THE DETERMINANTS OF THE CAPITAL STRUCTURE OF FINANCIAL FIRMS IN NIGERIA: THE FINANCIAL MANAGERS' PERSPECTIVES

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ABSTRACT

The paper examined the considerable factors in deciding on the appropriate amount of equity and debt in the Nigerian banking industry, and the factors influencing banks' capital structure. Data were gathered through questionnaires administered to the financial managers of 25 listed banks in Nigeria. Cross tabulations and Chi-square were used for data analysis. The result suggests that credit-rating, volatility of earnings and cash flow, bankruptcy or near-bankruptcy, financial distress, transaction costs, fees for issuing debt, and financial flexibility are the important factors in choosing appropriate amount of debt. The most important factor that affects banks' choice between short- and long-term debts is matching the maturity of debt with life of the asset. The study also reveals that ownership structure and management control, growth and opportunity, profitability, issuing cost, and tax economics associated with debt are the major factors influencing bank's capital structure. It is, therefore, recommended that banks should adopt a mixed source of financing and choose appropriate ownership structure and management policy.

INTRODUCTION

Capital structure deals with how companies finance their operation. An ongoing debate in corporate finance concerns the question of firm's optimal capital structure, that is, problem of how firms choose and adjust their strategic mix of securities. At the outset of such debate is the question of the relevance of firm's strategic financing decisions for its own valuation. The question then is, is there a way of dividing a firm's capital into debt and equity so as to maximize the value of the firm? From a practical viewpoint, this question is of utmost importance to corporate financial managers

A recent survey by Graham and Harvey (2001) among US firms reveals that managers seek a target debt-equity ratio. However, due to random events or other changes, firms may temporarily deviate from their optimal capital structure and then gradually work back to the optimum.

Lack of adequate capital has been identified as the major cause of business failure. There is no doubt that the banking sector plays a significant role in the economy of any country. In the effort to raise capital and the pursuance of optimal capital structure, banks need to adjust and mix both debt and equity strategically in order to finance their operations efficiently and effectively. This implies that banks should neither be highly geared nor lowly geared in order to maximize the value of the firm.
In addition, the Central Bank of Nigeria has set the minimum capital base of ₦25 billion in regulating the banking industry. To meet up with this requirement, the banks must raise capital. Nigerian banks are still far from achieving optimal capital structure and significantly, this is at the peril of both the providers of capital and the banking industry. Thus, this study will assist Nigerian banks decide on the appropriate mix of debt and equity that will help in achieving optimal capital structure.

In the light of this, the paper attempts to investigate the practices and determinants of the capital structure of the Nigerian listed banks. To properly address this problem, this paper will answer the following questions:
- What are the important factors in choosing appropriate amount of debt?
- How are banks financed and which source has been most effective?
- What are the factors responsible for making equity issue?

- What are the potential determinants of banks' capital structure?

To meet the main objective, the study focused on the following specific objectives.
(i) To find out the important factors in choosing appropriate amount of debt.
(ii) To verify how banks are financed and the most effective source.
(iii) To identify the factors responsible for making equity issue.
(iv) To examine the potential determinants of banks' capital structure.
The rest of the paper contains four sections. Section 2 provides a brief literature review. Section 3 deals with research methods while Section 4 presents the results. Concluding remarks follow in Section 5.

LITERATURE REVIEW

Since the foundational work of Modigliani and Miller (1958), a number of authors extended their capital structure irrelevancy theory. The existing literature on the subject also thoroughly describes the various attempts to modeling corporate debt equity policy. However, what optimal mix of securities a firm should issue still remains undetermined.

Until recently, corporate finance, as an area of research investigation in developing countries has not been given serious attention. The reasons for this are not far fetched. Many developing countries initially chose a state-sponsored route to development, with a relatively insignificant role assigned to the private corporate sector, especially before financial liberalization as the case in Nigeria. In the poorer countries, irrespective of development strategy, there is only an embryonic corporate sector. Moreover, most of the corporate financing needs were met by regional and international development banks, which either took an equity interest in the firms or provided the debt component of a firm's capital. However, in almost all these countries, development banks have experienced serious difficulties (Murinde and Kariisa-Kasa, 1997).

Existing empirical evidence is based mainly on data from developed countries. For example, Bradley et al (1984), Kim and Sorensen (1986), Friend and Lang (1988), Titman and Wessels (1988) and Chaplinsky and Niehaus (1993) focus on United States and Japanese manufacturing corporations; Rajan and Zingales (1995) examine firms from G 7 countries; and Wald (1999) uses data from G 7 countries except Canada and Italy. Findings based on data from developing countries appeared only, in recent years, for example in Booth et.al (2001), Omet and Mashhardive (2003), Balla and Mateus (2003); Green, Murinde and Suppakitjarak (2003); Chen (2003), Baner (2004), Green and Tong (2004), etc.

Furthermore, empirical research on corporate finance has to a certain extent, frequently disregarded financial industry. Overall, it seems that the investigation of capital structure of financial firms such as banks has been largely overlooked. Thus, there is a conspicuous gap in the empirical research on capital structure of corporate financial firms in Nigeria. Hence, the issue of determinants of capital structure of financial firms is yet to be settled at the empirical level in Nigeria given the present state of capital market.

DATA AND METHODOLOGY

The target population was defined as the financial managers of all listed banks on the Nigerian Stock Exchange Market. Primary data was mainly used and was obtained through a questionnaire survey. It was administered to a sample of 25 financial managers giving a response rate of 100 percent. The data collected were analyzed, using cross tabulations and the Chi-square test.

RESULTS

This section presents and discusses the evidence gathered in questions 1 to 6 of the survey conducted on twenty-five (25) financial managers of Nigerian Banks.

Factors in Choosing the Appropriate Amount of Debt

Financial managers were asked to rate on a scale from 1 (not important) to 5 (very important) the importance assigned to each item in a list of 8 factors affecting the choice of appropriate amount of debt. The mean scores of each factor are shown in table 1.

Table 1: Factors in Choosing Appropriate Amount of Debt

Factors	**Mean Scores**
Tax advantage of interest deductibility	3.73
Potential cost of bankrupt or near-bankrupt financial distress.	3.95
Debt levels of other firms in ones	3.36
Industry credit rating	4.55
Transaction costs and fees for issuing debt	3.95
Personal tax cost that investors face when they reserve interest income	2.82
Financial flexibility	3.95
Volatility of earnings and cash flow	4.50

Evidence shows that the most important factor in choosing appropriate amount of debts for banks is credit rating, which has a mean score of 4.55. The analysis indicates that out of 22 respondents, 40% agreed that it is an important factor, 32% felt it was fairly important, 8% selected hardly important while 4% each were for both not important and very important.

The next factor is volatility of earnings and cash flow with a mean score of 4.5. The analysis shows that 64% of the 22 respondents agreed that it is very important factor, 12% believed it is very important, 8% felt it is important while 4% suggested that it is not an important factor. The second least important factor is debt levels of other firms in the industry, which has a mean score of 3.36 while the least important factor is the personal tax cost that investors face when they reserve interest income with a mean score of 2.82.

Conclusively, the most important factor in choosing the appropriate amount of debt for banks is credit rating while the least important factor is personal tax cost that investors face when they reserve interest income.

Preference for Funding

There were responses from 22 banks out of 25 banks; the remaining 3 banks have no debt issue at all. They finance their operations mainly through equity and retained earnings. These banks are Zenith Bank, Intercontinental Bank and Guarantee Trust Bank. Another interesting finding relate to attitudes to finance source. Firstly, respondents were asked about how they prefer to fund their bank. Is it through internal, external, mixed sources or is there no preference?

The result shows that out of 25 responses, 80% prefer the mix source, 12% prefer the internal source, 4% prefer the external source and 4% have no preference at all. This is indicated in the table 2 below.

Table 2: Preference to Funding Bank

	Frequency	Percent	Valid Percent	Cumulative
Valid internal	3	12.0	12.0	12.0
External	1	4.0	4.0	16.0
Mix	20	80.0	80.0	96.0
No preference	1	4.0	4.0	100.0
Total	25	100.00	100.00	

Secondly, the respondents were asked to specify the percentage of their funding sources from the following, short (up to 1 year), medium (up to 5 years), long (> 5 years) and terms do not matter. Here, the respondents were reluctant to give out the information. Only 3 out of 25 responded

Thirdly, respondents were asked to give reasons why they have preferences for a particular source. The result shows that they have preference for short-term source because it is cheap, liquid and easily repayable. They have preferences for medium term because it bridges the gap between long term and short term and is easily available. Also, they have preference for long-term source because it is used for planning; interest rate is low and the repayment period is long.

Lastly, they were asked to indicate the sources, which have been most effective. The results are presented in Table 3. Here, the result indicates that the mix source is the most effective with 72%, followed by internal source with 20% and lastly, external source with 8% as shown in table 3.

Table 3: Most Effective Source

	Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid internal	5	20.0	20.0	20.0
External	2	8.0	8.8	28.0
Mix	18	72.0	72.0	100.0
Total	25	100.0	100.0	

Factors Affecting Banks' Choice between Short and Long Term Debt

Financial managers were required to rate on a scale from 1 (not important) to 5 (very important), the level of importance of each factor in a list of six in banks choice between short term and long-term debt. Table 4 shows the mean score of each factor.

Table 4: Factors Affecting Banks' Choice between Short and Long Term Debt

Factors	Mean Score
Issuing short term when waiting for long-term market interest rate to decline.	3.64
Matching the maturity of debt with life of asset.	4.55
Borrowing short term so that returns from new project can be captured by shareholders	2.95
Expect rating to improve so as to borrow short term.	2.64
Borrowing short term reduces chance that banks will want to take on risky projects.	3.6

This result shows that matching the maturity of debt with the life of asset is the most important factor with a mean score of 4.55. Analysis shows that out of 22 responses, 64% indicates that it is a very important factor, 12% important, 8% fairly important and 4% hardly important.

Another factor that is important is issuing short-term debt when waiting for long-term market interest rate to decline, with a mean score of 3.64. Analysis shows that 32% agree that the point is important, 20% very important, 15% hardly important, 12% fairly important and 8% not important. The next important factor is borrowing short term loan which reduces the chance that bank will want to take on risky projects. This has a mean score of 3.60. Analysis shows that 40% agreed that it is an important factor, 20% fairly important, 16% very important, 8% not important and 4% hardly important.

The second least important factor that affects bank's choice between short and long-term debt is borrowing on short term so that shareholders can capture returns from new projects. This has a mean score of 2.95 and analysis indicates that out of 22 respondents, 32% agreed it is important, 28% fairly important, 16% not important, 8% hardly important, and 4% very important.

The least important factor is expecting rating to improve so as to borrow short-term loan. The mean score is 2.64. From the responses of the 22 respondents, 28% agreed it is hardly important, 20% important, 2% important, 16% not important, and 4% very important.

Only 22 out of 25 respondents could respond to that section because the remaining 3 do not have any debt issue. Conclusively, the most important factor that affects banks' choice between short and long-term debt is matching the maturity of debt with life of the asset while the least important factor is expected rating to improve so as to borrow short term.

Factors Responsible for Making Equity Issue

Another interesting finding relates to features associated with equity and debt issues. The first issue in this section relates to factors responsible for making equity issues. The mean score of each factor is shown in table 5. The financial managers were asked to rate on a scale from 1 (not responsible) to 5 (highly responsible) the factors responsible for making equity issue.

Table 5: Factors Responsible for Making Equity Issue

Factors	**Mean Score**
To fund a major expansion	4.28
To make an acquisition	3.74
To reduce leverage	3.17
To reduce leverage if market conditions are right	3.04

The most important factor is to fund a major expansion with a mean score of 4.28. The analysis shows that out of 25 responses, 44% agreed that it is highly responsible, 40% responsible, 16% fairly responsible. The next factor is to make an acquisition. This has a mean score of 3.74. The analysis shows that out of 23 respondents, 4% indicated that it is responsible, 20% agreed it is highly responsible, 20% felt it is fairly responsible and 8% refused to give their opinion.

The second least important factor is "to reduce leverage with a mean score of 3.17. Findings show that out of 24 respondents, 48% indicate that it is responsible, 20% not responsible, 12% fairly responsible, 8% hardly responsible, 8% highly responsible and 4% did not respond.

The least important factor is to reduce leverage if market conditions are right. It has a mean score of 3.04. The result shows that out of 23 respondents, 40% support that it is fairly responsible, 24% that it is responsible, 4% not responsible, 4% responsible and 8% withheld their opinion.

How Often Should a Debt Issue Be Made?

Respondents were also asked to identify the frequency with which they make debt issue in their banks. Out of 25 respondents, only 18 respond to this question. 48% indicated that they make debt issue as the need arises, 8% monthly, 8% quarterly, 4% yearly and 4% indicate that they make debt issue bi-annually. 28% make no disclosure. This is shown in table 6 below.

Table 6: How Often Do You Make a Debt Issue?

	Frequency	**Percent**	**Valid Percent**	**Cumulative Percent**
Valid monthly	2	8.0	11.1	11.1
Quarterly	2	8.0	11.1	22.2
Bi-annually	1	4.0	5.6	27.8
Yearly	1	4.0	5.6	33.3
Others (specify)	12	48.0	66.7	100.0
Total	18	72.0	100.0	
Missing system	7	28.0		
Total	25	100.00		

Factors Influencing Banks' Capital Structure

There are some factors that influence the bank's capital structure. Financial managers are asked to appraise the influence of such factors on a scale of 1 (least important) to 5 (most important) as they affect banks' capital structure. Table 7 shows the mean score of each factor.

Table 7: Factors Influencing Banks' Capital Structure

Determinant	**Mean Score**
Ownership structure and management control	4.64
Size of the firm	4.00
Growth opportunity	4.44
Profitability	4.44
Uniqueness of the firm and its reputation	3.88
Tangibility	3.50
Issuing cost	3.22
Tax economy associated with debt financing	3.48
Risk and cost of financial distress	3.72
Earnings per share	3.64

The finding shows that ownership structure and management control is the most important factor with the mean score of 4.64. Analysis shows that out of 25 respondents, 64% strongly agreed while the remaining 36% agreed that it is an important factor.

The second important factors are growth opportunity and profitability both with the mean score of 4.44. Analysis shows that out of 25 respondents, 52% strongly agreed, 40% agreed and 8% slightly disagreed that growth opportunity is relevant factor in determining banks' capital structure while 56% strongly

agreed, 36% agreed, 4% slightly disagreed and 40% strongly disagreed that profitability is a relevant factor. Next in importance is size of the firm. Research shows that it has a mean score of 4.0 and out of 25 respondents, 24 respond with 48% strongly agreed, 48% agreed and 4% of no response.

The uniqueness of the firm and its reputation is another factor with a mean score of 3.88. Out of 25 respondents, 40% strongly agreed, 32% agreed, 16% disagreed, and 12% slightly disagreed. The risk and cost of financial distress has a mean score of 3.72. Analysis shows that 25 responses are obtained out of which 52% agreed, 20% strongly agreed, 12% slightly disagreed, 12% disagreed, and 4% strongly disagreed. Earning per share that has weak influence on capital structure has a mean score of 3.64. Analysis shows that out of 25 responses, 48% agreed, 24% strongly agreed, 12% strongly disagreed, 5% disagreed, and another 8% slightly disagreed.

Tangibility as a weak factor has a mean score of 3.5, and 24 out of 25 responded with 44% agreed, 20% slightly disagreed, 20% disagreed, 12% strongly agreed and 4% refused to give their opinion. Tax economies associated with debt financing and issuing cost, which is seen to have the weakest influence on banks capital structure, have the mean scores of 3.48 and 3.22 respectively. Analysis show that out of 25 responses, 44% agreed, 20% disagreed, 16% slightly disagreed, 16% strongly agreed and 4% strongly disagreed that tax economies associated with debt financing influence capital structure of banks, while out of 25 respondents, 23 respondents gave their responses that issuing cost influence capital structure. The proportion of their responses is 44% agreed, 32% slightly disagreed, 12% disagreed, 4% strongly disagreed, and the remaining 8% represents the proportion that failed to give their response.

Hypothesis Testing

Ho: There is no significant relationship between capital structure of banks and their determinants.
H_1: There is a significant relationship between capital structure of banks and their determinants.

To test this hypothesis, 12 factors were listed as likely determinants of capital structure. Respondents were to state their degree of agreement or disagreement with each statement. A non-parametric test of association based on one sample, chi-square test was employed to test the differences in the opinion of respondents on each of the possible determinants of capital structure.

Among the 12 factors listed, 7 of them were tested. They are growth opportunities, profitability, tangibility, issuing cost, tax economics associated with debt financing, risk/cost of financial distress and earnings per share. 6 out of the 7 factors were significant predictors of capital structure. In other words, there is a significant difference in the opinion of respondents with respect to 6 out of the 7 factors proposed. The probabilities associated with chi-square value for each of the factors is low ($p < 0.05$).

Table 8: Chi square distribution showing determinants of capital structure of banks

Determinants	**Chi-square**	**d.f**	**P. Value**
1. Growth opportunity	7.760	2	0.021
2. Profitability	19.640	3	0.000
3. Tangibility	6.000	3	n.s
4. Issuing cost	10.913	4	0.012
5. Tax economics associated with debt financing.	10.800	4	0.029
6. Risk/cost of financial distress and insolvency	17.600	4	0.001
7. Earnings per share	14.400	4	0.006

NS = Not significant

CONCLUSION

The study identified factors to be considered in choosing appropriate amount of debt for banks in order in which they are responsible. They include credit rating, the volatility of earnings and cash flow, financial flexibility, the transaction costs and fees for issuing debt, the potential costs of bankruptcy, near-bankruptcy financial distress, the tax advantage of interest deductability, the debt levels of other firms in the industry and the personal tax cost that investors face when they reserve interest income. In addition, the study discovers that banks prefer to fund their operation through the mix source.

The study equally reveals the factors affecting bank's choice between short and long-term debt. In the order of importance, they are matching the maturity of debt with the life of assets, issuing short-term debt when waiting for long-term market interest rates to decline, short-term borrowing to prevent the bank from undertaking risky projects, and short-term borrowing to capture returns from new projects. From the study, the factors responsible for making equity issues in their order of importance are funding a major expansion, making acquisition, and leverage reduction if market conditions are right. Moreover, most banks make debt issue when the need arises, some monthly, others quarterly, biannually and yearly.

Finally, the study discovers that the following elements influence the bank's capital structure in this order of importance: ownership structure and management control, growth opportunity, profitability, size of the firm, uniqueness of the firm and its reputation, risk and cost of financial distress, earnings per share, tangibility, tax economies associated with debt financing and issuing cost.

In the light of these findings, banks should adopt the mix source of financing, that is, both internal and external source. The internal source should be retained earnings while equity should be the external source. The factors determining capital structure of banks in Nigeria are widely known to be both endogenous and exogenous. Given the pivotal roles that banks play in the nation's economy, it is expected that banks should choose and adjust their strategic mix of securities to maximize the value of the firm. This ensures that banks keep a balance with respect to optimal capital structure.

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