict a binary dependent variable - a problem (vulnerable, weak and or distress) or non-problem bank from a set of discriminatory independent variables. Multiple regression analysis and discriminant analysis are two related techniques in this regard, but as noted by Altman et al (1991) and Eisenbeis (1977), these techniques pose the following difficulties when the dependent variables follow a binary choice model:

i) If it can have only a binary choice, the assumptions necessary for hypothesis testing in regression analysis are necessarily violated. For

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example it is unreasonable to assume that the distribution of error terms is normal.

ii) Predicted values cannot be interpreted as probabilities, since they are not constrained to fall in the interval between O and 1.

iii) Linear discriminant analysis does allow direct prediction of group membership, but assumptions of multivariate normality of the independent variables as well as equal variance-covariance matrices in the two groups, are required for the prediction rule to be optimal.

Traditionally, it should be held that one maximum unlikelihood estimation technique (MLE) that is appropriate for binary choice problems such as classifying banks into problem and non-problem groups, is the logit model. This model has been tested extensively, by experts like Pastence and Ruland (1986) Odedokun (1995) and West (1985). The objective of this logit model is to determine the conditional probability that a bank will fail, given a set of derived balance sheet ratios if all or most of the following signals exist:-

a) Negative or very low net interest margin

b) Inadequate cash reserves or readily marketable assets to cover short term liabilities

c) Negative capital and or reserve balances

d) Abnormally high asset delinquencies (increase or non-preferring loans)

e) Large volume of volatile deposits

f) Paying rates of interest on deposits or inter-bank takings are more than peer group (distressed borrowing)

g) Negative Routine examination comments

h) Management disagreement with examiners finding always

i) High staff turnover

j) Inadequate loan or credit policies.

As stated earlier, one objective of logit model is to determine the conditional probability P_i that the i^{th} bank will fail given a set of K derived balance sheet ratios $\chi_i 1$, $\chi_i 2$ ... $\chi_i k$ for that bank. The model could be expressed thus:

Let Y_i, Y_2 .... Y_n be independent binary response variables whose probability functions P_i , P_2.... P_n satisfy the equation:

The equation:

$$\text{Log } \frac{P}{1-P} = a_o + \sum_{j-i}^{k} + aj \text{ x ij} \quad \text{..... (1)}$$

where i = 1, 2, ... n and P_i is given by

$$P_1 \frac{1}{1+C+P(-ß)} \quad \text{..... (2)}$$

with $ß_1$ defined as $= ơ_o + \sum_{j=1}^{k} ai \text{ x ij}$ .....(3)

Note that the coefficient a_i (j = 1, 2, ...n) measures the effects on the odds of failure of a unit changes in corresponding independent variables. The logit model (2) tends to be more preferred to a set of competing alternatives by researchers, especially as a unique maximum always exists for the logit model, and almost any non-linear estimation routine will find the estimated parameters of the model. Specially, parameters of equation (2) are estimated by maximizing over the a_js the log likelihood functions.

$$L = \sum_{i-1}^{n} Y_i \text{Log}\ (P_{ij}) + \sum_{j-1}^{n} (1-Y_i)\ \text{Log}\ (1-P_{ij}) \ldots\ldots\ (4)$$

Espabhodi 1991 developed and tested Logit models that could aid regulatory agencies as well as bank examiners in identifying potential failures in the United States banking industry. Recent studies in Nigeria, particularly by Jimoh 1993, and Nyong 1994, made use of the Logit model to investigate the predictability of bank failure using publicly available data for commercial and merchant banks. Furthermore, Nyong 1994 combined commercial and merchant banks data in the estimation of the model parameters. In view of the Banks' operational uniqueness, merchant banks, not allowed to carry out certain commercial banks functions this study developed separate models for the two types of banks using 1993 data to capture varying operational characteristic.

A bank may be classified as weak or sound based on its conditional probability P_i of failure, that is classified problem bank for that bank is greater than an optimal cut-off point CCP ½ or .5 as used in this study, to report both the estimation and validation results.

CCP = ½ or .5 ..... (5)

For the purpose of utilizing the models, individual decision makers should select a cut-off point that is consistent with their decision. It is also important to note that the models don't intend to classify banks into those expected to fail or not, but to aid regulatory authorities (CBN/NDIC) identifying potential problem banks. The model may be used to assign a probability of failure, and rank the banks in terms of their probabilities of failure. Banks with the highest probabilities of failure can then be accorded immediate attention or supervision by both CBN and NDIC.

2.6.1 TECHNICAL CHARACTERISTICS OF DISTRESSED BANKS

Both CAMEL rating system and RARM model resolved that an attempt to designate bank as a "problem" and or "distressed" calls CAMEL and RARM component testing. In addition RARM include market share in order to reveal the market resilience of individual bank and the extent to which the bank can take the market for a ride as stated earlier. Based on these parameters appropriate financial ratios are also developed in order to accurately depict the condition of the bank under consideration. A bank in chronic stage of distress is usually one that showed after evaluation all or most of the following symptoms:-

1) Gross under-capitalization in relation to the level of operation
2) High level of classified loans and advances
3) Illiquidity reflected in its inability to meet customers' immediate or daily cash withdrawals
4) Low earnings resulting from huge operational losses
5) Weak management as reflected by poor credit quality, inadequate internal control, high rate of frauds forgeries and labour turnover.

For example, using adjusted shareholders fund data, a bank whose ratio of the adjusted shareholders funds to total assets is negative, may be declared technically insolvent or distressed. If on the other hand the ratio remains negative for a period of one year or extremely low, during the period under review, the distress may actually be chronic, signifying the low or high degree of under-capitalization for the banks level of operation.

Other ratios used include, loans to deposit ratio (LDR) liquidity, average liquidity ratio (ALR) ratio, classified assets as a proportion of total loans and advances. It is

important to note that while four of the CAMEL components were significant variables in the case of commercial banks, only capital adequacy, asset quality and liquidity components of CAMEL were significant variables explaining distress in merchant banks. Thus a bank is classified distressed where the ratios point to excessive assets problems, unsatisfactory performance in combination of other areas including net inter-bank positions, overdrawn position with CBN, protracted management and boardroom squabbles.

In conclusion, where these problems are so severe, immediate corrective actions by CBN/NDIC are necessary. We also noticed that only liquidity, capital adequacy and asset quality components of CAMEL seem to be important determinants of merchant banks financial conditions in Nigeria.

2.6.2 EFFECTS OF DISTRESS ON THE FINANCIAL SYSTEM AND THE ECONOMY

An assessment of the effects or impact of distress (bank failure) on the Nigerian economy is an empirical issue which should necessarily involve model specification, estimation and stimulation using the Nigerian data. But for brevity reasons this issue is approached by examining the theoretical implications of general bank failure in an economy, and also by looking at some relevant financial and economic data in Nigeria. The intermediating role of banks and their relevance both in the transmission of monetary policies and in the payment system underscore their importance as well as the problem that bank failure at the prevailing dimension in our economy could precipitate. From their intermediation role banks generate financial resources and put these at the disposal of deficit economic units who use the resources to further the cause of economic growth in the form of increased employment of otherwise idle resources and

this in turn leads to increased output. Hence, an industry-wide insolvency of banks, as being experienced in Nigeria do retard the economy's rate of capital formation, reduce level of employment and output and ultimately the pace of economic growth.

When mobilizing financial surpluses, banks issue claims (securities) on themselves to the fund owners. These securities becomes less attractive in the event of wide-spread insolvency thereby increasing the holders risk exposure and also making them loss confidence in the financial industry. This paralyses the development of a good banking culture. It also cause the banks cost of intermediation to rise as they need to pay higher returns to attract and retain deposits. There will be great and pervasive uncertainty such that the perceived real returns on financial assets will be lowered. Other indirect cost will also go up as in the case of more frequent intervention by the regulatory authorities. In the worst circumstance, that is the banks become terminally distressed, depositors' fund is lost unless there is an explicit and or implicit provision for protecting depositors.

There is also threat to the development of an efficient payment mechanism. Settlement of transactions become predominantly cash-based with its associated risks. The effectiveness of monetary policies will be reduced in direct proportion to the extent to loss of confidence in the banking system as reflected in the instability that will characterize the demand for money and the proportion of money in circulation that will be outside the banking system as banks no longer serve as safe depositories. It is puzzling, that in Nigeria today, in spite of global trend towards credit based economies and the growth of this culture in most emerging markets, most economic transactions are carried out on a cash and carry basis. This phenomenon accounts for the huge pool of fund in the informal sector estimated at about 50% of the total money supply. That

is a good proportion of this represents idle fund that could have been effectively utilized in the productive sector, as loans and advances, if the banking system is stable, safe and sound. Available statistics indicate that more than two-third (⅔) of the aggregate loans and advances of distressed banks were non-performing with their aggregate adjusted capital in the negative amounting to ₦19.2 billion in 1994. The cash based nature of our economy not only chokes the development of the financial industry by hampering efficient resource allocation and financial intermediation, but encourages distortion in money supply and macro-economic management.

Another financial cost to be incurred by the economy in order to resolve distress problem is borne by tax-payers at large. That is a more severe implication for a depressed economy already on the path of declining growth. For example, the present financial condition of the hard core distressed banks are tending towards irreversible distress situation with the cost of recapitalizing them amounting to ₦36.6 billion while that of liquidation stood at ₦18 billion. If these funds have alternative uses their multiplier effect on the economy will be felt, hence the loss to the economy as a result of this magnitude of bank failure is better imagined than quantified and or even stopped.

It is also observed that in addition to the broad theoretical implications for an economy, there exist specific impacts in the literature, of bank failures. These have been observed to operate through restriction on banks credits, accordingly, that the expenditures of economic agents are constrained by the quantity of credits made available to them. The classified loans and advances of technically insolvent banks amounted to ₦11.9 billion 1990, ₦12.8 billion 1991, ₦18.8 billion 1992, ₦52.9 billion 1993, ₦46.9 billion in 1994 and ₦66.5 billion in 1995 which provides capital shortfall

of ₦1.5 billion, ₦1.9 billion, ₦5.6 billion, ₦9.1 billion, ₦16.7 billion and ₦21.4 billion in 1990, 1991, 1992, 1993, 1994 and 1995 respectively. Developments that reduced the total operations of banks as intermediaries reduce spending and consequently affect aggregate economic performance adversely (Gilbert and Kolhin 1994). To the extent that bank failures disrupt the process of financial intermediation including credit granting activities of banks aggregate economic activities may be adversely affected. Most analysts used regression analysis results in investigating the effects of distress and the economy, but due to some unavoidable reasons or constraints, hence the choice of observing the trend of net domestic credit to the economy and compare it with the trend to key economic parameters like growth of real GDP, the rate of manufacturing, capacity utilization and per capita income in Nigeria using the following four year trend of some selected macro-economic indicators.

TABLE 5
SELECTED MACRO-ECONOMIC INDICATORS

	1992	1993	1994	1995
Real (Growth Rate %)	3.0	2.3	1.4	2.17
Manufacturing Capacity utilization (%)	41.8	37.2	30.4	27.9
Inflation Rate (%)	44.6	57.2	57.0	72.8
Net Domestic Credit (%)	91.4	69.1	29.2	23.1
Narrow Money MI (%)	52.8	94.4	47.8	8.1
Broad money M2 (%)	49.2	49.8	39.1	10.3
Current Account Balance (% GDP)	-0.9	-2.4	-5.4	-5.6
Overall Balance (% of GDP)	18.3	-5.1	-4.7	-3.1
External Reserves (US $ Million)	713	1330	1659	1441.0
Overall Fiscal Balance (% of GDP)	-10.2	-15.4	-7.9	-0.6
Domestic Debt Stock (% of GDP)	31.5	31.9	38.1	24.6
External Debt Stock (% of GDP)	98.9	79.0	72.3	73.9
GDP Per Capita (₦)	1,066	1069	1069	1290
Population Growth Rate (%)	2.1	3.2	2.1	2.1
Life Expectancy at Birth (Yrs	51	52	52	52

SOURCE: NDIC Quarterly M/J 1996, p. 32.

As evident in table 5 above, the change in net domestic credit fell from its level of 91.4% in 1992 to 69.1% in 1993 and further fell to 29.2% and 23.1% in 1994 and 1995 respectively. As stated earlier, it can be observed that as the number of banks in distress increased from 38 in 1993 to 60 in 1995 and the non-performing loans of these distressed institutions increased from ₦13.1 billion in 1993 to ₦44.5 billion in 1995, it is seen that the addition to total net domestic credit assumed a downward trend. This observation corroborated the hypothesis that developments that disrupt the operations of banks as financial intermediaries will adversely affect total quantity of bank credits. It is seen that the rate of manufacturing capacity utilization of 41.8% in 1992 dropped to 37.2% in 1993, 30.4% in 1994 before it further nose-dived to 27.9% in 1995. The implication is that as liquidity constrained economic agents, the activities of the manufacturing sector might have or have been hampered by the declining trend in bank credits to the economy. The table shows a stable per capita income over the years, but a conversion to foreign currency (e.g. US dollar) indicate that it was actually declining. Given that all sectors of the economy are interrelated the overall impact of disruption to banking activities can be captured by the rate of growth of real GDP, declining consistently until 1995 when it rose slightly from its all-time low figure of 1.38% in 1994 to 2.17% in 1995 and still below the rate of 2.3% in 1993. With several intervening factors accounting for the deteriorating fortunes of the economy, the situation cannot be completely explained away from the theoretical symbolic relationship that exist between the banking sector that is currently in deep crisis and the real sector of the economy. The debilitating effects of bank failure have under scored the need to intensify efforts at sanitizing the system. Regulatory and supervisory authorities and governments have adopted some measures at addressing this menace, however, efforts remain largely marginal owing to various constraints. Furthermore, reforms and existence coupled with cooperation from all and sundry are needed to ensure total success in distress eradication.

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CHAPTER THREE

3.0 INTRODUCTION

An efficient financial system is widely accepted as a necessary condition for an efficient functioning of a nation's economy. For a finance industry to be efficient, it must be regulated in view of the failure of the market system to recognise social rationality and the tendency for market participants to take undue risks which could impair their stability. It therefore becomes necessary for every country to regulate its financial industry, however the regulatory and or supervisory agencies may differ from country to country but the goal of promoting and ensuring an efficient, safe and sound financial industry is paramount and unique. In Nigeria CBN, NDIC, FMF, SEC and FMBN handle the regulatory and or supervisory activities of this industry.

The concept of regulation here means a body of specific rules of agreed behaviour, either imposed by some government or other external agency or self-imposed by explicit or implicit agreement within the industry, that limits the activities and business operations of financial institutions. Finance industry hold the bulk of the money supply in an economy, creating money through loans and advances extends to customers. Acts as the vehicle through which monetary policies are implemented just as it intermediates between surplus and deficit units. These sensitive and essential services of mobilizing funds and allocation of credits expose the finance industry to liquidity problems and risks that might arise from loss of public confidence. It thus become imperative for government to regulate finance industry more than any other sector of the economy.

3.1 GENERAL OVERVIEW OF THE FINANCIAL INDUSTRY (BANKING) IN NIGERIA

Over the years, the Nigerian financial industry has undergone a series of structural and institutional changes. The industry has moved from an underdeveloped financial market with few banks in the 1960s to a more diversified and sophisticated computerized industry with many government financial institutions, made up of 66 commercial banks, 54 merchant banks, more than 5 usually known development banks and numerous non-banking financial institutions, as at 1998 ending.

At the apex of the financial industry is the Central Bank of Nigeria (CBN) which is now autonomous and no longer under the direct supervision of the Federal Ministry of Finance (FMF), that also play a vital role in the financial industry. Besides these two institutions, there are other government financial agencies within the system. These include NDIC, NSITF, NBCB, NERFUND, NEXIM, and SEC. With the promulgation of the new CBN and BOFI decrees, 24/25 1991 the CBN now represents the monetary authorities in the financial industry. Other development seen are Peoples' Bank, Community Bank, finance and investment companies, brokerage firms, insurance and mortgage institutions.

3.2 MAJOR DEVELOPMENTS IN THE INDUSTRY IN RECENT YEARS

The structure of the Nigerian financial industry has changed significantly, both in size and complexity, from the pre-colonial era through the 1980s and into the 1990s. These changes are as a result of combination of factors, like:-

i) The changing policy environment

ii) Technological innovations

iii) The inter-relationship between the different units or groups of units in the system

iv) And interplay of market forces and some macro-economic variables

v) Introduction of the legal and institutional framework for the supervision and regulation of the financial institutions.

All these factors contributed greatly in changing the structure of the Nigerian financial industry, coupled with some policy initiatives aimed at facilitating the emergence of a more efficient system of financial intermediation within the Nigerian economy. In area of ownership, there are different types of banking institutions in the Nigerian financial industry, with the Central Bank of Nigeria (CBN) at the apex of the system. Other institutions are the deposit and development banks, the capital market with the Securities and Exchange Commission as its apex institutions, and non-banking financial institutions such as the insurance companies, primary mortgage firms, finance houses and discount houses.

3.4 THE SUPERVISORY AND REGULATORY INSTITUTIONS

3.4.1 THE CENTRAL BANK OF NIGERIA (CBN) AND ITS ROLES

The Central Bank of Nigeria (CBN) was established as a wholly-owned Federal Government institution by the CBN Act of 1958. The bank commenced business on 1st July 1959 with initial capital of ₦3 million. It is charged with the following main functions:-

i) Currency issues and distribution in its capacity as banker to banks

ii) Supervises and examines, clear cheques and lender of last resort

iii) Banker to the government

iv) Public debt management

v) Promotion of monetary stability through monetary/fiscal policies

vi) Foreign exchange management

vii) Supervision of finance houses

viii) Promotion of the development of the financial (money and capital) markets

ix) Promotion of special schemes and funds for industrial development.

The current legal backing for CBN operations rests mainly in the new CBN Decree 24 of June 1991 and to further strengthen its supervisory capability, the Banks and Other Financial Institutions (BOFI) Decree 24 of June 1991 was also promulgated. It should be noted that this decree 24 of 1991 supersedes the Act of 1958 and all subsequent amendment Acts. The promulgation of this decree marked an important landmark in the history of banking and or financial industry development in Nigeria, because it expanded powers conferred on the CBN to execute its primary functions.

3.4.2 THE NIGERIAN DEPOSIT INSURANCE CORPORATION (NDIC) AND ITS ROLES

The Nigerian Deposit Insurance Corporation (NDIC) was established by Decree 22 of 1988 and commenced operation in March 1989. NDIC is an independent government agent (autonomous) and charged with supervisory function of all licensed banks and other deposit taking financial institutions. At present NDIC insures only commercial and merchant banks limiting its supervisory activities to them. Provides guarantee financially to depositors in case of bank failure and ensure that these banks comply with regulations and practices that foster safety and soundness in the market place.

Section 5 of the NDIC Decree No. 22 of 1988 states the functions and or the statutory roles of the corporation to include:

i) Insuring the deposit liabilities of all the licensed banks

ii) Financial and technical assistance to the insured banks. This is done by;

   a) Grant loans

   b) Give guarantee for a loan taken by the insured banks

   c) Accept an accommodation Bill with interest within (not exceeding) 90 days maturity exclusive of days of grace subject to renewals not more than four times

   d) Subject to CBN approval, take over the management of problem banks until its financial position substantially improves

   e) Direct specific changes in the management of the problem bank, arrange a merger or contract to have deposit liabilities assumed by another bank.

iii) Guaranteeing of payment to depositors in the event of insured bank failing up to a maximum of ₦50,000=xx only to each depositor.

iv) Assisting monetary authorities in the formulation and implementation of banking policies to ensure sound banking practices and fair competition

v) Watch monetary stability by encouraging a flexible banking system and consumer protection for their deposits and better services.

3.4.3 THE CAPITAL MARKET SEGMENT AND OTHER INSTITUTIONS

The capital market is a network of specialized financial institutions that, in various ways bring together suppliers and users of capital for raising long-term finance

to assist governments and companies to execute their development projects. That is a bridge between surplus savings bloc and deficit needing bloc. This relates to the insurance and marketing of shares, bonds and debentures as main instruments (goods) in the market using the services of Brokers, dealers and underwriters. Through its pricing mechanism, the capital market also provides industrial management with some idea of the current cost of capital - this is an important guide for determining the level and rate of investment. CBN, commercial and merchant banks are the key players in the capital market in addition to securities and Exchange Commission (SEC), the Nigerian Stock Exchange (NSE), The Central Securities Clearing System (CSCS), the Stock-Broking Houses, the Registrar/Issuing Houses, companies and investors.

b) The Securities and Exchange Commission (SEC)

The Securities and Exchange Commission (SEC), is an apex regulatory authority in the capital market and came into existence through the Securities and Exchange Commission Decree and or Act 71 of 1979 which was later repealed and replaced by the new SEC Decree No. 29 of 1988. Prior to the recent financial sector reforms, the functions of the SEC included valuation of all eligible securities to determine the price, amount and timing of all public offers of securities. That is full disclosure by market operators and users. Regulating securities trading through market surveillance, registering securities and institutions in the capital market, creating the atmosphere necessary for the orderly growth and development of the capital market and to protect the investors as well as fostering the development of the Nigerian Capital Market.

b) The Central Securities Clearing System (CSCS)

Through a department within the (NSE), the (CSCS) came into existence in April 1997 in responding further to the needs of the Nigerian capital market. It is a settlement and custodian mechanism that enhances the delivery and settlement period. It is also a central depository for all other certificates of quoted securities, doubles as a sub-registry in conjunction with registrars of quoted companies, provide clearing and custodial services to local and foreign instrument. Settlement and delivery is not at internationally recommended standard T+5, as the market joined the global making markets and setting the stage for electronic trading on the market and making Nigerian capital market more efficient, more investor-friendly and more responsive to the needs of both local and foreign investors.

c) The Nigerian Stock Exchange (NSE)

Lagos Stock Exchange (LSE) was it until 1960 when section 21 incorporated NSE as a limited liability company and a non-profit making organisation/limited by guarantee to promote commerce in Nigeria. The June 6th 1961 Act accorded LSE legal recognition, the provisions of which were to regulate the business of stock-broking in Nigeria. NSE is charged with the responsibilities of providing facilities to the public for purchase and sale of stocks and shares of any kind and the investment of money, controlling the granting of quotation in the respect of shares and stocks under the listing requirements of the NSE. Listing simply means offer for sale of existing shares, offer for subscription of new shares by a company requiring additional capital and by introduction where a company seeking quotation already has enough shares held by the public to satisfy listing requirements of the exchange.

Aimed at reaching out to the grassroots and bring services of SE and those of capital market nearer to investing public, the NSE by 1977 increased its branches (trading floors) to six namely, the Lagos floor 1961, Kaduna 1978, Port Harcourt 1985, Kano 1989, Onitsha 1990, Ibadan 1990 and with the movement of Federal administrative capital from Lagos to Abuja, the Abuja floor 1998.

The NSE introduced the second-tier securities market (SSM) to accord small and medium size enterprises quotation and listing in view or in the event that they cannot meet the requirement of the main market. These small and medium size firms bring contributions to the main and or overall industrial development of the country. Stockbroking witnessed a significant growth rate from 20 in 1985 to 140 by December 1994 and still on the increase by December 1998 as a result of increase in the demand for financial intermediation in filling the savings and investment gap of the economy.

d) Others

i) Stock Brokers - Act as issuing houses in some cases, and brokers to the issues in all cases. Only brokers who are the dealing members may be appointed as the sponsoring broker to any public issue. The only one authorised to buy/sell on behalf of investors and also acts as an investment adviser and portfolio managers.

ii) Registrars & Issuing Houses; plays an important though passive role. Provides share registration to both listed company and private companies. Ensures dividend payments process bonus issues and issuance of share certificates. Represent public companies which retain them to carry out the above jobs.

iii) Capital Market Investors; These are individuals, international investors, trustee companies investment and or insurance companies. They represent companies who seek additional capital for their business, with investors as ultimate target of all activities. They are the group that actually invest, in the capital market either through debt, or equity capital.

3.5 BANK REHABILITATION; THE NIGERIAN EXPERIENCE

The financial industry of any economy plays an important role in promoting and or supporting economic growth and development. That is banks world-wide over, occupy a strategic and leading position in the financial industry, and traditionally any financial industry in distress cannot perform the above stated role effectively. Consequently financial industry regulators and supervisors pay great attention to the banking industry. Prior to the regulation some distressed banks went into self liquidation or self-rehabilitation. Since the commencement of regulation and the establishment of the CBN in 1959, rehabilitation had been a favoured strategy for the resolution of the problems of distressed banks.

Evolutionally the Nigerian financial industry (banking) has come of age with the following significant growth, since 1892. Up till 1960 this industry was solely foreigners and this skewness in ownership structure was responsible for lack of credit to indigenes (Rowan 1952, Rowan and Newlyn 1954). To unchain this some indigenous banks came on stream in late 1920s and 1930s when the industry was unregulated The colonial authorities saw the need to regulate then commissioned G.P. Paton in 1948, to study and determine the need for regulation. The Banking Ordinance of 1952 was born following Paton's Commission recommendation, seeing 16 indigenous bank failed.

By 1954 21 out of 24 indigenous banks collapsed, making way for consensus for the need for a central bank. And Loynes 1957 report supports the establishment of CBN which was done in 1959 CBN Act of 1958.

To regulate and supervise this industry CBN and NDIC were agencies charged with these tasks. Holding firm since 1959 CBN with government through FMF bored these task up till 1988 when the industry players went out of proportion both in members and or structural sizes. That is the growth witnessed between 1986 to date in the industry exposes Nigeria not to be ready in both expertise and technology to make the financial industry successful. Hence the imminent large number of banks going distressed simply because of; the inhibitive policy environment, capital inadequacy, management problems, widespread structure, political interference in the banks management and governments sledge hammer of 1986 deregulation exercise.

3.5.1 BANK REHABILITATION OPTIONS IN NIGERIA

Distress in the financial industry do precipitate other crises necessitating the regulatory and or supervisory authorities taking a series of actions and interventions, aimed often depend not only on financial factors but on social, economic and political factor. Not to protect the interest of bank managers, owners or even preserve a particular bank as an institution but rather to protect depositors, and safeguard the stability of the financial system. Problem (illiquid/insolvent) banks rehabilitation has been the major process/or step in the series of intervention, since they are usually coped with by using some form of rehabilitation options rather than allowing them to fail. The rehabilitation options are usually well packaged, intensive-care programmes designed to ensure that the financial conditions of the affected institutions stop deteriorating, move

to the path of full recovery and financial soundness and strong capital base. These rehabilitation plans include:

a) Direct Financial Support by Government:- Since the emergence of indigenous banks in early 1950s and failed with the same rapidity Federal Government has adopted the policy of direct financial assistance to stop the Nigerian banking public being exposed to the hazard of bank failures. Government being aware that bank failures would induce runs and losses, demonstrates its commitment to the preservation of the institutions to extent possible.

Most State Government or regional banks presently in existence have benefited. Notable among them are National Bank of Nigeria (NBN), African Continental Bank (ACB) and Wema Bank (WB). More money is injected into these banks in form of capital to enable them compete favourably in the market.

b) Liquidity Support Loan; CBN as a lender of last resort, initiated series of measures to solve the problem of some banks in distress and avert banking panics. Since the establishment of CBN in 1959, it has been versed in providing liquidity support loan to the financial system to pacify the severity of the liquidity problems arising from the various causes of financial distress enumerated above. Also this has addressed problems of policy-induced stocks, mismanagement (asset/liability maturity mismatch) and stemming incipient runs on banks.

c) Technical Assistance: Management quality becomes crucial since they formulate strategy and business plans aimed to achieve the laudable objectives (reducing bank's financial and technical problems) putting the plans into effect. Both CBN/NDIC

have significantly acted in these directions to appoint in most cases professionals either from public or private to assist with the management and improve the internal control system of these banks. Several provisions from BOFI Decree 24 of 1991 takes explicit care of this issue.

d) Mergers/Acquisitions & Management Take-over; Section 34 of BOFI decree states that CBN can take over any bank with immediate effect the control and management of some bank. Section 23(3) of NDIC also strengthen this takeover until its financial position has substantially improved.

3.6 THE FAILED BANKS (RECOVERY OF DEBTS) AND FINANCIAL MALPRACTICES (DECREE NO. 18 OF 1994) IN BANKS

The issue of failed banks dates back to the early 1950s, sequel to the tragic failure suffered by the largely unregulated indigenous banks. These failures brought untold hardship to customers forcing the government to enact the 1952 Banking Ordinance, amended in 1958, 1962 and finally repealed in 1969 when 1969 Banking Decree was enacted. The 1958 CBN Act and 1969 Banking Decree were also replaced by new CBN and BOFI Decrees 24 and 25 of 1991.

But from 1950s when the first incident of bank failures was witnessed it was to recur in 1998 following in 1986 when the Federal Government embarked on the Structural Adjustment Programme (SAP) aimed at deregulating the economy in the direction of market-determined pricing. The deregulation started with the banking sector such that deposit and lending rates were no longer fixed by the CBN. Other deregulation features include, systematic removal of regulatory controls, structures, operational guidelines which had hitherto inhibited growth competition and efficiency.

Since deregulation in 1986, the number of banks increased tremendously from 40 in 1985 to 119 in 1991 and so the rapidity of bank failures from 16 in 1952 to 124 in 1998.

Observing the alarming rate at which all these new generation banks failed the Federal Government on 9th November 1994, promulgated into law Decree No. 18, tagged, "The Failed Banks (Recovery of Debts) and Financial Malpractice in Banks". This decree also established "The Failed Banks (Recovery of Debts) and Financial Malpractice Tribunals" empowered to among others

a) Recover the debts owed to failed banks arising in the ordinary course of business of the banks and which remains outstanding as at the date the banks are closed or declared failed banks by the CBN.

b) Try offences created under the decree relating to certain malpractice in banks.

c) Section (a) above was amended to include all those outstanding loans that have over-stayed their repayment periods. Beneficiaries of such loans names be submitted to NDIC Committee on Recovery of Debts Chairman.

To implement and set the decree in motion, the provisions granted the establishments of five (5) tribunal zones. Hence the inauguration of five (5) special tribunals, swear-in their chairmen immediately. Two (2) of the tribunals will be sitting in Lagos Zone, while the other three (3) were for Benin, Enugu and Kano Zones, one for each zone. The Lagos zone commenced sitting immediately thereby marking the beginning of a new era in our regulatory and supervisory of the Nigerian financial (banking) industry, and the economy at large.

The Decree has thirty-six (36) sections with two (2) schedules, and divided into three (3) parts as follows:

Apart One (1): Consists or has 1-8 sections that established the tribunals and spelt out its powers.

Part Two (2): Consists of 9-18 sections and deals with recovery of debts and failed banks.

Part Three (3):- is made up of sections 19-36 and identifies what constitutes offences and penalties under the decree.

The tribunals have powers and jurisdictions to try offenders who contravened the provisions relating to the offences specified under the failed banks etc. Decree 24 and 25 of 1991 NDIC Decree 22 of 1988 and other related money laundering Decree 3 of 1995 and, Foreign Exchange (Monitoring and Miscellaneous) Decree 17 of 1995. Hearing and judgement should be within and concluded also within 21 days or after the charges were brought to the tribunal. And immediately after the 1998 budget, during the Minister of Finance breakdown briefing, the Minister confirmed the take-over of 124 distressed banks assets and liabilities by NDIC as at 1st January 1998.

Similarly, it is pertinent to note that with the coming into existence of this administration by 29th April, 1999 the activities of these zonal tribunals were transferred to Federal Ministry of Justice under Court of Appeal. This the administration did as to dis-abuse some minds that the tribunals are military organs to clamp down on some individuals in financial industry managements.

CHAPTER FOUR

4.0 DATA PRESENTATION AND ANALYSIS

4.1 INTRODUCTION

The last few years have been both traumatic and revolutional for the Nigerian financial (banking) industry). Accustomed to steady profits and little, or no problem since 1959 when the CBN was established, the industry has, in recent times produced the largest number of technically insolvent and under-capitalized banks. Currently, the magnitude of distress in the nation's banking industry has reached an unprecedented level thereby making it an issue of concern to the government, the regulatory/supervisory authorities, the banks and as well as the general public.

It should be noted that the banking system was already in distress by the time NDIC was established in 1988 when about seven banks were known to be technically insolvent. The government however did not embark upon a cleansing efforts because it was feared that it will lead to loss of public confidence and flight of foreign capital moreso no deposit insurance institution to expeditiously manage such bank closures.

The purpose of this chapter is to highlight measures that have been employed by the regulatory/supervisory authorities to empirically verify the current distress condition in the Nigerian financial industry most especially that the causes were attributed to a variety of issues, ranging from institutional to economic and or political factors. Adopting the broad approaches, that is survey of major loss in the industry (both corporate and individual) and an indepth statistical analysis of a range of secondary statistics referred to as performance indicators. It is hoped that the magnitude as well as the depth and review of failure resolution options the rehabilitation, and the management so far adopted to address the problem are carefully dealt with.

4.2 AN OVERVIEW OF THE FINANCIAL INDUSTRY

Commercial banking business dates back to 1892, with the pioneer banks owned by expatriate to facilitate colonial administration as well as trade with Britain. Until 1930 when Nigerians start to embrace banking business. The industry unregulated, the indigenous banks were soon faced with problems of under capitalized, poor and inexperienced management and competitive pressures from the well established foreign banks.

In 1952, the first Banking Ordinance was enacted. Its implementation led to failure of many indigenous banks. The CBN was established in 1959 to supervise/regulate and possibly prevent large scale of bank failures. Since then, CBN played major roles in laying the foundation for sound financial industry including the establishment of NDIC in 1988. Following the 1986 implementation of SAP, the financial industry was gradually deregulated, say from 1987. Banking was liberalized such that the number of banks from 42 in 1986 to 120 in 1988 giving an annual average growth rate of about 31%. Also when the interest rates control was removed bank deposits jumped from about ₦20.5 billion in 1986 to ₦468 billion at the end of 1998. Similarly, total assets of banks increased from about ₦68 billion in 1986 to about ₦232 billion at the end of 1992 and over ₦543 billion at the end of 1998. In spite of these goings, the financial condition of some licensed banks continued to deteriorate. In 1989 seven (7) banks were adjudged technically insolvent, in 1990 it became nine (9), in 1991 eight (8), in 1992 about 15 distressed institutions were confirmed. The number rose astronomically to one hundred and nineteen (119) at the end of 1997.

A significant feature in the Nigerian banking scene and in relationship to banking distress has been government ownership of banks, justified like when Nigerians could

not own banks. Government officials appoint and remove bank board of management at will and without due regards to qualification, experience and proven integrity. Loans and advances were made indiscriminately to officials of the governments. This crippled such banks financially and operationally.

4.3 EMPIRICAL ANALYSIS OF THE CAUSES AND NATURE OF DISTRESS

As indicated in chapter three (3), the current distress condition in Nigeria's financial industry has been attributed to a variety of causes, ranging from institutional, social to economic and political factors. However, these were largely impressions which had not been subjected to any empirical (survey and or statistical) verification at least with respect to the Nigerian situation. This chapter, therefore aims at remedying distress limitation through true broad approaches.

a) The first involves a survey of major actors in the financial industry including the various operators and their clients (corporate and individual) as well as their regulatory/supervisory agencies to find out first hand, what they perceived as the causes and nature of their problems.

b) The second involves indepth statistical analysis of a range of secondary statistics usually referred to as performance indicators, including the familiar CAMEL ratings. Under this two pronged analytical approaches namely:

   i) The logit model of the determinants of distress in the financial institutions.

   ii) And a contra-factual analysis of the performance criteria.

4.4 SURVEY EVIDENCES

The survey was designed to generate a wide range of information pertinent to the subject of distress and targeted at financial institutions their clients (corporate and individual) and the regulatory/supervisory agencies, sorting specifically the following information about:

i) The perception of the nature, extent and causes of distress

ii) The assessment of various distress resolution options and the role of regulatory/supervisory agencies.

iii) Financial operators assessment of their individual situation with regard to the distress problem/what contribute to the perceived condition.

iv) The suggestions for ensuring a faster and more effective resolution of the distress problem.

v) The clients (customers) perception about the nature, extent and causes of distress as well as the assessment of the roles of the regulatory/supervisory agencies.

vi) Customers suggested remedies for effective resolution of the distress situation.

vii) The supervisory/regulatory agencies perception of the causes of distress, and the assessment of the existing distress resolution measures and fresh suggestion for ensuring a lasting solution.

viii) The Government's perception of the causes of distress and suggestions for ensuring a lasting solution to the problem.

The resulting array of the information obtained from the publications done by CBN, NDIC due to time and cost that the weights are so enormous to bore are

reproduced in these attempts. It should be noted that the respondents to this survey included; the financial institutions, their customers, (corporate/ individuals) regulatory/supervisory agencies and the government.

4.4.1 SAMPLING PROCEDURE AND ANALYTICAL TECHNIQUES

A sample of each type of financial institutions and their users was selected to give a representative coverage from the list of existing institution, their branches and customers (namely account holders with deposit banks) obtained from the CBN supplemented with those from the NDIC. Later a combination of stratified and purposive sampling techniques was employed to select the sample of institutions/customers to be covered dividing the country into five (5) zones each comprising a cluster of contiguous states, namely Lagos, Ibadan, Enugu, Bauchi and Kano, all these neatly shown on "Appendix A" shows details of sampling procedures.

APPENDIX A

To estimate the proportion (P) of financial institutions/their customers to be sampled from a total population (N), of all branches and customers, the variance of proportion is given by:

$$\text{Var}(P_x) = \sigma_{Px}^2 = \frac{[P(1-P)/n]}{(N-1)} \qquad \ldots\ldots (1)$$

where n = number of branches in the sample.
Solving for n, in (1) we obtain

$$n = \frac{[N_p(1-P)]}{[(N-1)\sigma_{Px}^2 + P(1-P)]} \qquad \ldots\ldots (2)$$

Thus, the number of observations required will depend on the value of proportion, (P), which *a priori* is unknown. The product of P and 1-P has its maximum value when P = 0.5. If we further assume the confidence interval on either side of the sample proportion to be 0.04 (i.e. margin of error of 4%); we have:

$$1.96\,\sigma_{Px} = 0.04 \qquad \ldots\ldots (3)$$

which implies that

$$\sigma_{Px} = 0.0204 \qquad \ldots\ldots (4)$$

When the population (N) is known, we can solve for P.

Given varying margins of error, the sample size worked out at about 10% for each category of financial institutions, 5% for the corporate clients and 1% for individual customers. Due to special relevance of distress to commercial and merchant banks, the corporate headquarters of these institutions were 100% covered. A total of 2,727 respondents, made up of 906 financial institutions (commercial/merchant, community , People's banks, finance houses, primary mortgage institutions, insurance companies, brokers, stock brokers and issuing houses), 581 corporate and 1231 individual customers (namely deposit banks were used. All regulatory/supervisory agencies, namely, CBN, NDIC, SEC, NSE, NISB, FMBN, NBCB, CAC and FMF/ED. The financial institutions and their clients were drawn from ten (10) States and Federal Capital Territory, Abuja achieving 100% response due to personal nature of administering the questionnaires. Of the respondents financial institutions accounted for 33.2% corporate customers 21.3%, individual customers 45.2% and regulatory/supervisory authorities 0.3%. In terms of geographical spread about 28.5% respondents were from Lagos, 13.2% from Kaduna, 8.2% Oyo, 7.7% Enugu, 7.1% Kano, 6.8% Plateau, 6.6% Imo, 6.5% Rivers, 5.1% Borno, 4.5% Edo and 4.8% from Abuja. Table 6 indicates these.

On analytical techniques, the analysis of the survey returns was based on simple descriptive analysis of frequency distribution of relevant statistical information supplemented by a relatively more sophisticated statistical analysis called saturated log-linear analysis. It is noted that a simple frequency distribution tables of types and number of responses translated into percentages were constructed and analysed. And in order to corroborate the evidence from the frequency analysis, the saturated log-linear analysis was undertaken and in the event each observed frequency cells reproduced by the saturated hierarchical log-linear model. All variables used for classification were independent variables while dependent variables were the number of cases in the cell of the cross-tabulation as indicated on the "Appendix A" reproduced with self-explanatory notes overleaf, for further details on the application of the log-linear analysis.

TABLE 6

DISTRIBUTION OF RESPONDENTS BY STATE AND TYPE

STATE	Financial Institutions[1]	Corporate Customers	Individual Customers	Regulatory/ Supervisory Bodies [2]	TOTAL	
					Number	Percentage
LAGOS	349	141	278	9	777	28.5
IBADAN	38	-	-	-	38	1.4
PLATEAU	37	47	102	-	186	6.8
BORNO	22	45	73	-	140	5.1
ENUGU	89	41	68	-	198	7.2
RIVERS	77	36	64	-	177	6.5
IMO	26	40	115	-	181	6.6
OYO	52	50	121	-	223	8.2
EDO	27	25	70	-	122	4.5
KANO	83	42	68	-	193	7.1
KADUNA	76	88	196	-	360	13.2
ABUJA	30	26	76	-	132	4.9
TOTAL	906	581	1231	9	2727	100
PERCENTAGE	33.2	21.3	45.2	0.3		100

[1] Comprise Commercial Banks, Merchant Banks, Community Banks, People's Banks, Development Banks and Mortgage Finance Institutions Finance Houses, Insurance Companies Stock Brokers and Insurance Brokers.

[2] Comprise Central Bank of Nigeeria (CBN), Nigeria Deposit Insurance Corporation (NDIC), the Securities and Exchange Commission (SEC), the Nigerian Stock Exchange (NSE), National Insurance Supervisory Board (NISB), Federal Mortgage Bank of Nigeria (FMBN) National Board for Community Banks (NBCB), Corporate Affairs Commission (CAC) and the Federal Ministry of Finance and Economic Development.

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APPENDIX B

In general, the model for the log of the observed frequency Fij in the ith row [i = 1, 2 . . r] and the jth column [j = 1, 2, . . . , c] of an r x c table is given by:

$$\text{Ln}(F_{ij}) = \gamma + \lambda^{R}_{i} + \lambda^{c}_{j} + \lambda^{RC}_{ij} \quad \text{.....(1)}$$

where

F_{ij} = observed frequency in the $(i_j,)$ cell.

λ^{R}_{i} = the effect of the i^{th} row category.

λ^{c}_{j} = the effect of the j^{th} column category.

λ^{RC}_{ij} = interaction effect for the i^{th} value of the row category and j^{th} value of the column category.

The lambda parameters and γ are estimated from the data as follows:

$$\gamma = \frac{1}{rc} \sum_{i=1}^{r} \sum_{j=1}^{c} \text{Log}(F_{ij}) \quad \text{.....(2)}$$

$$\lambda^{R}_{i} = \frac{1}{c} \sum_{j=1}^{c} \text{Log}(F_{ij}) - \gamma \quad \text{.....(3)}$$

$$\lambda^{c}_{j} = \frac{1}{r} \sum_{i=1}^{r} \text{Log}(F_{ij}) - \gamma \quad \text{.....(4)}$$

$$\lambda^{RC}_{ij} = \text{Log}(F_{ij}) - (\gamma + \lambda^{R}_{i} + \lambda^{c}_{j}) \quad \text{.....(5)}$$

To uniquely estimate the lambda parameters, we need to impose the following constraints on them:

$$\sum_{i=1}^{r} \lambda^{RC}_{ij} = \sum_{j=1}^{c} \lambda^{RC}_{ij} = 0$$

The estimates of the log-linear model parameters are provided as part of the output from SPSS/PCT hierarchical log-linear procedure. A basic limitation of this method is that when tests for many lambdas are calculated, the usual problem of multiple comparisons arises. That is, when many comparisons are made, the probability that some are found to be significant when there is no effect, increases rapidly. Goodman

APPENDIX B

(1984) gives a discussion of special multiple-comparison procedures for testing the lambdas.

Analytical Framework

Each of the observed cell frequencies is reproduced by the saturated hierarchical log-lineal model. In the log-linear model, all variables that are used for classification are independent variables and the dependent variables are the number of cases in a cell of the cross-tabulation.

In general, the model for the log of the observed frequency Fij in the ith row (i = 1, 2 . . . r) and the jth column (j = 1, 2....., c) of an r x c table is given by:

$$\text{Ln}\,(F_{ij}) = \gamma + \lambda_i^R + \lambda_j^c + \lambda_{ij}^{Rc} \quad \text{..... (1)}$$

where

- F_{ij} = observed frequency in the (i,j) cell.
- λ^R_i = the effect of the i^{th} row category.
- λ^c_j = the effect of the j^{th} column category
- λ^{Rc}_{ij} = interaction effect for the i^{th} value of the row category and j^{th} value of the column category.

The lambda parameters and γ are estimated from the data as follows:

$$\gamma = \frac{1}{rc} \sum_{i=1}^{r} \sum_{j=1}^{c} \text{Log}\,(F_{ij}) \quad \text{.....(2)}$$

$$\lambda_i^R = \frac{1}{c} \sum_{j=1}^{c} \text{Log}\,(F_{ij}) - \gamma \quad \text{..... (3)}$$

$$\lambda_j^c = \frac{1}{r} \sum_{i=1}^{r} \text{Log}\,(F_{ij}) - \gamma \quad \text{..... (4)}$$

$$\lambda_{ij}^{Rc} = \text{Log}\,(F_{ij}) - (\gamma + \lambda_i^R + \lambda_j^c) \quad \text{..... (5)}$$

To uniquely estimate the lambda parameters, we need to impose the following constraints on them:

$$\sum_{i=1}^{r} \lambda_i^R = \sum_{j=1}^{c} \lambda_j^c = 0$$

$$\sum_{i=1}^{r} \lambda_{ij}^{Rc} = \sum_{j=1}^{c} \lambda_{ij}^{Rc} = 0$$

4.4.2 CAUSES, NATURE AND EXTENT OF DISTRESS IN THE FINANCIAL INDUSTRY

Available results from the respondents showed that all the factors commonly cited that were indeed the causes of distress with differences largely those of degree. According to the result about 41.0% of financial institutions attributed the causes to institutional factors 40$ to the combination of both political and economic factors. It is interesting to note that when political and economic factors were separately analysed relatively low score was recorded. An obvious indication is that respondents recognised the strong link between the two groups of factors, with one reinforcing the other. Corporate and individual customers also associated the distress with institutional factors, although both gave the first position to political/economic factors, Table 7 overleaf explains this positions.

On the financial institutions assessment of the causes of distress, revealed the following ranking for some of the critical factors; poor lending 19.5%, bad management 17.8% inadequate internal supervision 16.9% and fraudulent practices 16.7% , 11.5% approximately of respondents cited under capitalization as a factor, 3.6% say it is foreign exchange management issue, as explained by Table 8. Given the strong association between bad lending policy and fraudulent practices with bad management, one would infer that bad management was indeed the most serious cause of distress. Further corroborating this assessment to institutional factors, were poor credit policy/administration was indicated to be a very strong factor in distress by about 78.9% of respondents followed by poor loan recovery, 70.2% fraud in

TABLE 7

ANALYSIS OF CAUSES OF DISTRESS BY TYPE OF REPSONDENTS

(Percentages)

Respondents/Factors	Financial Institutions [1]	Corporate Customers	Individual Customers	Total
Political Instability	7.9	8.6	14.7	11.4
Economic Instability	8.2	9.7	9.6	9.2
Both Political and Economic Factors	40.3	43.0	41.9	41.9
Institutional Factors	41.0	37.7	33.6	37.3
Others	2.6	1.0	0.2	1.1
Total	100	100	100	100

[1] Comprise Commercial Banks, Merchant Banks, Community Banks, People's Bank, Primary Mortgage Institutions, Finance Houses, Development Banks, Insurance Companies, Stock Brokers, Insurance Brokers and Issuing Houses.

banks, 52.9% and insider dealings and abuses 52.2%. Corporate clients gave top place among the strong causes to insider dealing and abuses 71.5%, poor credit policy/administration pattern for individual customers except that second place went to upsurge in the number of banks between 1989 and 1994 followed by poor credit policy/administration. Table 9 overleaf has this.

On the impact of various economic factors, about 69.2%of financial institutions blamed inflation as a cause, 37.7% faulted stabilization securities, frequent changes in monetary policy has 37.3% with instability of interest rate policy not considered as a serious factor. Corporate customers said, non-availability of foreign exchange 89.3%, inflationary pressure, 83.5% and frequent changes in monetary policy 74.979. for individual customer inflationary pressure came first at 76.4% followed by frequent changes in monetary and fiscal policy 66.7%, all in Table 10 overleaf. Very revealing was the respondents rating of the impact under political factor. 74.7% went to general politics uncertainty traced to the 12th June 1993 anniversary which led to panic withdrawal of deposits by many customers 54.1%. Table 11 shows these.

Finally, specific institutions self appraisal pined their healthy condition to strong capital base, high liquidity position, strict supervision and good management,

TABLE 8

FINANCIAL INSTITUTIONS' ASSESSMENT OF THE CAUSES OF DISTRESS IN THE INDUSTRY

(Percentages)

CAUSES	All Financial Institutions	Commercial Banks	Merchant Banks	Community Banks	People's Bank	Finance Houses	Primary Mortgage Institutions	Insurance Companies	Insurance Brokers	Issuing Houses
Bad Loans and Advances	19.5	30.1	12.9	17.2	19.4	20.3	14.9	15.3	19.2	15.4
Fraudulent Practices	16.7	16.4	18.8	18.5	17.7	18.9	12.3	19.1	13.5	12.3
Under-Capitalization	11.8	7.6	9.6	12.7	14.5	9.0	19.6	12.0	12.8	15.4
Rapid Changes in Government Policies	10.8	9.8	5.5	16.9	9.7	13.5	8.3	10.5	9.6	18.5
Bad Management	17.9	13.1	21.7	14.0	14.5	16.4	28.2	16.8	19.2	15.4
Lack of Adequate Supervision	16.9	20.1	29.4	17.5	17.7	17.5	11.6	9.6	6.4	7.7
Undue Reliance on Forex	6.4	2.9	2.1	3.2	6.5	4.4	5.1	16.7	19.3	15.3
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

IBRAHIM

TABLE 9

RESPONSES ON THE ECONOMIC FACTORS PERTINENT TO DISTRESS

(Percentage)

	Financial Institutions				Corporate Customers				Individual Customers			
	Strong	Moderate	No Effect	Total	Strong	Moderate	No Effect	Total	Strong	Moderate	No Effect	Total
1. Upsurge in No. of Financial Institutions between 1989-1994	47.2	35.4	17.4	100.0	49.3	32.3	18.4	100.0	67.6	22.6	9.8	100.0
2. Poor Credit Policy Administration	78.9	18.2	2.9	100.0	69.1	27.8	3.1	100.0	–	–	–	–
3. Poor Loan Recovery Method	70.2	26.9	2.9	100.0	64.7	29.2	6.1	100.0	68.0	26.5	5.5	100.0
4. Fraud in Banks	52.9	41.9	5.2	100.0	–	–	–	–	–	–	–	–
5. Insider Dealings/Abuse	52.2	41.1	6.7	100.0	71.5	21.0	7.5	100.0	76.2	20.9	2.9	100.0
6. Inadequate Banking	47.6	44.6	7.8	100.0	–	–	–	–	–	–	–	–
7. Interference by Shareholders	43.9	36.9	19.2	100.0	–	–	–	–	–	–	–	–
8. Inadequacy of Professionally Trained Manpower	46.7	44.6	8.7	100.0	–	–	–	–	–	–	–	–
9. Poor Management	–	–	–	–	21.8	59.7	18.5	100.0	–	–	–	–
10. Others	–	–	–	–	100.0	–	–	100.0	–	–	–	–
Total Responses	54.8	36.2	9.0	100.0	60.9	29.6	9.5	100.0	70.5	23.3	6.2	100

TABLE 10

RESPONDENTS' RANKING OF EFFECTS OF VARIOUS ECONOMIC FACTORS ON DISTRESS

(Percentage)

Factors	Financial Institutions[1]				Corporate Customers				Individual Customers			
	Strong	Moderate	No Effect	Total	Strong	Moderate	No Effect	Total	Strong	Moderate	No Effect	
1. Inflationary Pressure	69.2	26.6	4.2	100.0	83.5	13.9	2.6	100.0	76.4	21.2	2.4	
2. Monetary Policy Changes	39.6	28.3	32.1	100.0	74.0	24.0	2.6	100.6	66.7	28.3	5.0	
3. Use of Stabilisation Security	35.7	51.1	13.2	100.0	–	–	–	–	–	–	–	
4. Non Availability of Forex	48.9	35.8	15.3	100.0	89.3	7.1	4.0	100.4	–	–	–	
5. High Exchange Rate in Parallel Market	56.5	28.8	14.7	100.0	–	–	–	–	–	–	–	
6. Others[2]	–	–	–	100.0	–	–	100.0	–	–	–	–	
Total Responses												

[1] Comprise Commercial, Merchant, Community, Primary Mortgage Development Banks, Finance Houses, Insurance Companies Insurance Brokers, Issuing Houses, Stock Exchange and Stock Brokers.

[2] Others include instability in interest rates, lending to high risk sectors as per CBN guidelines.

TABLE 11

RESPONDENTS' RANKING OF EFFECT OF POLITICAL FACTORS ON DISTRESS

(Percentage)

Factors	Financial Institutions				Corporate Customers				Individual Customers			
	Strong	Moderate	No Effect	Total	Strong	Moderate	No Effect	Total	Strong	Moderate	NoEffect	Total
1. Political Uncertainty	74.7	21.7	3.6	100.0	82.4	15.9	1.7	100.0	78.2	18.5	3.3	100.0
2. Uncertainty Associated with June 12	44.5	41.6	13.9	100.0	51.0	35.8	13.2	100.0	51.0	34.0	15.0	100.0
3. Panic Withdrawal by Depositors	54.1	36.5	9.4	100.0	100.0	–	–	100.0	–	–	–	–
4. Others	100.0	–	–	100.0	–	–	–	–	–	–	–	–
Total Responses	58.3	32.9	8.8	100.0	68.2	24.9	6.9	100.0	65.3	25.9	8.8	100.0

Table 12. Institutions which admitted being distressed attributed their condition mainly to poor capitalization 33.1%, poor loan recovery monitoring 23.6% and bad credit policy and administration 23.6% also, while about 19.7% of respondents said it is the lingering political crisis table 13. On institutions that admitted they were severely distressed blamed their situation mostly on undue interference, in their internal operations by board members to be 32.1%, bad credit policy and administration 25.0%, economic depression 25% and lingering political crisis 17.9% all showed by Table 14. A further breakdown of the results showed that highly distressed banks attributed, largely to interference, bad credit policy, economic depression and political crisis shown in table 15 respectively.

Nature: Response on self-appraisal showed that about 58.5% felt they were healthy, 28.6% mildly distressed, 10.5% severely distressed and about 2.3% refused to assess their situation. On those that felt they were healthy 20.2% were deposit taking (commercial, merchant, People's Bank/Community) non-bank financial institutions (finance houses primary mortgage market operators (stock brokers/issuing houses). Of the commercial banks 60.9% felt they were healthy, 26.8% mildly distressed, 11.8% severely distressed. The corresponding ratios for merchant banks were 52.11% and 6.8% respectively while community banks ratios were 54.7% and 1.2% for healthy mildly distressed and severely distressed respectively. Only 2.3% which did not or failed to indicate their situation, financial houses, 50% community banks, 15% primary mortgage, 20% commercial banks, 10% merchant banks 5% all on table 15 while one may not put high premium on the percentage distribution it is clear by mere acknowledgement by various institutions that the problem of distress existed and had indeed infested many of them.

Extent: The rapid increase in the number of distressed banks and the magnitude of distress has reached, an alarming proportion, eroding confidence and credibility. with ungloomy picture and more alarming impending consequences. As at December 1994 55 banks were confirmed distressed. It rose to 60 at the end of 1995 implying that one out of 2 banks was distressed. The Table (IIA) below depicts a three year trend of deterioration in the banking industry.

TABLE IIA **Three Year Trend of Distress in the Banking Industry & Related Indices**

PARAMETERS	Dec. 1973	December 1994	December 1995
Number of distressed banks	38	55	60
Total assets (₦'billions)	55.1	73.1	95.6
Total loans/leases(₦'billions)	28.6	45.6	66.5
Non-performing loans/leases (₦611m)	3.1	29.5	44.5
Ratio of Non-Performing Loans/Leases to total loans/leases (%)	56.0	65.0	67.4
Amount required for recapitalization (₦ billion)	12.8	16.7	24.3
Total deposit (₦ billion)	27.7	48.8	70.8
Deposit Insurance Fund (₦billions)	2.8	4.2	6.0

SOURCE: NDIC Quarterly March/June 1996, p. 28.

TABLE 12
ANALYSIS OF FINANCIAL INSTITUTIONS' ASSESSMENT OF FACTORS RESPONSIBLE FOR THEIR BEING HEALTHY
(Percentage)

Factors	All Financial Institutions	Commercial Banks	Merchant Banks	Community Banks	People's Bank	Finance Houses	Primary Mortgage Institutions	Insurance Companies	Insurance Brokers	Stock Brokers	Issuing Houses
Strong Capital Base	30.0	31.7	28.6	29.2	20.5	16.2	41.1	37.3	32.1	13.5	16.7
High Liquidity Position	24.3	24.8	31.3	22.2	18.2	28.0	18.7	29.9	16.1	16.2	16.7
Good Management and Competent Staff	15.3	9.6	6.3	14.1	27.3	11.2	22.8	20.6	28.6	40.5	33.3
Minimum Fraud/Sound Internal Control	7.2	7.6	3.6	11.3	4.5	12.7	5.0	2.8	7.1	2.7	-
Strict Discipline	16.0	18.7	26.0	11.9	25.0	15.7	8.3	7.5	12.5	24.3	33.3
Non-Interference by Shareholders	7.2	7.6	4.2	11.3	4.5	16.2	4.1	1.9	3.6	2.8	-
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

TABLE 13

ANALYSIS OF FINANCIAL INSTITUTIONS' ASSESSMENT OF FACTORS RESPONSIBLE FOR THEIR BEING SLIGHTLY DISTRESSED

(Percentages)

Factors	All Financial Institutions	Commercial Banks	Merchant Banks	Community Banks	People's Bank	Finance Houses	Primary Mortgage Institutions	Insurance Companies	Insurance Brokers	Stock Brokers	Issuing Houses
Poor Capitalisation	33.1	27.7	27.1	27.0	25.0	19.4	57.1	52.6	20.0	42.8	–
Poor Loan Recovery	23.6	25.5	24.3	28.8	8.4	41.7	14.3	5.3	20.0	28.6	–
Bad Credit Policy	23.6	22.7	24.3	25.0	33.3	25.0	21.4	15.8	26.7	28.6	100.0
Political Crises	19.7	24.1	24.3	19.2	33.3	13.9	7.2	26.3	33.3	–	–
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

TABLE 14/15

ANALYSIS OF FINANCIAL INSTITUTIONS' ASSESSMENT OF FACTORS RESPONSIBLE FOR THEIR BEING SEVERELY DISTRESSED

(Percentages)

Factors	All Financial Institutions	Commercial Banks	Merchant Banks	Community Banks	People's Bank	Finance Houses	Primary Mortgage Institutions	Insurance Companies	Insurance Brokers	Stock Brokers	Issuing Houses
Economic Depression	25.0	23.5	–	–	n.a	33.3	–	100.0	100.0	100.0	–
Political Crises	17.9	17.6	33.4	50.0	n.a	–	–	–	–	–	–
Bad Credit Policy	25.0	29.4	33.3	–	n.a	40.4	–	–	–	–	–
Undue Interference from Board Members	32.1	29.5	33.3	50.0	–	26.3	100.0	–	–	–	–
Total	100.0	100.0	100.0	100.0	n.a	100.0	100.0	100.0	100.0	100.0	0.0

TABLE 16
SELF-APPRAISAL BY THE FINANCIAL INSTITUTIONS
(Percentages)

Financial Condition	All Financial Institutions	Commercial Banks	Merchant Banks	Community Banks	People's Bank	Finance Houses	Primary Mortgage Institutions	Insurance Companies	Insurance Brokers	Stock Brokers	Issuing Houses
Healthy	58.5	60.9	52.1	54.1	33.3	46.3	63.2	50.0	9.3	38.5	33.3
Mildly Distressed	28.7	26.8	39.7	40.0	66.7	29.3	26.3	12.5	60.2	25.6	50.0
Severely Distressed	10.5	11.8	6.8	1.2	-	-	2.6	37.5	30.5	35.9	16.7
Non-Response	2.3	0.5	1.4	4.7	-	24.4	7.9	-	-	-	-
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

The table indicates both the magnitude of distress as implied by the number and depth by the extent of required recapitalization and proportion of non-performing credits. As at December 1995 the market share of the 60 distressed banks in deposit mobilization was ₦70.8 billion that is 33.5% of total industry deposit of ₦211 billion and loans and advances of ₦66.5 billion, 38% of the industry's total loans and advances of ₦178.9 billion. The distressed banks were overlent with average loans and advances to deposit ratio of 94% which compared unfavourably with the maximum prudential ratio of 70%, and accounted for ₦44.5 billion or 77% of the total bad debts of ₦57.8 billion in the system. The non-performing credit of ₦44.5 billion constitute about 67% out of their total credit. That is for every one naira (₦1.xx) of credit given out by distressed banks only about thirty-three kobo (33k) was collectable.

Completely eroded due to mismanagement, insider loans, frauds and large amount of non-performing credits is owners capital. As at December 1995 the 60 distressed banks altogether had a recapitalization requirements of ₦24.3 billion as against ₦13.6 billion of 1993 December. The option of sourcing funds to recapitalize from private sector has to be in consonance with that period governments determination to remove distortion in the economy and restore depositors'/or investors' confidence.

The NDIC insurance risk to these 60 distressed banks is estimated at ₦36.4 billion six (6) times more than the corporation's insurance fund of about ₦6 billion as at December 1995. This figure as observed by the corporation's auditors is grossly inadequate in meeting the attendant depositors' pay-off in the event of liquidating the already financially-distressed banks.

It is paramount at this juncture to stress that the pervasive incidence of non-performing loans is one of the prime causes of distress. Debts owed by governments and their agencies constituted a significant proportion particularly in banks where State Governments have controlling interests. The failure of State Governments to honour their obligations as at and when due has continued to undermine the efforts of regulatory/supervisory authorities in addressing the problems of ailing banks.

TABLE 18

GOVERNMENT'S DEBT OWED TO BANKS AS AT 30TH JUNE 1995

S/No.	NATURE	STATE	FEDERAL	TOTAL	%
1.	Direct	1841	--	1841	20
2.	Guaranteed	5997	1227	7274	80
3.	Total	7837	1227	9115	100
4.	Principal	3879	822	4701	52
5.	Accrued Interest	3959	455	4414	48
6.	Total	7838	1277	9115	100

SOURCE: NDIC Quarterly March/June 1996, p. 29.

As at 30th June, 1995 total government indebtedness to banks stood at about ₦9,102 billion most of which were non-performing credits. Hence, to facilitate early bank failure resolution recovery of non-performing loans should be geared up. In fact there could be no better example for the Federal Government to demonstrate its preparedness to sanitize the banking system than by ensuring that the State Governments settle their overdue debts to the banks. Such action would also provide the moral ground for proceedings against other defaulting borrowers (corporate/or individuals).

4.4.3 MEASURES FOR IMPROVING DISTRESS

a) Resolution Strategies:

Suggestions for Improved Performance largely by the banking sub-sector respondents gave prime place to the need to beef-up the level of supervisory personnel, proposed by 37.8% of respondents. Compliance with prudential guidelines 22.5%, stable macro-economic environment to guarantee realistic exchange and interest rates 18.9%, discontinuation of the use of stabilization securities 14.4% and curb abuses in clearing houses 6.4%, all these indicated in Table 19. Table 20, shows suggestions to initiate economic and political factors ranging from need to deregulate the economy for the necessity to eradicate corruption and enforced law and order to enhance security of life and property. On government role, there is need for close cooperation between government and professional bodies in the formulation of relevant economic policies and autonomy for regulatory/supervisory bodies CBN scored 21.2% followed by 17.9% for efficient tribunals to assist in loan recovery, Table 21 has this explanation.

TABLE 19

ANALYSIS OF RESPONDENTS' SUGGESTIONS FOR ENHANCING EFFECTIVENESS OF SUPERVISORY/ REGULATORY BODIES' ROLE IN ARRESTING DISTRESS IN FINANCIAL INSTITUTIONS

(Percentages)

Suggested Actions	All Financial Institutions	Commercial Banks	Merchant Banks	Community Banks	People's Bank	Finance Houses	Primary Mortgage Institutions	Insurance Companies	Insurance Brokers	Stock Brokers	Issuing Houses
Strengthen Supervision	37.8	4.4	5.9	50.5	47.6	47.9	46.9	51.2	50	58.3	–
Enforce Compliance with Prudential Guidelines	22.5	29.2	23.5	9.3	19.0	8.6	9.4	34.1	41.1	29.2	–
Ensure Emergence of Realistic Exchange and Interest Rates	18.9	17.7	14.7	25.8	19.0	27.4	37.5	8.5	7.1	12.5	–
Stop or Reduce the use of Stabilisation Security	14.4	27.4	23.5	14.4	14.4	16.1	6.2	6.2	1.8	–	–
Curb Abuses in Clearing House	6.4	21.3	32.4	–	–	–	–	–	–	–	–
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	–

TABLE 20

NALYSIS OF RESPONDENTS' SUGGESTIONS FOR ADDRESSING THE ECONOMIC, POLITICAL AND INSTITUTIONAL PROBLEMS FACING FINANCIAL INSTITUTIONS

(Percentages)

Suggestions	All Financial Institutions	Commercial Banks	Merchant Banks	Community Banks	People's Bank	Finance Houses	Primary Mortgage Institutions	Insurance Companies	Insurance Brokers	Issuing Houses
Free Market Economy	4.4	7.7	7.9	–	–	0.8	4.3	2.3	1.6	–
Curb Inflation	6.8	6.9	6.9	5.0	19.6	4.2	8.7	7.8	4.2	–
Eradication of Corruption	12.1	11.9	11.9	10.0	10.9	12.6	17.4	13.2	12.2	–
Stable Polity	16.8	15.8	15.8	4.2	17.4	21.8	27.8	19.4	17.3	14.3
Enforce Law and Order	11.5	7.4	6.9	16.7	10.9	16.8	8.7	17.8	13.9	71.4
Maximum Shareholding	6.3	3.9	3.4	20.8	8.7	4.2	2.6	3.1	10.7	–
Recruit Professionals	14.8	18.8	18.8	16.6	–	0.8	8.7	17.1	18.0	–
Training of Staff	15.9	19.0	19.8	16.7	21.7	13.4	13.0	6.2	12.3	14.3
Prudent Lending	11.4	8.6	8.6	10.0	10.8	25.4	8.8	13.1	9.8	–
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

TABLE 21

WHAT GOVERNMENT SHOULD DO TO CURB DISTRESS IN FINANCIAL INSTITUTIONS

(Percentages)

Suggested Actions	All Financial Institutions	Commercial Banks	Merchant Banks	Community Banks	People's Bank	Finance Houses	Primary Mortgage Institutions	Insurance Companies	Insurance Brokers	Issuing Houses
Involvement of Professional Bodies	29.7	15.9	20.9	73.7	37.5	40.5	10.4	35.9	30.8	100.0
Ensuring Autonomy of Regulatory Bodies	21.2	30.3	28.4	13.2	-	7.1	10.4	28.1	43.6	-
Stop Wasteful Spending and Curtail Inflation	17.2	20.7	19.4	13.1	15.6	16.7	10.5	20.3	10.5	-
Scrap Stabilisation Securities	14.2	23.9	22.4	-	21.9	3.9	20.8	4.7	-	-
Effective Tribunal for Debt Recovery	17.7	9.2	8.9	-	25.0	31.8	47.9	11.0	5.1	-
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

b) Analysis of Respondents' Recommendations for Tackling Distress

They believed in the need for a holistic distress resolution approach, however various options including those currently used were given prominence either as short term or long-term measures. Under short-term 25.6% score went to call to assist banks to tackle the capitalization deficiency problem by encouraging dilution of ownership, followed by strengthening management 23.3%, discourage fraud through stiff penalty 13.8%, need for political stability 13.6%, deregulation of the economy 12,7% and more professionals in the workforce 11.0% table 22. Long term on the other hand gave prompt action to liquidate terminally distressed banks 40.0%, enhance discipline within the industry 25.9%, encourage mergers and acquisitions 17.0% all on Table 23.

c) Analysis of Response of the Regulatory/Supervisor Authorities

They attributed the negative performance to both institutional and political and economic factors tracing this to upsurge in the number of bank between 1986 and 1991, poor internal control, insider dealings fraud and poor credit policy and administration. In addition to all regulatory changes, they offered short term resolution options as enumerated above and on long term, the regulatory and supervisory authorities needs to be given more powers to overcome legislative deficiencies, check illegal activities and act decisively and promptly in an emergency. On average the survey results of 56.9% respondents gave a pat on authorities doing their job fairly well, 20.4% say they poorly performed, 15.9% calls for crucial staff training, 16.8% emphasized stable policy - Table 21A. That is the need for strong political commitment and leadership for ensuring a lasting resolution of distress in the financial industry. A decision needs to be taken to implement a carefully sequenced coherent and comprehensive plan for distress resolution that will protect the interest of depositors, ensure stability and soundness of the financial industry.

TABLE 2.4

ANALYSIS OF RESPONDENTS' SUGGESTIONS FOR ADDRESSING THE ECONOMIC, POLITICAL AND INSTITUTIONAL PROBLEMS FACING FINANCIAL INSTITUTIONS

(Percentages)

Suggestions	All Financial Institutions	Commercial Banks	Merchant Banks	Community Banks	People's Bank	Finance Houses	Primary Mortgage Institutions	Insurance Companies	Insurance Brokers	Issuing Houses
Free Market Economy	4.4	7.7	7.9	–	–	0.8	4.3	2.3	1.6	–
Curb Inflation	6.8	6.9	6.9	5.0	19.6	4.2	8.7	7.8	4.2	–
Eradication of Corruption	12.1	11.9	11.9	10.0	10.9	12.6	17.4	13.2	12.2	–
Stable Polity	16.8	15.8	15.8	4.2	17.4	21.8	27.8	19.4	17.3	14.3
Enforce Law and Order	11.5	7.4	6.9	16.7	10.9	16.8	8.7	17.8	13.9	71.4
Maximum Shareholding	6.3	3.9	3.4	20.8	8.7	4.2	2.6	3.1	10.7	–
Recruit Professionals	14.8	18.8	18.8	16.6	–	0.8	8.7	17.1	18.0	–
Training of Staff	15.9	19.0	19.8	16.7	21.7	13.4	13.0	6.2	12.3	14.3
Prudent Lending	11.4	8.6	8.6	10.0	10.8	25.4	8.8	13.1	9.8	–
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

TABLE 22

RESPONDENTS' RECOMMENDED SHORT-TERM MEASURES FOR RESOLUTION OF DISTRESS IN FINANCIAL INSTITUTIONS

(Percentages)

Short-Term Resolution Options	All Financial Institutions	Commercial Banks	Merchant Banks	Community Banks	People's Bank	Finance Houses	Primary Mortgage Institutions	Insurance Companies	Insurance Brokers	Issuing Houses
Recapitalization of Problem Institutions	25.6	26.4	27.2	28.4	20.0	18.3	32.1	16.5	21.1	50.0
Overhaul Management	23.3	31.0	31.8	13.7	11.1	12.6	29.9	20.9	21.1	–
Stiff Penalties for Bank Fraud	13.8	9.5	9.1	18.4	26.7	14.3	13.6	18.7	15.5	50.0
Engage Professionals	11.0	10.6	10.2	5.3	26.7	11.4	8.2	19.8	16.9	–
Deregulate Economy	12.7	14.4	13.6	8.4	6.7	21.1	13.6	5.5	8.5	–
Political Stability	13.6	8.1	8.1	25.8	8.8	22.3	2.6	18.6	16.9	–
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

TABLE 23

RESPONDENTS' RECOMMENDED LONG-TERM MEASURES FOR TACKLING OF DISTRESS IN FINANCIAL INSTITUTIONS

(Percentages)

ong-Term Measures	All Financial Institutions	Commercial Banks	Merchant Banks	Community Banks	People's Bank	Finance Houses	Primary Mortgage Institutions	Insurance Companies	Insurance Brokers	Issuing Houses
iquidate Teminally Distressed Banks	40.0	38.5	38.2	50.0	23.5	33.3	50.0	50.0	54.5	-
ancial Discipline	25.9	21.6	21.8	30.0	26.5	41.7	25.0	27.3	18.2	100.0
riotism	17.1	15.5	14.5	20.0	14.7	16.7	25.0	22.7	27.3	-
rgers and Acquisition	17.0	24.4	25.5	-	35.3	8.3	-	-	-	-
l	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

APPENDIX C

In general, the model for the log of the observed frequency Fij in the ith row [i = 1, 2 . . r] and the jth column [j = 1, 2, . . . , c] of an r x c table is given by:

$$\text{Ln}(F_{ij}) = \gamma + \lambda^{R}_{i} + \lambda^{C}_{j} + \lambda^{RC}_{ij} \quad \text{.....(1)}$$

where

F_{ij} = observed frequency in the $(i_j,)$ cell.

λ^{R}_{i} = the effect of the i^{th} row category.

λ^{C}_{j} = the effect of the j^{th} column category.

λ^{RC}_{ij} = interaction effect for the i^{th} value of the row category and j^{th} value of the column category.

The lambda parameters and γ are estimated from the data as follows:

$$\gamma = \frac{1}{rc}\sum_{i=1}^{r}\sum_{j=1}^{c}\text{Log}(F_{ij}) \quad \text{.....(2)}$$

$$\lambda^{R}_{i} = \frac{1}{c}\sum_{j=1}^{c}\text{Log}(F_{ij}) - \gamma \quad \text{.....(3)}$$

$$\lambda^{C}_{j} = \frac{1}{r}\sum_{i=1}^{r}\text{Log}(F_{ij}) - \gamma \quad \text{.....(4)}$$

$$\lambda^{RC}_{ij} = \text{Log}(F_{ij}) - (\gamma + \lambda^{R}_{i} + \lambda^{C}_{j}) \quad \text{.....(5)}$$

To uniquely estimate the lambda parameters, we need to impose the following constraints on them:

$$\sum_{j=1}^{r}\lambda^{RC}_{ij} = \sum_{j=1}^{c}\lambda^{RC}_{ij} = 0$$

The estimates of the log-linear model parameters are provided as part of the output from SPSS/PCT hierarchical log-linear procedure. A basic limitation of this method is that when tests for many lambdas are calculated, the usual problem of multiple comparisons arises. That is, when many comparisons are made, the probability that some are found to be significant when there is no effect, increases rapidly. Goodman

(1981) gives a discussion of special multiple-comparison procedures for testing the lambdas.

Analytical Framework

Each of the observed cell frequencies is reproduced by the saturated hierarchical log-lineal model. In the log-linear model, all variables that are used for classification are independent variables and the dependent variables are the number of cases in a cell of the cross-tabulation.

In general, the model for the log of the observed frequency Fij in the ith row (i = 1, 2 . . . r) and the jth column (j = 1, 2....., c) of an r x c table is given by:

$$\text{Ln}(F_{ij}) = \gamma + \lambda_i^R + \lambda_j^C + \lambda_{ij}^{RC} \quad \text{.....(1)}$$

where

- F_{ij} = observed frequency in the (i,j) cell.
- λ_i^R = the effect of the i^{th} row category.
- λ_j^C = the effect of the j^{th} column category
- λ_{ij}^{RC} = interaction effect for the i^{th} value of the row category and j^{th} value of the column category.

The lambda parameters and γ are estimated from the data as follows:

$$\gamma = \frac{1}{r\,c} \sum_{i=1}^{r} \sum_{j=1}^{c} \text{Log}(F_{ij}) \quad \text{.....(2)}$$

$$\lambda_i^R = \frac{1}{c} \sum_{j=1}^{c} \text{Log}(F_{ij}) - \gamma \quad \text{.....(3)}$$

$$\lambda_j^C = \frac{1}{r} \sum_{i=1}^{r} \text{Log}(F_{ij}) - \gamma \quad \text{.....(4)}$$

$$\lambda_{ij}^{RC} = \text{Log}(F_{ij}) - (\gamma + \lambda_i^R + \lambda_j^C) \quad \text{.....(5)}$$

To uniquely estimate the lambda parameters, we need to impose the following constraints on them:

$$\sum_{i=1}^{r} \lambda_i^R = \sum_{j=1}^{c} \lambda_j^C = 0$$

$$\sum_{i=1}^{r} \lambda_{ij}^{RC} = \sum_{j=1}^{c} \lambda_{ij}^{RC} = 0$$

d) Log-Linear Analysis of Survey Data

The result of analysis of the survey data was a two-way cross-tabulated format to see how our earlier findings can be corroborated by a more rigorous and statistical analysis. The results obtained after a saturated hierarchical log-linear analysis was carried out on the data as shown in "Appendix B".

i) Results of analysis

Table 25A, it is observed from the analysis that all these broad groups (institutional, economic and political factors) of factors causing distress have statistically high significance for all categories of banks. Not significant for corporate/individual customers, but economic and institutional factors are statistically significant for all classes of respondents. Highly significant impact of economic crisis is observed, from the point of view of banks. It is therefore right to infer that economic crisis (macro-economic instability, depression etc) institutional factors (poor management, insider dealings, poor credit administration etc) and political instability are significant factors causing distress.

Table 25B on the rating by banks of the elements comprising economic factors as causative agents of distress. From the analysis it is highly significant from the point of view of banks. Inflationary pressure (IP) and monetary policy

TABLE 25A

TWO-WAY CROSS-TABULATION OF FACTORS RESPONSIBLE FOR DISTRESS BY CATEGORY OF RESPONDENTS

		RESPONDENTS			
		FI	CC	IC	Row Totals
FACTORS	PI	70	68	239	377
	EC	411	414	838	1663
	IF	393	297	546	1236
	OT	24	8	3	35
Column Totals		898	787	1626	3311

ESTIMATES OF PARAMETERS BASED ON THE SATURATED LOG-LINEAR MODEL[1]

PARAMETER	COEFFICIENT	SSE	Z-VALUE
Main Effects			
EC	1.5047	0.064	23.401
IF	1.2362	0.065	19.011
CC	–0.2492	0.083	–3.016
Interaction Effect			
PI - FI	–0.5005	0.096	–5.193
EC - FI	–0.3408	0.076	–4.471

[1] Only parameters whose coefficients are significantly different from zero are produced.

TABLE 25B

TWO-WAY CROSS-TABULATION OF ECONOMIC FACTORS RESPONSIBLE FOR DISTRESS BY FINANCIAL INSTITUTIONS

		FINANCIAL INSTITUTIONS			
		STRONG	SLIGHT	NO-EFFECT	Row Totals
ECONOMIC FACTORS	UC	232	117	29	378
	IP	315	121	19	455
	MPC	336	113	15	464
	SS	152	213	43	408
	NAFX	186	163	70	419
	PMEX	203	144	87	434
	CP	1	1	1	3
	OT	1	1	1	3
Column Totals		1426	873	265	2564

ESTIMATES OF PARAMETERS BASED ON THE SATURATED LOG-LINEAR MODEL[1]

PARAMETER	COEFFICIENT	SSE	Z-VALUE
Main Effects			
UC	1.1551	0.121	9.563
IP	0.9893	0.127	7.767
MPC	0.9092	0.132	6.887
SS	1.2071	0.117	10.289
NAFX	1.3478	0.114	11.804
PMEX	1.408	0.113	12.429
CP	-3.5083	0.511	-6.867
Interaction Effect			
IP-STRONG RATING	0.6908	0.166	4.16
MPC-STRONG RATING	0.8355	0.169	4.929
SS-SLIGHT RATING	0.3880	0.159	2.43

[1] Only parameters whose coefficients are significantly different from zero are produced.

changes (MPC) are rated, strongly significant while stabilization securities (55) have marginal effect on distress. The important economic policy implications of this analysis include;

i) Banks regard, the entire spectrum of economic factors, to be causing their distress.

ii) Contrary to the popular belief the stabilization securities cause distress, banks see it as having slight impact on distress.

Table 25C also viewed ratings of economic factors by corporate customers to cause distress. All the factors except (SS) and OT are regarded significant. Strongly significant factors include IP, MPC and NAFX, Forex is also a strong factor in the speculative nature of its market provides an avenue for banks to increase their earnings. Hence modifying the market operations affected fortunes of many banks. From the viewpoint of corporate clients, (Ss) significance is on their positions to be indirectly concerned.

Table 25D this is on individual customers concern and shows all factors (collectively) significant. Factors with strongest significance include IP, MPC and PCA. Interestingly, customers belief Ss has significant influence on banks may be due to publicity given to it in the media. Recommendation also need to put in place effective policy required to address the lingering macro-economic problems.

Table 25E this is on the entire spectrum of political factors, and they are in general highly significant in leading to distress. This has strongest influence from the banks perspective and the analysis has important policy implication.

TABLE 25C

TWO-WAY CROSS-TABULATION OF ECONOMIC FACTORS RESPONSIBLE FOR DISTRESS BY CORPORATE CUSTOMERS.

		CORPORATE CUSTOMERS			
		STRONG	SLIGHT	NO-EFFECT	Row Totals
ECONOMIC FACTORS	UC	1	1	1	3
	IP	325	99	10	434
	MPC	305	1	8	314
	SS	1	23	1	25
	NAFX	291	1	12	304
	PMEX	1	1	1	3
	CP	1	1	1	3
	OT	7	1	1	9
Column Totals		932	128	35	1095

ESTIMATES OF PARAMETERS BASED ON THE SATURATED LOG-LINEAR MODEL[1]

PARAMETER	COEFFICIENT	SSE	Z-VALUE
Main Effects			
UC	-1.405	0.5263	-2.67
IP	2.8221	0.1907	14.798
MPC	1.1949	0.3478	3.436
SS	1.3144	0.3428	3.834
NAFX	-1.405	0.5263	-2.669
PMEX	-1.405	0.5263	-2.669
CP	0.9854	0.2204	4.471
STRONG			
Interaction Effect			
IP-STRONG RATING	0.5713	0.2424	2.357
IP-SLIGHT RATING	0.8666	0.2654	3.039
MPC - STRONG RATING	2.135	0.3787	5.638
MPC - SLIGHT RATING	-2.1612	0.6344	-3.407
SS- STRONG RATING	-2.0305	0.6847	-2.965

[1] Only parameters whose coefficients are significantly different from zero are produced.

TABLE 25D

TWO-WAY CROSS-TABULATION OF ECONOMIC FACTORS RESPONSIBLE FOR DISTRESS BY INDIVIDUAL CUSTOMERS.

INDIVIDUAL CUSTOMERS

		STRONG	SLIGHT	NO-EFFECT	Row Totals
ECONOMIC FACTORS	UC	1	1	1	3
	IP	665	183.	21	867
	MPC	536	227	40	803
	SS	1	1	1	3
	NAFX	1	1	1	3
	PMEX	467	205	46	718
	CP	1	1	1	3
	OT	1	1	1	3
Column Totals		1671	620	112	2403

ESTIMATES OF PARAMETERS BASED ON THE SATURATED LOG-LINEAR MODEL[1]

PARAMETER	COEFFICIENT	SSE	Z-VALUE
Main Effects			
UC	−1.8936	0.525	-3.603
IP	3.0233	0.175	17.229
MPC	3.239	0.169	19.071
SS	−1.8936	0.525	−3.603
NAFX	−1.8936	0.525	−3.603
PMEX	−1.8936	0.525	−3.603
CP	3.2057	0.169	18.943
STRONG	0.4723	0.229	2.065
Interaction Effect			
IP-STRONG RATING	1.1076	0.239	4.629
MPC - STRONG RATING	0.6792	0.235	2.886
CP - STRONG RATING	0.5747	0.235	2.445

[1] Only parameters whose coefficients are significantly different from zero are produced.

TABLE 25E

TWO-WAY CROSS-TABULATION OF POLITICAL FACTORS RESPONSIBLE FOR DISTRESS BY FINANCIAL INSTITUTIONS

FINANCIAL INSTITUTIONS

		STRONG	SLIGHT	NO EFFECT	Row Totals
POLITICAL FACTORS	PI	295	94	16	405
	J12	149	160	72	381
	PW	219	133	31	383
	OT	1	1	1	3
Column Totals		664	388	120	1172

ESTIMATES OF PARAMETERS BASED ON THE SATURATED LOG-LINEAR MODEL[1]

PARAMETER	COEFFICIENT	SSE	Z-VALUE
Main Effects			
PI	0.9116	0.162	5.642
J12	1.3626	0.153	8.917
PW	1.1485	0.156	7.364
STRONG	0.5973	0.2074	2.881
Interaction Effect			
IP-STRONG RATING	0.7554	0.219	3.454

[1]Only parameters whose coefficients are significantly different from zero are produced.

Table 25F, this is on June 12 and the resultant panic withdrawals as causes of distress from perspective of corporate customers. The implications of these findings are significant because;

a) Their believe that is crucial and thus calling for an early effective and sustainable solution.

b) General rather than specific strength attached to the events underscores the need for a comprehensive political solution.

Table 25G, this rating is also on June 12 and panic withdrawals from individual customers perspective. Just as in table 25F, the analysis here shows the significance although from interaction viewpoint. This result implies widest context is the most effective approach. They advocate permanent and sustainable solutions including democratization and political stability.

Table 25H, ratings by banks of institutional factors like growth in number, PCA, fraud, insider dealings/poor management. PCA and fraud are highly significant, and strongest factors, with insider relatively low significance rating. The implications of this finding is that PCA, (loan disbursement, debt recovery etc) from operations perspective is most important "internal" factor. Statistically, banking supervision/regulation efforts are needed and overhauling the entire administration and management structures of banks aimed at minimizing fraud/insider dealings.

Table 25I, on institutional factors from corporate customers perspective. All factors three of them as mentioned earlier are viewed significant.

TABLE 25F

TWO-WAY CROSS-TABULATION OF POLITICAL FACTORS RESPONSIBLE FOR DISTRESS BY CORPORATE CUSTOMERS

		CORPORATE CUSTOMERS			
		STRONG	SLIGHT	NO-EFFECT	Row Totals
POLITICAL FACTORS	PI	336	65	7	408
	JI2	178	125	46	349
	PW	6	1	1	8
	OT	1	1	1	3
Column Totals		521	192	55	768

ESTIMATES OF PARAMETERS BASED ON THE SATURATED LOG-LINEAR MODEL[1]

PARAMETER	COEFFICIENT	SSE	Z-VALUE
Main Effects			
PI	1.6818	0.215	7.824
JI2	2.3156	0.198	11.694
PW	−1.7001	0.397	−4.2821
STRONG	0.9003	0.248	3.6241
Interaction Effect			
IP-STRONG RATING	0.9376	0.267	3.514

[1] Only parameters whose coefficients are significantly different from zero are produced.

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TABLE 25G

TWO-WAY CROSS-TABULATION OF POLITICAL FACTORS RESPONSIBLE FOR DISTRESS BY INDIVIDUAL CUSTOMERS

CORPORATE CUSTOMERS

		STRONG	SLIGHT	NO-EFFECT	Row Totals
POLITICAL FACTORS	PI	658	156	27	841
	J12	390	260	115	765
	PW	1	1	1	3
	OT	1	1	1	3
Column Totals		1,050	418	144	1,612

ESTIMATES OF PARAMETERS BASED ON THE SATURATED LOG-LINEAR MODEL[1]

PARAMETER	COEFFICIENT	SSE	Z-VALUE
Main Effects			
PI	2.3527	0.211	11.143
J12	2.8317	0.207	13.668
PW	–2.5912	0.457	–5.674
Interaction Effect			
IP-STRONG RATING	1.0216	0.294	3.475

[1] Only parameters whose coefficients are significantly different from zero are produced.

TABLE 25H

TWO-WAY CROSS-TABULATION OF INSTITUTIONAL FACTORS RESPONSIBLE FOR DISTRESS BY FINANCIAL INSTITUTIONS

		FINANCIAL INSTITUTIONS			
		STRONG	SLIGHT	NO-EFFECT	Row Totals
INSTITUTIONAL FACTORS	G	259	199	87	545
	PCA	804	192	20	1,016
	FRD	279	243	24	546
	ID	289	222	24	535
	IBSE	272	238	33	543
	IBS	261	206	78	545
	IFM	251	240	47	538
	FM	1	1	1	3
	OT	1	1	1	3
Column Totals		2,417	1,542	315	4,274

ESTIMATES OF PARAMETERS BASED ON THE SATURATED LOG-LINEAR MODEL[1]

PARAMETER	COEFFICIENT	SSE	Z-VALUE
Main Effects			
G	1.2724	0.101	12.504
PCA	1.148	0.116	9.891
FRD	0.9345	0.113	8.241
ID	0.9162	0.114	0.072
IBSE	1.0253	0.109	9.401
IBS	1.2501	0.102	12.227
IPM	1.1192	0.106	10.605
PM	-3.8329	0.518	-7.406
STRONG	0.6382	0.13	4.906
SLIGHT	0.3591	0.13	2.757
Interaction Effect			
PCA - STRONG RATING	1.0705	0.149	7.197
FRD - STRONG RATING	0.3665	0.149	2.455
ID - SLIGHT RATING	0.2946	0.149	1.968

[1] Only parameters whose coefficients are significantly di ferent from zero are produced

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TWO-WAY CROSS-TABULATION OF INSTITUTIONAL FACTORS RESPONSIBLE FOR DISTRESS BY CORPORATE CUSTOMERS

		CORPORATE CUSTOMERS			
		STRONG	SLIGHT	NO-EFFECT	Row Totals
INSTITUTIONAL FACTORS	G	174	114	65	353
	PCA	476	223	33	732
	FRD	1	1	1	3
	ID	289	85	30	404
	IBSE	1	1	1	3
	IBS	1	1	1	3
	IPM	1	1	1	3
	PM	26	71	22	119
	OT	9	1	1	11
Column Totals		978	498	155	1,631

ESTIMATES OF PARAMETERS BASED ON THE SATURATED LOG-LINEAR MODEL[1]

PARAMETER	COEFFICIENT	SSE	Z-VALUE
Main Effects			
G	2.6359	0.149	17.677
PCA	2.969	0.151	19.647
FRD	−2.054	0.528	−3.889
ID	2.449	0.154	15.862
IBSE	−2.054	0.528	−3.889
IBS	−2.054	0.528	−3.889
IPM	−2.054	0.528	−3.889
PM	1.4832	0.167	8.845
STRONG	0.44	0.192	2.294
Interaction Effect			
PCA - STRONG RATING	0.7024	0.201	3.489
ID - STRONG RATING	0.7229	0.204	3.533
PM - SLIGHT RATING	−0.7192	0.235	−3.061
PM - SLIGHT RATING	0.6851	0.229	2.989

[1] Only parameters whose coefficients are significantly different from zero are produced.

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This result however confirmed the earlier one. Hence the need for overhaul of the management operational structure of banks, cannot be over-stated.

Table 25J, also on institutional factor rating from individual customers perspective observing all factors to be statistically significant. They belief in growth in the number (which is exogenous factor) of banks in addition to PCA, insider dealings had very significant impact. It confirms the popular opinion that factors internal to the bank are equally (if not more) important reasons for bank failure. They perceived the problem of growth to be significant most especially when assessing/referring to the "free entry" era of 1986-1990, when appropriate and technical and strong supervisory framework were lacking.

Table 25K, this estimates spatially on political instability, economic crisis and institutional factors, statistically showing two factors of economic, and institutional factors is highly significant in all the states. In terms of location and interaction effects, economic crisis is very significant in Lagos, and Abuja, politically in Borno and Rivers. All factors proved significant in Lagos, in further assessment.

All these findings have far reaching implications. The aggregate of response from all states indicates that political instability (democratization, June 12, panic withdrawals, governance etc.) except in Lagos is not statistically significant. The most significant are economic and institutional factors. The place of Lagos as the

TABLE 25J

TWO-WAY CROSS-TABULATION OF INSTITUTIONAL FACTORS RESPONSIBLE FOR DISTRESS BY INDIVIDUAL CUSTOMERS

		INDIVIDUAL CUSTOMERS			
		STRONG	SLIGHT	NO-EFFECT	Row Totals
INSTITUTIONAL FACTORS	G	538	180	78	796
	PCA	512	199	41	752
	FRD	1	1	1	3
	ID	555	152	21	728
	IBSE	1	1	1	3
	IBS	1	1	1	3
	IPM	1	1	1	3
	PM	1	1	1	3
	OT	1	1	1	3
Column Totals		1,611	537	146	2,294

ESTIMATES OF PARAMETERS BASED ON THE SATURATED LOG-LINEAR MODEL[1]

PARAMETER	COEFFICIENT	SSE	Z-VALUE
Main Effects			
G	3.5951	0.163	22.048
PCA	3.3975	0.166	20.471
FRD	-1.684	0.533	-3.159
ID	3.1127	0.173	18.063
IBSE	-1.6841	0.533	-3.159
IBS	-1.6841	0.533	-3.159
IPM	-1.6841	0.533	-3.159
PM	-1.6841	0.533	-3.159
STRONG	-1.6841	0.533	-3.159
Interaction Effect			
G - STRONG RATING	0.5989	0.228	2.632
PCA - STRONG RATING	0.7468	0.229	3.251
ID - STRONG RATING	1.1133	0.234,	4.753
PM - SLIGHT RATING			

[1] Only parameters whose coefficients are significantly different from zero are produced.

TABLE 25K

TWO-WAY CROSS-TABULATION OF FACTORS RESPONSIBLE FOR DISTRESS BY GEOGRAPHICAL SPREAD (Location)

FACTORS OF FINANCIAL DISTRESS

		PI	EC	IF	OT	Row Totals
INSTITUTIONAL FACTORS	ABUJA	19	88	79	5	191*
	KANO	42	97	99	2	240
	IMO	29	134	65	1	299
	ENUGU	29	155	65	2	251
	OYO	43	164	101	2	310
	KADUNA	43	236	149	2	430
	BORNO	16	116	96	3	231
	PLATEAU	32	145	120	1	298
	RIVERS	20	139	115	5	279
	LAGOS	83	320	295	10	707
	EDO	21	109	51	1	182
	Column Total	377	1,703	1,304	34	3,418

ESTIMATES OF PARAMETERS BASED ON THE SATURATED LOG-LINEAR MODEL[1]

PARAMETER	COEFFICIENT	SSE	Z-VALUE
Main Effects			
LAGOS	1.0709	0.097	11.056
IF	1.1981	0.062	19.477
EC	1.4714	0.061	24.315
Interaction Effect			
ABUJA - EC	–0.3443	0.149	–2.297
BORNO - PI	–0.4738	0.227	–2.083
RIVERS - PI	–0.5245	0.197	–2.656
LAGOS - EC	–0.2467	0.105	–2.349

[1] Only parameters whose coefficients are significantly different from zero are produced.

economic nerve centre of the country strongly affected by the political disturbances and is a pointer that political factor causes distress. And in the direction of panic withdrawals, Lagos and oil state of Rivers confirmed the high significance given to these factors.

4.5 STATISTICAL EVIDENCES

Given the importance of this thesis and the implications of its submissions a re-examination of issues already discussed on the basis of a wide range of performance indicators including the familiar CAMEL ratings becomes very necessary.

4.5.1 FRAMEWORK FOR MODELLING THE DETERMINANTS OF DISTRESS

Distress problem has to do with a situation where the performance of an identified or a given bank is below certain set standard. That is a bank is said to be distressed if specifically it does not meet prescribed performance criteria. The rational behind this definition is that standards are set out of experience or empirical evidence to forestall failure. Non-compliance with standards is synonymous with failure and this definition measures the incidence of bank distress but not the degree (temporary or terminal). Banks distress is modelled qualitatively unlike quantitative measures since a bank is either distressed or not, thus modelling bank distress involves a binary choice. That is binary models (solvent or insolvent, liquid or illiquid failed or not failed) have traditionally been used to define bank conditions. Some of these models include probity analysis, discriminant analysis and logit models but we will adopt logistic regression model because of its ability to normalise the probability of failure between 0 and 1. Logit model uses maximum likelihood method to optimize the coefficient estimates,

discriminant analysis don't. Distressed or not distressed disallows the use of multiple regression model to forecast the probability of distress. The methodology as observed, by Uchendu 1995 is better suited for industry-wide performance analysis.

Before delving into problem of modelling bank distress, the factors influencing bank distress in terms of stipulated policy targets like liquidity ratio, statutory minimum paid-up capital, loan-to-deposit ratio and capital adequacy ratio should be revisited. Factors like management efficiency/quality, asset quality, return on assets and capital loan type are the factors influencing the health of a bank (West 1984, Jimoh 1993 and Nyong 1994). On bank performance is ownership structure. It will be interesting here to opine that government owned banks are more likely to go distress than private-owned due to political influence on their operation (like loan administration). Bank as financial intermediaries, have their operational result being affected by their environment. The fiscal, monetary and banking policy, macro-economic policy, economic activities (boom and recession) and politics all affect banks' operational returns. Note that the regulatory, macro-economic and political factors are not explicitly modelled but, the measures of profitability, especially for profit oriented enterprises

a) Model Specification; According to Pindysk and Mulainfeld 1991 and Norusis 1992, the probability of a bank being distressed Pd is given by

$$Pd = \frac{e^z}{1+e^z} = \frac{1}{1+e^z} \qquad \ldots\ldots\ldots (1)$$

where;

e = the base of the natural logarithms (2.7108)

z = linear combination of factors that influence probability of bank distress.

Thus,

$$z = a_o + a_1x_1 + a_2x_2 + \ldots + a_nx_n \ldots\ldots\ldots(2)$$

where;

a_i = i^{th} coefficient estimate

x_i = i^{th} explanatory variable.

The odds of a bank being distressed is determined by the ratio of the probability of distress to the probability of non-distress.

$$\frac{Pd}{1-Pd} = \frac{\frac{1}{1+e^z}}{1-\frac{1}{1+e^z}} = e^z \ldots\ldots\ldots (3)$$

given in equation 3 above.

Taking the natural logarithm of both sides of equation 3 above it gives

$$\log \frac{Pd}{1-Pd} = Z = d_o+d_1+x_1+\ldots+a_nx_n \ldots\ldots (4)$$

Hence equation 4 above is the logi model to be estimated iteratively until it conveys to give the log of the odds, from where the probability of distress, Pd in equation (1), can be estimated. This equation also shows how the variation of the various (X_i)influencing bank distress affect the log of the odds of a bank being distressed. In this study, the initial estimates of the odds of distress is $\frac{Pd}{1-Pd}$ which would be used to start the iteration process, and is measured by a dummy variable which takes the value of 1 if the distress criterion is below the standard stipulated by policy or it takes the value of zero, otherwise, mathematically, let 0 represent dummy variables measuring the odds of bank distress. Then

D_1 = 1 if PC1 < PCT .....(5)

= 0_1, otherwise for each bank (as stated above).

Dummy (dependent) variables are defined for other distress measures like liquidity ratio and loan to deposit ratio, is operational definition and it differs from Nyong 1994 who used Examiners intuitive rating of banks as failed or not failed, distress or non-distressed etc. The problem of this rating is there appears to be no single measure currently in use to categorically rate a bank as distressed or not, and this may be why a bank could be misclassified Note that the factors that exhibit odds of a bank being distressed include, asset quality, quality of management, defined by the ratio of non-performing loans to total loans Nyong (1994, p. 13), measures of profitability (returns on asset, return on capital), earnings, loan type, ownership type (private or government) and operating efficiency measured by expense to earnings ratio. Good management, buoyant operational results and adequate liquidity would definitely reduce the odds of a bank being distressed, while ownership structure would increase the odds of a bank being distressed, due to owner's level of interference in the bank's operations, as the case may be. The main sources of data for the logit regression are from secondary data collected by the CBN from banks statutory returns.

4.5.2 THE MEASURES OF DISTRESS

The objective of this research is to identify factors influencing distress/defining the dependent variables representing the distress condition to include, liquidity ratio (LR), loan-to-deposit ratio (LDR) and capital adequacy ratio (CAR) using the statutory requirements that

i) LR < 40 percent

ii) CAR > 8.0 percent

iii) LDR < 64.0 percent,

for a bank to operate soundly. Thus a bank with LR<40% scores a 1 or 0 otherwise. Similarly a bank with CAR<8.0% or LDR>64.0% takes 1 or 0, if the condition does not hold. It is seen that most of the banks observed score similar to each of these definition.

For comparative purposes CBN, introduced another distress measure DMD (a dummy variable which takes a priori, a value one or zero for a bank being identified, distressed or non-distressed) and carried out for commercial banks with available data.[1] And owing to redefinition of capital adequacy ratio between 1992 and 1994, this measure was seldom used as a measure of distress in the analysis.

b) Estimation and Analysis of Results:- The different equations and combination of explanatory variables were estimated using the logistic regression module. The estimation results and summary statistics are shown in Tables 26A-E. It is observed that the equation performed well as implied by the high adjusted P-values. In all cases convergence was obtained in less than the default (maximum) 10 iterations set for optimal solution of the equations applied to both commercial and merchant banks.

i) Commercial Banks

Table 26A shows the result of the logit regression for 48 commercial banks, in 1992 using two different distress measures (loan to-deposit ratio LDRC and liquidity ratio LRC) in equations 1-4 and 5-7 respectively, with different distress attributes combinations. On LDRC, equations 1-5, CAR has a positive and significant influence

on the odds of the banks being distressed. This should be so as the increase in capital adequacy target (CAT) will lead many marginal banks into distress. The CAR had non-significant effects on LRC equations 5-7.

On ownership effects in 1992, commercial banks have mixed but non-significant effects on odds of a bank being distressed. The result shows that increasing LR reduces the odds. The same but non-significant relationship is indicated for the profitability measures (ROC and ROA) and loan quality ratio (LQR) the optional efficiency measure (expenses) profit ratio (EXR) was positive and significant increase in loan provisioning (TLLR) increases odds.

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TABLE 26A

LOGIT REGRESSION RESULTS FOR 48 SAMPLES OF COMMERCIAL BANKS — 1992

Equation	Dependent Variables (Distress Situation)	Explanatory Variables									Summary Statistics (P Value)
		Constant	CAR	DMO	LR	ROC	TLLR	ROA	EXR	LQR	
1.	LDRC	-5.408 (-10.4)	0.0064 (2.07)	-0.6664 (-1.14)	-0.0002 (-0.06)	-0.0002 (-0.18)	0.0006 (1.86)				0.9297
2.	LDRC	-5.4 (-10.53)	0.006 (2.06)	-0.6 (-1.09)	(-0.00009) (-0.03)		0.0006 (1.83)	-0.005 (-0.19)			0.9297
3.	LDRC	-5.6 (-10.19)	0.007 (2.25)	-0.5 (-0.87)	0.0001 (0.06)		0.0005 (1.58)	-0.006 (-0.25)	0.005 (1.43)		0.9416
4.	LDRC	-5.25 (-8.57)	0.006 (1.91)	-0.2 (-0.31)	0.0002 (0.08)			-0.02 (-0.71)	0.005 (1.70)	-0.01 (-0.79)	0.9153
5.	LRC	-2.329 (-2.75)	0.006 (0.18)	-0.036 (-0.01)	-0.1 (-3.48)		0.0001 (.39)	0.038 (1.26)			1.0000
6.	LRC	-2.7364 (-3.53)	-0.0009 (-0.27)	-0.354 (0.67)	-0.088 (-3.50)	0.0007 (.69)					1.0000
7.	LRC	-4.9488 (-7.60)	-0.0022 (-54)	0.569 (1.06)		-0.0013 (-1.24)				-0.0027 (-0.22)	0.9213

Table 26B is on 39 banks analysed in 1993, including CAR in equation 6. A dummy variable DMD was used based on the CBN classification for comparative purpose. As in 1992, ownership type has negative but non-significant results for DMO, while most of the other distress measures, were positive but also not significant. For all definition of distress in this year for the 32 banks, CAR was significant in equation 1 with wrong-sign. The reason for this plausible result may be due to 1993 quality of operational data. LDR was very significant, because increase in LDR signifying the bank is over-trading which increases the odds. LR reduces the odds. The higher the LQR the lower the odds equations 8-11. ROC and ROA were insignificant due to quality of data reported.

Another 51 banks were observed this time using logit regression instead of profitability measures, shown on table 26C. Ownership was consistently positive but non-significant. CAR maintained its positive relationship with distress especially where the significance level is high. LDR (L) was significant and positively related to distress as in table 26B. LR is negative and has strong relationship with odds, as in equations 12456 and 7).

ii) Merchant Banks

Table 26D in 1992 was on the merchant banks. CAR had negative but non-significant relationship with distress. Increase in the LR reduces the odds also, types of ownership increases the odds. Equations 3 and 5 show that high loan quality reduces the odds, of the bank being distressed.

TABLE 26B

LOGIT REGRESSION RESULTS FOR 3 SAMPLES OF COMMERCIAL BANKS — 1993

Equation	Dependent Variables (Distress Situation)	Explanatory Variables										Summary Statistics (P Value)
		Constant	DMD	CAR	L	LR	LQR	TLLLR	ROA	ROC	EXR	
1.	LDRC	-8.1 (-4.4)	1.13 (1.04)	-0.03 (-1.96)	0.04 (2.88)	-0.01 (-3.70)	0.04 (1.26)	- -	0.27 (1.65)	-0.0037 (-1.57)	-0.05 (-0.88)	1.000
2.	LDRC	-6.2 (-6.29)	0.28 (0.34)	-0.01 (-0.98)	0.03 (2.61)	-0.028 (-1.49)	0.0038 (0.18)	- -	- -	-0.0002 (-0.48)	-0.01 (-0.44)	0.9995
3.	LDRC	-6.3 (-5.90)	0.3 (0.42)	-0.01 (-0.86)	0.038 (2.69)	-0.03 (-1.60)	0.005 (0.27)	- -	0.0003 (0.01)	- -	-0.01 (-0.47)	0.9993
4.	LRC	-0.6 (-4.4)	0.27 (0.27)	-0.026 (-0.95)	-0.02 (-0.91)	-0.09 (-2.71)	.	0.0003 (0.3)	0.015 (0.65)	-0.001 (-0.36)	-0.03 (-0.68)	1.00
5.	LRC	-0.8 (-6.3)	-0.19 (-0.23)	-0.007 (-1.04)	-0.01 (-0.64)	-0.09 (-2.86)	-0.006 (-0.25)	- -		0.00005 (0.01)	-0.01 (-0.49)	1.00
6.	CARC	-6.99 (-2.92)	1.79 (1.06)	-0.09 (-1.65)	0.02 (1.18)	-0.02 (-0.73)		- -	0.0003 (0.68)	0.2 (1.39)	-0.0008	0.99 (-0.02)
7.	DMd	-10.0 (-2.74)	-0.7 (-0.34)	-0.02 (-0.73)	0.07 (1.50)	0.09 (1.20)	-0.05 (-0.78)	- -	0.19 (0.62)	-0.0019 (-0.42)	-0.2 (-1.48)	1.0
8.	DMD	-7.63 (-3.58)	-1.21 (-0.82)	0.002 (0.19)	0.069 (1.90)	0.033 (0.99)	-0.08 (-1.70)	- -	- -	-0.0003 (-0.10)	-0.13 (-1.36)	1.0
9.	DMD	-5.87 (-2.38)	-0.5 (-0.42)	0.003 (0.29)	0.06 (1.75)		-0.1 (-1.58)	-0.006 (-0.87)	- -	-0.002 (-0.94)	-0.07 (-0.63)	1.0
10.	DMD	-6.1 (-2.34)	-0.2 (-0.2)	0.003 (0.30)	0.07 (2.02)		-0.12 (-2.16)	-0.006 (-0.97)	- -	-0.0029 (-1.04)		1.0
11.	DMD	-6.7 (-3.34)	-0.3 (-0.31)	0.009 (0.90)	0.06 (1.97)	-0.01 (-0.36)	-0.09 (2.14)		- -	0.0006 (-0.95)		1.0

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TABLE 26C

LOGIT REGRESSION RESULTS FOR 51 SAMPLES OF COMMERCIAL BANKS -- 1993

Equation	Dependent Variables (Distress Situation)	Explanatory Variables							Summary Statistics (P Value)
		Constant	DMO	CAR	L	LQR	LR	TLLLR	
1	DMD	-6.27 (-7.11)	0.18 (0.26)	0.006 (1.54)	0.02 (2.70)	0.01 (0.86)	0.03 (-2.50)		0.99
2.	DMD	-6.19 (-6.95)	0.6 (0.87)	0.007 (1.58)	0.028 (2.95)		-0.03 (-2.76)	-0.0006 (-0.86)	0.99
3.	DMD	-4.6 (-6.81)	0.39 (0.62)	-0.003 (-0.96)			-0.019 (-1.50)	-0.0003 (-0.54)	0.96
4.	DMD	-6.17 (-7.11)	0.3 (0.53)	0.007 (1.62)	0.03 (2..92)		-0.03 (-2.68)		0.99
5.	LRC	-1.98 (-2.01)	0.3 (0.60)	-0.002 (-0.49)	-0.006 0.61	-0.016 (-1.17)	-0.09 (-3.59)		1.0
6.	LRC	-2.5 (-2.95)	0.1 (0.25)	-0.002 (-0.49)	-0.005 (-0.55)		-0.07 (-3.73)	-0.0001 (-0.25)	1.0
7.	LRC	-2.88 (-5.0)	0.15 (0.25)	-0.0004 (-0.16)			-0.07 (-3.74)	-0.0002 (-0.35)	1.0
8.	CARC	-6.18 (-6.14)	1.19 (1.16)	-0.00 (-0.77	0.004 (0.57)	0.003 (0.29)	-0.004 (-0.37)		0.99
9.	LDRC	-6.7 (-7.87)	1.05 (1.59)	0.00 (1.64	0.02 (3.24)	-0.005 (-0.42)	-0.02 (-1.61)		0.99
10.	LDRC	-6.8 (-8.05)	0.9 (1.38)	0.00 (1.72)	0.02 (3.26)		-0.02 (-1.57)		0.99

TABLE 26D

LOGIT REGRESSION RESULTS FOR 42 SAMPLES OF MERCHANT BANKS – 1992

Equation	Dependent Variables (Distress Situation)	Explanatory Variables												Summary Statistics (P Value)
		Constant	CAR	LR	TLLR	DMO	PBT	TA	LQR	ROC	ROA	EXR	L	
1.	LRMB	-2.97 (-3.87)	-0.002 (-0.37)	-0.03 (-2.05)	-0.019 (-1.63)	3.54 (1.96)	-0.002 (-0.54)							0.9930
2.	LRMB	-2.97 (-3.87)	-0.002 (-0.37)	-0.03 (-2.06)	-0.019 (-1.65)	3.55 (1.97)				-0.0008 (-0.55)				0.9930
3.	LRMB	-2.8 (-2.92)	-0.003 (-0.49)	-0.02 (-1.51)		1.41 (1.03)	-0.002 (-0.68)	0.00006 (.08)	-0.04 (-1.93)				-0.002 (-0.55)	0.9697
4.	LRMB	-3.01 (-3.19)	-0.002 (-0.31)	-0.03 (-1.99)	-0.02 (-0.48)	3.5 (1.92)	-0.002 (-0.55)							0.9899
5.	LRMB	-2.82 (-2.82)	-0.003 (-0.48)	-0.02 (-1.52)		1.41 (1.02)			-0.004 (-1.86)			-0.0068 (-0.06)	-0.002 (-0.56)	0.9577
6.	LRMB	-2.96 (-3.87)	-0.002 (-0.32)	-0.036 (-2.79)	-0.0198 (-1.67)	3.6114 (2.00)					-0.015 (-.53)			0.9929

In 1993 logit regression analysis was used on 30 merchant banks, with data on profits. The coefficient estimates and summary are on Table 26E for different specifications of liquidity ratio, measures of distress. The inclusion of ROC and ROA in the regression and reduction of sample size gave significant result. It is observed that the quality of data on banks' operations contributed to the poor results.

4.5.3 ANALYSIS BASED ON PERFORMANCE CRITERIA

To forestall banks distress, performance criteria based on experience and international standard is set for licensed banks In Nigeria, ratios used and the critical cut-off points for compliance are as follows:

	PERFORMANCE CRITERIA		Cut-off Value
i.	Liquid asset structure		10%
ii.	Minimum paid up capital:		Now
	Merchant banks	₦40 million	₦500m
	Commercial banks	₦50 million	₦500m
iii)	Capital adequacy ratio	8%	
iv)	Liquidity ratio	30%	40%
v)	Sectoral credit allocation:		
	Priority	29%	
	Others	25%	

SOURCE: CBN/NDIC October, 1995, p. 85.

TABLE 26E

LOGIT REGRESSION RESULTS FOR 30 SAMPLES OF MERCHANT BANKS – 1993

Equation	Dependent Variables (Distress Situation)	Explanatory Variables									Summary Statistics (P Value
		Constant	CAR	LR	I	DMO	ROC	PR	LQR	EXR	
1.	LRMB	1.31 (0.21)	-0.05 (-0.80)		-0.00 (-0.37	-8.59 (-0.32)		-0.051 (-0.53)	-0.065 -0.87)	-0.55 (-0.48)	0.9996
2.	LRMB	4.05 (0.45)	-0.08 (-0.87)		-0.0 (-0.58	-8.38 (-0.32)	-0.003 (-0.87)		-0.05 (-0.82)	-0.9 (-0.92)	0.9998
3.	LRMB	3.6 (0.36)	-0.08 (-0.84)	0.01 (0.30)	-0.0 (-0.54)	-7.7 (-0.29)	0.007 (-0.39)		-0.06 (-0.75)	-0.5 (-0.27)	0.9999
4.	LRMB	-3.87 (-4.32)	0.0001 (0.03)	0.003 (0.89)	-0.00 (-0.62)	-7.30 (-0.44)	-0.0008 (-0.7)		0.005 (0.48)	0.03 (0.53)	0.9237
5.	LRMB	-3.65 (-4.85)	-0.0007 (-0.15)	0.003 (0.87)	-0.00 (-0.63)	-7.47 (-0.45)	-0.0007 (-0.62)			0.03 (0.58)	0.9390

Note that the above information have changed. The minimum paid up capital now is uniform and at ₦500 million in 1999 budget. CAR remains 8% with at least 50% of the components of a banks' capital comprising paid-up capital and reserves (i.e. statutory, share premium, bonus issues, general reserves and other unappropriated profit). Every bank must maintain a ratio not less than one to ten (1:10) between its adjusted capital funds and total credit, net of provisions. Sectoral credit allocation abolished. By definition, liquidity ratio, defined as:

$$LR = \frac{\text{Total Specified Liquid Assets}}{\text{Total Current Liabilities}} \quad \ldots\ldots (6)$$

reflecting the liquidity condition of a bank. The components of treasury bills and certificates in each banks' liquid assets should constitute at least 10% of the total liquid assets monitored using liquid asset structure ratio defined as

$$LAR = \frac{\text{Short-Term Government Securities}}{\text{Total Current Liabilities}} \quad \ldots\ldots\ldots\ldots (7)$$

while the capital adequacy ratio denoted as CAR is defined as:

$$CAR = \frac{\text{Total Qualified Capital}}{\text{Total Risk - Weighted Assets}} \quad \ldots\ldots\ldots\ldots\ldots (8)$$

is an indicator of the appropriate level of capitalization of a bank. Section 13 of BOFI Decree required banks to maintain an 8 % minimum CAR or as may be prescribed from time to time.

4.5.4 Major/Indicators and the Degree of Distress

The indicator Rd denotes the degree or depth of distress banks in fraction of the banks that complied with at most d-1 of the performance ratings, defined as

$$Rd = \frac{1}{} \sum_{i-1}^{n} 8\,(i\ \ d) \quad \ldots\ldots\ldots \quad (9)$$

where 8 (i d) = 1 if bank i satisfies at most d-1 of the five performance ratings and 8 (i d) = 0 otherwise, n is the number of commercial and or merchant banks. Parameter d equals the number of performance ratings that have not been satisfied and takes value between one and five (1 or 5). A value of d closer or equals five indicates banks likelihood of being declared technically insolvent if all performance ratings have equal weights. The statistics Rd ranges from zero to one (0 to 1). When Rd tends towards zero it implies the banking system is generally in good condition and if Rd tends to one the banking system is in distress Table 4.8.

The indicator R1 represents the fraction of the banks that did not comply with the minimum LR of 40%, defined as

$$R_1 = \frac{1}{n} \sum_{i-1}^{n} d\,(i, 40) \quad \ldots\ldots\ldots \quad (10)$$

where, d (i 40) = 1 if bank's observed LR < 40%, and take the value of ratio, otherwise. Other summary indicators CAR, and wholly secured liquid assets (treasury bills, certificates) denoted Ro and Rc are defined as

$$R_C \frac{1}{n} \sum_{i=1}^{n} h(i, 8) \quad \ldots\ldots\ldots \quad (11)$$

$$R_S \frac{1}{n} \sum_{i=1}^{n} f(i, 10) \quad \ldots\ldots\ldots \quad (12)$$

where h(i 8) = 1 if the CAR < 8% but takes the value zero otherwise. Also f(i 8) = 1 if bank i^{th} wholly secured liquid asset (treasury bills and certificates) is >10% and is

zero otherwise. The measures R_c and R_s are shown on Table 28.

R_t is loan to deposit ratio LDR wich indicates the fraction of banks that did not comply with the maximum LDR of 64%, defined as

$$R_t = \frac{1}{n} \sum_{i=1}^{n} v(i, 64) \quad \ldots\ldots \quad (13).$$

V(i, 64) takes the value 1 if the observed LDR for the i^{th} bank >64 maximum and zero otherwise. It ranges, between zero (o) and one (1) with values closer to zero it implies efficient use of banks funds and higher values implies serious overtrading by bank, a factor which could lead to distress situation.

The degree of banks' distress explanatory analysis was on secondary data from May 1993 to October 1994, aimed at providing vivid explanation of the extent and depth of distress in the financial (banking) industry especially during the turbulent period of political upheaval and uncertainty.

Table 28 shows summary indicators R_d, R_l and R_c while Figure 1 throws more light on the degree of distress, suggesting or implying that June 12th issue aggravated the distress condition as reflected in the rise of Rd in July 1993, ranging from 12.1% in August to 16.7% in December 1993. By January 1994, the degree of distressed banks increased substantially to about 25% due to, may be policy changes (reversal of deregulation). Figure 2 gives the plots of liquidity (wholly secured liquid assets and capital inadequacy) indicators, R_l, R_s and R_c. The plot R1 implies the banks liquidity position heightened in July 1993 due to panic withdrawals associated with June 12th issue, and LR improves as from August 1993 to June 1994 when it worsened again, may be due to withdrawals in the wake of the anniversary

TABLE 28

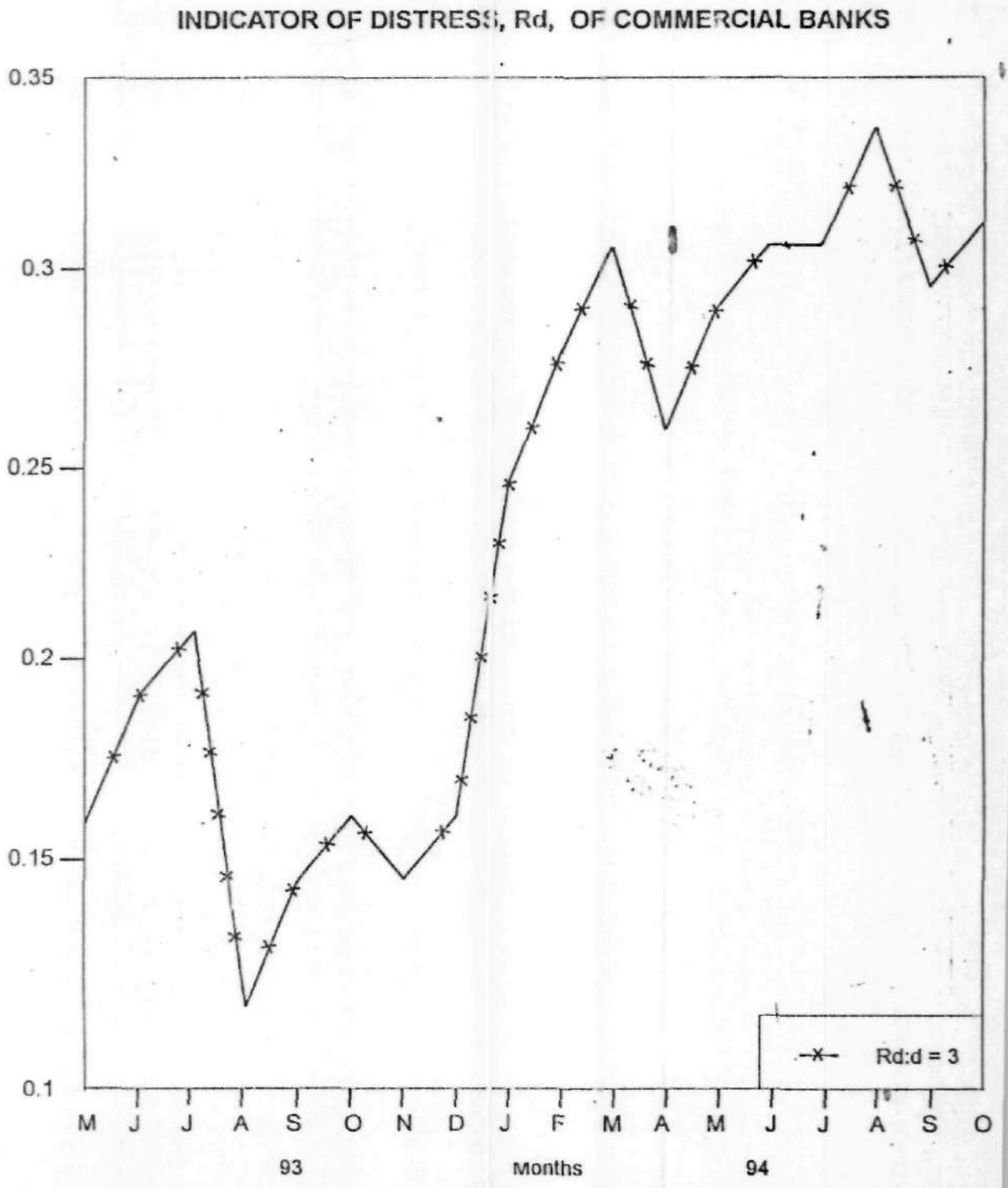
COMMERCIAL BANKS FINANCIAL CONDITIONS BASED ON PERFORMANCE CRITERIA RATINGS: MAY, 1993 TO OCTOBER, 1994[1]

Period	Degree of Distress Rd d = 3	d = 4	d = 5	Illiquidity Rl	Holdings of T-Bills & T-Cert. Rs	Capital Inadequacy Rc
1993						
May	0.167	0.712	0.90	0.56	0.18	0
June	0.197	0.515	0.818	0.53	0.33	0
July	0.212	0.576	0.848	0.64	0.36	0
August	0.121	0.485	0.742	0.44	0.41	0
September	0.152	0.439	0.758	0.39	0.42	0
October	0.167	0.394	0.652	0.39	0.44	0.05
November	0.152	0.303	0.606	0.38	0.48	0.08
December	0.167	0.364	0.621	0.39	0.48	0.15
1994						
January	0.25	0.516	0.875	0.31	0.53	0.25
February	0.281	0.594	0.875	0.34	0.47	0.25
March	0.308	0.538	0.892	0.35	0.45	0.23
April	0.262	0.554	0.846	0.35	0.48	0.25
May	0.292	0.6	0.846	0.35	0.38	0.25
June	0.308	0.569	0.908	0.4	0.43	0.33
July	0.308	0.585	0.846	0.4	0.45	0.25
August	0.338	0.677	0.831	0.37	0.46	0.26
September	0.297	0.531	0.828	0.36	0.5	0.23
October	0.313	0.563	0.859	0.36	0.48	0.3

[1]See Section 4.3 for the definitions of Rd, Rl, Rs, and Rc. Data is source from the Research Department, CBN.

Rd = Indicator of Distress
Rl = Indicator of Illiquidity
Rs = Indicator of secured liquid assets
Rc = Indicator of Capital inadequacy
d = number of performance ratings that have not been satisfied. In other words, a bank is classified as 'distressed' if it did not satisfy d of the performance ratings.

FIGURE 1



. The degree of distress, Rd, of commercia banks, between May, 1993 and October, 1994 The indicator, Rd, can be interpreted as the fraction of commercial banks that failed three or more of the performance ratings.

of the June 12th. The trend in R_d don't follow discernible pattern but illustrated the fact that liquid assets of the majority of the banks are not wholly secured in the period under review.

Re in the figure 2 implies that all the banks were adequately capitalized, from Mayto September 1993. The degree of inadequate capitalization started in October 1994. In January 1994, the value of R_c depicts 25% of banks were under-capitalized which peaked to 30% in October 1994. It is interesting to note that as R_c tended to understate the degree of distress, the R_l appeared to overstate the degree which underscores the point that an unweighted CAMEL rating cannot by itself predict with certainty the number of distressed banks in the industry.

Table 29 has four summary measures for the period May 1993 to October 1994 graphically represented on figure 3. Merchant banks distress situation worsened between July/August 1993 increasing from 18.5% to about 39.0%. this temporary distress in merchant banks improved significantly within October 1993 to January 1994 due to relative calm in political front. The delayed release of 1994 budget and re-regulation of the economy affected negatively the performance of these merchant banks. The degree declared in August 1994 and accelerated thereafter. Figure 4 shows merchant banks illiquidity wholly secured liquid asset and capital inadequacy indicators. Capital deficiency is not a good indicator of distress illiquidity slightly overstated the degree of distress merchant banks. Unweighted rating mechanism in conclusion may not give correct picture of distress in the Nigerian financial industry.

TABLE 29

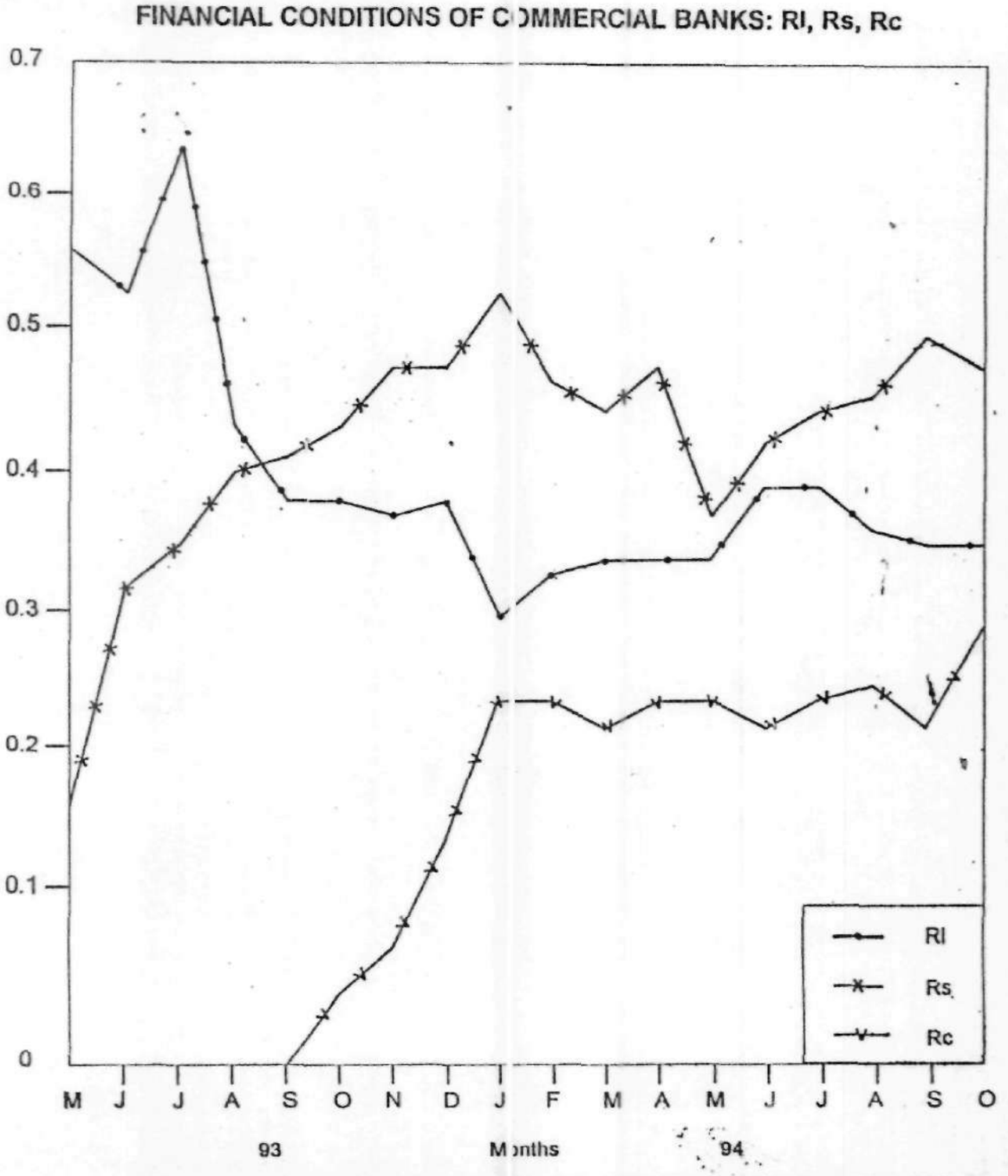
MERCHANT BANKS' FINANCIAL CONDITIONS BASED ON PERFORMANCE CRITERIA RATINGS: MAY, 1993 TO OCTOBER, 1994[1]

Period	Degree of Distress Rd d = 3	Rd d = 4	Rd d = 5	Illiquidity RI	Holdings of T-Bills & T-Cert. Rs	Capital Inadequacy Rc
1993						
May	0.37	0.712	0.889	0.463	0.31	0
June	0.204	0.463	0.796	0.39	0.35	0.07
July	0.185	0.537	0.741	0.43	0.35	0.07
August	0.389	0.611	0.87	0.46	0.41	0.04
September	0.407	0.611	0.722	0.43	0.43	0.06
October	0.148	0.296	0.556	0.31	0.59	0.06
November	0.111	0.352	0.519	0.33	0.59	0.07
December	0.115	0.269	0.481	0.27	0.63	0.04
1994						
January	0.154	0.365	0.596	0.4	0.54	0.08
February	0.423	0.635	0.962	0.38	0.31	0.096
March	0.346	0.673	0.942	0.38	0.29	0.096
April	0.327	0.692	0.962	0.4	0.31	0.096
May	0.308	0.558	0.885	0.37	0.44	0.096
June	0.327	0.5	0.885	0.37	0.5	0.135
July	0.327	0.481	0.865	0.35	0.52	0.135
August	0.294	0.431	0.824	0.31	0.51	0.137
September	0.34	0.46	0.96	0.32	0.54	0.18
October	0.314	0.451	0.843	0.35	0.65	0.12

[1] See Section 4.3 for the definition of Rd, RI, Rs and Rc. Data is sourced from the Research Department, CBN.

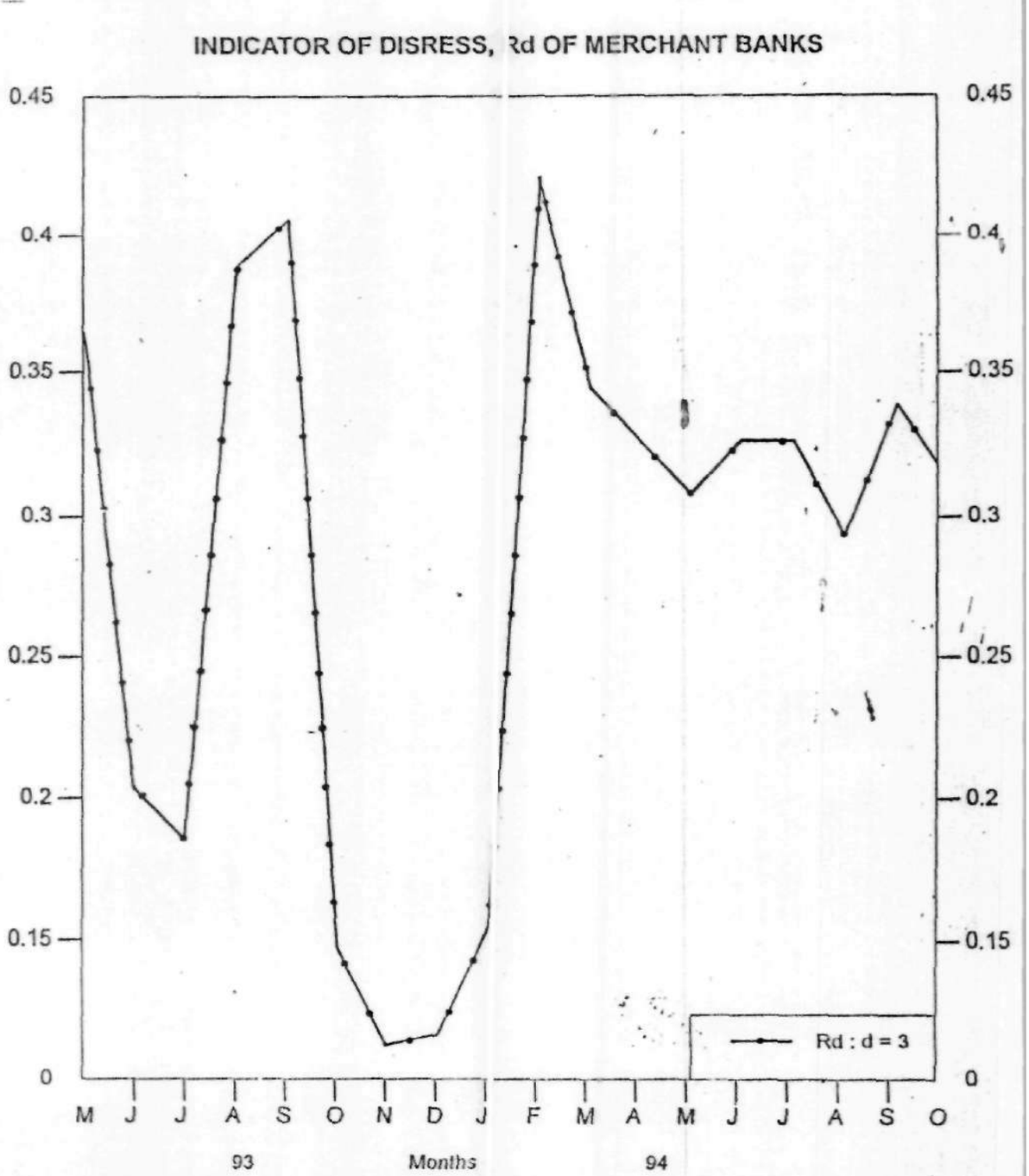
Rd = Indicator of Distress
RI = Indicator of Illiquidity
Rs = Indicator of secured liquid assets
Rc = Indicator of Capital inadequacy
d = Number of performance ratings that have not been satisfied. In other words, a bank is classified as 'distressed' if it did not satisfy d of the performance ratings.

FIGURE 2



Financial conditions of commercial banks represented by RI, Rs, and Rc between May, 1993 and October, 1994.

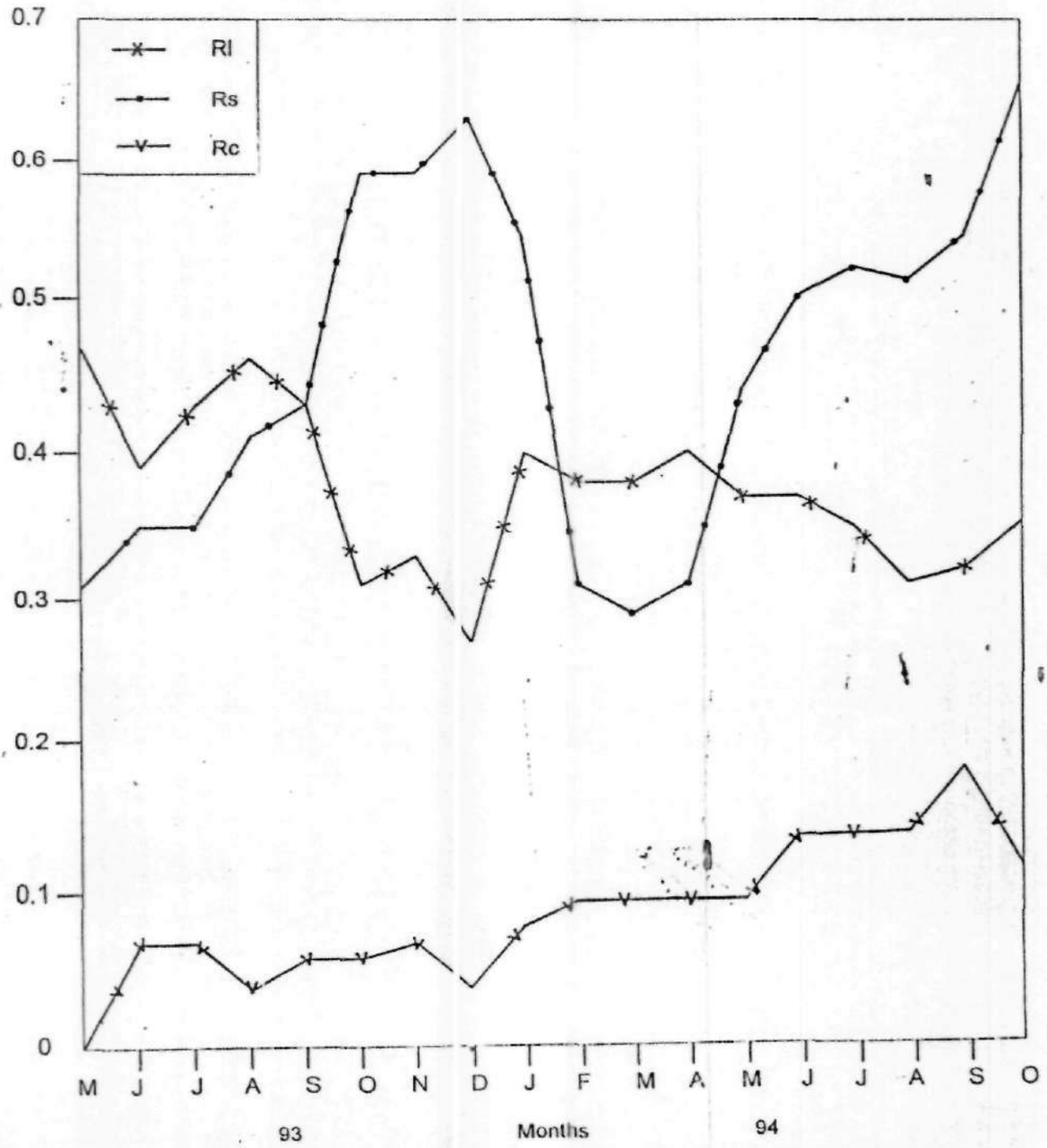
FIGURE 3



The degree of distress Rd of Merchant Banks, between May, 1993 to October, 1994. The indicator Rd can be interpreted as the fraction of merchant banks that failed three or more of the performance ratings.

FIGURE 4

FINANCIAL CONDITIONS OF MERCHANT BANKS: RI, Rs, Rc



Financial conditions of merchant banks represented by RI, Rs and Rc between May, 1993 and October, 1994.

4.6 SENSITIVITY ANALYSIS

The import of this topic is to evaluate the sensitivity of distress measures to the cut-off and standard values prescribed in the various monetary and credit policy as well as prudential guidelines. The sensitivity factor is intended to be captured by varying the cut-off values set for the performance criteria ratings and see how such variation affects the predictive power of the summary measures.

4.6.1 LIQUIDITY MEASURE

Figure 5 shows that at present 40% minimum LR stipulated, about 41% of the commercial banks would be illiquid. A deviation by hypothetically reducing LR to 22% would imply that the number of banks too would reduce to 28% when LR is raised to 38% the number of banks in danger increased to 63%. At 50% prescribed minimum LR, 75% banks were illiquid. Two things are proved here:

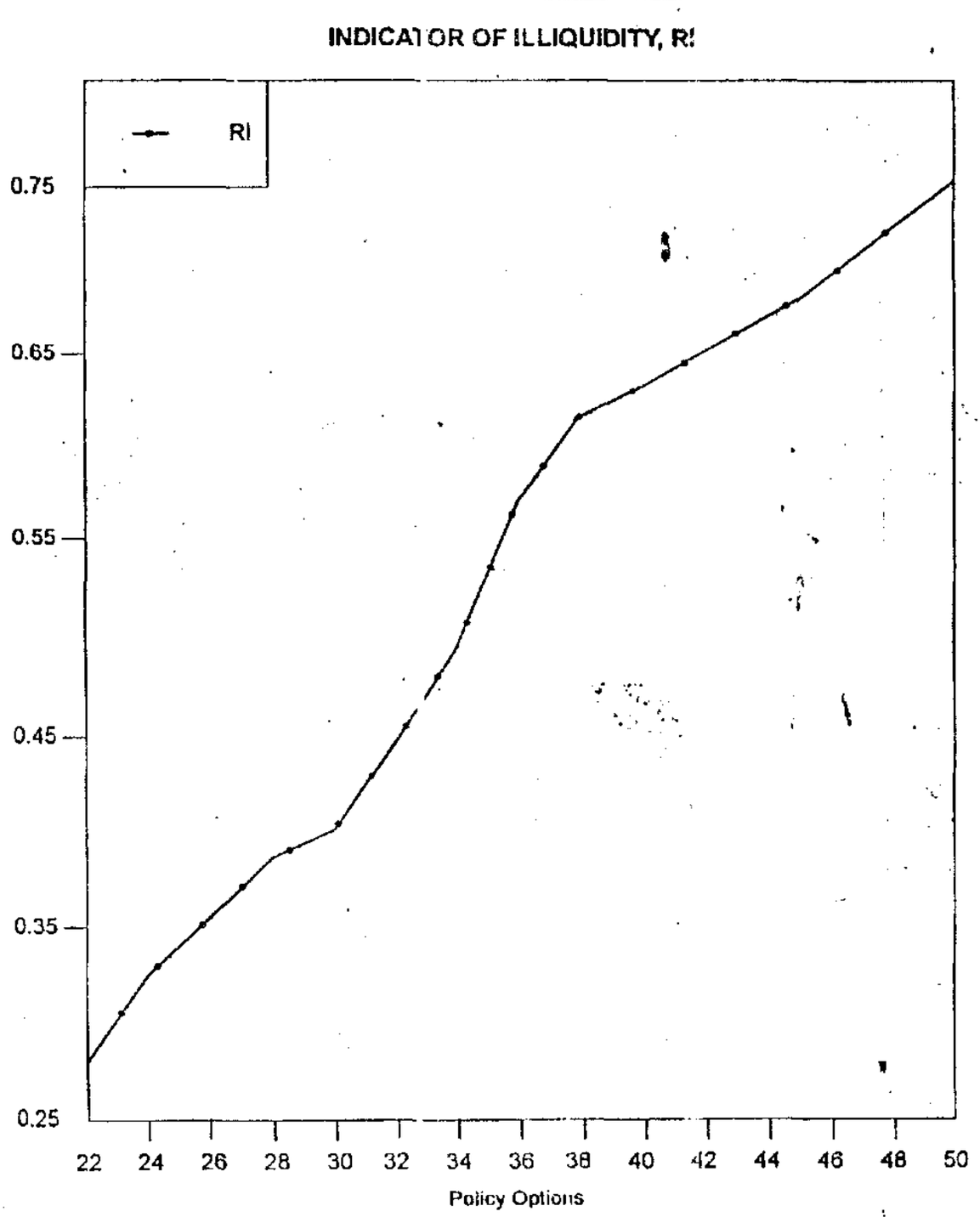
i) The higher the LR the more likelihood of commercial banks getting distressed vice-versa.

ii) Illiquidity is a highly critical factor that exerts influence on bank performance.

4.6.2 LOANS TO DEPOSIT RATIO (LDR)

Figure 6 shows that at the 70% prescribed maximum LQR at least 51% of all the commercial bank exceeded their level and are likely to be distressed. When hypothetically reduced to 50% maximum the number of banks exposed to danger increased, to 75%; while at 100% maximum LDR about 16% would be distressed.

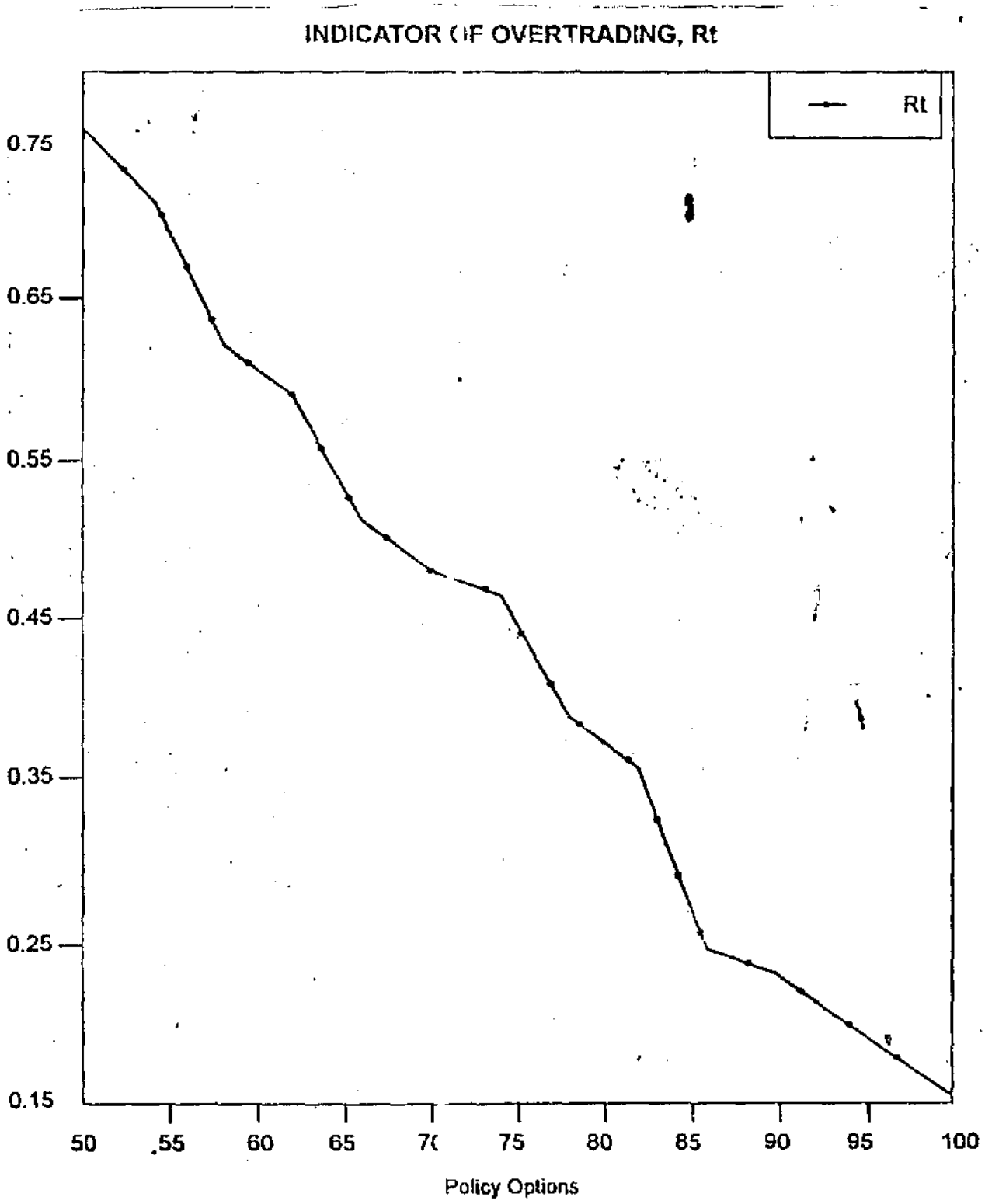
FIGURE 5



The sensitivity of the indicator RI to different policy options using the December, 1994 performance ratings of commercial banks.

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FIGURE 6



:. The sensitivity of the indicator Rt to th e different policy options, using December, 1994 performance *ratings of comme cial* banks.

This analysis shows that the higher the maximum LDR set the more likelihood that banks would be "healthy" and vice-versa.

4.6.3 CAPITAL ADEQUACY RATIO (CAR)

Figure 7 implies that at 8% CAR, about 33% of the banks would be under-capitalized. At a hypothetically lower level the number of banks decrease while at higher level the number of banks rise. For example at 7.5% CAR, the number of under-capitalized commercial banks is 31%. At 25% CAR the banks rise to 86%. The higher the CAR the more likelihood bank would be distressed.

4.6.4 EFFECTS OF POLICY CHANGES ON THE DEGREE OF DISTRESS

The impact of the performance criteria options on the degree of distress Rd is given on Table 30 and graphically on figure 8, showing the different options represented coded from 1-17. It implies that should monetary authorities decide to increase the minimum LR from 40% to 45% decrease LAS from 10% to 7%, increase paid-up capital and CAR from ₦500 million to ₦1,000 million and 8% to 25% respectively. The level of commercial banks distress would rise significantly from the present uncomfortable level of 29.7% to over 60 %.

4.7 CONTRA-FACTUAL ANALYSIS

This method is sometimes called "with/without analysis" and cannot clearly establish causal effect, but can highligh the approximate period at which divergence from the norm occurred thereby allowing for more objective interference of the cause(s). Actual/against expected (statutory) outcome may be adopted, hence contra-factual analysis since we may or shall be dealing with expected rather than extrapolated outcomes, selecting two of the CAMEL ratios; CAR and LR for usage, with data from 1992 July to 1994 June being the time frame when bank to bank data

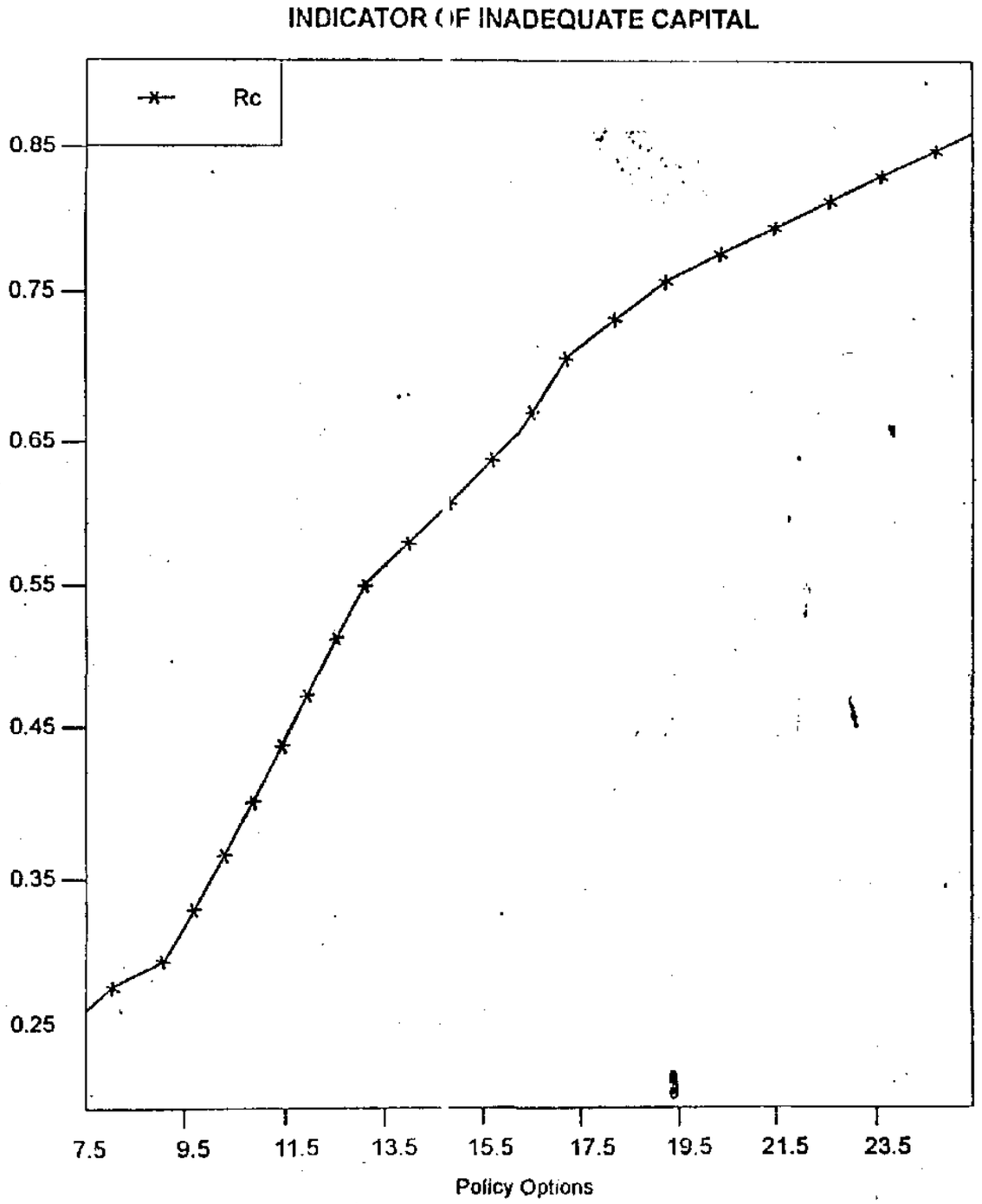
TABLE 30

IMPACT OF PERFORMANCE CRITERIA POLICY OPTIONS ON THE DEGREE OF DISTRESS USING THE COMMERCIAL BANKS DECEMBER, 1994 RETURNS AS A CASE STUDY

CODE	Policy Options					Degree of Distress
	LR (%)	LAS (%)	L-t-D (%)	MPC (N'm)	CAR (%)	
1	30	10	70	50	8	0.297
2	30	10	70	100	8	0.480
3	35	10	65	100	8	0.516
4	35	10	65	70	8	0.469
5	35	20	65	70	8	0.563
6	35	5	65	70	8	0.453
7.	40	10	60	80	14	0.609
8.	35	7	65	80	15	0.625
9.	35	7	65	80	25	0.625
10.	20	7	80	80	25	0.563
11.	22	5	78	50	7.5	0.266
12.	30	0	70	50	8	0.078
13.	40	10	60	50	8	0.606
14.	45	15	55	50	8	0.422
15.	45	15	55	80	8	0.563
16.	45	15	55	90	8	0.578
17.	45	15	55	100	8	0.594

LR = Liquidity Ratio
LAS = Liquid Asset Structure Ratio
L-t-D = Loans-to-Deposit Ratio
MPC = Minimum Paid-Up Capital
CAR = Capital Adequacy Ratio

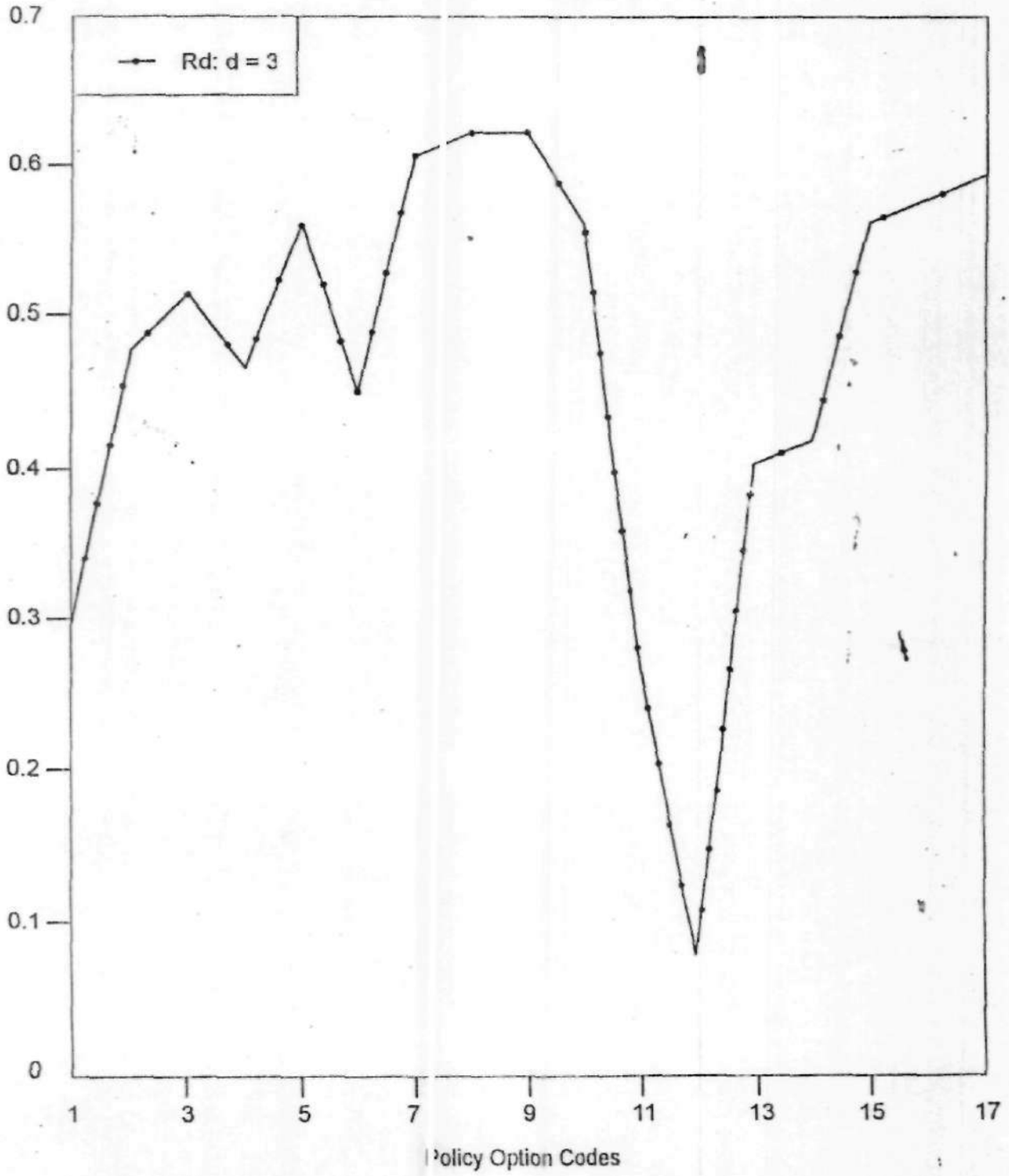
FIGURE 7



The sensitivity of the indicator Rc to the different policy options, using December, 1994 performance ratings of commercial bank .

FIGURE 8

INDICATOR OF DISTRESS, Rd, OF COMMERCIAL BANKS
DECEMBER 1994 TO DATE



The impact of the policy options on the degree of distress Rd of commercial banks, using December, 1994 data of commercial banks.

were available. To remove constraints and clearly bring out all salient trends that data are presented and analysed on monthly basis. This analysis will highlight the degree and period of compliance with statutory policy targets or lack of it by various categories of financial institutions, as represented in figure 9. Added to global analysis, for all commercial and merchant banks, a total of 12 banks were selected comprising an equal number of big banks, distressed, new generation and merchant banks in respect of 8% minimum CAR and 30% minimum LR so as to draw possible implication on the institution's health status.

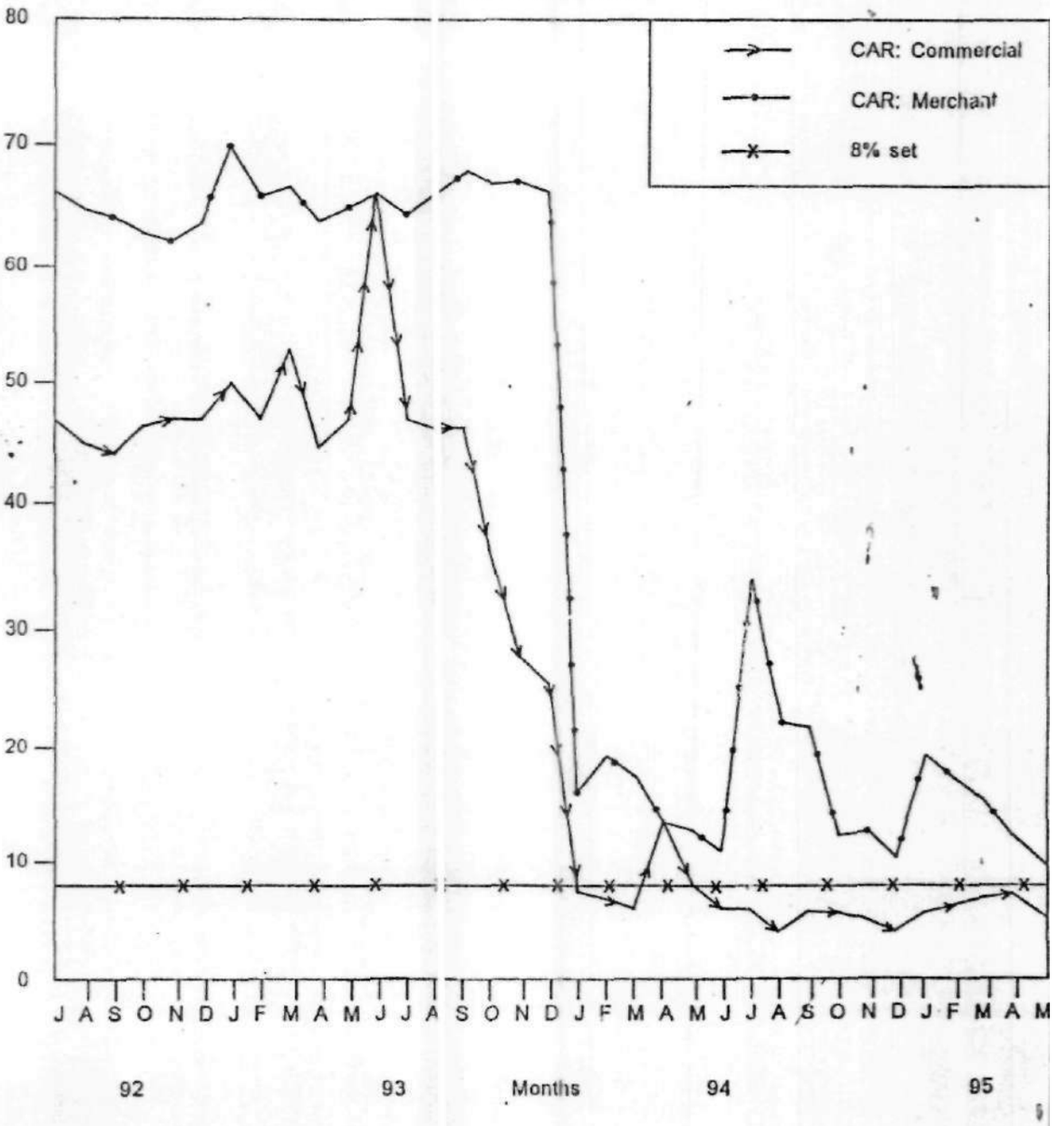
4.7.1 CAPITAL ADEQUACY RATIO (CAR)

The prescribed minimum of CAR is 8%. From 1992 to December 1993 the performance was remarkable, generally hovering around accepted minimum of 8% figure 10. The CAR trend for 3 big commercial banks are CO11, CO33 and CO32 showing consistency that they met CAR requirement. Between July 1992 and December 1993, CAR rating of 20% to 80% was maintained. From the end of 1993 to June 1994 they merely maintained minimum with positive deviation, figure 11. This infer that since January 1994, the big banks were merely surviving as far as CAR requirement is concern. The three merchant banks analysed MO70, MO75 and MO76 consistently comply with minimum CAR requiremen . Most of these banks have retained CAR far above the minimum with peak of 120% by MO70 and MO76 in October 1993, and January 1994 respectively - figure 12.

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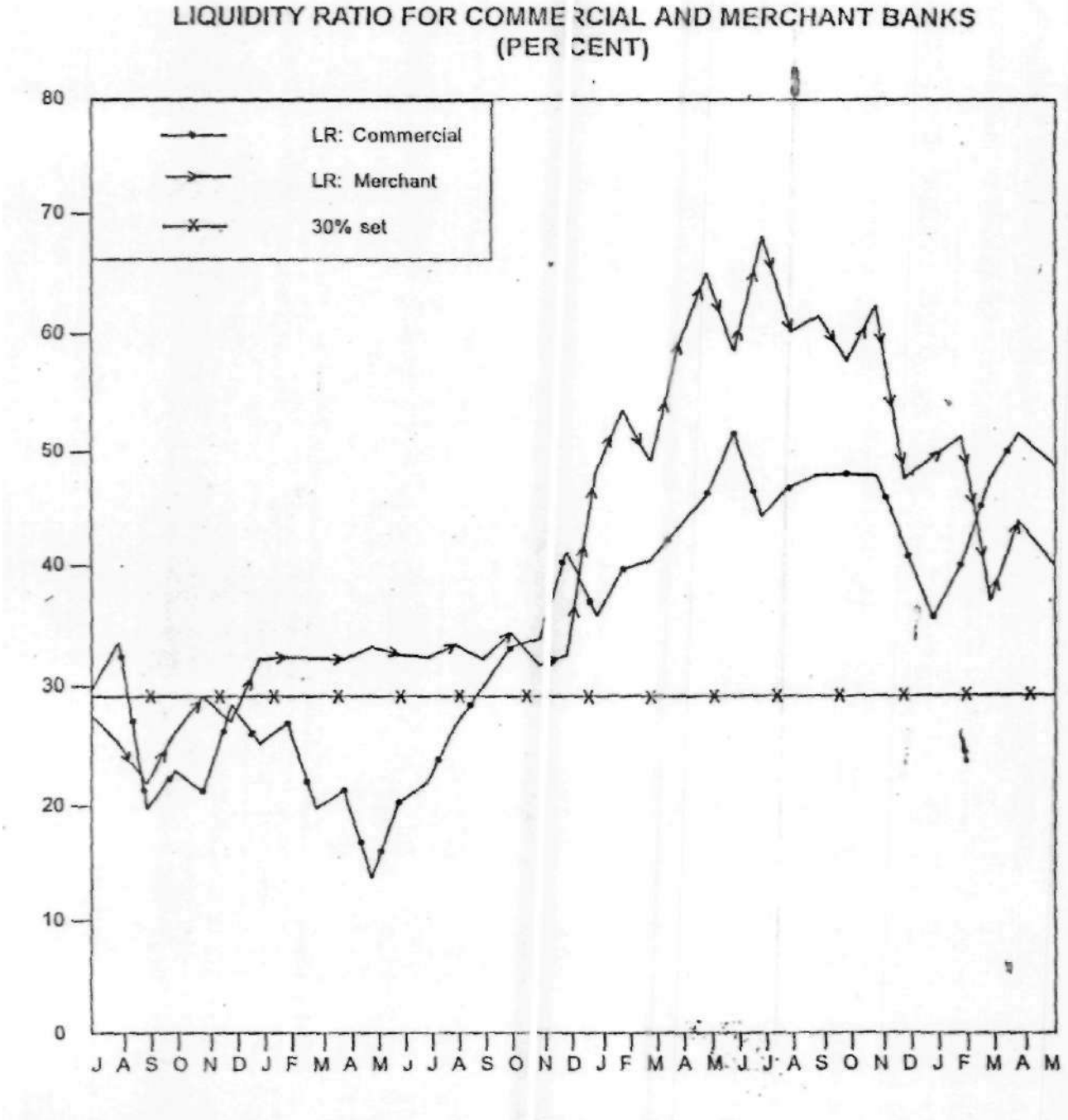
FIGURE 9

CAPITAL ADEQUACY RATIO FOR COMMERCIAL AND MERCHANT BANKS
(PER CENT)



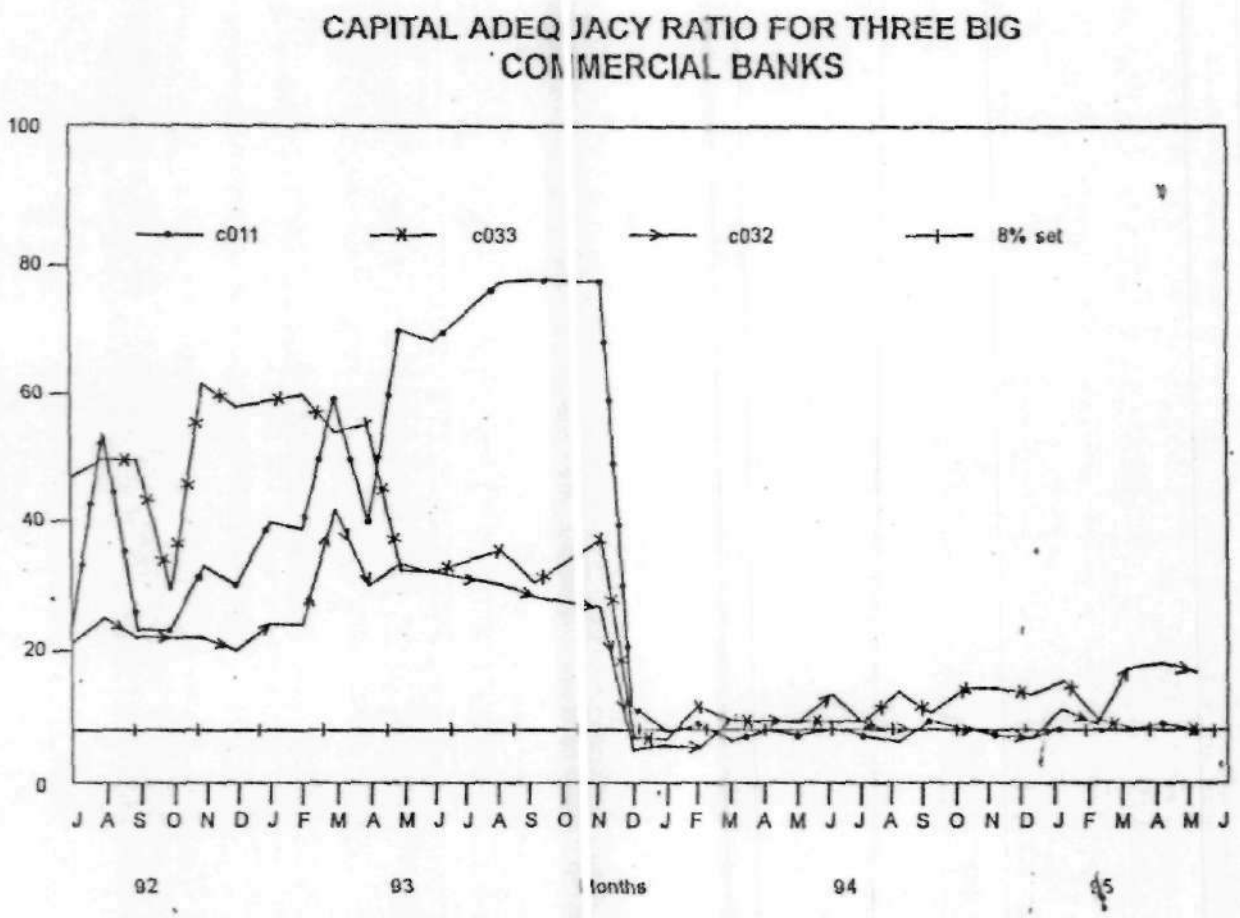
Capital Adequacy Ratio (CAR) for commercial and merchant banks from July, 1992 to May, 1995.

FIGURE 10



Liquidity Ratio (LR) for commercial and merchant banks from July, 1992 to May, 1995.

FIGURE 11



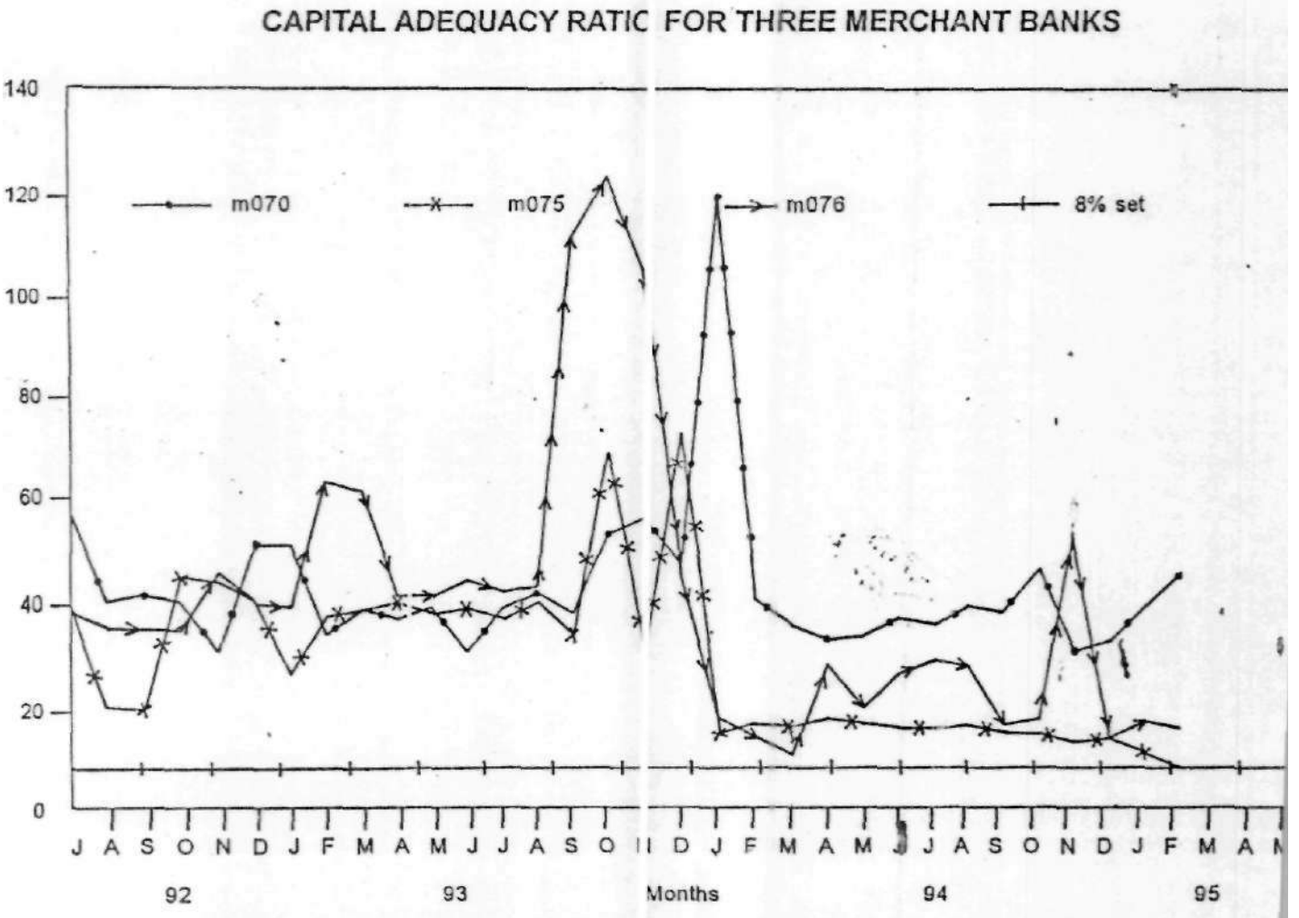
: Capital Adequacy Ratio (CAR) of selected big three commercial banks from July ,1992 to June, 1995.

Figure 13 shows the analyses of the new generation banks CO37, CO63 and CO54 with most of the period exceeding the prescribed minimum. These banks were more vibrant in pre than post 1993 period when gap between the actual and statutory CAR narrowed significantly. For CO54 a negative CAR was recorded between February and April 1994 and March and May 1995. The analyses for three distressed banks in figure 14, namely COO2, CO51 and MO69 is the reverse of the early ones presented above. Between July 1992 and November 1994 they were just able to maintain CAR minimum (except C002) all three recorded negative CAR December 1994. That is they failed to comply with CAR legal requirement indicating a state of terminal distress.

4.7.2 LIQUIDITY RATIO (LR)

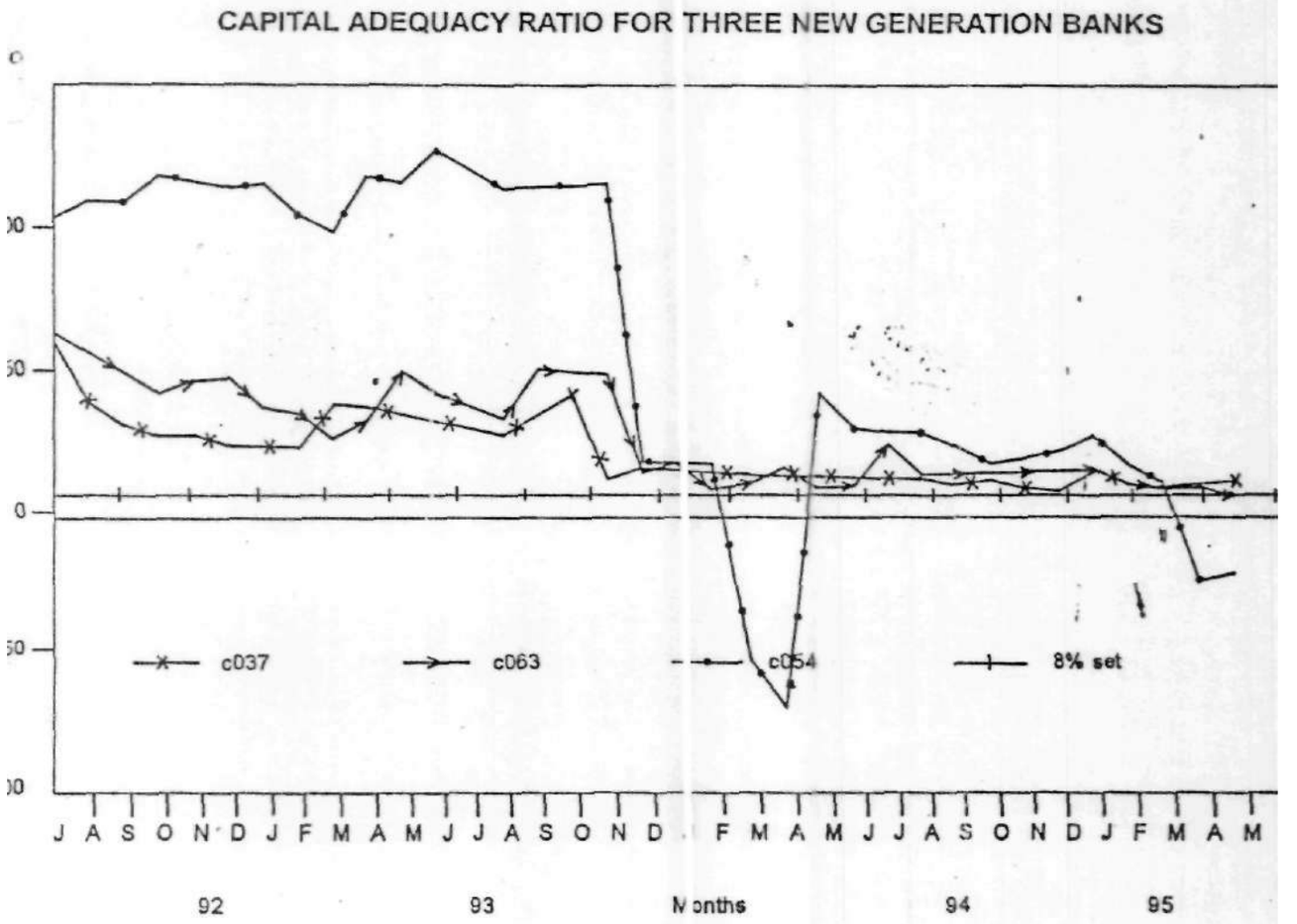
The current minimum LR (one of the most important CAMEL ratings) is 30%. From 1992 to last quarter of 1993 most banks performed poorly showing below the minimum. Improves performance from December 1993. Figure 15 shows except for few months and with regards to CO33, all the three maintain LR below minimum period coincided when prudential guidelines were being introduced. From early 1994 when the distress became strong the three banks comply and exceeded, to, the, minimum LR except in March 1994 and January 1995 when CO35 and CO33 maintain LR below 30%. The three merchant banks performed better from July 1992 to February 1995 showing LR above 30% except in November 1992 when MO76 recorded 18% which was lower than minimum figure 16.

FIGURE 12



Capital Adequacy Ratio (CARR) of three selected merchant banks from July, 1992 to June, 1995.

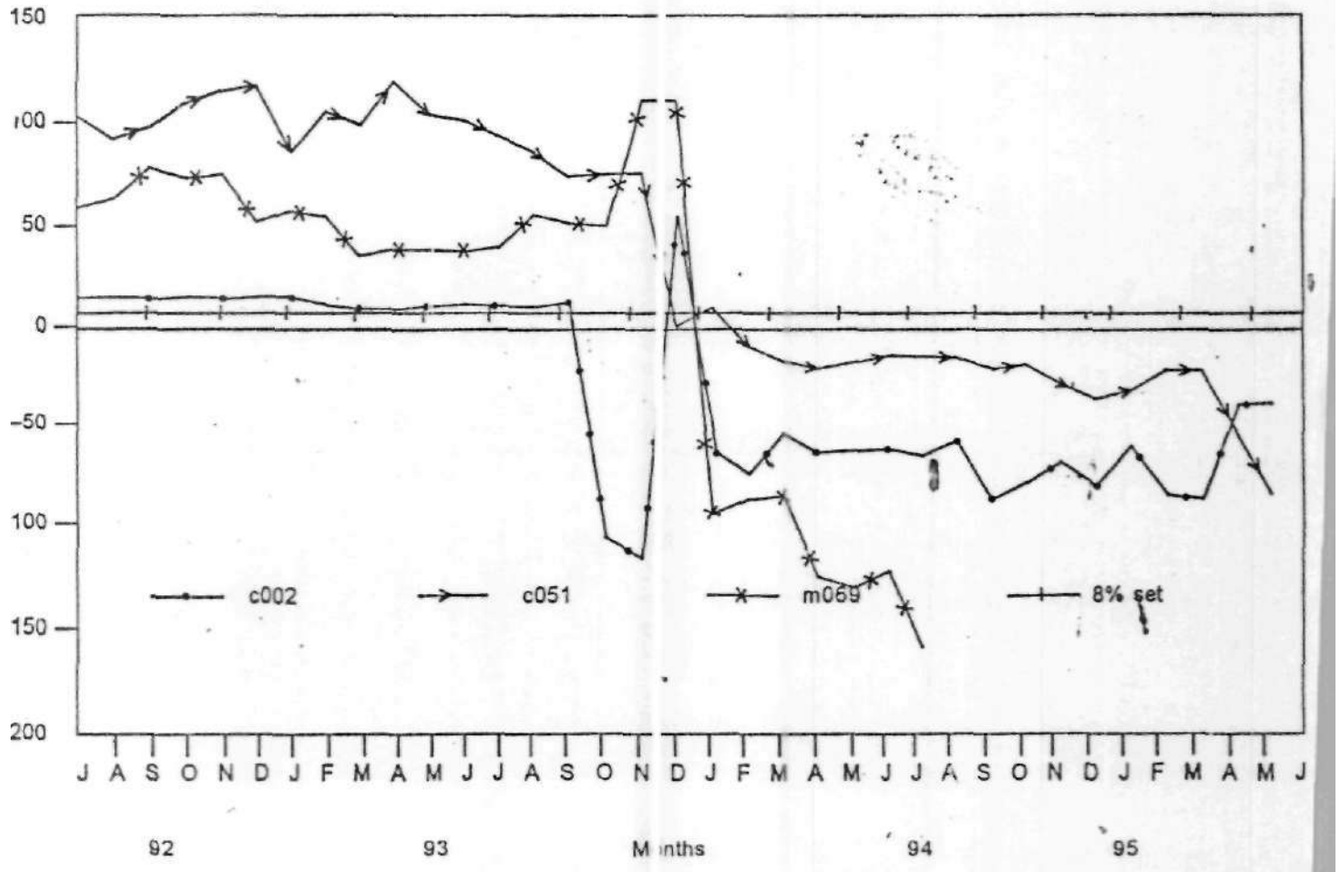
FIGURE 13



Capital Adequacy Ratio (CAR) of three selected new generation banks from July, 1992 to June, 1995.

FIGURE 14

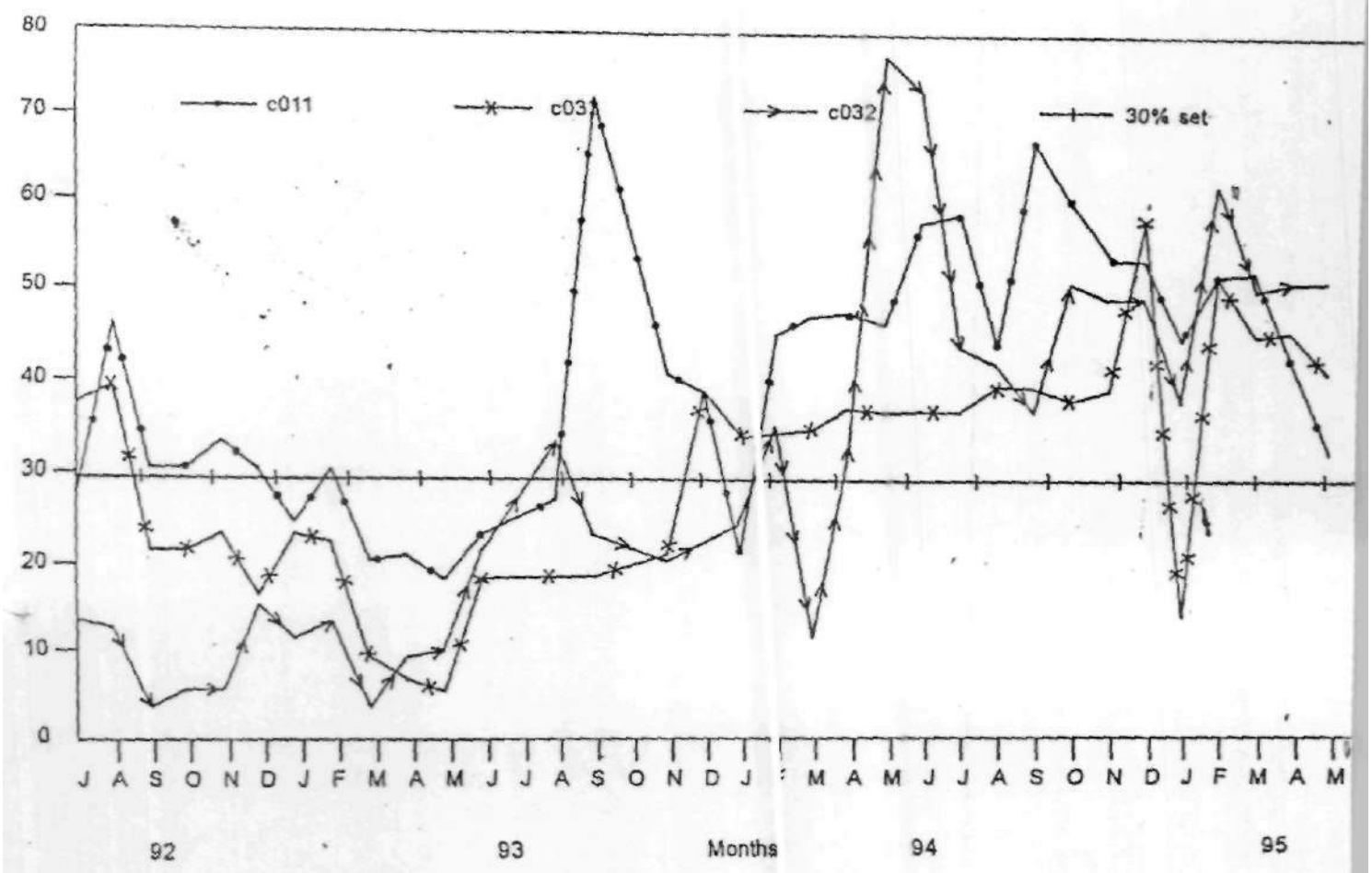
CAPITAL ADEQUACY RATIO FOR THREE DISTRESSED BANKS



Capital Adequacy Ratio (CAR) of three selected distressed banks from July, 1992 to June, 1995.

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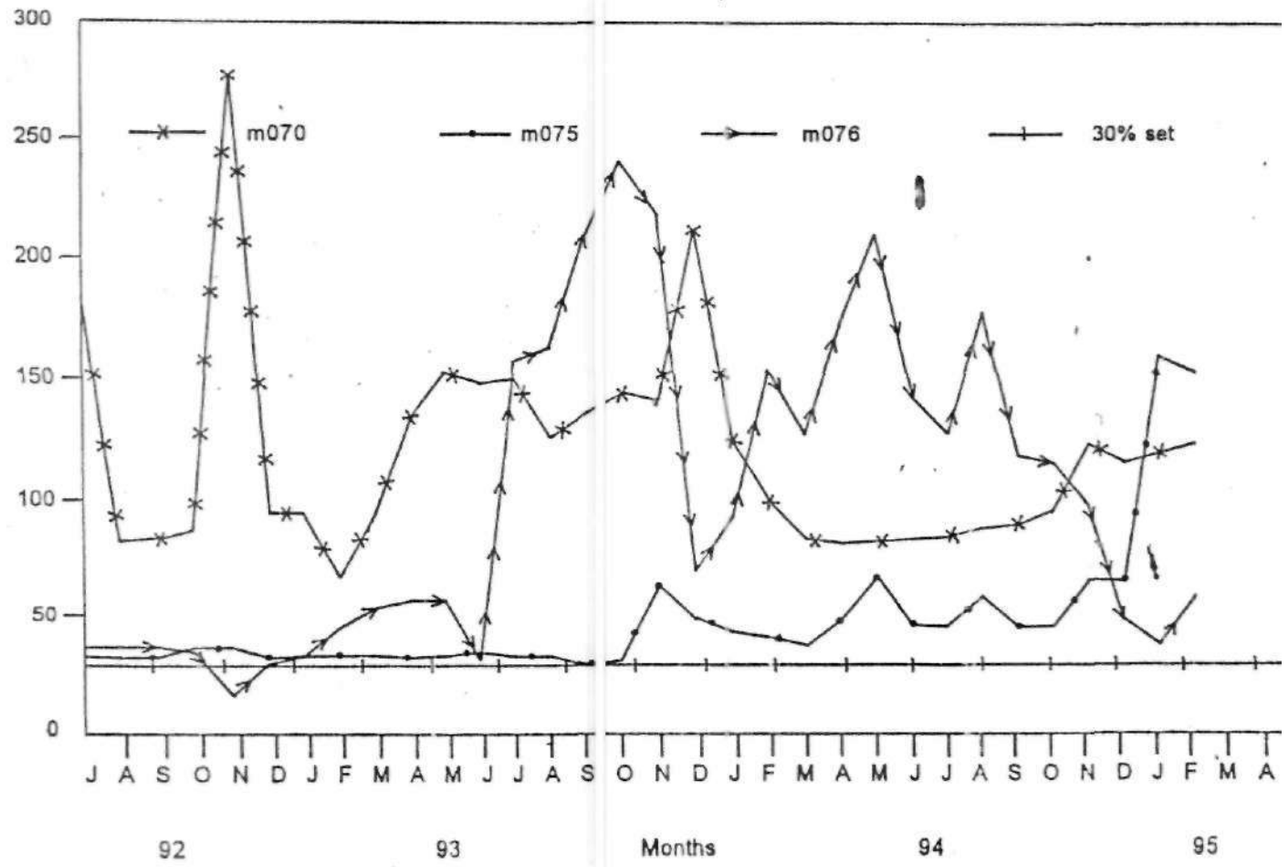
FIGURE 15



Liquidity Ratio (LR) of selected big three commercial banks from July, 1992 to June, 1995.

TABLE 16

LIQUIDITY RATIO FOR THREE MERCHANT BANKS



Liquidity Ratio (LR) of three selected merchant banks from July, 1992 to June, 1995.

The new generation banks performed relatively well on LR exceeding the minimum level by C037 and CO63 represented in figure 17. Between July 1992 and December 1994 CO51 complied while COO2 and MO69 were below minimum figure 18. From January to June 1994 co51 exceeded minimum to stabilize at about 150% in May 1994, due to changes in the regulatory framework regarding CBN overdraft facility. A persistent low LR indicates worsening distress condition. Conclusions drawn from this are that;

i) All healthy banks were able to maintain minimum CAR/LR or exceed the prescribed minimum during the period.

ii) All distressed banks were unable to meet the specified minimum CAR/LR.

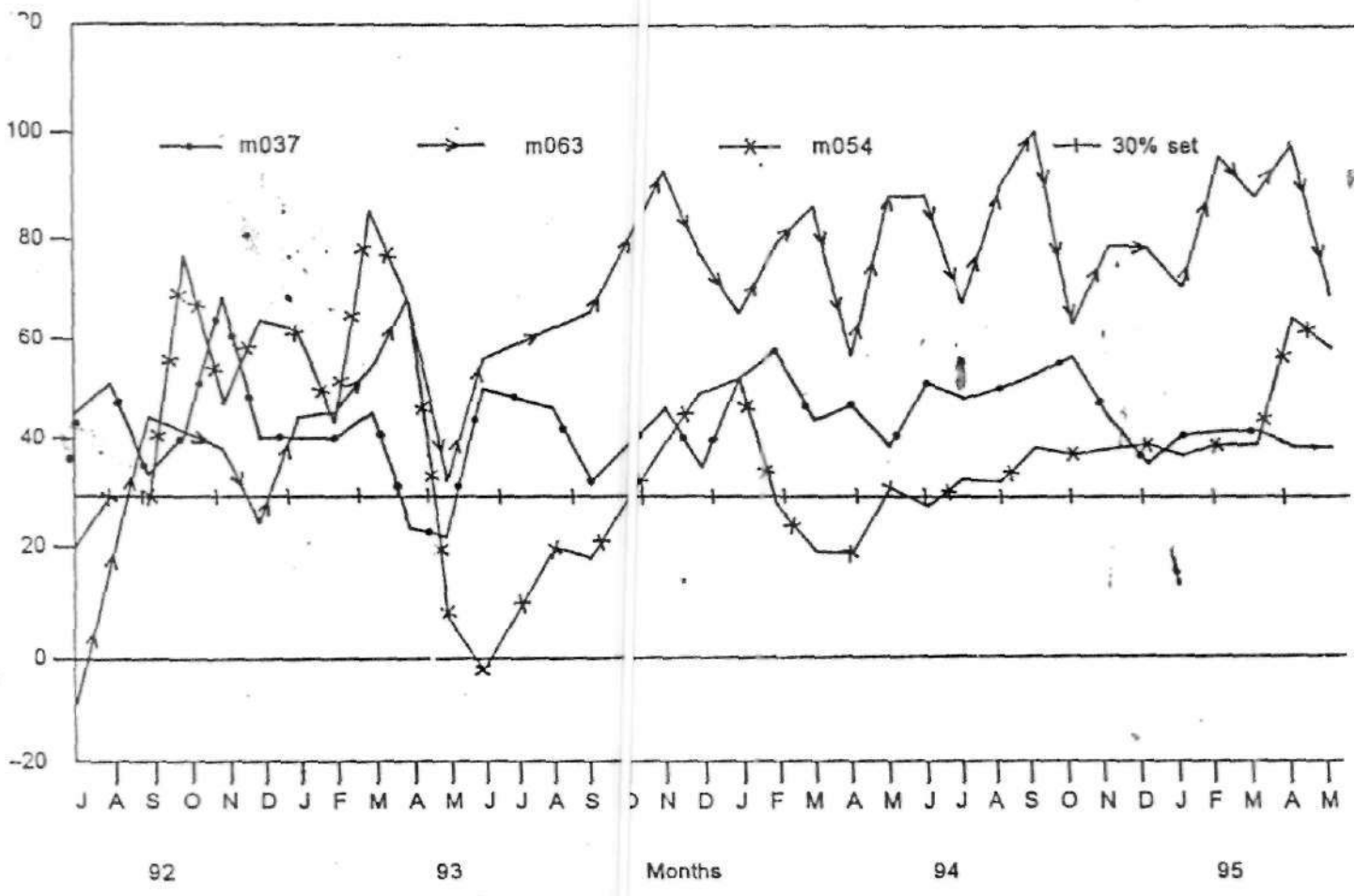
iii) From the analysis it is clear that there is likelihood for bank to go distress if it is unable to meet minimum in one or more of CAMEL ratings.

iv) The further away positively the actual CAR/LR for a bank the greater the likelihood that the institution would be healthy.

4.7.3 SIGNIFICANCE TEST TO THE ANALYSIS OF LIQUIDITY RATIOS

A useful extension of this analysis is to try to find an answer to the question of how large the deviation of the observed liquidity ratio should be from the prescribed minimum to attract concern or further necessary action by the monetary authorities. Although the prescription of a uniform LR for similar categories of

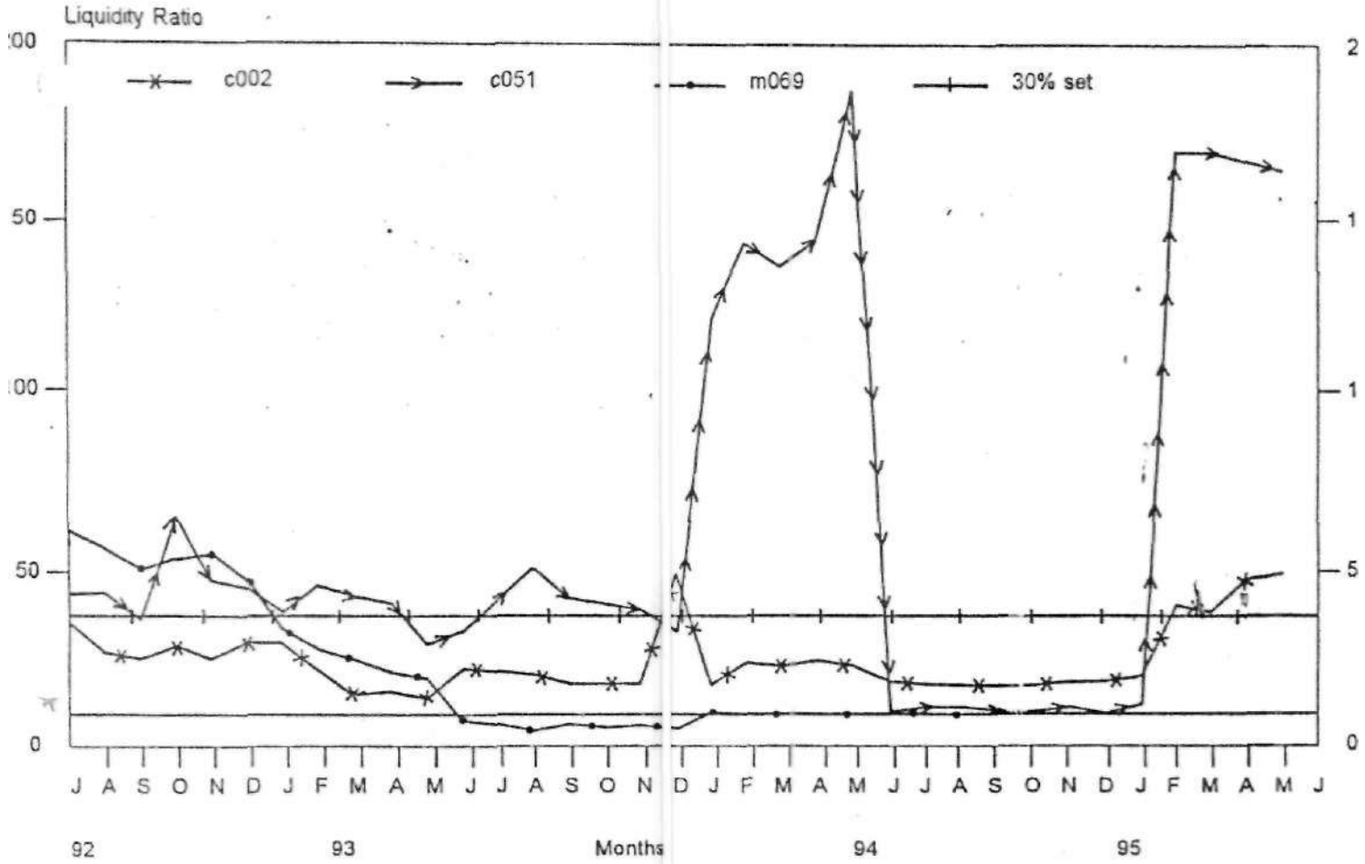
FIGURE 17



Liquidity Ratio (LR) of three selected new generation banks from July, 1992 to June, 1995.

FIGURE 18

LIQUIDITY RATIO OF THREE DISTRESSED BANKS



Liquidity Ratio (LR) of three selected distressed banks from July, 1992 to June, 1995

financial institutions, its major weakness is that it does not take cognisance of institutional or structural differences among broadly similar institutions. In addition to the usual descriptive statement on the LR, an inferential statement on the significance of non-compliance with policy target is important.

Dogowa 1994 attempted to provide a solution by measuring and analysing the index of non-compliance with the set target. If the index is denoted by L_t it would be statistically defined as:

$$L_T = \text{Log}_e \left(\frac{r_t}{PL}\right) \quad \ldots\ldots\ldots\ldots 14)$$

where r_t = the computed ratio of the bank for the t^{th} month of interest and PL = the prescribed ratio set in the policy guideline. If $L_t = 0$, it indicates perfect compliance with the policy target. If $L_t < 0$ it indicates inadequate liquidity, and where $L_t > 0$ there is excess liquidity.

It is possible to test whether such departure from adequacy is statistically significant enough to have adverse effects on the institution and the economy at large and to warrant further follow-up action on the part of the monetary/supervisory authorities. This has been demonstrated by (Dogowa, op. cit.) that under the null hypothesis of compliance (H_o) the index L_t is normally distributed with mean zero and variance 0.11406 and 0.0571 in the case of merchant and commercial banks respectively. The significance of the index L_t therefore can be ascertained by using the test statistics S_t defined as:

$$S_t = \frac{L_t}{\sqrt{\text{Var}(L_t)}}$$

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which under the null hypothesis (Ho) has a standard normal distribution. The analyst

should then be able to decide on the va ue of the significance level (d) so that

$$\acute{\alpha} = P_r \text{ (Abs } (S_t) > Z \acute{\alpha}/Z$$

where Zά/Z is the upper 100 (1-ά/:) percentage point of the standard normal distribution. We then reject (H_o) when ver the absolute value of S_t is greater than or equal to the critical value, Zά/z thus for ά = 10%, Zά/z = 1.645 and for ά = 5% Zά/z = 1.96.

Table 31 exhibit the significanc test of the industry LR covering the periods July 1992 to May 1995. From 1992 to f rst quarter 1994 the merchant banking industry was not significantly different from 30 % minimum prescribed. From April 1994 to November 1994 merchant banks were e: cessively liquid which is attributed statistically to the increased holdings of cash-relate items and positive balances with the CBN as well as the increased investments in go ernment securities.

Commercial banks' LR on the o her hand from July 1992 to August 1993 was below minimum, with insignificant devi ations except for May 1993 when the deviation was highly significant even at the 1% si nificance level. This statistical significance of the temporary illiquidity in May 1993 vas by over ₦2.7 billion decrease in the bank balances with CBN. But on the aggre ate, commercial banks LR positions improved from May 1994 to November 1994 and March to April 1995, largely attributed to the increased positive balances of these ba ks with CBN.

TABLE 31

SIGNIFICANCE TEST OF THE INDUSTRY: LIQUIDITY RATIO OF COMMEI CIAL AND MERCHANT BANKS

Period	Commerci l				Merchaut			
	LR	Lt	St	Remark[1]	LR	Lt	St	Remark[1]
1992								
July	30.2	0.007	0.028	0	28.5	(0.051)	(0.137)	0
August	34.3	0.134	0.561	0	26.0	(0.143)	(0.382)	0
September	20.3	(0.391)	(1.635)	0	22.4	(0.292)	(0.779)	0
October	23.7	(0.236)	(0.986)	0	27.0	(0.105)	(0.281)	0
November	21.8	(0.319)	(1.336)	0	29.9	(0.003)	(0.009)	0
December	29.1	(0.030)	(0.127)	0	27.8	(0.076)	(0.203)	0
1993								
January	25.9	(0.147)	(0.615)	0	33.0	0.095	0.254	0
February	27.7	(0.080)	(0.334)	0	33.2	0.101	0.270	0
March	20.3	(0.391)	(1.635)	0	33.1	0.098	0.262	0
April	21.9	(0.315)	(1.317)	0	33.0	0.095	0.254	0
May	14.0	(0.762)	(3.189)	1	34.0	0.125	0.334	0
June	20.9	(0.361)	(1.513)	0	33.4	0.107	0.286	0
July	22.6	(0.283)	(1.185)	0	33.1	0.098	0.262	0
August	27.4	(0.091)	(0.379)	0	34.2	0.131	0.349	0
September	30.3	0.010	0.042	0	33.0	0.095	0.254	0
October	34.0	0.125	0.524	0	35.2	0.160	0.426	0
November	34.7	0.146	0.609	0	32.4	0.077	0.205	0
December	42.2	0.341	1.428	0	33.3	0.104	0.278	0
1994								
January	36.5	0.196	0.821	0	49.2	0.495	1.319	0
February	40.8	0.307	1.287	0	54.9	0.604	1.612	0
March	41.6	0.327	1.368	0	50.1	0.513	1.368	0
April	44.4	0.392	1.641	0	60.4	0.700	1.866	1
May	47.2	0.453	1.897	1	66.5	0.796	2.123	1
June	52.9	0.567	2.374	1	59.8	0.690	1.840	1
July	45.4	0.414	1.734	1	69.8	0.844	2.252	1
August	48.1	0.472	1.976	1	61.6	0.719	1.919	1
September	49.2	0.495	2.070	1	62.9	0.740	1.974	1
October	49.3	0.497	2.079	1	59.1	0.678	1.808	1
November	49.2	0.495	2.070	1	63.8	0.755	2.012	1
December	42.7	0.353	1.477	0	48.9	0.489	1.303	0
1995								
January	36.6	0.199	0.832	0	50.7	0.525	1.399	0
February	41.2	0.317	1.328	0	52.5	0.560	1.492	0
March	49.0	0.491	2.053	1	37.9	0.234	0.623	0
April	52.8	0.565	2.366	1	45.1	0.408	1.087	0
May	50.6	0.523	2.188	1	41.8	0.332	0.885	0
St. Dev.	0.2390				0.3750			

[1] 0 = Deviation from Policy Target is statistica' y not significant at the 10 percent level.
1 = Deviation from Policy Target is statistica fy significant at the 10 percent level.

4.8 COMPOSITE BANK RATING MEASURE

The analysis of secondary data has shown that the individual measure of bank distress are inconclusive indicators of or about the health of a bank. The basis and superiority of the composite bank rating measure over a single rating index are anchored on the fact that the former takes into account a wider range of factors which enhances or retards a banks' performance in determining the state of health, of the bank. The literature review identified two composite bank rating systems one developed by CBN/NDIC joint committee and the other by Augusto and Co, both covering the CAMEL variables and market share in Augusto/Co in addition.

It should be noted that the essence of this section is to review the weighting and coverage of the two rating methods and then propose a composite measure for use by CBN/NDIC. Both ratings used CAMEL rating measures but in addition Augusto and Co rating index includes market share (which measure total assets, total loans (net) deposits and profit), all these shown on tables 2 and 4. The weighting of CBN/NDIC is theoretically diversified, to accommodate market share with the following modifications.

- The contribution of CAR to the proposed index was reduced from 25 to 15 thus assigning 10% weight to market share, measured by banks total deposit to total system deposit.

Table 32 shows the modified rating scheme and the computational framework. Table 33 provides the data entry format for such computations. This rating method was applied to 10 sample banks made up of 3 relatively big 3 new generations, 3 merchant banks and 1 distressed bank for which data was available.

The results are on Table 34 based on 1993 data, showing that the bank coded L1 had composite rating score 14.3% and accordingly classified by the index as seriously distressed, and was liquidated in 1994. Of the remaining 9 banks CN2, M1 and M2 were correctly classified as sound, and others satisfactory. This confirms that composite bank rating index could be used as an off-site early warning system to assist the regulatory/supervisory authorities in the identification of likely banks for closer supervision.

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TABLE 32

COMPOSITE RATING INDEX (CRI) COMPUTATION FORMAT

	C I
CAPITAL ADEQUACY	
(a) Average Capital to Risk Weighted Ratio	@ IF (B:B4 < = 0,0, (@ IF (B:B4 > = 16, 100 + B B4/0 16)))
(b) Average Adjusted Capital Ratio	@ IF (B:B5 < = 0,0 (@ IF (B:B5 > = 20, 100, + B B5/0 2)))
(c) Average Capital Growth Rate	@ IF (B:B6 < = 0,0, (@ IF (B:B6 > = 2,100, + B B6/0 02)))
(d) Capital Adequacy Share of Composite Index (Max. 15%)	(3*B4 + B5 + B5)/500* 15
ASSET QUALITY	
(a) Average Non-Perf. Risk Assets to Aver. Cap. & Reserves	@ IF (B B10 > = 20,0 +100 - B B10/0 2)
(b) Aver. Reserve for Losses to Non-Perf. R. Asset	@ IF (B:B11 > = 80, 100, B:B11/0 8)
(c) Aver. Non-Perf. Risk Assets to Average Cap. & Reserves	@ IF (B B12 < = 0,0,(@ IF (B:B12 > 100 0, 100 - B B12)))
(d) Asset Quality Share of Composite Index (Max. 25%)	(3 * B10 + B11 + B12/500* 25
MANAGEMENT	
CAELM 1/	@ SUM (B7, B13, B25, B31, B35)* 100/85
COMPLIANCE	@ SUM (B:B18)/2
Management Share Index (Max. 15%)	(B 6 + 2* B17)/300* 15
EARNINGS	
(a) Profit After Tax to Average Assets	@ IF (B B21 < = 0,0,(@ IF (B B21 > =2,100 + B B21/0 02)))
(b) Total Expenses to Total Income	@ IF (B:B22 > = 100,0,(@ IF (B B22 < = 80, 100, + (100 - B B22)/0 2)))
(c) Net Interest income to Average Earning Assets	@ IF (B B23 < = 0,0, (@ IF (B B23 > = 12,100, + B B23/0 12)))
(d) Interest Exp. to Average Earning Assets	@ IF (B B24 > = 24,0 (@ IF (B B24 < = 0,100, 100 - B B24/0 24)))
(e) Earnings Share of Composite Index (Max. 20%)	@ SUM (B21: B24)/400* 20
LIQUIDITY	
(a) Average Liquidity Ratio	@ IF (B B28 < = 0,0, (@ IF (B B28 > = 60,100, + B B28 0 6)))
(b) Average Credit to Deposit Ratio	@ IF (B B29 < = 70,0, (70 - B B29)/0 7)
(c) Volatile Liability Depcndency Ratio	
(d) Liquidity Share of the Composite Index (Max. 15%)	(2* B28 + B29)/300* 15
MARKET SHARE	
Total Deposit-to-Industry Deposit Ratio	@ SUM (B:B34)
Market Share of Composite Index (Max. 10%)	@ SUM (B:34)/100* 10
COMPOSITE SCORE	@ SUM (B7, B13, B18, B25, B31, B35)
BANK RATING BASED ON C.R. INDEX	@ I F (B38 < 41, "DISTRESSED",(@ IF (B38 < 56," MARGINALLY DISTRESSED"
	@ I F (B38 < 71, "SATISFACTORY", (@ IF (B38 < 86, "SOUND",
	@ I F (B38 < = 100, "VERY SOUND", (@NA))))))))

TABLE 33

DATA ENTRY FORMAT FOR CRI

	C1	C2	C3	CN1	CN2	CN3	M1	M2	M3	L
CAPITAL ADEQUACY										
(a) Average Capital to Risk Weighted Ratio	11.8	17.9	26.7	18	16.7	16.7	76.5	33.5	51.1	-151.1
(b) Average Adjusted Capital Ratio	100	71.2	86.4	100	100	100	100	100	100	
(c) Average Capital Growth Rate	35.5	117	87.7	51.8	111.5	122.1	155.5	93.9	49.9	-290.7
ASSET QUALITY										
(a) Average Non-Perf. Risk Assets to Average Capital & Reserves	45.7	47.6	20.7	15.4	8.9	11.5	13.8		18.8	90.2
(b) Average Reserve for Losses to Non-Perf. Risk Assets	43	47.9	18.9	8.4	8.8	11.2	26	1	18.1	81.3
(c) Average Non-Perf. Risk Assets to Ave. Capital and Reserves	273.8	341.2	51.9	58.8	38.2	28.4	8.8		16.1	-112.1
MANAGEMENT										
SCAMEL [1]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
COMPLIANCE	400	400	400	400	400	400	400	400	400	100
Compliance Share (Max. 200%)	200	200	200	200	200	200	200	200	200	50
EARNINGS										
(a) Profit After Tax to Average Assets	2.2	2.8	5.3	2	10	6.7	18.9	5.7	6	-91.7
(b) Total Expenses to Total Income	49.4	51.8	31.7	25.5	21	-21.9	11.5	6.1	14.2	-48.1
(c) Net Interest Income to Average Earning Assets	56.9	62.2	63.3	14	44.5	52.1	61.8	14.1	34.7	-219.3
(d) Interest Expenses to Average Earning Assets	20.2	15	-18.3	-11.3	-19.9	-23.6	-31.9	-12	-21.3	210
LIQUIDITY										
(a) Average Liquidity Ratio	57.9	39.7	61.3	56.1	76.9	51.4	127.7	87	88.7	1
(b) Average Credit to Deposit Ratio	26.4	24.7	23.5	41.5	35.3	35.4	20.7	16.3	18.3	56.7
MARKET SHARE										
Total Deposits-to-Industry Deposit Ratio	5.5	12.2	3.4	0.8	2.6	1.8	0.8	0.7	0.4	0
DECISION TREE FOR COMPLIANCE										
COMPLIANCE WITH:	4	4	4	4	4	4	4	4	4	1
(1) CAR (Min. 8%)	1	1	1	1	1	1	1	1	1	0
(2) Adj. Capital Ratio (Min. 1:10 or 9.091%)	1	1	1	1	1	1	1	1	1	0
(3) Liquidity Ratio (Min. 30%)	1	1	1	1	1	1	1	1	1	0
(4) Loans-to-Deposit Ratio (Max. 70%)	1	1	1	1	1	1	1	1	1	1

1 SCAMEL = Share of CAMEL in Composite Rating Index (derived)

TABLE 34

COMPOSITE RATING INDEX FOR 12 SELECTED BANKS

	C1	C2	C3	CN1	CN2	CN3	M1	M2	M2	L1
CAPITAL ADEQUACY										
(a) Average Capital to Risk Weighted Ratio	73.8	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	0.0
(b) Average Adjusted Capital Ratio	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	0.0
(c) Average Capital Growth Rate	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	0.0
(d) Capital Adequacy Share of Composite Index (Max. 15%)	12.6	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	0.0
ASSET QUALITY										
(a) Average Non-Perf. Risk Assets to Average Capital & Reserves	0.0	0.0	0.0	23.0	55.5	42.5	31.0	100.0	6.0	0.0
(b) Average Reserve for Loss to Non-Perf. Risk Assets	53.8	59.9	23.6	10.5	11.0	14.0	32.5	1.3	22.6	100.0
(c) Average Non-Perf. Risk Assets to Average Capital & Reserves	0.0	0.0	48.1	41.2	61.8	71.6	91.2	0.0	83.9	0.0
(d) Asset Quality Share of Composite Index (Max. 25%)	2.7	3.0	3.6	6.0	12.0	10.7	10.8	15.1	6.2	5.0
MANAGEMENT										
SCAMEL	52.3	54.0	61.5	61.8	70.2	66.9	69.9	75.3	64.7	13.1
COMPLIANCE	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	25.0
Management Share Index (Max. 15%)	12.6	12.7	13.1	13.1	13.5	13.3	13.5	13.8	13.2	3.2
EARNINGS										
(a) Profit After Tax to Average Assets	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	0.0
(b) Total Expenses to Total Income	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
(c) Net Interest Income to Average Earning Assets	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	0.0
(d) Interest Expenses to Average Earning Assets	15.8	37.5	100.0	100.0	100.0	100.0	100.0	100.0	100.0	0.0
(e) Earnings Share of Composite Index (Max. 20%)	15.8	16.9	20.0	20.0	20.0	20.0	20.0	20.0	20.0	5.0
LIQUIDITY										
(a) Average Liquidity Ratio	96.5	66.2	100.0	93.5	100.0	85.7	100.0	100.0	100.0	1.7
(b) Aver. Credit to Deposit Ratio	62.3	64.7	66.4	40.7	49.6	49.4	70.4	76.7	73.9	19.0
(c) Volatile Liability Dependency Ratio	–	–	–	–	–	–	–	–	–	–
(d) Liquidity Share of Composite Index (Max. 15%)	12.8	9.9	13.3	11.4	12.5	11.0	13.5	13.8	13.7	1.1
MARKET SHARE										
Total Deposit-to-Industry Deposit Ratio	5.5	12.2	3.4	0.8	2.6	1.8	0.8	0.7	0.4	0.0
Market share of Composite Index (Max. 10%)	0.6	1.2	0.3	0.1	0.3	0.2	0.1	0.1	0.0	0.0
COMPOSITE SCORE	57.0	58.6	65.3	65.6	73.2	70.2	72.9	77.7	68.2	14.3
BANK RATING BASED ON C.R. INDEX	SATISFACTORY	SATISFACTORY	ATISFACTORY	SATISFACTORY	SOUND	SATISFACTORY	SOUND	SOUND	SATISFACTORY	DISTRESSED

observed that there is generally a dearth of relevant literature (due to the time lag of this thesis and the capital that may be involved) on the subject also particularly with regard to the definition measurement and causes (the second set of constraints) of distress. The constraints or deficiency became more glaring in the case of Nigeria where few available studies don't provide any comprehensive and indepth analysis on the causes and nature past and or present crisis in the industry. And this explains hitherto the scanty package in terms of trying to develop a workable definition of distress as well as framework for measuring, resolving/or rehabilitate and establishing strongly its causes in Nigeria.

5.2 METHOD OF STUDY AND HIGHLIGHTS OF FINDINGS

From the printed literatures collected two broad analytical techniques were found in the most cases to be adopted to or in the investigation of the nature, extent and the causes of the distress in the financial industry, that is:

i) Nation-wide survey of all major actors in the financial industry.

ii) An examination of the issues using purely statistical techniques based on the secondary data including the familiar CAMEL ratings.

The Survey; involved over 2,727 respondents made up of 906 financial institutions, 581 corporate customers, 1,231 individual customers plus all the regulatory/supervisory agencies in the industry. The data generated were analysed using simple descriptive statistics (frequency analysis) the result were further subjected to a more sophisticated statistical analysis using log-linear technique to corroborate the results of the frequency analysis. The survey confirmed distress but generalized that distress could not be described as systematic since a good number of banks remain

healthy to which many customers "flown for safety". On the whole, 58.5% of the institution are healthy, 28.6% believed they were mildly distressed, 10.9% confirmed being severely distressed. All the major factors causing distress namely institutional, economic, political etc. contributed in varying degrees to the distress rating institutional factor highest, (in terms of poor management, credit policy, ineffective machinery for debt recovery, insider dealings, abuses, fraud and poor credit administration) and socialisation are of significant positions to distress.

Economically, factors like economic recession, inflationary pressures and frequent changes in monetary policies could not be diverted. Respondents as observed don't attach strong weight to the use of stabilization securities as a factor to cause distress. Political factors include long transition programme, annulment of June 12 Presidential election and resultant political crisis leading to panic withdrawals of deposits. These factors were not given high prominence.

On regulatory/supervisory authorities, CBN has not been firm enough and NDIC a bad insurer providing insufficient cover of ₦50,000 maximum compensation. This the regulatory/supervisory institutions agreed to with financial institutions, dividing their distress resolution into short and long terms.

5.3 FINDINGS BASED ON THE USE OF STATISTICAL TECHNIQUES

This approach also confirmed the existence, extent, causes and or nature of distress in the Nigerian financial industry, specifically concentrating on the existence and degree of distress in banks. Managerial, structural, operational, regulatory and political factors were also in observance to be the causes of distress.

The logit model indicates that increasing the statutory capital adequacy ratio

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(CAR) loan-to-deposit ratio (LDR) fo commercial banks increases odds of being distressed. Also government owned b nks had higher probability of being distress, while high liquidity ratio (LR), loan quality ratio (LQR) reduces odds of being distressed. This model provides five indicators of distress namely, degree of distress, illiquidity, capital deficiency, specifi d liquid assets and overtrading based on performance criteria ratings. In merch nt banks the degree of distress ranges between 18.5% to 39% between August 1993 to anuary 1994 while commercial banks' between 12.1% and 25% of the same period.

Contra-factual analysis revealed that all sampled healthy banks maintained or exceed the accepted specified minimum equirements for both CAR & LR for the period July 1992 to June 1995. All distresse l banks were unable to meet the minimum in respect of CAR and LR shown from the analysis that the greater or higher the actual CAR and LR the greater the likelihood that the institution would be healthy.

Significance test of the LR for both merchant and commercial banks for the period July 1992 to May 1995 indicates that from 1992 to first quarter of 1994, the liquidity ratio for merchant banking ind stry was not significantly different from 30%. But from April to November 1994 mer hant banks on the aggregate were excessively liquid due to cash holdings expansion o balances with CBN and increased investments in government securities. those of com mercial banks were not significant except for May 1993 when negative deviation wa highly significant even at 1% level related to cash holdings by over ₦2.7 billion dec ease in their balances wit CBN.

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5.4 SUMMARY

In this thesis attempt have been made to reiterate the centrality of the financial (banking) industry to the development process of any economy and the nation at large and drew attention of the readers and or users to the implication of its being riddled with the bank failures or distress. Experiences of countries that have gone through similar distress are recounted. Major causes of distress are also mentioned and or X-ray to enable one know the genesis of this cankerworm that has afflicted our financial industry.

Negative impacts and or implications of bank failures including their disastrous effects if the failures are not well managed in terms of loss of public confidence, negative effect on the banking culture, democratization of the economy, lower investment and dampened economic activities, crowding out of the real sector from the credit market, capital flight and lost faith in the Nigerian financial industry by the international community among others.

In view of the recent increase in the distress rate of banks attention was focussed to identify problem banks and predict failures with sufficient lead time for regulatory and supervisory authorities to institute remedial action through measures like logit-regression to measure individual financial institution and to assign each a probability of failure. Widely used financial ratios were employed to measure operational efficiency and predict the potential problem banks.

Also the study noted that bank failure and or distress may retard the economy's rate of capital formation and ultimately the pace of economic growth, lead to increase in the cost of intervention by the regulatory and supervisory authorities, lead to inefficient payment mechanism, slow down the pace of economic transformation

process, constitute avoidable burden on the budget reduce the total quality of bank credits and consequently affect aggregate economic performance adversely.

5.5 CONCLUSION

With regard to this thesis it is concluded that based on the Nigeria style of economy, and the level and urgency of this research work, useful and credible literature are found. I appreciate the various institutions that put together these nice literature for review and adoption.

There has been mixed feelings over success achieved in rehabilitating ailing banks in Nigeria. One major flaw in our rehabilitation effort has been that the dose administered has not been far-reaching enough to solve the funds mental problems of the affected banks. Even when government gives out loan, is concluded, to the ailing banks, the loans in most cases are not enough to address the problems of the banks. Worse of when the management of the bank being assisted is left iin the hands of the managers that mismanagement the bank in the first place.

Conclusively, between 1986 and 1994 as observed and as a result of financial deregulation, the performance of licensed banks in the system has been sweet because new players, in what used to be a highly protected and regulated industry brought, dynamism, challenges, competition and growth to the sector. The four aspects however is that licensed banks have lost some of the confidence enjoyed after the first failure episode of early 50s and since the establishment of the CBN in 1959. Also, the clear lesson from SAP, and deregulation, was that many of these our licensed banks are passing through strains and stresses with deteriorations sending complex set of interrelated problems. And lastly as observed by Khoury & Ghosh (1998) that the

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colour of money will continue to remain the same across institutions, differences however are embodied in the quality of the brain trust that one particular institution can summon. Therefore, the quality of management in any bank will go a long way to determine its ability to respond quickly and effectively to opportunities in today's highly competitive and deregulated computerised sophisticated market, internet world.

5.6 RECOMMENDATION

In view of the severe consequences of the bank failure on an economy, given the marginal effects of the measures already adopted, this thesis proposed and suggested areas of cooperation and assistance from other organs of government in order to sanitize the system and achieve the ultimate target of moving the economy forward. In particular adopt a comprehensive approach involving apply in tax payers money, effecting and strengthening necessary reforms statutes and enjoying the cooperation of other necessary arms of government.

It is hoped that various measures being adopted coupled with recent reforms in the nation's regulatory framework the Nigerian financial industry is heading for consolidated and rapid growth. With the increased use of new banking technologies and the creation of new financial instruments injured banks need to be better informed of the changing risks in their operations. Transparency is needed to guide regulators, investors and general public and banks themselves in the industry undergoing transformation.

With regards to the proposals for distress resolution, strong preference for a comprehensive distress management strategy rather than ad-hoc measures to prevent the

problem from infesting the entire system. High priority should be given to the various institutions, recapitalization and strengthening of internal controls.

To avert the calamity of our economy we should imbibe and imbibe by second object of the Rotarians with States; "high ethical standards in business and professions, the recognition of the worthiness of all useful occupation, and the identifying by each Rotarian of his occupation as an opportunity to serve society". Nigerians taking this noble call definitely we would not be in this mess today.

DATA DEFINITION/OR ABBREVIATIONS

CBN:	Central Bank of Nigeria
CC:	Corporate Customers
CP:	Credit Policy
BOFI:	Banks and Other Financial Institutions
NDIC:	Nigerian Deposit Insurance Corporation
ANOVA:	Analysis of Variance
CAMEL:	Capital Adequacy, Asset Quality Management Earnings and Liquidity
SSM:	Second-Tier Securities Market
SEC:	Securities and Exchange Commission
NSE:	Nigerian Stock Exchange
FI:	Financial Institutions
PC:	Private Customers
EC:	Economic Crisis
IF:	Institutional factors
OT:	OTHERS Individual customers = 1
UC:	Under-Capitalization
IP:	Inflationary Pressures
MPC	Monetary Policy Changes
SS:	Stabilization Securities
NAFX:	Non-Availability of Forex
FOREX:	Foreign Exchange
PMEX:	Parallel Market Exchange Rate
J12:	Political Crisis Directly Affiliated to June 12
PW:	Panic Withdrawals

G: Growth

PCA: Poor Credit Administratior

FRD: Fraud

ID: Insider Dealing

IBSE: Inadequacy Banking Supervision and Examination

IBS: Interference By Shareholders

IPM: Inadequate Professional Manpower

PM: Poor Management

ABC: African Bank Corporation

BBWA: British Bank for West Africa

FMBN: Federal Mortgage Bank of Nigeria

NISB: National Insurance Supervisory Board

NBCB: National Board for Community Banks

SB: Standard Bank

FBN: First Bank of Nigeria

NIDB: Nigerian Industrial Development Bank

NACB: Nigerian Agricultural and Cooperative Bank

NBCI: Nigerian Bank for Commerce and Industry

IFEM: Inter-Bank Foreign Exchange Market

IMF: International Monetary Fund

RARM: Regulatory Authorities Rating Model

CCP: Credit Cut-off Point

LR: Liquidity Ratio

LDR: Loan-To-Deposit Ratio

LQR: Loan Quality Ratio

ALR:	Average Liquidity Ratio
FMF/ED:	Federal Ministry of Finance/Economic Development
NSITF:	Nigerian Social Insurance Trust Fund
NERFUND:	National Economic Reconstruction Fund
NEXIM:	Nigerian Export/Import
CSCS:	Central Securities Clearing System
LSC:	Lagos Stock Exchange
NBN:	National Bank of Nigeria
ACB:	African Continental Bank
WB:	Wema Bank
SAP:	Structural Adjustment Programme
CAC:	Corporate Affairs Commission
CAT:	Capital Adequacy Target
EXR:	Expenses Profit Ratio
ROA:	Return on Assets
ROC:	Return on Capital
TLLR:	Total Loans Liquidity Ratio/Return
MLE:	Maximum Unlikelihood Estimation
LDRC:	Loan-to-Deposit Ratio Commercial
LRC:	Liquidity Ratio Commercial
QTLY:	Quarterly
CBN E/FR:	Central Bank of Nigeria Economic and Financial Review
CRI:	Composite Rating Index

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APPENDICES

A: Sampling Procedure for the application of the log-linear analysis. . 53

B & C: Sampling procedure used in selecting sample of institutions and customers. 80/80A

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