PRICING OF FINANCIAL PRODUCTS AND SERVICES IN THE NIGERIAN BANKING INDUSTRY:

A CASE STUDY OF AFRICAN INTERNATIONAL BANK LTD

BY

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DEPARTMENT OF BUSINESS ADMINISTRATION

AHMADU BELLO UNIVERSITY

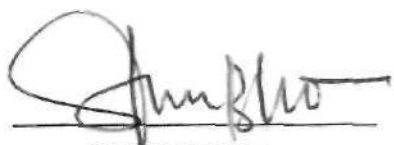
SEPTEMBER, 1999

DEDICATION

This work is dedicated to my parents who gave me the gift of education and set the standards I strive to attain.

DECLARATION

Some of the materials used in this project were taken from various books, and journals, which have been acknowledged in the reference. The rest are entirely the work of the writer



STUDENT

_____

SUPERVISOR

CERTIFICATION

This project entitled "PRICING OF FINANCIAL PRODUCTS AND SERVICES IN THE NIGERIAN BANKING INDUSTRY: A CASE STUDY OF AFRICAN INTERNATIONAL BANK LTD" by Hassan M. Bello meets the regulations governing the award of the degree of master in Business Administration (M.B.A.) Of the Ahmadu Bello University, Zaria and is approved for its contribution to knowledge and literary presentation.

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ABSTRACT.

The study titled pricing of financial and services a case study of African International Bank Limited is justified by the realization that pricing is less developed in the Nigeria banking industry compared to other aspects such as credit analysis or legal documentation.

The reason for this was traced to the fact that in highly deregulated financial market the prices of almost all financial products and services as set by the regulatory bodies such as the CBN .

The inefficiencies of price controls has led to deregulation and banks are free to set many prices of their products and services.

The objective of the study is to allow more flexibility in pricing and increased profitability through superior pricing of bank products and services.

The study took a broad look at pricing in the African International Bank Limited. In doing that primary data was acquired though inter personal interviews with some of the management staff of the bank and the secondary data was obtained from a review of relevant literature.

The study found that commercial banks are in strict adherence to provisions of the bankers tariff which allows them little room to

develop a systematic approach to pricing. The only evidence of deregulation and consequently some degree of systematic pricing is in the area as interest rate. Even here the pricing mechanisms are not fully developed.

The following recommendations were made.

Loan terms should reflect the borrowers contribution to the banks over all risk.

Banks should identify and offer fixed rates to those firms whose cash flow as relatively fixed in nominal terms.

Banks should use the customer profitability model in assessing and pricing loans; as well as ensuring that adequate strategies are put in place for business accounts on one hand and customer accounts on the other.

Banks should also adopt a split rate pricing scheme so as to improve profit and simultaneously maintain customer incentive to hold large balance.

The CBN should also abolish the use as the Bankers tariffs.

CHAPTER ONE

1. INTRODUCTION

How a bank prices its products and services has a major impact on its profitability. Given the importance of pricing financial products and services, why is it that pricing is less developed in the Nigerian banking industry compared to other aspects of banking such as credit analysis or legal documentation?

A major influence is regulation. In a highly regulated financial market, the price of almost all financial products and services are set by regulatory bodies such as the Central Bank of Nigeria (CBN). For market stability, most prices are set at fairly generous levels allowing banks to achieve easy profitability. However the inefficiencies of price controls has led to deregulation. Now banks are free to set many of the prices for their products and services.

Another major influence is inflation. In a high inflation environment a major part of company profits come from inflation. For instance, inventory can rise in value simply sitting in the warehouse. In these conditions, most companies are less sensitive to interest rates and other bank charges. Generally these have been below inflation rate. Government monetary and fiscal policies have brought inflation down to reduce the distortions it creates in the economy.

In low inflation environment, most customers are very sensitive to interest rates.

The combination of deregulation and lower inflation makes pricing a major challenge to banks.

This work takes a broad look at pricing financial products and services as they relate to commercial banks to reveal opportunity for banks.

The work is divided into five chapters - chapter one deals with the basic introduction of the study, stating the problems, objectives of the study, hypothesis, scope and limitations, and methodology. Chapter two- literature review presents and examines the existing literature on pricing of financial products and services, paying particular attention to various pricing models and classifications.

Chapter three presents the background and structure of the Nigerian banking industry while chapter four is on data analysis. Chapter five, the final chapter, deals with the summary conclusion and recommendations.

1.2 STATEMENT OF PROBLEMS

We can argue that banks are really no different from other companies in that the basic principles of business still apply. However we can examine

some peculiar aspects of the basic products and services that banks offer so as to gain a better understanding of pricing issues that are special to banks.

While most companies sell either products or services, banks sell both. While most services are intangible (i.e. a hair cut) banks sell an intangible product (money). Selling an intangible product and providing intangible services means that the distinction is often blurred. As such it is sometimes hard to tell where a product stops and a service starts.

This blurring makes pricing financial products and services more complex compared to non financial products and services. The terms interest is generally used as a price for money product while fees and commission are generally the price for a financial service.

Banks act as intermediaries. They buy money from people who have it but do not need to use it immediately and sell it to people who need it. This intermediary role can be with or without recourse. With recourse means that the depositors can claim their funds from the bank regardless of how the bank used the funds. Without recourse means that the depositor (really on investor) can only claim their funds from the ultimate user of the funds. The distinction between these two positions has a major impact on the risk the bank takes. The risk will influence greatly the price the bank charges for its services.

While a primary function of banks is to manage financial risk, many bank's functions do not involve direct use of funds and can be classified as non financial risk activities examples are issuing travelers cheques, demand drafts etc. The financial risk element has a major effect on pricing.

Apart from the forgoing complexities and special problems in pricing financial products and services, another problem is that commercial banks operating in Nigeria are just beginning to have the need to price their financial products and services. This is so because hitherto, the prices of almost all financial products and services are regulated by the Central Bank of Nigeria (CBN) through the periodic release of the bankers tariff which states the prices of most financial products and services.

In other words, the triad of special complexities in pricing, deregulation and inflation make pricing a major challenge to banks.

1.3 OBJECTIVES OF THE STUDY

The objective is to show the possibilities in pricing financial products and services, in which there is a lot of scope for doing new things and achieving various goals. This will eventually allow more flexibility in pricing and increased profitability through superior pricing of banks products and services.

1.4 STATEMENT OF HYPOTHESIS

To enable me have a direction in this research work; I have had to formulate the following hypothesis:

1. Commercial Banks, operating in Nigeria do not have a systematic method of pricing their products and services.

2. Commercial banks in Nigeria still abide by the bankers tariff even through they are free to set the prices of most of their products and services as a result of deregulation.

3. Risk and expected return have no important implication for loan selection and pricing in the Nigeria banking industry.

4. Much of credit analysis is geared toward loan selection, without paying any attention to pricing.

1.5 SCOPE AND LIMITATION

The scope of the study is limited to the African International Bank Ltd. It is my intention to apply the pricing practices found in this banks to other commercial banks since they ~~operation~~ operate in the same economic and political environment.

1.6 METHODOLOGY

A major method of classifying data is the primary and secondary. The primary data relating to the research was acquired through interpersonal interviews with some of the top executive of the bank. The secondary data was derived from an examination of certain documents especially circulars relating to pricing. And also a review of some of the already existing literature on pricing of financial products and services. The method of data analysis employed is that of which compares the findings obtained from the African International Bank to those obtained in the literature review to see if they are in conformity or otherwise.

1.7 DEFINITION OF KEY TERMS AND CONCEPTS

i. Collateral security: this is property pledged as a guarantee for repayment of money.

ii. Commission charges: these are charges on operation of current account, issuance of demand drafts, opening of letters of credit etc.

5. Financial deregulation: this is a technique of indirect monetary control basically it involves controlling the money stock through manipulation of the sources of monetary base, and hence the control of interest and exchange rates through the interplay of forces of demand and supply.

iv. Fiscal policy: adjusting government expenditures and taxes to try to overcome unemployment and/or inflation.

v. Inflation: increasing prices of goods and services. An increase in the average price level in the nation.

vi. Hedging: this is a way for bank to protect themselves against risks. Normally the interest rate risk associated with granting fixed rates loans are unacceptable to the banks. Financial futures contracts (Hedging) provides banks a way they can offer fixed rate loans without taking an interest rate risk. The bank can grant a fixed rate loan, fund it with short term money and simultaneously enter into one or more offsetting financial futures contracts. The bank will price the loan at a profitable spread over the present cost of funds and the futures contract will lock in current cost of fund. If interest rates rise and drive up the cost of funds, the bank will make a compensating profit on

its futures contract. However, if interest rates fall, the bank will loose a corresponding amount on the futures contract.

The hedging concept can also be used to lock in current low rate of interest in anticipation of future needs of funds.

vii. Interest: interest is most simply defined as the cost of using some one else's money or viewed from the other end as the price charged for allowing someone else to use your money (capital), just as your wage and your rent is the money you receive by allowing someone to use your labour and land.

viii. Liquidity: Ease with which an asset can be exchange for other assets (without loss of value). Money is the most liquid asset.

Ix. Monetary base: this is defined as the sum total of bank reserves (vault cash and balances with CBN) and currency in the hands of the non-bank public.

x. Monetary policy: government action designed to stabilize prices/or employment by adjusting or controlling the availability and/or cost of credit (money).

XI. Moral ~~succession:~~ Suasion a "non official" tool of monetary policy involving appeals to (and sometimes pressure on) the commercial banks to follow suggested lending policies to influence the availability and cost of credit.

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CHAPTER TWO

LITERATURE REVIEW

2.1 INTRODUCTION

The chapter begins by defining what Banking is and then goes on to state the rationale behind pricing followed by a discussion on pricing and bank strategy, pricing classification loan pricing and profitability model, pricing business credit and pricing consumer loans and deposits. The chapter finally presents a portfolio view of loan selection and pricing.

2.2 BANKING DEFINED

Section two of the Bills of Exchange Act 1882 defines a banker as "any person or company incorporated or not, carrying on the business of banking. But the most generally acceptable definition of a banker is that given by Sir John Paget in his book, "Law of Banking" which categorically states that "No one and nobody, corporate or otherwise can be a banker who does not:

i. Receive money on current or deposit accounts

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ii. Pay cheques drawn by his customers on himself, or

iii. Collect the proceeds of cheques for his customers

Those three basic hall marks of a genuine banker were recognized by the court of appeal in the case of United Dominions Trust Ltd V. Kirkwood (1966) Here the decision hinged on whether United Dominions Trust Ltd, were bankers or unregistered money lenders. It was held that the distinguished features of the business of banking were the receipts of money on current or deposit accounts, the payment of cheques drawn by the depositors and the collection of cheques for customers and the recognition of the conduct of banking services by other bankers. The Plaintiff Company won the case having satisfied the above criteria.

The Banks and other financial institutions Decree (BOFID) No. 25 of 1991, under section 61 also defines banking as "the business of receiving deposits in current accounts, savings accounts, or other similar accounts, the paying or collecting of cheques drawn by or paid in by customers, the provision of finance or such other business as the Governor of the Central Bank of Nigeria may publish in the Federal Gazette designated as banking business.

2.3 WHY WE PRICE

The basic objective of pricing is to maximize return on equity of the bank over the long-term. When people invest in banks they have an expectation of a certain return on their investment. Generally speaking the riskier the investment, the higher will be the returns the investor expects.

When pricing financial products and services, we need to be aware of the effect the product has on bank's risk profile. If it increases the bank's risk profile, the price of that product should be higher than other similar products. In this way we compensate the investor for taking on a higher risk.

There are two key risk areas for banks

1. **Liquidity Risk:** This refers to the banks need for funds to meet deposit out flow and loan increases compared to actual or potential sources of funds such as the sale of an asset or taking on an additional liability.

2. **Interest Rate Risk:** This relates to the effect changes in interest rates between assets such as loans and liabilities such as deposits. For instance, making a long-term fixed rate loan

based on variable ~~rate~~ rate short-term deposits increases the interest risk.

3. **Credit Risk:** This is the risk that a loan (principle and interest) will not be repaid as and when due. Adding a risky loan to moderately risky portfolio increases the credit risk.

4. **Capital Risk:** This indicates the extent to which asset values can fall before the position of depositors and other creditors is jeopardized.

As part of the planning process banks should have a clear idea of where they stand in terms of their risk return profile. They should also know where they want to be. Each new product or service should help the bank move in the direction of its desired risk – return profile.

2.4 PRICING AND BANK STRATEGY

For a company to do well in an industry, it should aim for a sustainable competitive advantage. While any company can have several specific strengths and weaknesses compared to other companies, there are two basic forms of competitive advantage; low cost or differentiation.

When a company chooses its primary customers it essentially makes a choice between a broad target market and a narrow target market. We can refer to this as competitive scope.

If we combine competitive advantage and competitive scope we have four possible general strategies

		Competitive Advantages	
		Lower Cost	Differentiation
Competitive Scope	Broad target	1. Cost leadership	2. Differentiation
	Narrow target	3. Cost focus	4. Differentiation Focus

A differentiation strategy aims to be unique in any way that is valuable to its target customer. Thus uniqueness allows the differentiator to charge premium price compared to others.

A lower cost strategy aims to be the lowest cost producer of that product or service. This will allow the company to charge similar prices or still lower prices and still make a significant profit often by high volumes.

Both these strategies can be aimed over a broad or narrow target.

Note that trying to aim for more than one strategy often means contradictory decisions that result in less than optimum performance in that strategy.

The choice of a general strategy will have a significant impact on fundamental pricing. The differentiator will look for unique features to add to their product or service and charge a premium price. The lower cost strategy will aim for low frill products and services and will seek to charge lower than average prices usually aiming for higher volumes to make high profits.

Pricing should follow the general strategy being pursued by the bank. Due to the intangible nature of financial products and services, differentiation is often harder to sustain successfully.

2.5 PRICING CLASSIFICATIONS

The peculiar nature of bank customers allows us to divide them into three categories:

1. Prime Customers
2. Perceived Value Customers
3. Relationship Customers

We can approach loan pricing differently to each of these customer types.

PRIME CUSTOMERS

Most banks have customers who can borrow at the lowest rate the bank is willing to grant loans. These are generally the largest and most credit worthy borrowers. They are termed prime customers. These companies generally have alternative sources of funding outside banks such as the commercial paper market or trade creditors. Also they are generally marketed by several banks that often give them pre-approved lines without their making specific requests.

Unlike weaker and more local borrowers, large prime customers tend not to tie their borrowing needs to their need for other banking services. Rather, they seek to have limited relationships in their dealings. Because of this, banks are not able to tie in other products and services to leverage profitability. Loan pricing will be a simple loan at the lowest rate.

PERCEIVED – VALUE CUSTOMERS

Another approach to pricing loans (or non-loan products and services) is to base price on the value of the funds or service to the customer. The reasoning here is that so long as the loan or service allows the customer to make their desired return, they will be willing to take the loan or service.

To price this way effectively the bank must be able to assess how valuable the loan or service is to the customer. Where a customer is executing a one off contract, has severe time constraint and pledged security, they may be willing to forego a significant portion of the profit of the transaction.

Perceived – Value Pricing works well under certain circumstances:

1. The customer has very limited access to alternative financing
2. The customer's security is already pledged to the bank.
3. The customer enjoys related products or services essential to that need for funds or services.

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RELATIONSHIP CUSTOMERS

The majority of a Banks customers fall into this category of relationship borrowers. Here the customer enjoys a wide range of products and services. Also they are a good source of future loan demand. While loan pricing may be at standard rates, the bank focuses on making significant returns from the bundle of products and services offered to the customer.

2.6 LOAN PRICING AND PROFITABILITY MODELS

Spread Pricing Model

This is the simple approach used mainly for prime customers. The spread pricing is essentially a margin over the bank's cost of funds. The cost of funds is the transfer price charged by the funds gathering function of the bank. In its purest form, the bank may fund the loan with duration - matched funds and price the loan as a mark up over the cost of those funds.

By duration matching the loan to the funding, the bank can eliminate the interest rate risk and the liquidity risk.

The loan price should be based on the marginal cost of funds rather than the average cost of funds. New deposits that are independent of historic rates will fund the new loan.

CUSTOMER PROFITABLITY MODEL

With this approach, loans should be priced such that the profitability of the bank's total relationship with the borrower meets the banks profitability standard. Very simply to be profitable, the total relationship should show that Revenue > costs.

Total revenues and total cost must be fully and carefully identified.

Revenues should be the Naira income from all sources for a specific period in the past (i.e. one year) we should avoid pooled revenue allocations as these distort true, individual customer profitability – for example one customer may be subsidizing another customer.

YYZ Customer Revenue Last 12 Month	₦000
Loan Interest	250
O/D Interest	120
COT	20
Commitment Fees	10
Bank's Share of Legal Fees	12
Other	5
Total	417

Figure 2.1

COST

The costs are in two groups; funding costs and the cost of other services. The funding cost are divided between the banks pool of non-equity funds and equity capital.

The simply equity cost can be found by using the ratio of equity to risky assets. For example this could be 15%. The bank must then decide what pretax return it wants on its equity. This could be say 50%.

The balance of funds supporting the loan (the loan, less equity, less XYZ deposits) represents the amount to be used to calculate the interest cost associated with the loan.

Cost assigned to XYZ (Last 12 Months	₦000
Cost of Funds	
Charge for Equity Capital Funds	55
Charge for Net Fund used	169
XYZ Demand Deposits	8
Cost of Services	12
Total	244

Figure 2.2

Revenue - Costs = 417,000 – 244,000 = 173,000

Based on this model the loan is profitable. However the ₦173,000 excess value must now be compared to the riskiness of the loan. The bank needs to have a criteria for linking riskiness to the excess value of the relationship. For instance a 1 to 10 risk rating range could allocate a minimum of 20,000 for risk rating 1 (highest quality) to a minimum of ₦500,000 for risk rating 10 (lowest quality).

The cost of services allocated to XYZ needs to be identified precisely. Most banks are yet to install ~~accrete~~ accurate cost accounting systems that allocate costs efficiently to customers. When the loan convenants call for direct non interest items, these should be included in the profitability model. Examples include, compensating balances, commitment fees prepayment penalties etc. These will be discussed in greater details in the next section.

2.7 PRICING BUSINESS CREDIT

In this section the determinants of bank loan policy are discussed in a conceptual manner. The approach taken is viewed necessary for senior management to achieve results from the loan portfolio. It abstracts from the mechanics of pricing a particular loan in favour of an analytic frame work.

It is assumed that the ultimate goal of bank management is the maximization of market value or ownership interest in the bank. This is accomplished by obtaining a set of customers that, other things equal, yields a stream of earnings over time that maximizes the value of the institution. The stream of earnings is evaluated by investors, or potential investors, by discounting the future earnings stream to obtain the net present value of profits obtained by lending activity.

THE VALUATION OF EARNINGS STREAMS.

At first glance, the computation of present value is straight forward. The cash flow from a loan is evaluated by discounting the future stream of returns, including interest and amortization.

However, a correct computation involves somewhat more subtlety. For each loan or loan class, one must compute the likelihood, or probability, that the loan will not be repaid in full. Under a default situation, the likely return to the bank must be computed as well. The expected return to the loan is obtained by computing the probability of complete repayment times the contracted return and the returns that will be obtained in the default case and the probability of non performance.

Obviously, the more severe the credit screen used to evaluate a loan proposal, the lower the default probability. This also implies that the returns obtained from the loan portfolio will be closer to the contractual return. However, competition is most fierce for the very best customers, so that the firm will find that restricting it's loan portfolio to only the very best borrowers is likely to result in a small portfolio in which the margin above the cost of ~~finds~~ funds to the institution

is minimal. Accordingly, the bank will accept at least some risk of default to improve its return stream. For some time, adding customers with some what higher default probability will add to the value of the firm by increasing the profit flow by more than enough to compensate the equity holders for additional risk associated with reduction in "quality" of the loan portfolio. At some point, however, the substitution of return for additional risk is no longer profitable. The gain on expected profit is more than offset by the effect of uncertainty of returns due to a decline in the quality of the loan portfolio on the bank's overall value to the stock holder.

One will note that it is the effect of the loan's quality on the riskiness of the over all loan portfolio that is important. Addition to the portfolio that aid in the diversification of the bank's assets may, in this sense actually reduce riskiness in the over all portfolio (this will be dealt with in the section of portfolio view of loan selection and pricing) on the other hand, loans that are identical to those already contained in the portfolio do little to reduce overall riskiness but may be offered because of a special expertise associated with previous lending in the industries involved. This concern for and weighing of diversification and specialization motivations for loan expansion is healthy part of the evaluation of lending policy.

It is incumbent upon each institution to decide where the critical point in the expansion of the loan portfolio exists. The volume of total credits will ultimately depend upon two factors. First, the bank's market, defined geographically or perhaps by industry concentration, will dictate loan quantity. The competitive situation within the market area dictates both the extent to which a bank may extract a preferred return from its customer base and its ability to do so. It also dictates the degree to which the bank must be willing to increase risk in order to obtain additional loans and/or higher margins. Second, the capital market it self dictates the extent to which the bank may absorb risk for return. As noted above, the optimal trade-off between return and asset quality will be dictated by the valuation of the bank's return by the investor, who must compare this earnings stream with others in the market place. In this sense, bank management must always remember that it is the market that will determine acceptable risk and return, and bank value. Once again, the privately held firm must realize the alternative opportunities open to the investor's funds.

ESTIMATING TOTAL EARNINGS

Accepting value maximization as a goal of management leads directly to the question of how to obtain estimates of the true earnings streams associated with the loan portfolio. Using a superficial, totally unbundled approach, the costs of funding are subtracted from the

loan receipt to obtain the earning streams (as we have seen earlier under loan pricing and profitability model/s). However, this assumes that such an arbitrary division of client's activity in the bank is both feasible and appropriate. Many would argue that such a procedure is inconsistent with the banking relationship, which should be viewed as a multi product and multi period association. Using this approach leads to two questions. First, what revenues should be included in gross return? Second, what is the expense profile of the portfolio? Frequently, these are combined under the rubric loan profitability analysis.

Loan profitability analysis is an attempt to integrate the revenues and costs associated with a customer in a uniform manner to obtain an estimate of the customer's overall contribution to bank earnings (Flynn 1978 and Mason 1979) it involves the collection of all revenues obtained from the customer or customer related accounts in the institution, as well as total costs. This is accomplished by deriving the contributions to the bank's balance sheet and the attendant profit and loss statement.

The usefulness of this method of cash flow analysis an example of which is contained in figures 2.1 and 2.2 has been the subject of much debate in the industry. Some argue that the advent of unbundling and product by product purchases in the financial industry

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has made this relationship approach obsolete. Further proponents of this line of reasoning contend on current wave of deregulation has accelerated the already quickening trend toward specific and single product purchasing.

However, these arguments miss an essential point in the use of customer analyses. At its heart it is an information gathering process. If, in fact, the client firm is "Cherry picking" that is, purchasing a series of unbundled services, this will be illustrated by the customer profile. On the other hand. If the firm conducts a wider range of activities with its bank, this higher degree of involvement and profitability will also be evident. The latter will prove valuable information when the bank is under competitive pressure from other industry participants.

Recent trends in unbundling product pricing have reduced the importance of customer analysis, it must be admitted. Yet, items such as free balances commitment fees and ancillary fee services remain an important part of the bank relationships. Consequently, the insights gained from tracking customer contributions continue to be relevant and valuable.

Account: The XYZ Company Date

Affiliated Account_____ period ending

_____ Type of loan

_____ Pricing Convention

Sources and uses of funds	Last 12 Months	
1. Average loan balance	₦_____	₦_____
2. Average collected demand balance	₦_____	
3. Average time balances	₦_____	
nvestable balances	₦_____	
4. Total Investble		₦_____
5. Net borrowed (or invested) funds		₦_____
Income Statement Revenues		
6. Gross interest income on loans		₦_____
7. Fees on line		₦_____
8. Fees generated by services		
a. Service charge	₦_____	
b. Other	₦_____	
9. Total income		₦_____
Expenses		
10. Interest on balances		₦_____

11. Cost of service provided

a.	Demand deposit	₦_____	
b.	Cash management	₦_____	
c.	Other funds transfer	₦_____	
d.	Loan and other credit related	₦_____	
e.	Other costs	₦_____	
	Total		₦_____

12. Total expenses ₦_____
13. Income before cost of funds ₦_____
14. Transfer price of funds ₦_____
15. Profitability ₦_____

Figure 2.3

In figure 2.3 the first half of the form consists of balance sheet contributions. The balance sheet entries in the customer analysis include the balances provided net of uncollected funds and required reserves. Demand and time deposits, RPs and other liabilities purchased by the customer are included here. On the asset side, the average loan balances outstanding over the period is computed. The difference represents net funds used or furnished by the customer.

The second half of the form concentrates on revenues and expenses. Income includes loan income, fees on credit commitments, and other income sources. Line of credit income appears in the second category for those firms that regularly obtain such arrangements in anticipation of possible needs. Likewise, firms that generate (and pay for) substantial transactions volume would be credited with service charge income. Other fee services, in as much as they are relevant, would also appear in this category.

From the income total, both direct and indirect expenses are subtracted. Some of these are readily available. Others are conceptually easy to define, but difficult to obtain, for technical or accounting reasons. (In the treatment at hand, capital costs are assumed to be incorporated in the cost of services provided). Interest paid on time deposits or other liabilities is in the first category. Like wise, direct operating costs are also obvious deductions. The frequently difficult areas are operating costs associated with the loan and deposit balances. This problem results from the frequent absence of good operating cost accounting data at the bank level. Functional cost accounting data have been improving in the industry, but this remains a difficult area in which to obtain quality statistics. In the interim, many banks may be forced to use only rough approximations.

Taken together, this view of the client relationship results in a fuller understanding of a customer's profit (or loss) to the bank. To see this point, figure 2.4 expands on the customer analysis to include the hypothetical case of XYZ Company. This firm obtained a fixed rate (12%) one year loan on January 1st 1998. Its profile indicates that an average 8.8% of the loan was financed by its own balances, and the fees on an outstanding loan commitment contributed an additional ₦25,000 per annum. Operating expenses directly associated with the customer's services were ₦1,900, resulting in a net income before cost of funds of ₦143,000. Taken as a percentage of net borrowed funds, this is equivalent to 15.71% (143,000/912,000), which compares favorably to the simple 12% lending rate. The difference, obviously, is due to the value of balances, and the fee income from the outstanding line of credit. By incorporating these, the bank increases the effective rate of return by 3.7% or more than 20% of the loan rate.

Account: The XYZ Company	Date
Affiliated Account NONE	Period ending
_____	Type of loan Inventory
_____	Pricing Convention Fixed 12%

Sources and uses of funds	Last 12 Months

1.	Average loan balance	₦100,000	₦1,000,000
2.	Average collected demand balance	₦88,000	
3.	Average time balances	₦____-___	
	Investble balances	₦____-___	
4.	Total Investble		₦88,000
5.	Net borrowed (or invested) funds		₦912,000

Income Statement Revenues

6.	Gross interest income on loans		₦120,000
7	Fees on line		₦25,000
8.	Fees generated by services		
	c. Service charge	₦___-____	
	d. Other	₦___-____	
9.	Total income		₦145,000

Expenses

10.	Interest on balances		₦___-___
11.	Cost of service provided		
	f. Demand deposit	₦1,400	
	g. Cash management	₦____-___	
	h. Other funds transfer	₦500	
	i. Loan and other credit related	₦_____	
	j. Other costs	₦_____	
	Total		₦1,900

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12.	Total expenses	₦1,900
13.	Income before cost of funds	₦143,100
14.	Transfer price of funds	₦110,000
15.	Profitability	₦33,100

Figure 2.4

Banks applying this methodology should be cautious in converting this historical record into future periods. Once customer profitability measures are obtained, it is easy to assume that the problem of estimating future earning stream has been solved. However, this is a very static view of the customer relationship and the financial markets. Abstracting from the volatility of interest rates, it assumes that balances on deposit during the proceeding period, services provided to customers, and their cost of delivery are all constant. Current period behaviour can only be projected into the future if all three of these of items are fixed. However, there are clearly reasons to suspect that this would not be the case.

Specifically, there is no obvious reason to assume that balances on deposit last period are indicative of average balances over the future loan horizon. The bank must be assumed of this either by making these balances part of the loan agreement or by examining the

historical pattern of the borrower to determine whether or not these represent normal or average behavior. Even in the latter case, the advent of electronics suggests, that this concept of normal balances is suspect for all loan agreements beyond very short run lending.

Operating costs should also be scrutinized. These costs have been rising precipitously in banking. Accordingly, the profitability of customers with a higher volume of transactions may prove suspect in the near future. Of course, fees have become a more important part of transaction services. So that increasing operating costs could be offset in this manner. However, the need for such escalation in service charges should be recognized when earning streams are estimated.

The final entry on the cost side is the cost of funds, or transfer price, for the loan. It should be clear that retrospective report that records the historical cost of funds, however constructed, is an irrelevant guide to current pricing policy. (Watson 1977). Once the customer profile has been up dated and examined, the prospective earnings stream must be compared with a current cost of funds or transfer price, which captures target rates of return, leverage and the inherent risk of the loan or loan category. The latter factors together derive a set of transfer prices to be used as part of loan valuation.

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Appropriate transfer prices are crucial to any loan pricing system. Constructing these rates involves three independently important considerations: namely, the cost of borrowed funds to finance the loan, the target rate of return for the loan function, and the inherent risk of the project. The first of these, for a fixed rate lending, is fairly straight forward. The cost of borrowed funds can easily be obtained from borrowing rate ~~and~~ at the federal funds quotes depending upon the applicable maturity and funding options open to the bank. For loans with well defined re-pricing terms; for instance the loan priced off three-month CD rates, the direct cost of funds is also easily estimable. For prime base loans, the process is some what more difficult. Here it is common to develop a funding strategy to finance prime and to allocate the cost of the pool of funds to the prime portfolio. This approach of pool rate pricing is fairly standard in the industry.

The second element of the transfer price is related to the leverage of the bank and the target return on equity. If the bank is to obtain the required return on capital that is dictated by its strategic plan, recognition of the needed margin above the cost of borrowed funds must be incorporated into the transfer price. Given the planned leverage, this equity contribution margin is easy to calculate.

The final element in the funds cost area is compensation for the probability of default associated with the lending type. Here recognition of loss rates can be incorporated directly into the pricing scheme so that compensation for loss probability adjusts the overall profitability of the loan to both the bank and the lending officer. This risk adjustment factor should incorporate both the expected loss rate associated with a particular type of lending and a compensation for absorbing such risk. The latter can be viewed as either an increase in return for bearing greater than average risk or, equivalently a differential allocation of capital across types of loans. Combining these three factors yields a funding transfer price, as is indicated in figure 2.4 line 14. In the example, the net profit of the loan relationship is ₦33,100. This represents a 3 ½ % return on net borrowed funds after all expenses and demonstrates more fully the attractiveness of the hypothetical customer. This example illustrates the value of the customer analysis. On an unbundled basis the customer had a margin of only 1%.

It is the responsibility of the commercial lending officer to construct the terms of the loan contract so as to assure at least some degree of back profitability in the customer relationship. This is accomplished by incorporating information from the customer profile into the loan evaluation and selecting loan terms that fit the circumstances of the borrower. Loan terms should be selected in a manner that makes the

loan desirable to the lender and at the same time feasible and profitable to the bank as a whole.

LOAN CONTRACT TERMS

Here, the characteristics of the loan return under different lending contracts will be examined explicitly. The second issue addressed is the determinant of appropriate terms for the entire set of loans in the bank's portfolio. The questions of who should be granted fixed or variable lending terms will be analysed as well as the question of appropriate percentages of each in the banks portfolio.

The background of these issues is fairly obvious. There have been increased interest in and use of variable-rate lending in banking over the last decade. In fact, statistics suggest that the prime-based loan contracts now account for a majority of commercial lending activity (Gendreau 1983 and Santomero, 1983) This trend can be traced rather directly to the increased variability of bank liability costs over the same period. Banks have argued that the uncertainty of funding costs has made the fixed-rate loan increasingly less attractive to the banks, since it forces the lender to accept both credit risk and greater interest risk in one loan contract.

However, these arguments often fail to consider the implications of shifting interest rate risk to the customer. This alteration in loan terms will have an effect on the performance characteristics of the borrower. Different lending terms will alter the pattern of earnings associated unto any project and the economic value of the investment. This fact is frequently neglected in discussions of loan pricing, as it is usually assumed that nothing has changed as a result of shifting rate risk from the lender to the borrower. Here the characteristics of the loan returns under different lending contracts will be examined explicitly.

As interest centers here upon the choice between fixed and variable rate pricing, these two pricing methods will be considered in turn. Any number of composite or blended pricing fomulars can be constructed from these two extremes. Specifically, a partially indexed loan will have characteristics consistent with both versions below:

Variable rate lending with caps will approximate either one of these two loan types depending upon the extent of rate movement. The latter is a fully variable-rate loan until it reaches a limit value, at which time it has fixed-rate loan characteristics.

It will be assumed that the bank has at least some funds available to it of both a short – and long term fixed-rate nature. However these funds may be limited. Therefore, the bank may wish to shift some of

its borrowers into a particular kind of lending contract, more appropriately to match its liability structure. The bank of course, does have the option of altering its liabilities to some extent or engaging in futures market activity toward the some end. Yet, the positioning of the loan portfolio, in terms of interest rate sensitivity, is a significant part of overall bank asset management that it requires careful consideration. Toward this end, let us consider the effect of loan contracts on the return stream.

THE FIXED-RATE CONTRACT

Consider the stream of earnings from a fixed rate contract first. These loans, by definition, are priced at an interest rate that does not change over the period of the loan. The rate charged reflects the cost of funds for the term loan, capital contribution, and loss probability, as discussed earlier. Note; however, that appropriate pricing requires that the contract rates for loans of various terms. Correspond to the market price of funds for different maturities. Specifically, one should require that longer-term loans exceed short term rates when the yield curve is significantly upward sloping and vice versa in a declining-rate environment (Van Horne, 1978). The price differential merely reflects the fact that funding costs, on the liability side, differ according to maturity, and this differential must be incorporated into the bank's pricing scheme. In any case, prepayment fees should be established

at the outset, so that the bank does not find itself into a significant amount of prepayments of long-term fixed rate when loan rates suddenly move down ward. Failure to do so leaves the bank in the unenviable position of bearing funding costs in an unexpectedly high rate environment, but not gaining in the lower rate one.

The return on the loan will differ from the contracted amount to the extent that the borrower is incapable of abiding by its terms, that is in the case of default. Presumably, default occurs because the return from the project for which the loan was granted or the overall profitability of the firm in the case of working capital borrowing was significantly below what had been expected. Indeed, default will only occur when the difference between the return on the project and the contracted payment to the bank exceeds the equity capital of the firm. In the case of working capital lending, default occurs when the value of the firm declines so precipitously that default becomes a desirable option.

For loans that have been defined initially as higher risk, the likely level of default is greater by definition. However, after the investment evaluation, the return to the project is very much at the mercy of circumstances. Consequently, the returns may not indeed will not, parallel the expected pattern of losses over the longer run, however,

one should expect the project evaluation rankings, at least by broad categories, to be representative of loss experience.

THE VARIBALE RATE CONTRACT

The variable-rate contract differs from the above in that the exact price of the loan is unknown at the time that the loan is granted. Variable-rate loan returns have both default (credit) uncertainty and interest rate uncertainty, both of which will affect the actual earnings from the loan. By definitions, the interest rate charged is set after the initial contract by a prearranged procedure such as prime-based pricing schemes. In addition, the project returns are uncertain and may lead situations where the investment returns are sufficiently low to cause default.

Intuitively, a default problem will occur in either one of two situations. In one case, the project returns plus firm equity are not sufficiently high to repay the loan commitment ,inspite of certain interest cost on the loan. On the other hand, a second case could arise where the project returns are reasonably strong. Yet, given an abnormally high rate of interest on the variable-rate loan contract, the project goes into default. The point to recognize is that there are two separate factors that affect repayment: project success and interest rate movement. Interestingly, default for either reason listed above is labeled credit

risk, as the observed phenomenon is the inability of the firm to repay the loan in full. This is true even if the actual reason for default is an unexpectedly high interest cost on the project, arising from unanticipated market rate increases.

Consider an extreme example of this situation. Suppose the firm in our example above; XYZ Company sought funding for an investment project that has an expected return of 14%. Further, assume that the range of outcomes is 12% to 16%. At the time it approached the bank for loan, the "going rate of interest" for a fixed-rate loan would, of course, depend upon future levels of rate, but it is expected to be equal to 12% fixed rate figure. If the variable-rate was granted, rather than the fixed contained in our previous example, the firm has a possibility of default that could not have occurred if a fixed rate loan was made (unless of course, material dis-inflation took place). Indeed, if interest rates moved upward during the course of the loan, the firm would default and the write off would be defined as a credit risk loss. In fact, the loss was completely due to interest rate risk that was transferred to the firm by the bank in the loan agreement. This firm could not have defaulted on a fixed rate contract if it had been offered.

CHOOSING LOAN TERMS

The preceding suggests that loan terms will have an impact on reported profitability of a loan portfolio and that the use of variable-rate loans adds uncertainty to those returns. In spite of this effect, the number of variable rate or short-term rollover loans has increased continuously over the last two decades. This is presumably due to banks' preference for an increased percentage of loans in the variable-rate category, resulting from their inability to obtain a sufficiently large portfolio of their liabilities in the fixed rate area. The continued move toward deregulation of short-term liabilities has accentuated this trend. Faced with this unbalance, the institutions must determine both which loans to shift into the variable-rate category and, at the bank level, the aggregate total of fixed versus variable-rate loans.

Determining which loans to offer a variable-rate loan contract is an important issue. Yet, this issue has received very little attention in the industry. One is left with a view that the bank is free to shift any loan to variable-rate category, regardless of its characteristics. However, as illustrated above, not all firms can absorb the variation in lending cost associated with an indexed pricing scheme equally well. Specifically, firms having cash flows that are relatively fixed in nominal terms would be particularly vulnerable to a variable-rate loan

agreement. In these cases, variation in loan cost, precipitated by a change in the cost of fund to the bank, must be absorbed out of the profit from the project, or ultimately, the capital of the firm. The bank essentially deceives its self in believing that the economic basis for granting the loan is unaffected by the alteration in rate charged to the borrower when the market conditions changed. And as pointed out above, it is surprised by the increase in defaults associated with its attempt to garner a larger proportion of a relatively fixed return stream.

This scenario is considerably different for other projects. For loans used to finance investments that have a cash flow that varies with the level of interest rates, the variable-rate loan is an appropriate lending contract. If the firm's cash flow responds significantly to the forces that lead to higher interest rates, the borrower is better prepared to absorb the increased cost of a higher interest rate when an environment of higher rate occurs.

Reference to the recent past will make this point more clearly. Over the last two decades, a substantial portion of interest rate movement can be accounted for by variations in inflation. (Van Horne, 1978). Economists since Irving fisher have contended that the level of expected inflation is a key determinant of the observed rate of interest. Some would contend it is the only major factor that has

caused the substantial variation of interest rates over the last 20 years (Fama, 1975). This contention aside, few would deny the existence of the link between inflation and the level of rates. This has interesting implications for loan terms.

It argues that projects whose returns are closely related to the level of inflation will have returns highly correlated with the open market interest rates. These will be prime candidates for variable-rate lending. On the other hand, projects or firms with returns that are relatively fixed in nominal terms should be the first group to be offered fixed-rate contracts. This would reduce the possibility that a high-rate environment, caused by an upward movement in the level of inflation, would drive firms into bankruptcy. Operationally, this concept of lending term choice requires that the bank examine the implication of price and interest rate movements on the viability of the projects of firms seeking funding.

CHOOSING PORTFOLIO COMPOSITION

The determination of how many projects should be in either the fixed or variable rate category goes beyond the firm and project specifics. It involves two different yet fundamentally important issues in bank management. The first of these is an analysis of the underlying structure of the bank's balance sheet. Including both asset and

liabilities, to determine the banks interest risk exposure. The second issue is the implication on profit and loss of absorbing interest risk beyond the bank's capacity, given its liability structure. This second issue involves an analysis of the cost and benefits of interest rate exposure. The latter is consistent and interrelated with the discussion above concerning the bank's willingness to bear credit risk.

On the first point, the bank's balance sheet will dictate the extent to which fixed-rate lending can be financed with the bank's liabilities of similar fixed rate duration. Institutions with a larger percentage of fixed-rate core deposits will be in a better position to offer fixed-rate lending than their counterparts in the industry. Like wise, institutions with a small fixed-rate investment portfolio have a greater capacity to offer fixed-rate lending terms.

Beyond the ability to match the portfolio composition of assets and liabilities, the bank must determine the extent to which it wishes to deviate from a hedged balance sheet. Much has been written about the advisability of such hedging via gap management or futures activity. However, these arguments should not be oversold. In fact, it may not be desirable for the typical bank to immunize itself completely from interest rate risk, as is so often suggested. To determine appropriate balance sheet composition, the bank must weigh the benefits of absorbing some interest rate risk in its loan

portfolio, in terms of larger anticipated spreads, against the profitability of other types of risk bearing. The bank ought to be willing to accept some reasonable amount of interest rate risk in its portfolio, via offering a fixed-rate loan financed by variable-rate lending. The only real questions are how much interest rate risk will be borne and how this risk can be allocated among interested borrowers.

Remember, earlier it was argued that variable-rate lending terms should be offered to firms that have a project return, or cash flow, that is likely to be related to interest rate movements. These are firms that can most afford the rate uncertainty and will, accordingly, be the least likely to suffer, excessively from such contract terms. On the other hand, fixed-rate terms are most efficiently offered to firms with relatively fixed returns, as well as firms with project returns that are not at all related to factors that cause interest rate movement.

The quantity of mismatching in the portfolio, that is the fraction of loans made, depends upon the likely returns from such mismatching, the riskiness of such activity, and the bank's willingness to bear such risk. For example, as the expected gain associated with offering a fixed rate intermediate term loan, financed by short-term deposit certificates, increases, the bank should be willing to accept more such loans. On the other hand, as uncertainties of rate environment

increase, as the variability of rates over the last several years, the quantity of mismatched lending should decline.

Equally important however, is the recognition that the bank is in the business of bearing risk, albeit prudent and carefully considered. It makes little sense for it to absorb credit risk and completely shy away from interest rate risk. It makes no sense for it to have a portfolio that has fairly substantial projected loan loss figures, while at the same time trying to obtain a perfectly immunized interest rate position. The firm must look at both forms of risk, interest rate risk and default risk, and determine how both should be borne so as to achieve the best performance for the institution's market value. This means that it must be ready to absorb both types of risk if the benefits out weigh the cost of increased variability in its profit figures. Indeed, it should trade off the benefits of bearing credit risk with those associated with bearing interest rate risk. Some firms will find that performance and market value would benefit by improving the quality of their loan portfolios while at the same time increasing their interest rate exposure.

The argument does not imply that institutions should move headlong into interest rate mismatching. Indeed, much can be said, and has been written, on the advisability of limiting interest rate risk to the short end of the maturity spectrum and to a small portion of the portfolio. Prudence is always warranted. However, prudence does not

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call for completely eliminating interest rate risk, while at the same time bearing considerable credit risk in the loan portfolio. It requires the balancing of these two in the over-all portfolio position so as to achieve the best possible return for bank stockholders.

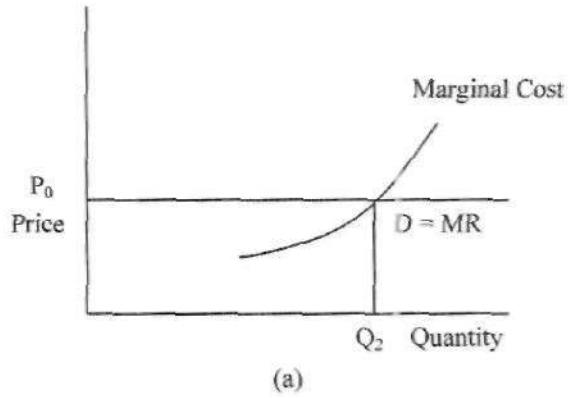
2.8 PRICING CONUMER LOANS AND DEPOSITS

Pricing strategies for consumer loans involve decisions to vary loan rates or credit availability depending on loan size or maturity. Pricing strategies can also involve decisions to vary fees on non-rate credit terms. The manner in which pricing strategies can profitability be varied is discussed below:

PRICE TAKING AND PRICE SETTING

Price taking: The demand for bank products at any particular bank is constrained by the size of the relevant market and competitor's behaviour. For instance, in the money market most banks are price takers in the sense that they can buy all the funds they desire if they pay the going market rate. However if they offer less than the market rate, they may attract no funds at all. This is illustrated in figure 2.5 (a). The demand for a bank's money market liabilities is horizontal over the relevant range. That is it can sell as much as it wishes at the present market prices, PO and in most cases, the cost of selling one

more Naira of money market liabilities equals the cost of the last Naira sold, PO. If a bank is a price taker, its actions have very little influence on the market price – it basically must "take" the price set in the market place by the interaction of all buyers and sellers of a service (credit). It then sets its output so that the marginal (extra) revenues it receives from producing another service at least equal its marginal (extra) cost of producing.



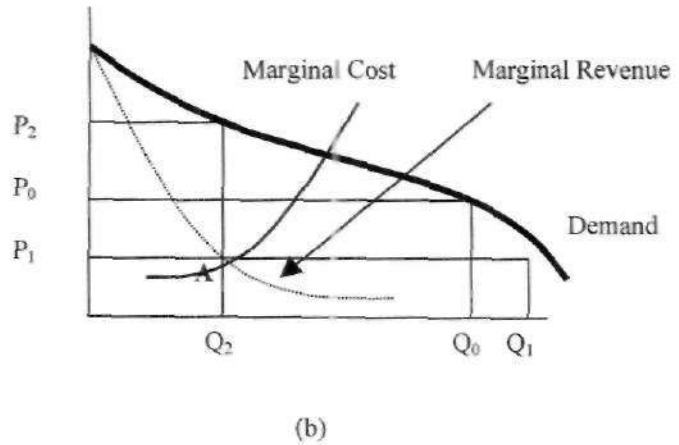


Figure: 2.5 (a) Price Takers (b) Price Setters

In the credit market, it s marginal costs incorporate cost of personnel, funds, computer time, and so forth, required to make and finance an additional loan and put it in the books. Marginal costs tend to rise because more expensive sources of funds must be tapped, less experienced personnel must be used, computer files must be provided, and so on as more loans are made.

Price Setting: In the case of consumer credit markets, and to a lesser extent, consumer deposit markets, must banks have price setting capabilities. A price setting bank is one that faces a down ward-sloping demand curve. In such a case a bank will be able to attract at least a few customers (possibly because of loyalty, locational convenience, or customer ignorance of or inability of use market alternatives) even if it charges a relatively high price. By setting a lower price, however, it will be able to attract customers from another market area (including other institutions). The lower it sets its price, the greater the quantity demanded of its product. (The demand curve is illustrated in figure 2.5 (b). If a bank lowers its price from P.O to P.I the quantity of its product demanded will increase from Qo to Q1. Since the price cut will reduce its revenues on all products sold, the additional ("marginal") revenue it gains from attracting more customers will equal P1 x Q1 (the new revenue earned) minus Po x Qo (the revenues previously earned). Since P1 is less than Po' the additional revenues will be substantially less than the revenue obtained on

the additional product sold, (Q1 – Qo) x P1. Thus, the marginal revenue earned when a price setter cuts prices will be far less than the product price. Hence, when the marginal revenue curve for a price setter is plotted in figure 2.5 (b), it lies substantially below the demand curve. In contrast, for a price taker, the marginal revenue equals the product price.

The marginal revenue concept is extremely important for price setters to consider, since they can increase profits only if their incremental revenue from cutting prices and expanding sales equal or exceed their incremental costs (including marketing costs) associated with expanding out put levels. Thus, in Figure 2.5 (b). If a bank's marginal costs of funds were increasing as shown, possibly because it had to pay more to obtain liabilities as it borrowed more heavily, it would maximize profits by producing at point A. Any expansion beyond point A would not pay, as its marginal revenues (once price cuts are taken into account) would be less than its incremental costs. In such a situation, a price setter would set price P2 and provide quantity Q2 of its product.

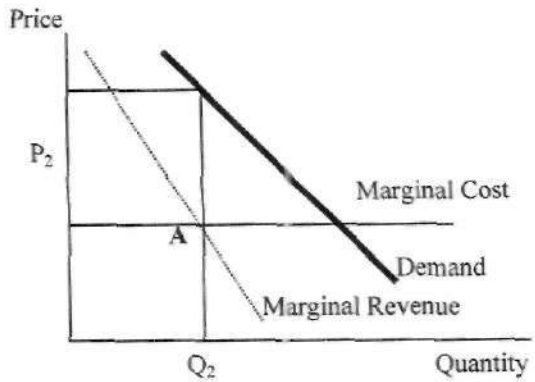
A price taker would behave similarly. However, it would not mark its price up over its marginal costs. Thus as shown in figure 2.5(b), it would produce quantity Q2 which it would sell at price P.O. Note that the price charged by a price setter will ordinarily be higher than that

charged by a price taker if they have the same cost of production. Furthermore, the price setter must be concerned with the effect a price change will have on total demand for it's product, while a price taker need not be so concerned.

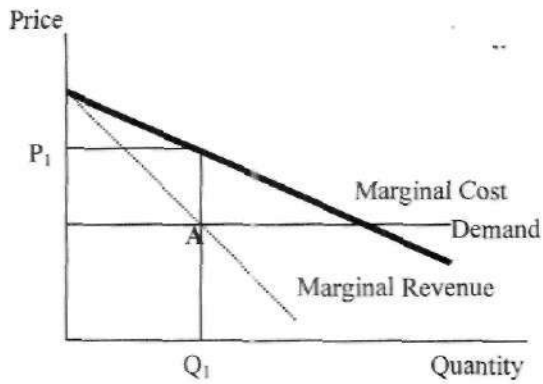
Price Discrimination: Price setters can enhance their profits if they have the power to segregate their markets and charge different prices for similar products in each case. For instance, a bank might find that the demand for its long-term low-down-payment consumer loans was relatively insensitive to price (because borrowers who wanted such loans were more likely to be strapped for cash and thus were less sensitive to loan rates than payment terms). At the same time, it might find its short-term, high-down-payment loans were very sensitive to rates (as its higher-income, wealthier borrowers were more able and willing to shop elsewhere to obtain lower rates). In that case it might face two different markets for credit, as shown in Figure 2.6 Figure 2.6 (a) shows the rate-insensitive demand for low-down-payment loans and Figure 2.6 (b) shows the rate sensitive demand for high-down-payment loans.

In order to maximise profits, the bank would want to set rates so that the quantity demanded for each Kind of loan would occur where the marginal cost of providing the credit exactly equaled the marginal

revenues obtained on its loans. Note that because very few additional customers are attracted by cutting price on low-payment loans



(a)



(b)

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Figure 2.6. Demand of consumer loan: (a) Low payment Loans (b) High-payment loans.

(Figure 2.6 (a), the marginal revenue curve declines steeply. It intersects the marginal cost curve at A, where Q2 amount of such

loans is demanded and price P2 is charged. Due to the insensitively of demand to price cuts, P2 is far higher than the rate (P1) that must be charged in the rate-sensitive market for high-payment loans. Even through the marginal cost is the same for both markets, the rate charged is much lower in the rate sensitive market.

A key implication of the proceeding analysis is that a bank must base its pricing strategies on a consideration of the extent to which it can be a price setter in the market it serves. A bank must consider the impact that a price cut will have on both quantity demanded of its product and its marginal revenues. It will increase its profits if its marginal revenues at least equal its marginal cost of expanding output. Furthermore, a bank can enhance its profits if it can devise a way to segment its markets so it can charge higher prices in markets that are not particularly price sensitive.

These are general principles of pricing, based on economic theory. However; pricing strategies are also affected by a host of more practical problems such as of loan size, effect of loan maturity on pricing and the effect of collateral. These are considered in turn.

Effect on Loan Size: As a general rule a bank will want to charge substantially more for smaller loans or not make them at all. This is

because the cost of loan origination usually exceeds the amount of finance charges.

Effect on Loan Maturity on Pricing: Most loan pricing practices involve the charging of higher rather than lower contracted rates on longer-maturity loans. There are several reasons for this.

First, borrowers who need longer-maturity loans may be riskier credit applicants who are expected to generate larger losses-both because they presently are more strapped for funds and therefore need a lower monthly payment and because adverse events may affect them over a longer rather than a shorter period of time. (Thus, higher rates must be charged to generate equal returns net of expected losses). Nevertheless, it is unlikely that the difference in possible losses is sufficient to compensate for the increased rates often charged on longer maturity loans. Second, borrowers who need longer-term loans to minimize their payments must be less rate sensitive borrowers. Thus, from the analysis presented earlier (see figure 2.6 (a), it may be possible for the bank to charge higher rates on loans sought by such borrowers. Third, consumer loans frequently are prepaid. Consequently, contractual maturities are irrelevant when it comes to calculating probable net rate of return on consumer loans. Only actual maturities count. Fourth a financial institution may have "Liquidity Preference" in that it will require a premium rate if it is to

extend consumer credit for a longer period of time since it will be taking interest rate risk if it funds the credit with short-maturity liabilities and also will incur risk if it funds the credit with (possibly higher cost) longer maturity liabilities and the loan is prepaid. Finally a bank may desire a higher "inflation risk" premium if it is expected to extend credit for a longer period of time and cost of funds are expected to rise with inflation.

Down payment and collateral requirements: In many cases it will be desirable to offer different rates on loans with different down payment and collateral requirement, rather than uniform rates on all loans. If the incremental rate earned from taking more risk on loans with reduced down payment or collateral requirements exceeds the extra losses expected on those loans, a bank may wish to adopt a multiple price policy. Under a multiple price policy, loans with lower down payment or less collateral will carry higher rates than other loans, all things being equal.

PRICING CONSUMER DEPOSITS

The primary reason for paying interest on deposit is to obtain funds. Strategies for pricing deposits must aim at obtaining needed funds (deposits) at least net cost. The net cost of obtaining deposits includes interest outlays less fees earned from service charges on

depositors' accounts, pricing strategies differ greatly for certificates and for checkable deposits.

Pricing non-personal certificates of deposits. For some types of deposits, such as non-personal CDs, service cost and service charges are relatively small. Thus, the primary cost of obtaining such deposits is the interest rate paid on them. However, the interest forgone on reserves required to back them and NDIC insurance charges must also be taken into account. Consequently, the cost of obtaining finds by selling large CDs at rate r equals (r + deposit insurance premium to deposit service costs) /1 – reserve requirement)

One advantage of selling CDs, especially long term CDs or long term savings certificates, is that it stabilizes the bank's costs of funds. This is illustrated in figures 2.7 and 2.8

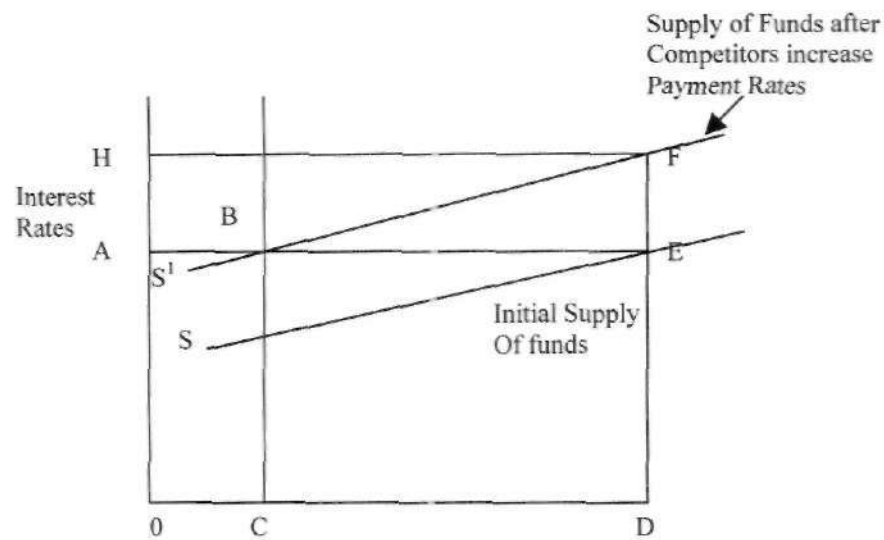


Figure: 2.7 Cost of obtaining more Funds if all Rates change.

Figure 2.7 shows that if a bank's competitors increase their payment rates on deposits, the bank can obtain fewer funds by offering a lower interest rate as shown on S'BF. The bank then has a choice. It can continue to pay rate A and only attract an amount of deposits equal to OC rather than OD. Alternatively, it can raise its payment rate to H and continue to attract the same deposits (OD) as before. If it chooses to retain its rate, its total interest payment will equal the area O ABC, with an average rate of A. If it choose to raise its rate on all deposits, total interest payment will equal the Area OHFD, with an average payment rate of H. it should be noted, however, that the average pay out rate will rise to H only after all CDs paying rate A have matured and been rolled over into CDs paying rate H.

Because banks are basically price takers in the large CD market, the supply of funds in that market, SE, will be nearly horizontal thus, if they do not match market rates, they will sell very few CDs. As a result they will generally have to match their competitors' rates in the large CD market.

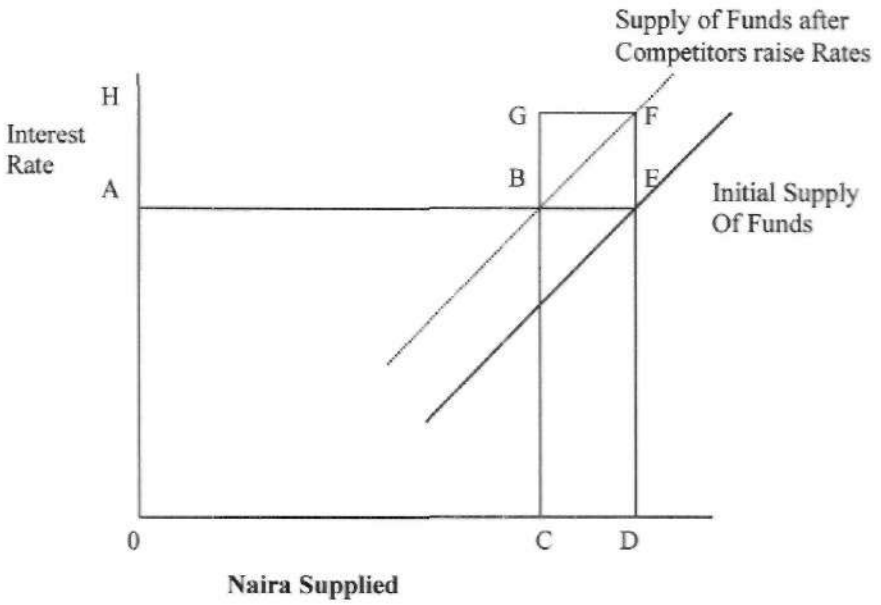


Figure: 2.8 Cost of obtaining more Funds by increasing incremented Rates paid.

CONSUMER CERTIFICATES OF DEPOSITS

In the consumer deposit market, in contrast with the CD market, the supply of ~~finds~~ funds SE, is likely to have a steeper slope. In that case, the issuance of consumer certificates of deposit allows the banks another option. That is illustrated in figure 2.8. In figure 2.8 it is assumed that competitors raise their rates as before. Instead of raising rates on all deposits, however the bank observes that a large portion of its depositors are content to receive rate A. thus, it pays A to attract OC of deposits. It still obtains a total of OD in deposit but pays an average rate only slightly higher than A. (geometrically, the average rate equals the area OABGFD divided by OD). That is, the issuance of consumer certificates of deposit allows a bank to obtain more

funds by varying only its marginal pay out rate. Often its average pay out rate will not be greatly affected. Consequently, if a bank feels competitive pressure, it may well want to offer higher-rate certificates of deposit rater than alter its basic NOW account or passbook saving payment rates. This approach holds average pay out rates down because it does not raise interest rates to customers that do not actively seek to obtain higher.

Lengthening the maturity of certificates of deposit can have beneficial effects when interest rates, in general are rising. For instance, even though market interest rates rise from A to H, in the short run as shown in figure 2.8, if only CD worth of certificate of deposit mature, the average cost of funds will not rise quickly. Even if new certificate pay rate H, average rate paid will only equal area OABGFD, divided by amount OD. Only after all certificate mature will an institution have to pay an average rate H on deposits.

Lengthening the average maturity of deposits may also be important if such action is under taken to achieve better balance of maturities of assets and liabilities (Wolkowitz and pohlman). Because many loans have rates that are reset at infrequent intervals, funding duration is of considerable importance. That bank has substituted market deposit, account (on which rate typically are adjusted weekly or even daily) for large certificate of deposit (with maturities of 90 to 270 days) in their

liability structure poses a threat that, in the short run, liability costs may rise more quickly than their rates of return on earning assets. This shift increases bank's interest rate risk unless steps are taken to off set it.

PRICING STRATEGIES

Banks have a great deal of latitude in their pricing strategies within relatively wide limits, they can be price setters rather than strictly price takers. For instance, a bank may choose to design one variant account for rate sensitive customers, charging full fees for account usage, consistently offering competitive rates it may also wish to offer another type of account for fee sensitive customers, either changing no fees or crediting against fees the value of balances – in either case paying below market rates.

Given some degree of price – setting ability on consumer deposit accounts, there are two general approaches to pricing strategies, the split-rate pricing and pricing to encourage balance maintenance.

Split-Rate Pricing - Split-rate pricing provide a way that average pay out rates can be reduced on deposit accounts without at the same time reducing depositors' incremental incentive to same. They work by paying one rate on a portion of deposit balance, $5^{1/4}$% on the first

₦2,500 for instance, and successively higher rates on incremental balance – such as 7%. On the portion of balance between ₦2,500 and ₦5000 and $7^{1/2}$% on that portion of the balance over ₦5000. Under this pricing strategy, the average rate paid on a ₦5000 balance is $6^{1/8}$%, while the average rate paid on a ₦10,000 balance is $6^{13/16}$%. However at the same time, the consumer earns extra interest at the rate $7^{1/2}$% for every additional Naira deposited above ₦5000.

Split-rate pricing schemes allows financial institutions to compete intensively by raising rates for incremental (marginal) deposit while not increasing their average cost of funds to the same extent. A similar approach was illustrated for certificates of deposits in figure 2.8.

Pricing to encourage Balance maintenance - there are two powerful incentives to encourage customers to hold larger average – size accounts. First, evidence suggests that many costs (postage, mailing, computer expenses) vary little with account size. Thus, the fixed costs associated with carrying an account can be covered more easily in large accounts as the interest rate spread earned on balance in larger accounts will more fully cover the fixed costs associated with account maintenance. For instance, if a bank earns a 3% spread between its average return on assets and its interest pay out on a ₦40000 account, it will generate ₦10 a month to cover the servicing

costs associated with account. However, if the account has an average balance of only ₦5000, it will only earn ₦1.25 per month to cover servicing cost.

The second reason larger accounts entail a benefit is that they are less likely to be over drawn, thereby triggering personal handing of the account, insufficient funds charges, and a potential loss of customer good will.

NSF charges (Non Sufficient Funds) – Banks can induce their customers to increase their average accounts holding in several ways. One way is to levy steep charges for handling checks on account with insufficient funds. Steep charges if they are well publicized, can encourage customers to keep large account balance or to pay a fee to obtain an automatic over draft credit line so they can avoid such charges.

Low Balance - Banks can also encourage customers to keep higher average balances by charging increasingly steep monthly fees as balance decline. Fees ca be increased from ₦10, ₦20, ₦30 per-month ₦50 ₦100 or even ₦150 per month as the balance decline. In addition, by basing monthly fees on minimum balance (rater than average balances) over the accounting period, the customers will have a greater incentive to maintain larger balances.

Scaled interest rates - As noted earlier, split-rate accounts can be structured so customers have an incentive to accumulate balances in their accounts. In addition, tiered accounts, in which the average rate paid on an entire balance increases as average balance size increases, may be offered. For instance, a customers might earn $5^{1/4}$% if the account has balance below ₦2500, 7% interest if the account has balances between ₦2500 and 5,000 and $8^{1/2}$% interest if the account has balances over ₦5000.

Both tiered and split-rate account can be used to encourage customers to hold larger average balance. Large accounts usually are more profitable, as they allow more earnings to be retained by the banks (from the spread between earnings on assets and interest payments) once costs of serving the account are covered.

2.9 A PORTFOLIO VIEW OF LOAN SELECTION AND PRICING

Good Credit analysis is widely recognized as a crucial determinant of success in banking. Most such analysis is conducted at the level of an individual customer, where the decision is made to extend or not to extend a line of credit, or at the level of an individual loan, where the decision is made to accept or reject an applicant offering to pay a particular loan rate (given the other loan terms). All banks are familiar

with loan exposure limits to individual borrowers, whether imposed by regulators or the policy of senior bank management. However, some banks have gotten themselves into serious trouble by failing to extend their assessment of credit risk exposure to sets of borrowers whose repayment capabilities are closely related to one another, the extent to which individual loans in a bank's portfolio are subject to shared risk of default is a second dimension of the credit risk problem that is less frequently addressed. While it is common place to observe that sufficiently diversifying the loan portfolio can reduce a bank's over-all exposure to credit risk, identifying and assembling a truly diversified set of loans can be quite difficult in practice. Even firms that have been reasonably ~~will~~ well diversified in the past may confront a substantially different investment environment as deregulation changes product offerings and shifts historical alignments between customers and financial service providers. Fortunately, much of the investment literature on portfolio selection can be applied to a discussion of bank credit risk exposure.

If a bank is viewed as a collection of assets and liabilities, the terms on which another asset (loan) should be added to the portfolio must reflect the effect of that new asset on share holders return. This, in turn, requires that management evaluate the inter-relationships between the new loan's return and the return (cost) of other bank assets (liabilities).

The institutional characteristics of Banking make it difficult to apply standard portfolio tools directly to the lending decision. ~~These~~ section bridges the gap between banking institutions and portfolio theory by providing a conceptual guide to portfolio issues in bank lending.

The basic principles discussed here apply to all depository intermediaries' Commercial Banks and Thrift institution alike, regardless of size or geographic location. The first part "making Bank decision under uncertainty" briefly considers a banking firm's planning objectives in a world of uncertainty. The principle of risk reduction through diversification is described in the next part ("portfolio theory's diversification principle") with special emphasis on loan contracts. The third part explicitly applies portfolio theory to loan selection and pricing, presenting several examples of common factors that affect loan defaults.

MAKING BANK DECISION UNDER UNCERTAINTY

Any firm must have a rule or objective that guides its activities. Economist have traditionally (though not always) begun with the assumption that firms seek to maximize their profits. When risk is considered, however, the profit stream becomes two-dimensional. Profits can be characterized in terms of their expected value (i.e. their

average level) or their variance (predictability). In well functional financial markets, securities with greater risk also tend to have higher expected returns. The objective function for a firm operating under uncertainty must therefore specify how shareholders feel about more (or less) risk versus more (or less) expected profits. Banking (and other) firms are generally thought to behave in a risk-averse fashion. That is, the bank will expose itself to greater profit variability only if expected returns are higher as well. In this view, the firm's objective is to maximize a utility function that values higher expected returns while preferring to avoid uncertainty in the return stream. Risk aversion has an important effect on the way a bank prices loans. Suppose the bank can invest in either a perfectly safe Treasury bill or a customer loan the might not be repaid in full. A risk-averse banker will lend only if the net loan return (after expected defaults and other costs) exceeds the Treasury bill rate.

Economic theory recognizes other firm objectives besides risk-averse utility maximization, but risk aversion seems to be reasonably accurate characterization of most banking behaviour for several reasons. First, many bank managers exert substantial influence over firm behaviour. The manager shares in extraordinary high profits only to a limited extent, while poor profits (or firm failure) can cost managers dearly interms of job security and future employment opportunities. As a result, managers may avoid very risky situations

even when the expected return to share holders is sufficient to compensate them for the risk. Second, many banks are owned by a small group of investors, each of whom has a substantial portion of his or her wealth in the bank's stock. The owners of a poorly diversified portfolios prefer (at least some extent) to avoid significant uncertainty about their primary assets earnings. Third, bank regulators seek to avoid bank failures, and therefore view fluctuating profits with concern. The associated regulatory pressure and restrictions can importantly affect bank decisions. Finally, the existence of sizable bankruptcy costs will induce banks to avoid extreme risk positions that might cause firm failure. Because debtors bear the bankruptcy costs in a failed firm, riskier firms must pay higher interest rates on their debts (including/uninsured deposits). These higher borrowing costs will discourage bankers from undertaking risks that do not offer correspondingly high expected returns.

The fact that banks trade off risk and expected return in evaluating various investments has important implications for loan selection and pricing. Developing these implications, however, requires a preliminary discussion on how an individual asset's riskiness differs from the riskiness of a portfolio of assets.

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PORTFOLIO THEORY DIVERSIFICATION PRINCIPLE

A profitable loan contract rate must compensate the bank for two distinct types of costs. First, the loan rate must cover the time value of the funds advanced. This time value – the pure rate of interest – is generally the largest portion of a loan rate and is relatively easy to measure. The current market interest rate on a 91-day Treasury bill for example corresponds (after adjustment for state and local taxation) to the riskless time value of money on a 91 day loan. Second, the loan rate should also include a premium over the pure rate of interest to compensate for the possibility that full repayment may not occur. Setting this premium appropriately requires sophisticated assessment of the borrower's financial future.

The loan rate premium can be further subdivided into a default premium and a risk premium. The default premium covers the lender's expected loss on the loan. Naturally, no lender should grant a loan he or she anticipates will not be repaid in full, but neither can the loan officer be entirely certain of repayment. The usual type of bank credit analysis is largely directed toward inferring the likelihood that the particular borrower will be unable to repay in full. Suppose, for example, the borrowers are known to repay either the full contract amount or zero. (partial or late repayments and extraordinary collection cost are easily included in this type of analysis). If the

assessed probability of default is say, 2%, the lender would charge a rate approximately 2% above the pure time value of money. This default premium can be assigned by examining a borrower's characteristics in isolation, without reference to other bank assets or liabilities. (Edward Altman).

The loan rate premium's second component compensates the lender for uncertainty about how much of the loan will be repaid. Such a risk premium – in excess of the expected loss-is needed to induce risk-averse lenders to make risky loans rather that concentrating exclusively on risk-less treasury bills. Two distinct factors determine the appropriate risk premium. The first is the lender's degree of aversion. The more reluctant is a lender to bear default risk, the higher will this premium have to be. Secondly, the lender's required risk premium is affected by the composition of other assets in the loan portfolio. Unlike the default premium, an appropriate risk premium cannot be assigned to an asset independent of what other assets are held by the lender. Rather, modern portfolio theory in any of its various forms clearly indicates that a security's "risk" can only be assessed in conjunction with the other assets held in the same portfolio.

A simple example will clarify this concept. Consider two assets (A and B) available for purchase, each of which has a great deal of variation

(dispersion) in its future value. Suppose there are two possible (equi-probable) future states of the world, and the assets will be worth the following amounts in each state.

	STATE	
ASSET	1	2
A	₦8	₦4
B	₦0	₦6

Individually, A and B each appears quite risky. But a portfolio comprising 60% of A and 40% of B will have the same value ₦4.80 – regardless of which state of the world occurs. In combination, these asset risks cancel one another leaving a risk-less portfolio. This dramatic result occurs because A and B have negatively correlated values: when A is worth a lot B is worthless and vice versa. (positive correlation naturally indicates that two asset values tend to move together, rather than inversely as either A and B covariance is a statistical concept closely related to correlation). While such perfect predictability of aggregate returns is rarely attainable, the diversification principle – that a portfolio has more stable returns than any individual asset in it – is quite generally valid. A direct implication of this observation is that one cannot judge the riskiness of any asset without evaluating how it relates to other assets that are available for purchase at the same time.

Bank loan returns have a rigid upper bound – because one can never collect more than 100% of the stipulated contract amount – so the possibility of default is what generates credit risk in bank lending. A loan is risky if the lender is uncertain about the extent of repayment. (If it were known beyond question that a group of loans would generate 2% defaults, there would be no risk as defined here). The diversification principle indicates that a loans portfolio's actual losses can be predicted, more accurately the larger the number of separate loans in the portfolio. In the extreme, a portfolio comprising a single loan would (expost) either repay in full or pay nothing. The dispersion (risk) of this repayment flow may be quite large. At the other extreme, the "Law of large numbers" guarantee that as the same aggregate Naira volume is lent to an ever large number of independent borrowers, actual default become closer to their mathematical expectation.

It is important to emphasize that the principle of diversification cannot reduce the portfolio's average default rate, but only the variability of actual loan losses (and thus the variability of bank profits) consider for example an experiment in which a "fair" coin is flipped repeatedly. In any sequence, the expected (average) number of "heads" is one-half the number of tosses. In a short sequence – say five tosses – a run of heads (or of tails) is not terribly unlikely. That is, there is some

significant probability that the actual number of "heads" will be substantially different from the expected number, probability theory asserts, however, that as the number of tosses gets large the actual number of heads is ever more likely to be near the expected number, which remains 50% of total tosses no matter how long the sequence. Similarly, diversification does not change a bank's expected default rate, though the actual defaults can be more accurately predicted in a portfolio composed of a large number of independent borrowers.

Because Bank shareholders are willing to trade off some expected profits in order to avoid uncertainty (and vice versa, the diversification principle has an important implication for loan pricing. Consider two loans with the same default probability. One, however is likely to default when the rest of the loan portfolio is experiencing relatively low losses (negative correlation with other assets). The other will tend to default when the rest of the loan portfolio is experiencing difficulty (positive correlation). The bank should charge the first borrower a lower loan rate, because adding that loan to the existing portfolio will leave the bank with lower over all risk. In short, a bank cannot set appropriate risk premiums without evaluating the covariance of an applicants possible defaults with that of other assets in the portfolio.

Two practical considerations substantially complicate the direct application of portfolio theory to bank loan selection and pricing

decisions. First, portfolio theory generally assumes that investors are "price takers" which means that the market somehow sets a price (interest rate) for each security and individual investors choose how much of each asset to purchase at the going rate. This view of asset acquisition is not applicable to bank loans, which do not trade in a market where prices are readily observed. Rather, Bank credit analysis serves a pivotal role that is absent from standard portfolio investment models. The bank must examine each applicant's financial characteristics to infer the likely default probability and covariance then choose a particular loan rate at which it is willing to lend. Naturally, this rate should compensate bank shareholders for the risks associated with the loan under review.

Second, most theories of portfolio selection assume that each potential asset's pay off are fixed and known to lenders. In reality, however, bankers need not purchase securities whose characteristics are immutably fixed. A large component of the "art" in banking involves structuring a loan deal in the way that best satisfies the customer and the bank simultaneously. The maturity rate, seniority and collateral associated with a transaction may affect the loan risk characteristics, as will the range of restrictive covenants specified, and perhaps later, the banker's skill in promptly identifying problem loans and efficiently effecting repayment or renegotiations. Furthermore, an applicant's default probabilities cannot be

determined without costly analysis, and not all potential lenders can evaluate the same applicant at equal cost. This suggest that, if credit information is costly to obtain and evaluate, specialization in a relatively few types of loans or within a relatively confined geographic area may be desirable. The specialized lender may distinguish more accurately applicants default probabilities, for example, or may be able to draft more effective restrictive convents. Collateral may be easier for a specialized firm to evaluate and control. Accurate information may be more readily obtained locally than it is across a greater distance. In short, unlike most portfolio models, a banks credit analysis and bargaining skills affect the risk-return characteristics of the loan portfolio.

Even though bank loans do not fit the usual model of optimal portfolio selection, the basic insights can (and should) be observed in lending. In particular, the portfolio theoretic viewpoint requires that credit analysis produce information about an applicant's default probability and the interrelationships between and among various borrowing customers. Loan default covariances are present whenever loan repayments are influenced by one or more common forces. Part of senior management responsibilities, therefore, the loan portfolio's composition and/or pricing to reflect the risk effect on total bank profits.

COVARIANCES BETWEEN BANK ASSETS AND LIABILITIES

Assets selection is often discussed independent of the way those assets are financed. However, many banks should also consider the relationship between their asset returns and the cost of availability of various types of deposit funds.

One type of asset liability covariance concerns the impact of market interest rate changes on liability cost and loan returns. A change in market rates affects total interest costs quite promptly for banks of all sizes. To minimize the effect of unanticipated interest rate changes on profits, bankers practice various forms of gap management. By adjusting asset and liability maturities (duration) to complement one another, a bank can control it exposure to interest rate risk (Benjamin Wolkowits). Unfortunately, these calculations often fail to consider the fact that some borrowers loan defaults will be correlated with the level of market interest rates. Interest rate risk management techniques based on an assumption that loan defaults are unrelated to interest rates will therefore fail to produce the share holders desired net risk exposure.

A second liability characteristic that should be reflected in loan pricing concerns the availability of retail deposits drawn form a limited geographic area. A regional recession can generate substantial

deposit withdrawals at the same time local loans are subject to unusually high default rates. The bank would then be forced to seek liquidity from unusual sources, just when its asset portfolio appears weakest. This possibility should lead the bank to hold a relatively large, short-term (i.e. liquid) bond portfolio. To keep the loan deposit ratio down, the bank will charge borrowers a relatively high-risk premium in recognition of the covariance between deposit availability and credit quality.

A further consideration for banks heavily dependent on local retail deposits is that their efforts to hedge or to bet on interest rate movements must be undertaken via loan pricing. A small bank wishing ~~of~~ to lengthen its asset maturity relative to liabilities cannot shorten its portfolio of (non-existent) negotiable C.Ds, but must induce borrowers to take more (longer) fixed-rate loans. This must be accomplished by adjusting the risk premiums on long versus short-term loans to reflect the degree of interest rate risk perceived in each type, given the banks rate forecast. Obviously, the asset maturity adjustment can extend beyond the corporate loan portfolio, as the bank revises other loan rates to encourage or discourage consumer installment loans, mortgages, lease financing, and so on.

Finally, multidimensional customer relationships – the fact that a customer tends to deal repeatedly with a bank as both borrower and

depositor – can have an important influence on loan pricing for two reasons. First, customers vary in the amount and variety of bank services they purchase, and hence in the profitability of their overall relationships, banks may set loan rates different from those implied by the preceding analysis, though diversification considerations will continue to have an important effect on loan selection and pricing. Secondly, covariance analysis should be extended to recognize the intertemporal dimensions of customer relationships. A new customer will have deposit flows and loan demands that are correlated with one another, and with the corresponding flows of other bank customers. A firm whose credit needs are positively related to those of other customers is less valuable than one whose loan demands are countercyclical. Deposit flows are much the same. A customer whose deposit balances are less correlated with other sources of funds will be more valuable to the bank. This correlation should be recognized in the customer profitability analyses. The loan and deposit rates offered to individual customers should reflect their correlation with the bank's other customers' liquidity and financing needs.

CONCLUSION

We price products and services to capture the greatest return on investment for the bank's share holders. However in doing so we

must balance risk and return. In particular, we must make sure we have looked at liquidity, interest, credit and capital risks.

There is a strategic dimension to pricing that states that banks will do well pursuing an explicitly defined general strategy of lower cost or differentiation. For instance, if you pursue differentiation you will seek unique features in your products or services that have value for your customer and will allow you to charge a premium price.

We can classify customers as prime, perceived – value and relationship. The approach to pricing will vary for each of these categories.

The customer profitability model is probably the best approach to assessing pricing. In this system you collect the total income and expenses relating to the customer. Where profitable you still need to assess if the excess value justifies the credit risk.

The determination of the quantity, nature and price of the loan portfolio requires an understanding of management's ultimate objective of long term value maximization. This has direct effects on loan portfolio structure and composition as these relate to this goal. Careful analysis of the entire loan relationship is needed to determine the nature of return stream or earnings to be obtained from

prospective or existing customers as they seek loan financing. This is an extremely difficult task to perform and, yet fundamentally important. Its relevance in the competitive environment is likely to grow as this information allows the bank more adequately to evaluate the profitability of customer groups and keep their best customers.

Appropriate decision-making, at the bank level, requires more careful consideration of the trend toward variable rate pricing. For some projects or firms, such pricing do little more that re-classify interest rate risk as credit risk, because some firms cannot adequately absorb such loan price variability. Recognition of this phenomenon suggest that loan terms should be set only after due consideration of the project's nature. Loan pricing should fit the firm's ability to pay.

On an aggregate portfolio level, the determination of the final loan portfolio composition involves knowledge of the bank's total balance sheet and it's willingness to absorb risk.

Banks that have price setting power can alter their loan rates and prices to vary the demand for their products. Nevertheless, the major consideration in pricing consumer loans is to establish prices so that extra revenue will cover all costs associated with making an additional loan.

The pricing of consumer deposits involves a number of issues. Institutions are usually price takers in the money market. However evidence suggest that they have considerable price setting power in the consumer deposit markets.

Institutions potentially can improve profits and simultaneously maintain customer incentives to hold large balances if they adopt split – rate pricing schemes in which rates paid on deposits increase on the highest portion of the deposit as balances increases.

Another way to enhance revenues from deposit accounts is to adopt price structures designed to encourage high balance maintenance.

Overall, consumer loans and deposits can be priced along many dimensions. Institutions may take one of this general tacks: a variety of pricing schemes that will appeal to a wide range of customers, or focused programmes that will have the greatest appeal at the least cost to the bank to that class of customer the institution chooses to serve.

Finally when discussing the issue of Bank Credit risk, the tendency is to narrow ones focus to individual loan transactions. This perspective can result in a loan portfolio of individually sound credits that complement one another terribly. Because high default covariance

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have potentially, devastating effects on bank's profitability, adequate loan portfolio diversification requires active supervision and planning by senior management.

The forecast and risk assessment required of the bank management are difficult to undertake and do not always lend themselves to cut and dried statistical analysis. It is never the less far preferable to attempt an explicit analysis of bank risk exposure than unwillingly to undertake portfolio risks for which the bank is inadequately compensated.

CHAPTER THREE

BACKGROUND AND STRUCTURE OF THE NIGERIAN BANKING INDUSTRY

3.1 BACKGROUND OF THE NIGERIAN BANING INDUSTRY

Critics of Nigerian banks have often charged that banks concentrate much too much on trade finance to the determinant of high value added sectors of the economy. Perhaps this bias if it exists, can be explained by the fact that modern Banking in Nigeria is deeply rooted in European trading activities in Nigeria just before the end of the last century.

British traders unhappy that the London banks had shown little interest in West Africa had to take initiative from their base in Liverpool.

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The first move of the traders was to invite the African Banking Corporation (ABC), then active in South Africa to open a branch in Lagos. The A.B.C swallowed the bait and opened a branch in Lagos. This was in 1892.

In a short time, the move proved a distraction from its focus in South Africa. A.B.C decided to sell the branch. Alfred Jones Chairman of Elder Dempsfer Shipping Company led some of the trading community interested in purchasing the branch, which would serve as a nucleus of a new bank. On March 31st 1894, the bank of British West Africa (B.B.W.A) emerged from the embryo of the former ABC

branch. It had monopoly of banking operations including the right to import coins from the British mint into West Africa (NDEKWU, 1994).

This monopoly was challenged when a group of British trading companies accused some shipping concerns of engaging in secret trading in spite of an accord requiring firms not to cross sectors. In response to the violation of the accord, these trading companies started a bank, the Anglo – Nigerian Bank just before World War I. the first major competitive challenge to B.B.W.A. was for equals rights to import coins from the British mint as B.B.W.A. was seen to be profiteering from the margin it charged as commission. This competitive challenge which was in favour of B.B.W.A, even though, the government of the colony had favoured allowing both banks to import coins from the mint (Fry, 1976). Following the death of Alfred Jones, Merger talks were initiated between the two banks. The BBWA eventually acquired the Anglo – Nigeria bank.

The Monopoly of B.B.W.A. was soon challenged by indigenous entrepreneurs who accused the bank for not providing support to the indigenous business community. Many of these banks, for reasons remarkably similar to those given for the banking crisis that followed more than sixty years later, in the late 1980s and the 1990s went bankrupt. These reasons include under capitalization, inadequately trained personnel and mismatching of maturities of loan assets and

deposit liabilities. Of the indigenous bank started in 1920s only national bank of Nigeria was around when financial sector liberalization began in 1986. Even National bank has since become moribund. A second phase of the surge in indigenous banks resulted again in so many bank failures in the early 1950s. These failures prompted the first real effort at regulating the activities of the banks. The regulation was institutionalized in the banking ordinance of 1952. This process of institution building continued with the central bank of Nigeria Act in 1958.

The outcome of these regulations was to raise entry barriers into banking. Behind these barriers an oligopoly of a few subsidiaries of multinational banks and few indigenous survivors of the 1950s such as the Agbon mabge Bank (A.C.B) and national bank, developed. Each of the banks served a segment of the market with little aggressive intent towards the market share of their supposed rivals. Later the creation of additional states in the federation gave rise to a new genre of banks. These banks owned by state government were founded primarily out of the need to provide banking services in provincial settings that did not attract the attention of the high street banks in Lagos.

Rivalry in banking was muted through the years. Advertising campaigns were mainly informational in nature until the 1980s.

Services were perceived by customers as poor and they generally did not think banks gave value for money. The inefficiencies associated with this quasi monopoly meant that idle funds were not mobilized and channeled to areas of higher productivity. This meant that financial deepening was lacking in the economy.

When the Dutch disease, following oil price collapse, was badly managed and Nigeria could not contract its consumption as its income declined, economic stagnation followed. A search for solution brought the structural adjustment program (SAP) to the fore. The corner stone of the World Bank assisted adjustment program was liberalization to stimulate competition and attain financial deepening. Renewed growth in the economy, it was expected would come from financial intermediation dependant on savings available through financial deepening. The reality turned out differently.

The lowering of entry barriers into banking with deregulation quickly resulted in a tripling of the number of banks from forty (40) to one hundred and twenty (120). As Howard Stein posits, contrary to the prediction of MC Kinnon – show hypothesis, financial saving and investment fell in the wake of deregulation (Stein, 1996).

3.2 STRUCTURE OF THE NIGERIAN BANKING INDUSTRY

THE MAIN STRUCTURE (FINANCIAL SRUCTURE)

The Nigeria financial system comprises the regulatory/supervisory authorities, bank non-bank financial institution (NBFIS), Financial bodies/associations etc. In the main both banks and non bank financial institutions operate at both the short end (money market and the long end (capital market) of the financial market, though with different degree of depth and impact. Similarly, banks and some NBFIS like Bureau de change operate in the Foreign Exchange Market. Usually, the bodies/associations regulate the activities of members toward smooth operation of the system. E.g. Chartered Institute of banker's, the bankers committee and the FITC.

3.2.1 THE SUB-STRUCTURE – (BANKING INDUSTRY)

(a) COMMERCIAL AND MERCHANT BANKS

The banking sector is at the centre of the financial system. Commercial and merchant banks are generally referred to as licensed banks in Nigeria. They operate under the legal framework of banks and other financial institutions decree (BOFID) No 25 of 1991.

These institutions perform the major role of financial inter-mediation and facilitation in any financial system. The first commercial bank. In Nigeria, the African Banking Corporation as we have noted above was established in 1892. Since then commercial banking activities in Nigeria have witnessed tremendous changes in terms of composition legislation etc. That not withstanding their basic function of retail banking have not changed.

They perform three major functions, acceptance of deposits, granting of loans/advances and the operation of payment and settlement mechanism. As at December 31st 1995, there were sixty-four (64) licensed commercial banks in Nigeria, with two thousand two hundred and thirty four (2234) branches nationwide. But because of the distress syndrome that afflicted the industry only about forty (40) of them are now fully functional. Also with the directive to increase the minimum paid up capital of banks to 500 million, it is expected that more banks will either merge or go under.

(b) Merchant banks on the other hand are mainly regarded as financial whole sellers. They cater for the financial need of corporate and institutional customers as well as high net worth individuals. Their major role in the economy is the provision of medium to long-term finance by engaging in activities such as equipment leasing, loans syndication, debt factoring, project

financing etc. As at December 31st 1995 there were fifty-one (51) merchant banks with one hundred and forty three branches (143) in the country. As with commercial banks, most of them are already liquidated and terminally distressed.

Recently, events and activities in the system tend to suggest that the line of distinction between these two main stream banks is getting blurred and narrowing. Hence there is a serious pressure for the adoption of universal banking where both commercial and merchant/investment banking activities can be practiced by any licensed bank.

Apart from commercial and merchant banks, the following banks are also in existence.

(c) THE PEOPLES BANK (PBN)

This institution established in 1988 was created to meet the credit needs of small borrowers, who cannot satisfy the target requirements normally demanded by main stream bank. The bank is expected to facilitate access to credit for economic operators at the grass root and there by increase their self-reliance. As at end of December 1995, the number of branches

stood at two hundred and seventy five (275) but most are plagued with poor management and problems of debt recovery.

(d) **THE COMMUNITY BANKS**

These are deposit taking financial institutions owned and managed by a community or group of communities to provide financial services to the community. The first community bank was established in December 1990. As at December 1995, there were one thousand three hundred and fifty five community banks in the country, but most of them have now folded up due to poor management and the general complexities in the economy.

(e) **DEVELOPMENT – ORIENTED BANKS**

These are institutions established to cater for some specific sectors and/or categories of needs. Development banks as at present are the Nigerian Industrial Development Bank (NIDB), the Nigerian Bank for commerce and Industry (NBCI), the Nigerian Agricultural and Cooperative Bank (NACB) and the Urban Development Bank (UDB). These institutions are created

by different statutes and are not subject to BOFID No 25 of 1991.

(f) **SPECIALIZED BANKS**

These are institutions specifically created to cater for designated needs. Most of the Development Banks can conveniently fit into this classification. A specialized bank, which is not mentioned above, is the Nigerian Export – Import Bank (NEXIM) This bank was created to encourage and promote export development in the country. The Bank's financing are tailor – made towards that direction.

3.2.2. THE REGULATORY/SUPERVISORY AUTHORITIES

These institutions are very important to the orderly development of the whole financial system. Presently, the Federal Ministry of Finance (FMF) is the highest regulatory Authority of the system; apart from the presidency which controls the whole economy. Its authorities and mandates cover every aspect of the system and the whole fabrics of the financial markets. Next in line as far as the banking industry is

concerned is the Central Bank of Nigeria at the apex of the banking sub sector. Others are Nigeria Deposit Insurance Corporation (NDIC) and the National Board for community Banks (for the regulation of community Banks). Each of these will now be discussed in turn.

THE FEDERAL MINISTRY OF FINANCE

This is the main regulator of the system. It is the supervisor of all other regulatory authorities. It is solely responsible to the presidency. It advises the Federal Government on its Fiscal operations and supervises the CBN on monitory policy/action. Though, it delegates other regulatory authorities to monitor activities of the main participants in the system, it liases and supervises these regulatory institutions for efficiency, and effectiveness. Above all, the FMF coordinates the activities of the system through the financial services co-ordinating committee (FSCC) introduced in the 1997 budget announcement. This body is chaired by the Federal Minister of Finance with the Chief Executives of the following institutions as members viz.: Central Bank of Nigeria (CBN), Nigerian Deposit Insurance Corporation (NDIC), Securities and Exchange Commission. The FSCC meets regularly to deliberate on the problems of co-ordinating, supervising and regulation of the financial service industry.

(a) THE CENTRAL BANK OF NIGERIA (CBN)

This was established by the CBN Act of 1968. Prior to this the West African Currency Board, a colonial establishment was charged with the responsibility for the operation of a common monetary system for all former British Colonies in West Africa. Among its primary functions, the bank issues and manage legal tender currency, monetary stability and a sound financial system, acts as a banker of last resort to other banks and assists the Federal Government to determine appropriate monetary and credit policies. Usually the CBN make proposals to the government in this respect and after these are reviewed and accepted they form part of the annual Federal Budget. A few days after the pronouncement of the budget, the CBN issues a comprehensive monetary policy guidelines, which spells out details on credit policies, interest regime, foreign exchange transactions etc. For the year under review. The CBN is the main regulatory authority of licensed banks and finance houses. Also recently its power has been extended to cover activities of primary mortgage institutions (PM/SO) and community banks. It exclusively regulates the activities of some specialized institutions such as NIDB, NBCI, and NACB. The Central Bank has a board of Directors with a part-time Chairman. The permanent secretary of the Federal Ministry of Finance, the managing director of NDIC plus three deputy

governors and the governor of Central Bank of Nigeria are members appointed by the president.

(b) The Nigerian Deposit Insurance Corporation (NDIC). The NDIC complements the supervisory role of the CBN. It was established through the promulgation of Decree 22 of 1988. Primarily, it insures bank deposit. Other functions include rendering financial and technical assistance to a distressed bank and liquidating a failed bank. The Corporation is mandated to examine the books and affairs of any licensed bank, and such banks are mandated to pay 15/16 of 1% of their total deposit liabilities as insurance premium to the corporation. A depositor's claim is limited to a maximum of ₦50,000 in the event of a bank failure. Generally, the corporation is empowered to promote safety, stability and confidence in the banking industry. The authorized share capital of the corporation is ₦1.006 Billion fully paid up and held in equal proportion between the Federal Ministry of Finance INC. and the Central Bank of Nigeria (CBN). At inception, the corporation reports to the CBN but effective 1st January 1997, the decree was ammended to make the corporation independent of the CBN and to be supervised by the Federal Ministry of Finance. The Board of the corporation is headed by a part-time chairman appointed by the president. A Director of Federal Ministry of

Finance, the Managing Director of NDIC, a representative of CBN are members in addition to three other part-time members appointed by the president of Nigeria.

(c) **NATIONAL BOARD FOR COMMUNITY BANKS**

This institution was created to supervise and regulate community banks. It gives prior approval for the establishment of community banks, while the final granting of license is the responsibility of the CBN. With the transfer of both regulatory and supervisory function over community banks to the CBN effective. 1st January 1997, the relevance of this institution remains unclear and yet to be sorted.

3.3 PRODUCTS AND SERVICES OFFERED BY COMMERCIAL BANKS

The products and services offered by commercial banks can be classified along balance sheet line. I.e. what product or service constitutes either asset or liability.

(a) Under assets we have the following:

SERVICE

(i) **OVERDRAFT**: These become available through the use of the current account, the customer being permitted to draw cheques or other orders for the payment of funds in excess of the balance standing in the Account. For this kind of accommodation the bank charges interest on the over drawn amount. Note that there is no right of an over draft on a current account and when cheques are presented which create an over draft without prior arrangement the bank has the option of returning them unpaid.

(ii) **TERMLOANS:** This is the other traditional method of lending and it differs quite significantly in operation from the over draft. When a loan facility is granted, a separate loan account is opened in the name of the customer. The full amount of the loan is then debited to this account and the funds credited to the current account. The full amount of the loan plus interest is repaid on the expiration of the term-the loan could be either short, medium or long-term.

(iii) **SYNDICATED LOANS**: The distinction between this and other loan accounts – is that the syndicated loan as granted by two or

more banks. Two or more banks come together to provide the loan to a customer.

(iv) **INSTALLMENTAL LOANS**: The type of loan as the name implies is repaid by regular uniform installments, usually monthly and over a period of one to three years.

(b) **INVESTMENTS**

(i) **TREASURY BILLS:** the banks buy these from the Central Bank of Nigeria and the discount houses. All treasury bills are issued by the Federal Government of Nigeria, both to raise finance to cover temporary excesses of state expenditure over income and as part of its open market operation (omo) to mop up excess purchasing power in the economy. Commercial Bank invest some of their liquid funds in purchases of treasury bills, arranging always to have on hand enough bills maturing each week in the immediate future to cover anticipated out goings of funds. The tenor of a treasury bill is usually 91 days.

(ii) **BILLS DISCOUNTABLE:** The original activity of the discount houses, and the one from which they take their name, was discounting of commercial bills of exchange.

The term bills of exchange is used to regulate settlement of commercial transactions undertaken on short duration credit terms both in respect of inland trade and more importantly international trade. To explain if, for example a manufacturer agrees to supply goods to the value of ₦10,000 on six months credit terms, he may draw a bill of exchange on the purchaser ordering him to pay the appropriate amount at the expiry of the six months period or more commonly, after 180 days as this is a more specific measure of time. If the purchaser is happy with the arrangement, he will signify his agreement to pay ₦10,000 on the due date by marking (signing) the bill with his acceptance and returning it to the manufacturer who is known as the drawer of the bill. The drawer then holds the bill until the due date when he represents it for payment.

If the drawer finds that he cannot afford to wait until the maturity of the bills before receiving his money, he can try to sell the accepted bill to a third party. Clearly, he will not be able to sell the bill for it's face value, as this offers no inducement to a prospective purchaser, he must be prepared to sell it at a discount. The amount of discount deducted by a purchaser from the face value will reflect both the length of time that he will have to wait to get his

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money back and the level of risk that the acceptor (buyer of the goods) will not be able to pay up on the due date. The rate of discount is usually expressed as an annualised percentage and is, in effect, equivalent to an interest rate charge to the seller of the bill.

Many of such bills are today discounted by the acceptors.

Securities – bounds and stocks – this refers to the investment of the bank in shares and stocks of various quoted companies.

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C. CONTINGECIES

(i) **GUARANTEES:** When capital projects are put out for tender, suppliers who wish to quote for the contract will normally be required to arrange for a satisfactory tender guarantee or bid bonds to be issued in favour of the party who will be contracting for the work to be done. The aim of this type of guarantee is to protect the buyer against loss if the contract is awarded to a supplier who cannot or

will not thereafter start work despite having put in a bid. Tender guarantees are commonly issued for a set percentage of the value of the contract.

(ii) **PERFORMANCE BONDS:** These provide a similar type of safeguard against the risks of a supplier finding himself unable to complete the contract at some time after having started work. This can be very costly to the buyer because of the extremely lengthy delays which it may cause and because any other supplier would quite probably have to begin again from the beginning, being unable to utilize any of the work done or the items supplied by the original seller. If any stage payments have been made to the original supplier these amounts will probably be irrecoverable, adding to the losses.

Performance bonds are relatively new creatures in banking. Under them, the guarantees given by the bank are unqualified. The amounts, which the bank may be called on to pay under all these types of guarantees, can be substantial. Before entering into them, therefore, the bank will wish to be entirely satisfied that the customer has the expertise and the resources to complete the contract. If necessary, security may be taken to ensure

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that the bank will not incur losses if payments have to be made.

(iii) **INDEMNITIES** Banks are asked to issue indemnities for both business and personal customers for a wide variety of reasons. Indemnities are often called for to enable exporter to obtain payment under letters of credit despite discrepancies in the documents. The bank will consider the integrity of the customer and the value of the counter – indemnity before issuing the required document.

(iv) **STAND BY LETTER OF CREDIT** A letter of credit is a written commitment given by a bank at the request of a buyer to effect payment to a seller on his satisfying precisely defined conditions. Letters of credit are normally concerned with settlements for goods, which move between countries. Letters of credit can include other conditional undertakings as well, provided the fulfillment of conditions can be evidenced through suitable documents, such letters of credit are called stand by letters of credit. For example stand by letters of credit are issued to settle certain claims. In these cases the settlement is made against receipt of invoice, receipt in a

particular format, certificate of discharge etc claims could cover payment of royalties, school fees etc.

(v) **RED CLAUSE LETTERS OF CREDIT** Under this type of letter of credit the issuing bank transmits the applicant's instructions to the negotiating bank that they may advance a sum (usually expressed as a percentage of the total invoice value) to the beneficiary. In practice, this may be used by the beneficiary to manufacture or ship the goods. This type of letter of credit gains its name from the practice of printing the clause, which authorizes advance payment(s) on the credit in red ink.

D. LIABILITIES

(i) **CURRENT DEPOSITS:** The current account is the archetypal bank account, being available in its complete form from no other types of organization. The balance of the current account is withdrawable on demand either by way of cash withdrawals or through the use of cheques, which are the principal identifying feature of the current

account. Standing orders and direct debit facilities are also available for making payments out of current account. The bank usually charges commission on turnover for the operation of the type of account at the rate of say 5 per mille i.e. for every one thousand Naira withdrawn from the current account the bank charges a commission of five Naira (₦5).

(ii) **TERM DEPOSITS:** While current account are designed to facilitate the processing of short term funds flow, term deposits accounts are for holding of medium term and long term surpluses of funds. Cheques are not available for the deposit accounts, which therefore provide the banks with a much less volatile source of funds for use in lending. Payment into a deposit account may be made in cash, by credit transfer, by transfer from current account or by cheque. Interest is also paid at a predetermined rate on the balances standing to the credit of the deposit account.

(iii) **SAVINGS ACCOUNTS:** These are similar to "ordinary" deposit accounts in that interest is paid at only a moderate rate on credit balances and the use of cheque

books is not permitted. The principal difference is that savings account deposits and withdrawals continue to be recorded manually in a passbook, which the account holder must produce at every transaction.

(iv) **NEGOTIABLE CERTIFICATES OF DEPOSIT**

A certificate of deposit is a document issued by a bank certifying that a deposit has been made with the bank. Certificates are usually issued at par for periods of three months to five years. They are payable to bearer and fully negotiable.

(d) SERVICES

(i) **OPERATIONAL:** These refer to the normal operational services such as payments and receiving of cash, provision of statement etc

(ii) **FUND TRANSFER:** These are the second major activity of banks, being one to which they devote some two third

of the efforts of their clerical staff. As the name implies they involve transfer of funds from one person, bank or place to another. There is little direct profit to the banks from these services, despite the current account commission charges they often levy.

(iii) **LETTERS OF CREDIT:** See stand by letter of credit

(iv) **DRAFTS AND STANDING ORDERS:** The draft is, in effect analogous to a cheque issued not by the customer but by the bank: it has the advantage to the payee that unlike a personal cheque it is unthinkable that it would be returned for lack of funds in the account. When a customer requests for a draft, his account is debited and the bank issues the draft according to his request. Draft could be in Naira or any foreign currency.

The principle of standing order is very simple a customer who has recurring payment to make can instruct his bank to record the details of payment and to remit it on his behalf each time it falls due, debiting his account accordingly.

Standing orders provide a convenient and reliable method of ensuring regular payment on time, encompassing such items as loan repayments, mortgage or rent payment annual subscriptions and insurance premiums.

(e) **TRADING**

(i) **MONEY MARKET:** The money market as a whole is concerned with the short term biding and borrowing of money, providing a pool of liquid funds on which the banking system can draw. The "classical" money market consists of two parts. The discount market and the money market proper. The principal participants in these markets are the banks, discount houses and the Central Bank of Nigeria.

(ii) **FOREX:** A further market in which the banking sector is heavily involved is the foreign exchange market in which foreign currencies are bought and sold. Although not directly related to the money markets discussed above, the foreign exchange market does have an effect on these markets and is in turn affected by them.

CHAPTER FOUR

DATA OF ANALYSIS

4.1 INTRODUCTION

This chapter analyses the data acquired in the research. It begins by examining the pricing method(s) employed by the African International Bank Ltd in pricing its products and services. The

chapter specifically looks at the following key areas – pricing of loan and over drafts, pricing of deposits, pricing of letters of credit, guarantees and performance bonds. In addition to the above, the chapter also looks at pricing of bankers payments, demand drafts and other bank charges and commissions such as commission on turnover.

The validity or otherwise of the research hypotheses are also tested in this chapter. But first a brief introduction of the research area (the African International Bank is presented.

African International Bank Ltd (formerly Bank of Credit and Commerce International Nigeria Ltd) was incorporated in Nigeria on the 6th of August 1979 and commenced operations in September 1979.

At the time of incorporation, the capital structure was 60% share held by Nigerian individuals and companies and 40% by the bank of credit and commerce International S.A. (Luxembourg). This is a result of the implementation of the 1976 indigenisation decree which limited the participation of foreigners in the banking industry to a maximum share holding of 40%.

The operation of the bank was arranged such that the B.C.C.I. S.A acted as the technical managers providing key management staff and operational framework.

Within a very short period of its operations, the bank was ranked as the 4th largest bank in the country with a deposit base of over 1 billion and a profit after tax of 21 million.

On the closure of B.C.C.I SA. by monetary authorities in Europe and United States, B.C.C.I. Nigeria Ltd, metamorphosed in July 1991 to African International Bank Ltd. Unlike the other affiliates of the bank in other countries that collapsed.

The survival is a consequence of the majority share holding held by Nigerians, thanks to the indigenization policy. Subsequently, the 40% shares of the BCCI SA were subscribed to by existing Nigerian shareholders by way of rights issue.

The bank continued to witness steady growth in terms of total assets, profit and market share in the financial industry despite the misfortune suffered by its former technical partners.

As at 31st December 1998. The balance sheet of the bank is lighted as follows:

(a)	Share capital and reserves	₦1,461,019,000
(b)	Total assets	N14,456,112,000
(c)	Total deposits	₦10,361,089,000
(d)	Profit before tax	₦937,660,000
(e)	Number of branches	51 branches and 8 cash centres

4.2 PRICING OF LOANS AND OVERDRAFTS

The bankers tariff revised August 1997 which became effective 1st March 1998 shows that interest rate are to be priced as per monetary policy. In effect individual banking institution guided by stance of policy and forces of supply and demand in the financial market is free to determine its prime-lending rate.

Given the above I decided to look at the monetary credit, Foreign trade and exchange policy guidelines for the 1999 fiscal year. Under interest policy, it was stated that the adoption of market based technique of monetary management requires a flexible and dynamic interest rate policy. Thus deregulation of interest rates, which came into effect in 1996, shall continue.

In this regard, the CBN would indirectly influence interest rate changes through its intervention rate on various money market

instruments especially the minimum rediscount rate (MRR) as well as the cut off rate at the weekly tender for treasury bills. The MRR, which is the nominal anchor of CBN's interest rate policy, shall be used more actively.

It stated, further that the Central Bank will on routine basis through both offsite surveillance and field examination, monitor the interest rate spread of each bank. The interest rate spread will be used as one of the factors for assessing the efficiency of each bank and moral suasion will be employed to induce those maintaining levels above the benchmark of 7% to compress it. Furthermore in order to address the problem of large spread between deposit and average lending rates, which tends to discourage savings and borrowing to the detriment of the economy, the policy stated that a more competitive financial environment shall be established where banks and non bank financial institutions would compete for funds. In this regard, the CBN will continue to encourage the introduction of alternative savings instruments at competitive rates in which the public can invest.

In essence what the policy translates to is that, to control the money supply, the monetary authorities apply the market – base instruments (open market operations (omo) rediscount rate and reserve requirements) In practical terms, the monetary authorities will estimate the desired money supply for the future period. It will then

project the likely growth in the monetary base and hence the money supply assuming the monetary authorities takes no action. The difference between the desired and likely levels of money stock will then result in the determination of some gap in the monetary base which will indicate the type of action to be taken by the monetary authorities open market operation (omo) in its classical form is conducted mainly on the secondary market for government securities. Through the buying and selling of government securities, the Central Bank directly changes the level of bank reserves and indirectly induces changes in the level of interest rate, the terms and availability of credit and ultimately the money supply. When the Central Bank sells securities in the market, the transactions lead initially to a contraction in the reserves that banks have available to meet their cash reserve requirements, the contraction in reserves leads in turn to higher interest rates and a contraction in bank credit and money supply. Conversely, when the Central Bank buys securities in the market, bank reserves increase and the ability to expand credit and money supply is enhanced. The linkage between open market operations and reserves is made clear by the accounting transactions that occurs when the CBN pays for the securities it buys or is paid for the securities it sells. When the Central Bank buys securities it pays for them by crediting the reserve account held at the Central bank by the seller's bank. The seller's account at the bank, in turn, are credited conversely, sales of securities by the Central Bank involve

debits to bank's reserve account with the Central Bank and debit to buyer's account in their banks. Thus when the Central Bank purchases securities, reserves increase; and when it sells securities reserves decline.

Three types of transactions in securities are possible in open market operations. These are (a) out right sales and purchases of securities in the Market (b) repurchase transactions (Repose) involving purchase or sale of securities with obligation to reserve the transaction on an agreed date; and (c) Matched sale purchase transaction, which as the name implies, is a simultaneous sale and purchase of security for delivery at a future date.

Instruments of OMO and the transaction described above are employed to attain the desired objectives with regard to the intermediate targets and exchange rate. The relevant interest rates in this regard would be the inter bank rate on over night funds since this rate, in effect, is the rate that clears the market for the bank reserve balances. Under normal circumstances, the day-to-day conduct of open market operations could be simplified as an exercise aimed at keeping the inter bank rate within the desired target range. If the inter bank rate for example, is above or close to it's upper band, the task of the central bank would be to supply more reserves to the market through open market purchases of securities.

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The focus on this key interest rate would be appropriate if other rates in the system move in close sympathy with it and if the demand for credit is responsive to the movement in interest rates.

Let us now turn our attention to how the central bank of Nigeria has acted to regulate the market and subsequently see how the African International Bank tin has reacted to these changes.

In a bid to control the excess liquidity in the countries financial system, the CBN mopped up an estimated 95,461,000 from circulation in the first half of 1999. Though open market operations (OMO) this was made possible by the use of the special treasury bills. Out of the total amount mopped up between January and June 1999, the sum of ₦75,328,000,000 was mopped up in April and June representing over 70 percent of the total money withdrawn from the banking sector during the period.

According to CBN officials this was because the CBN had at the time just released ministries and parastatals accounts to commercial and merchant banks, resulting in liquidity over hang in the economy.

Accordingly the mandatory special treasury bills STBs were introduced, through which the CBN debited the accounts of all

commercial and merchant banks especially those holding ministries and parastatals accounts and those participating in the weekly AFEM intervention of the Apex bank.

The introduction of the STBs caused a tight liquidity in the system. Thus reducing the banks capacity to participate in the OMO. OMO of 28 to 42 days rose from 12.50% and 12.63% to 17.9% and 18.6% in June. The minimum rediscount rate (MRR) also rose from 17% to 20%. Where as the interbank rate rose by more than 100% to 60% per annum, compared to 20% average cost of funds in banks.

In reaction to the above the African International Bank which had a prime lending rate 20% as at January 1999 (which has been effective since March 1998) jerked it up to 22% in May 1999, and subsequently to 25% par annum by June, 1999.

The lending rates as at January 1999 were categorized as follows:

1. Prime lending rate (PLR) – 20% pa
2. Classification of customers into three Tiers
   Tier 1 Multinationals and blue chips
   Tier 2 Middle market corporate
   Tier 3 Commercial and individuals.

perception
~~Precipitin~~ of risk in credit exposures to the above tiers was presented as follows:

TIER	RISK LEVEL	RATE
1	v. LOW	PLR + 0% (or – 1%)
2.	MEDIUM	PLR + 4%
3.	V. HIGH	PLR + 5%

By May 1999 when the bank increased all lending rate by 2% p.a. The rates looked like this at PLR – 22%

TIER	RISK LEVEL	RATE	
1.	v. LOW	PLR + 0% (or – 1%)	22 or 21%
2.	MEDIUM	PLR + 4%	26%
3.	V. HIGH	PLR + 5%	27%

Further more in June the PLR was raised by 3% to 25% Pa. presented as follows:

TIER	RISK LEVEL	RATE	
1.	VERY LOW	PLR + 0% (– 1%)	25 or 24%
2.	MEDIUM	PLR + 4%	29%

3.	VERY HIGH	PLR + 5%	30%

A number of implications

The forgoing shows firstly that interest rates in the African International Bank in and indeed all Commercial Banksin Nigeria are variable. An offer of credit facility always carries a clause stating that rate of interest and other charges are subject to change without prior notice. Where as in our literature review it was argued quite convincingly that projects whose returns are closely related to the level of inflation will have returns highly correlated with open market interest rates and as such would be prime candidates for variable – rate lending. On the other hand, projects or firms with returns that are relatively fixed in nominal terms should be the first group to be offered fixed-rate contracts. This would reduce the possibility that a high-rate environment caused by an upward movement in the level of inflation would drive firms into bankruptcy.

Secondly it shows that the African International Bank Ltd classifies its customers into three tiers to reflect the level of risk associated with each tier and to price credit appropriately depending on the risk element. It is however noted that this broad classification may be suspect because, often, there are customers in the lesser categories (i.e. those with medium and high-risk ratings) whose actual risk ratings are as good as the multinationals and blue chips. When this

issue was raised to one of the bank's officials. He agreed with the observation and noted that the first tier is really not restricted to multinationals and blue clips. He gave numerous examples of some accounts that enjoy prime lending rates despite the fact that they are neither multinationals nor blue chips.

Finally the prime lending rate (PLR) IS BASED ON THE CBN's minimum rediscount rate (MRR) which is the cost of funds to the bank. A 5% margin is added to this to obtain the prime lending rate. Remember that the CBN enjoins banks to maintain a maximum 7% spread between their deposit and lending rates. To arrive at the cost of funds, the bank uses the going rate for a 90 days treasury bill and add one or two percent. In most case this equals the prevailing MRR. This is however not done in isolation, the bank also takes into cognizance the prevailing liquidity ratio and the prices of competitors vis a vis its strategy and targets.

For example in March 1998 when the MRR was around 15% the prime lending rate in African International Bank Ltd (A IB) was 20% by January 1999 when the MRR became 17% it took A IB up to may to increase its PLR to 22% by June 1999 when the MRR was raised to 20%, A IB raised its PLR to 25%. This shows a constant spread of 5% between the MRR and A IB's prime lending rate.

Further more we have seen that there is an additional 4 to 5% spread between the PLR and the rates for medium and high risk loans respectively. This element is a compensation for the probability of default associated with the lending type. Here recognition of loss rates is incorporated directly into the pricing scheme so that compensation for loss probability adjusts the overall profitability of the loan to the bank. This nullifies our third hypotheses, which states that "Risk and expected return have no important implication for loan selection and pricing in the Nigerian Banking Industry".

However the classification of ~~and~~ risk into tiers viz. multinational and blue ~~clips~~ chips middle market corporate and commercial and individuals as practiced in the African International Bank is too simplistic an approach, since it does not have diversification consideration. This tendency to narrow ones focus to individual loan transactions can result in a loan portfolio of individually sound credits that compliment one another terribly because high default covariance have potentially devastating effects on the banks profitability.

This also leads us to the fourth hypothesis, which states that much of credit analysis is geared towards loan selection without paying any attention to pricing. The above classification shows that risk rating and consequently pricing is determined prior to the analysis. This is so because a blue chip or multinational company is easily identified

as such. Similarly one does not need any analysis to tell whether a business belongs to middle market corporate on the commercial and individual tier. This element of classification and pricing before analysis therefore validates the forth hypothesis. It has however been noted that other customers who were hitherto in the second or third tiers have moved up to the first tier because their performance and bargaining power warrants such a rating. Further any inability of the bank to rate them as such would guarantee ~~that~~ their being snatched by competitors.

CUSTOMER PROFITABILITY ANALYSIS

On customer profitability analysis it was discovered that the bank uses the following format to determine the total earnings from a customer'

NAME OF ACCOUNT.....

NATURE OF LIMIT.....

AMOUNT OF LIMIT.....

Month & year	Turnover Debit	Credit	Maximum Balance Dr – Cr	Minimum Balance Dr – Cr	Commission	Inte rest

TOTAL TURNOVER

TOTAL EARNINGS

The format above is used to determine the level of operation and earnings on a customer's account for a period of at least 6 months to 3 years. A look at the format instantly reveals that it is inadequate since it shows only the total revenue from the customers account, without any attempt to show the cost associated with the customer where as we have seen earlier that loan profitability analysis is an attempt to integrate the revenues and costs associated with a customer in a uniform manner to obtain an estimate of the customer's overall contribution to banks earnings.

Finally there has been no evidence of demarcation in pricing strategies between business credit and consumer or personal loans.

We have seen earlier in chapter two that pricing strategies for consumer loans involve decisions to vary loan rate or credit availability depending on loan size or nature where as that of business credit requires a completely different approach.

FEES

In addition to interest, the African International Bank also charges the following fees on loans and overdrafts.

PROCESSING FEES: This has to do with processing the loan request it is charged only once and the bank charges 1% of the amount requested. This is in line with the bankers' tariff, but suprisingly the bank does charge customers whose requests are declined after the initial processing.

MANAGEMENT FEES: This is also charged once and it is 1% of the loan amount.

RENEWAL FEES: This is for those customers who have an overdraft or credit line, which is usually renewed annually. The bank charges 1% of the amount.

PENALTY FEES: This refers to the following:

(a) Those customers who fail to pay their installment payment 1% ~~are~~ is charged on the unpaid installment in addition to paying the agreed interest rate on the unpaid amount.

(b) The customers who are in excess of their approved credit lines (excess over limit) 1% are charged monthly on the excess in addition to normal interest charges.

(c) Those customers who were granted an inadvertent overdraft 1% is charged on the amount in addition to the normal interest charges.

There has been no internal pricing guideline regarding to the above other than they are prescribed in the bankers tariff and are charged by most banks.

4.3 PRICING OF DEPOSITS

Pricing of deposits follows the same frame work as discussed in the last section (pricing of loans and overdrafts), in that it is affected by the general movement in interest rates though not with the same magnitude as we shall soon see.

Deposits have three broad classifications, Demand, savings and time. Demand deposits constitute current, call and over due time deposits. The deposits in the category as the name implies are paid on demand with the exception of the strict call deposit ~~when~~ which requires seven days notice before it is withdrawn. Savings deposits are saving accounts even though they are usually paid on demand but with a penalty, as we shall see later. Time deposits are those deposits with a maturity period ranging between 30 days to 1 year. The pricing of each of these in the African International Bank will now be discussed in turn.

DEMAND DEPOSITS

Current Account: This class of deposit generally does not attract any interest payment on credit balances held. This is because the customer is free to cash or withdraw all or part of his balance any time, he so wishes. In fact as we shall see later the bank has service charge for this type of account.

In some cases however, the African International Bank pays interest ~~our~~ on current account to some of its very good customers who maintain average minimum balances in their current accounts running into tens of millions of Naira. In all such cases, the customer who puts up a request for the bank to pay interest on his current account deposit

justifying why same should be paid initiates this. The bank then looks at it and either refuses or grants the request based on the situation on ground. This type of customers usually have a very good bargaining power and can easily be snatched away by competitors the interest paid usually does not exceed 3% per annum.

CALL DEPOSITS: There are two types of call deposits. The strict and the 7 days. The strict call requires a seven days notice to the bank before withdrawal is permitted. Where as for the 7 days call, the bank does not adhere strictly to the 7 days notice. The strict call deposit is usually priced higher than the 7-day call. For example if the 7 days call pays 2.5%, the strict call will pay between 3% to 3.5% per annum. This is to compensate the depositor for having to comply strictly with the 7 days notice requirement.

SAVING: The savings account customer has a savings passbook on which operations in the account are recorded. This type of account is operated like a demand deposit in that the customer is free to draw from the account any time he wishes but there is a penalty in that interest is not paid in any month the customer make more than three withdrawals from the account. Interest is paid monthly on this class of deposit. The CBN requires banks to pay interest on the savings account balance as at 18th of every month. The interest rate for all savings accounts in the bank is the same irrespective of balance. The

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bank has been paying interest on savings account at the rate of 5% per annum since January 1999. Inspite of the fact that we have seen a general rise in lending rates in the economy. This is because the bank realizes those deposits in the savings and call categories are generally not rate sensitive, ~~to rate~~ As such the rates for all on savings deposits have not been altered. This approach as we have seen in chapter two holds average pay out rates down because it does not raise interest rates to customers that do not actively seek it.

TIME DEPOSTS: Are categorized as follows:

30 days

60 days

90 days

180 days

270 days

1 year

These are priced to reflect the length of maturity for example in the African International Bank; the rates are allocated as follows:

30 days	-	10% per annum
60 days	-	10.25% per annum
90 days	-	10.50% per annum
180 days	-	12% per annum

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270 days	-	14% per annum
1 year	-	15% per annum

The rate above have been in existence since January this year it was however observed that some customers are enjoying higher rates than the above. The first reason for this is the length of maturity i.e. if a customer has obtained a certificate of deposit maturing in one year beginning January 1st 1999. The new rates will apply to him only after his deposit had matured i.e. 31st December 1999 provided he wants to renew or roll over the deposit.

Second is that the bank has not found it necessary to review upwards and publicize all it's rates because the bank realizes that a large portion of it's depositors are either ignorant or content to receive the old rates. However those customers who actively seek for higher rates are accommodated through negotiation especially if the amount(s) are significantly large. As we have mentioned earlier, this approach is effective for holding down the average pay out rate when interest rates in general are rising.

We have also seen that deposits are priced to reflect their maturity, the longer the maturity period the higher the rate. This is to encourage customers to lengthen the maturity of their deposits. This as shown in chapter two can be beneficial to the bank when interest

rates are rising. On the other hand there was no evidence of split-rate pricing which provides the bank, a way to reduce average pay out rate without at the same time reducing depositors incremental incentive to save. This is used to encourage customers to hold larger average balances because larger accounts usually are more profitable as they allow more earnings to be retained by the bank (from the spread between earning on assets and interest payment).

What was observed, however, is that in some isolated cases, customers with large amounts to deposit, usually have a better bargaining power when negotiating for rates – they are able to obtain higher rates.

4.4 PRICING OF LETTERS OFCREDIT AND PERFORMANCE BONDS AND GURANTEES

The prices of letter of credit and performance bond and guarantees are fully regulated by the Central Bank of Nigeria. Their charges and commissions are clearly spelt out in the banker's tariff as follows:

INWARD LETTER OF CREDIT (EXPORT)

1. **Advising Commission**

When a Nigerian Bank simply verifies authenticity of a credit and delivers same – the approved commission is ₦1, 000. When a Nigerian Bank has to rewrite the credit the approved commission is 0.5 per mile or ₦5 for every ₦1,000 Naira with the minimum being equivalent of US$25.

2. **Confirming Commission**

The approved rate for this is 1% of the letter of credit (LC) amount with the minimum being ₦1, 500.

3. ***Transferable Credits***

Transferable and divisible credits (part shipment). When all or part of a credit is transferred the charges (payable by the original beneficially are of the amount transferred). The approved rate for this is 0.5% with a minimum of US$25 or equivalent.

4. **Negotiation of Documents**

The approved rates are a commission of 1% of the LC value plus interest if applicable, at the local rate.

OUTWARD LETTERS OF CREDIT (IMPORT)

1. Processing and Registration of form M the approved fee is 0.5% of the value of form M but a maximum of ₦1, 000 (i.e. the fee should not exceed ₦1, 000).

   (a) Amendment: The approved commission is ₦1, 000 flat plus cable or telex charges same applies to b, revalidation and c, extension.

2. **Establishment Commission**

   For credits up to 180 days the approved commission is 1% of the value of the LC with a minimum charge of ₦1000 for credits up to 270 days the approved commission is 1.25% of the LC value with a minimum charge of ₦2000.

   For credits up to 360 days – the approved commission is 1.5% of the LC value with a minimum charge of ₦3, 000.

3. **Handling Commission** – The approved rate is 0.5% of the LC value with the minimum charge being ₦2, 000.

4. **Renewal, extension and increase in the amount.**

   Renewals – Credits may be renewed after 15th day following expiry only on payment of full establishment commission.

Extension – The approved charge is ₦1, 000 flat.

When a letter of credit is extended for period in excess of twelve months from the date of establishment a re-establishment commission of 1% per annum is payable.

Increases - Additional commission should be charged on the amount of any increase for the un-expired period of validity of credit plus a flat charge of ₦1,000.

5. **Other Amendments**

On each occasion that amendments (other than those mentioned above) are made, a charge of ₦1, 000 flat is to be made.

PERFORMANCE BONDS AND GURARANTEE

1. Performance Bond (Chargeable from date of liability – the approved commission is 2% per half year on the value of the bond.

2. Advance Payment Bond – The approved commission is 1% per half year on the value of the bond.

3. Bond and Guarantees issued in favour of Nigerian Railway Corporation and Bonds of customs and excise – the approved commission is 1.5% per half year on the first ₦1 Million and 1% half yearly thereafter.

4. All other bonds and guarantees – the approved commission is 2% per half year – minimum charge ₦1,000 where commission in respect of the charges is calculated and falls below minimum figure, the minimum figure will be charged.

For all bonds and guarantees secured by 100% cash cover or Bank Guarantees, the commission should be reduced by 75%.

Accordingly the African International Bank has adhered to the above rates. On few occasions however where the amounts are significantly large, the bank charges lower than the tariff but there has been no evidence to suggest that the bank charges higher than the approved rates.

4.5 PRICING OF BANKER'S CHEQUES AND DEMAND DRAFTS

These are also regulated by the CBN. They are priced as per the bankers tariff which has the following approved rates for them.

Bankers Cheques

(a) Customer – the approved rate is ₦50 flat

(b) Non customer the approved rate is ₦100 or 5% of the amount whichever is higher.

Demand Drafts:

(a) Customer – ₦100 flat

(b) Non customer ₦150 flat

The pricing of demand draft is one area where some of the bank's officials complained that, the price does not cover the cost of the service because to purchase a Demand Draft the customer pays only ₦100 to the bank where as the cost of posting the advise for the draft to the paying branch is around ₦360.

4.5 PRICING OF OTHER SERIVES

The prices of other services such as commission on turnover (C.O.T) exchange commission, Bills for collection, to mention a few are all prescribed by the banker's tariff.

In this regard the approved rate for commission on turnover which is the commission charged for any withdrawal on current account is ₦5 per mille i.e. for every ₦1,000 drawn from a current account, the bank charges ₦5. It was however observed that, the African

International Bank usually allows a concessionary rate to some very profitable customers who have a high volume of turnover – the concessionary rate ranges from ₦2 to ₦4 per mill.

For exchange commission – commission on outward telegraphic transfer, mail transfer or draft are set at 1% where as travelers' cheque issuance attract a 1% commission for issuance. In ward bills for collection have an approved commission of 2% on the value of the bill.

The second hypothesis states: Commercial Banks in Nigeria still abide by the bankers tariff even though they are free to set the prices of most of their products and services as a result of deregulation. The proceeding analysis proves the hypothesis to be valid to some extent. It should be noted that what I had in mind when I formulated the hypothesis was that, the prices of certain products and services have been excluded from the bankers tariff as result of deregulation - so banks are free to charge what ever they may. In reality however all the prices are mentioned, infact most products and services are priced by the bankers tariff but a few like interest allowed and purchases of cheques, where housing fees etc are either referred to the monetary policy or simply designated as negotiable, so that what ever the bank does, it is still in line with the bankers tariff. The closing section of the bankers' tariff has the following as footnotes.

1. Any new charges to be introduced by any bank should be referred to be standing sub-committee on banker's tariff for consideration.

2. Banks should adhere strictly to the provisions in the tariff.

This also tends to lend credence to the first hypothesis, which state that: Commercial Banks, operating in Nigeria do not have a systematic method of pricing their products and services. We have seen some element of systematic pricing in such areas as pricing of loans and deposits but on the whole, the supremacy of the banker's tariff offers little room for the banks to evolve a systematic approach to pricing their financial products and services. The non transport manner in which banks price financial assets on the one hand and the absence of adequate information to systematically rank the risk exposure to particular companies and industries makes the system most inefficient.

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CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 SUMMARY

The study on pricing of financial products and services in the Nigerian Banking Industry, a case study of African International Bank is introduced in chapter one where it was noted that how a bank prices its products and services has a major impact on profitably.

On statement of problems it was ~~agreed~~ argued that the triad of special complexities in pricing, deregulation and inflation make pricing a major challenge to banks in Nigeria.

The objective of study is to show the possibilities in pricing financial products and services in which, there is a lot of scope for doing new things and achieving various goals. This will eventually allow more flexibility in pricing and increased profitability though superior pricing of bank's products and services.

Chapter two reviews some of the existing literature on pricing financial products and services, it begins by showing that we price to capture the greatest return on investment for the bank's shareholders, however in doing so, we must balance risk and return. In particular, we must make sure that we have looked at liquidity, interest credit and capital risks.

On pricing classification, it was shown that customers could be classified as prime, perceived value and relationship. The approach to pricing will vary for each of these categories.

The customer profitability model was shown to probably be the best approach to assessing pricing. In this system, you collect the total

income and expenditure relating to the customer. Where profitable you still need to assess if the excess value justifies the credit risk.

This was further explicated under pricing business credit, where it was ~~agreed~~ argued that the determinants of quality, nature and price of the loan portfolio requires an understanding of management's ultimate objective of long term value maximization. This has direct effects on loan structure and composition as these relate to the goal. Careful analysis of the loan relationship is needed to determine the nature of return stream or earnings to be obtained from prospective or existing customers as they seek loan financing.

It was further ~~agreed~~ argued that appropriate decision making at the bank level requires more careful consideration ~~off~~ of the trend towards variable rate pricing. For some projects or firms such pricing do little more than reclassify interest risk as credit risk because some firms cannot adequately absorb such loan price variability.

On an aggregate portfolio level, the determination of the final loan portfolio composition involves knowledge of the banks total balance sheet and its willingness to absorb risk. The latter is important, because ultimately interest rate risk is another dimension of uncertainly associated with the bank's earning stream. As such it should be evaluated in the same manner as other types of risks.

Equally important, however, it should be evaluated along other sources of uncertainly so that the benefits and cost of each are equalized.

The discussion then turned to pricing of consumer loans and deposit – here it was ~~agreed~~ argued that banks that have price setting power can alter their loan rates and prices to vary with the demand for their products. Nevertheless, the major consideration in pricing consumer loans is to establish prices so that extra revenue will cover all cost associated with making an additional loan. This is not always easy to accomplish since the costs of making a consumer loan typically are large relative to potential finance charge revenues. In the absence of up front fees, required rates may be high on small or short-term loans. Thus institutions must either charge very high rates on small loans or refuse to make them, switch potential borrowers to revolving credit plans or cover up front loan origination cost by charging loan origination and credit investigation or application fees.

The pricing of consumer deposits involves a number of issues. Institutions are usually price takers in the money market. However evidence suggest that they have considerable price setting power in the consumer deposit markets. Institutions potentially can improve profits and simultaneously maintain customer incentive to hold large balances if they adopt split-rate pricing schemes in which rates paid

on deposits increase on the highest portion of deposit as balances increase.

Another way to enhance revenues from deposit accounts is to adopt price structures designed to encourage high balance maintenance.

Over all, consumer loans and deposits can be priced along many dimensions. Institutions may take one of the two general tacks: a variety of pricing schemes that will appeal to a wide range of customers, or focused programmes that will have the greatest appeal at the least cost to the bank, to that class of customer the institution chooses to serve.

The chapter ends with discussion on portfolio view of loan selection and pricing. Here it was shown that, when discussing the issue of bank credit risk, the tendency is to narrow ones focus to individual loan transaction. This perspective, it was agreed, can result in a loan portfolio of individually sound credits that complement one another terribly. Because high default covariance have potentially devastating effects on banks profitability, adequate loan portfolio diversification requires active supervision and planning by senior management.

In chapter three the back ground and structure of modern banking in Nigeria was presented. On the background it was noted that Nigerian

financial institutions have generally not evolved. They have been copied from else where. The weak roots of these institutions and their resulting shortcomings have consequences for the environment of competitive rivalry.

The structure of the financial system comprises the regulatory/ supervisory authorities, banks, non bank financial institutions, financial bodies/Associations etc. in the main both banks and non bank financial institutions operate at both the short end (money market) and the long end (capital market) through with differing degrees of depth and impact.

Chapter four analyses the data obtained for the research. This includes both the primary and secondary data. Which ~~have~~ were obtained from the review of existing literature on pricing financial products and services, monetary policy guideline, the banker's tariff, some documents of the African International Bank as well as interviews with some of the management staff of the bank.

The chapter starts with a brief history of the African International Bank Ltd, which was incorporated in Nigeria on the 6th of August 1979 and commenced banking operations in Sept. 1979. It was also shown here that the bank has continued to witness steady growth in terms of total assets, profit and market share.

The Chapter, then goes further to look at pricing in the African International Bank Ltd as it relates to loans and over draft, Banker's payment, demand drafts, and other bank charges. The hypotheses of the research project are also tested in this chapter. The findings which are mainly from the chapter from the conclusion the follows immediately.

5.2 CONCLUSION

The pricing of loans and overdrafts in the African International Bank Ltd is guided by the monetary policy of the Federal Government of Nigeria.

Individual banking institutions guided by the stance of policy and forces of supply and demand in the financial market is free to determine its prime lending rates. The Central Bank of Nigeria (CBN) indirectly influence the rate changes through its intervention rate on various money market instruments especially the minimum rediscount rate (MMR) and the cut off rate for the weekly tender for treasury bills.

To control the money supply the CBN apply market based instruments (open market operation (OMO), discount rate and reserve requirement. The CBN estimates, the desired money supply for the future period and then project the likely growth of the monetary base and hence the money supply. The difference between the desired and likely level of money stock will then result in the determination of some gap in the monetary base, which will then indicate the type of action to be taken by the monetary authorities.

The introduction of the mandatory special treasury bills causes a very tight liquidity in the system, thus reducing banks' capacity to participate in the omo, it also leads to a contraction in the reserves that bank have available to meet their cash reserve requirement. The contraction in reserves lead in turn to higher interest rate and a contraction in bank credit and money supply.

This was demonstrated when in response to the above the African International Bank Ltd raised it prime lending rate and consequently all lending rates from 20% in January to as high as 25% in June with the maximum interest rate at 30% per annum.

The cost of funds in the bank is based on the MRR upon which it adds a 5% margin to obtain the prime lending rate (PLR) after taking into congnisance, the rates charged by its competitors.

The bank also charges between 4 to 5% higher than the prime lending rate, for lending to non prime customers. This is an element of compensation for the probability of default associated with lending to those customer types, which show that risk and expected return have important implication for loan selection, and pricing. It ~~not~~ however, noted that the classification of customer types such that ~~not~~ IS obtained in the African International Bank is too simplistic, too broad and does not have diversification considerations. Moreover such a classification shows that risk rating and consequently pricing are determined prior to analysis, not withstanding that some customers are later re-classified to the first tier considered as the lowest risk borrowers, after the analysis of their performance with the bank. This leads us to conclude that much of the credit analyses are geared toward selection without paying any attention to pricing.

It was also discovered that all lending rates are variable and subject to change without prior notice.

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On assessing the profitability of customers it was found that the format used by the bank is inadequate as it shows only the earnings from the customers account without showing the cost associated with the customer which leads us to conclude that the bank does not have

in place a cost accounting system which apportions total cost to various accounts.

There was also no evidence of demarcation in pricing strategies between business and consumer accounts.

The fees relating to loans and overdrafts are prescribed by the Bankers tariff and charged as prescribed.

On pricing of deposits, the bank prices its deposits in such a way that when rates in general are rising, the bank does not have to review upwards its entire rate. In most case it allows interest rate raises to customers who actively seek such. Further more deposits are priced to reflect their maturity. The longer the maturity the higher the rate. These two approaches are effective for holding down the average pay out rate when interest rates are rising.

Finally the prices of letter of credit, performance bonds banker's cheques, demand drafts, the rate of commission on turnover and other services are prescribed in the bankers tariff. In the case of commission on turnover, however, the bank has been found to charge less than the approved rate for customers whose debit turnover and the attendant income or commission turn over is significantly high enough to warrant such a concession.

This and the practice of paying interest on current deposit to some select customers who maintain high balances on this generally non interest bearing deposit shows that there is some degree of flexibility in pricing geared towards obtaining higher customer loyalty and consequently more patronage to the bank.

The forgoing leads us to conclude that Commercial Banks operating in Nigeria are in adherence to the provisions of the bankers tariff, which offers them little room to develop a systematic approach to pricing their products and services.

The only evidence of deregulation and consequently some degree of systematic pricing is in the area of interest rate. Even here the pricing mechanisms are not fully developed. This coupled with the absence of information to systematically rank the risk exposure to particular companies and industries makes the system in efficient.

5.3 **RECOMMENDATIONS**

1. It is recommended that loan terms should reflect the borrower's contribution to the banks over all risk, which is predominantly determined by the extent to which individual assets and liabilities react to the same external

event. Three inter related steps are required to monitor and control institutions over all loan risk exposure.

First management must enumerate the systematic risks to be considered in assembling the loan portfolio. One bank for example may find the possibility of a recession very important, while another worries more about effect of exchange rate on its borrowers. This stage of the analysis is tricky largely because there is no systematic way to ensure that the bank has not ignored an important possibility. Statistical and economic analysis surely have important roles to play, but so do common sense and long banking experience. The basic point is that explicitly or implicitly, any bank represents a bet on the economies future course. By explicitly identifying the relevant risks and their probabilities, the bank will be in a better position to assess its over all exposure and to price risk appropriately.

Second a reporting system with a manageable number of appropriate loan categories must be designed and installed. An optimal system will require a substantial amount of preliminary analysis to determine how loans should be grouped or categorized. Potential borrowers

can then be sorted into a set of categories that capture the bulk of shared reactions to external shocks. (While "Commercial and industrial loan" will surely prove too broad a category a very specific one such as "loans to retail hardware stores with annual sales under ₦1 Million" will be too numerous to allow for practical management oversight) initial design of the loan categories would probably evaluate histories loan experiences (at one or more banks) using statistical techniques to infer past relations among loan types, as the bank revises its assessment of relevant lending rates.

Thirdly management must assign different risk premiums on loan types that are believed to pose different risk exposures. Simply "meeting the competition" on all loan deals amounts to accepting other banks' (implicit or explicit) risk assessment. A more active stance on loan pricing requires the bank to project the possible magnitudes of shocks relevant to each loan category, translate these shocks into range of effects on total profits, and set loan terms that generate sufficiently high expected profits to compensate for implied risk. Risk adjustment on various loan types can be implemented several ways.

1. Internal transfer prices can be varied to reflect the correlation of various loan categories with other bank assets.
2. For loans that are most highly correlated with the rest of the portfolio, contract terms can be structured to include collateral, restrictive covenants, shorter maturities or other features that reduce the covariance.

3. A Naira limit on certain loan categories (or individual loan size) can be imposed.

Regardless of the specifics, over all risk management requires a basic focus on default covariance and identifiable risk exposures. Management's role is to define the set of relevant events, identify shared exposures and assure that loan rates reflect the net effect on total bank profits. These decisions cannot be relegated to the lending officer level, but must involve senior management (in much the same way interest rate risk is managed via a high-level asset – liability committee) only managers with a bank wide perspective on risk exposure are in a position to apply the principles recommended here.

2. With regards to variability of interest rates, it is recommended that the bank identify and offer fixed rates to those firms, whose cash flow are relatively fixed in nominal terms as these firms are particularly vulnerable to a variable rate contract. This will reduce the level of default. But for loans used to finance investments that have cash flow that varies with the level of interest rate, the variable rate contract is an appropriate lending contract. The interest rate risk inherent in the fixed rate contract can be offset by duration matching of the asset (loan) and liability (deposit) or by hedging.

To determine, which category a borrower falls requires an examination of the loan proposal submitted to the bank and its sensitivity to differential rate environments. The determination of how many projects should be either in the fixed or variable rate category goes beyond the firm and project specifics. It involves two different yet fundamentally important issues in bank management. The first of these is an analysis of the underlying structure of the banks' balance sheet, including both asset and liability to determine the banks existing interest risk exposure. The second issue is the implication on profit and loss of

absorbing interest rate risk beyond the banks' capacity given its liability structure.

3. The bank is also recommended to use the customer profitability model in assessing and pricing loans. A care full analysis of the loan relationship should be undertaken to determine the nature of return or steam of earnings to be obtained from prospective or existing customers as they seek loan financing. This approach integrates the revenues and cost associated with a customer in a uniform manner to obtain an estimate of the customers over all contribution. This however, requires the bank to set up a good cost accounting mechanism, which will allow it to obtain all cost associated with a customer. It is therefore recommended that the bank install a good cost accounting system to measure all costs relating to customers and apportion same accordingly, because without a good cost accounting data customer profitability analysis is not possible. Further more once these measures are obtained, it is easy to assume that the problem of estimating further earnings has been solved. However, this is a very static view of the customer analysis and the financial market. The prospective earning stream must be compared with current cost of

funds, which captures target rates of return, leverage and interest risk of the loan category.

4. The bank should also ensure that adequate pricing strategies are put in place for business accounts on one hand and consumer accounts on the other. This will allow the bank to set standard prices for retail services and provide pricing guide lines for corporate services and also to set a mechanism by which the prices can be reviewed.

5. The bank is further recommended to adopt a split rate-pricing scheme in which rates paid on deposit increase on the highest portion of deposit as balances increase. This has the potential of improving profit and simultaneously maintaining customer incentive to hold large balances.

6. Much of what has been recommended can only be attained with the provision of the enabling environment by the regulators especially the Central Bank of Nigeria.

Government's frequent resort to forced subscription of the mandatory special treasury bills for banks, to reduce liquidity in order to check inflation generated by it's (Government) own lack of fiscal discipline has proved

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quite a challenge to the managerial abilities of many banks. One big problem with the mandatory special treasury bill is that it can cause a serious liquidity problem for banks being debited. If care is not taken there may be a run on such bank if they are not financially strong to meet their customer's demand for cash.

7. Finally the Central Bank of Nigeria should remove the stipulation requiring banks to maintain a maximum of 7% spread between deposit and lending rates. And also abolish the use of the bankers' tariff to enable banks come up with a systematic way to price their products and services. These will ensure the emergence of a highly competitive banking industry.

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