



# NJB

NIGERIAN JOURNAL

*of Business*



## DETERMINANTS OF THE POST – PERFORMANCE OF INITIAL PUBLIC OFFERS IN THE NIGERIAN BANKING SECTOR

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### Abstract

In this study we propose that the post-performance of IPOs in the Nigerian banking sector is a function of pre-IPO factors common in literature - that is, age, size and pre-tax profit.. In support of this proposition, we provide empirical evidence through the OLS estimates of the relationship between the post share price performance of the bank after the IPO and Pre-IPO factors. The analysis shows that although the factors as a whole explain 60% of the variation in performance, none could be used for predicting as they were all surprisingly not significant. This is inconsistent with the accepted position in literature, indicating therefore that there must be other important variables for the Nigerian banking sector. Further research is recommended to investigate other variables including herd instinct and paucity of securities in the capital market.

### Introduction

Nigerian banks most commonly have the tradition of going public via initial public offering (IPO). The Nigerian banking sector had witnessed some IPOs in the past; prominent among such offers were those of Union Bank of Nigeria Plc. (Listed 1970), First Bank of Nigeria Plc (listed 1971), and United Bank of Africa (listed 1971). Most recent IPOs were made by Oceanic Bank International Plc (Listed 2004), Zenith Bank Plc (Listed 2005) amongst others (NSE Fact book, 2005). The 2004 and 2005 spate of IPO issues were policy induced. That is, they were mainly used by banks as ways of meeting up with the N25 billion new capital level specified by the central monetary authority for the banking sector in the Nigerian financial system.

IPOs are usually linked with high initial returns and long-run loss (Ritter, 1991).

Considerable work have been done on short-run under-pricing and lately long-run performance of IPOs across different economies. The long-run period is typically defined to be in the region of three years (Khurshed, Mudambi and Goergen, 1999).

In this study it is proposed that, “the long-run performance of IPOs in the Nigerian banking sector is a function of pre-IPO factors”. However, of immediate importance to this paper is the need to confirm if the pre-IPO factors identified in this study as determinants of post IPO performance hold.

The pre-IPO factors include: the age, size, and pre-tax profit (or losses) of the issuing bank. The age is to be taken as the difference between the date of incorporation and date of listing of the security on the Nigeria Stock Exchange (NSE); the size is the net assets of the bank in the year before the listing, while the pre-tax profit (or losses) is the average pre-

tax profit (or losses) for the last three years before the listing. Therefore, the choice of the topic "IPOs long-run performance in the Nigerian banking sector" was necessitated by

The questions, which we need to answer, are:

1. Is there a relationship between the size of a bank at the time of its going public and its share price performance after the IPO?
2. Is there a direct relationship between the age of a bank and the performance of its shares after the IPO?
3. Is there a direct relationship between the level of pre-tax profit (or losses) of a bank before its listing and its performance after the IPO?

### **Review of Related Literature**

with availability of data, regression is run to verify how each of the aforementioned variables impact on the performance of IPO using statistical analysis software.

#### **Going Public: the Experience in the Nigerian Banking Sector**

The banking sector reforms have been the major driver of capital market development in Nigeria within the last few years. This period recorded a high number of banks making IPOs to meet the new requirements. The banking sector contributed about 84% (N86.01billion) of the total value of new issues that were floated during the period. Many of these later issues were very successful and were highly

the need to provide empirical evidence in support of the proposition that 'IPO long-run performance in the Nigerian banking sector is a function of pre-IPO factors.

Establishing the performance of IPO poses no problem as it involves the estimation of the impact of the performance of IPO on some notable variables that affect such performance.

Chief among these variables are;

- the age of the bank;
- the size of the bank;
- the pre-tax-profit(losses) of the firm before the listing; and
- the degree of the multinationality and diversity of products among other variables.

Such estimation involves specifying a model for the relationship and over subscribed and had a high initial market performance (see SEC Quarterly, 2004).

The IPO market in Nigeria has been seen as a difficult market to predict by any rational investor and corporate issuer. Over the years, the inability to accurately predict the performance of the ordinary shares of a company listed on the NSE has discouraged some companies from listing their shares in the market. For instance, the Guaranty Trust Bank (GTB) Plc made its debut in the market, that it was a company to watch out for. But no sooner than it was listed than the share price started to fall. Within two weeks of listing, the share price of GTB appreciated from N10 to

N14 before it started to drop. The share price eventually fell to less than N3.00 before starting to appreciate again. The same fate has affected Intercontinental Bank Plc and Standard Trust Bank that were listed after their IPO (see SEC Quarterly, 2004).

Some of the previous studies on the long-run performance of UK IPOs such as Levis (1993) and Espenlaub, Gregory and Tonks (1998) have documented the existence of long-run overpricing but have only provided limited explanations for the existence of this phenomenon. A study by Khurshed et al (1999), documented a long-run under-performance of 17.81%. They then explore the relationship between pre-IPO factors and its price performance in the long run. They found that the pre-IPO performance of a firm has a significant effect on long-run performance. A seminal article by Ibbotson (1975) reported a negative relation between initial returns at the IPO and long-run share price performance for a sample of US IPOs issued during the period 1960-69. He reported that there was a general positive performance in the first year, negative performance in the next three years and a general positive performance in the fifth year. Ritter (1991) analysed the performance of US IPOs issued between 1975-84 and reported that they underperformed the benchmark (NASDAQ and AMEX-NYSE) by about 29% in the three year period after their launch. Rajan and Servaes (1997) showed that

They further documented that long-run performance is related to a richer set of factors than previously posited in the literature.

Factors identified by previous researchers in this connection include the underwriters' reputation, ownership structure and bad luck (Carter, Fredericks and Singh (1998), Michaely and Shaw (1994), Brav, Geczy and Gompers (1998), Jain and Kini (1994), Fields (1995)). In addition to these, they also showed that long-run performance is positively related to the degree of multinationality of a firm. They found a significant negative relationship between the long-run performance and first day returns. The quality of a firm at the time of the IPO also explains long-run performance. The better the quality the less is the likelihood of under-performance.

over a five-year period following their IPO, companies underperform the market benchmarks (NYSE/AMEX) by 17% to 47.1%. Carter *et al.* (1998) showed that over a three-year period after the IPO, the US firms underperformed the market (NYSE/AMEX/NASDAQ) by 19.92%. Work in other countries has shown that long-run market adjusted returns are negative with the notable exceptions of Korea (Kim, Krinsky and Lee, 1995) and Sweden (Loughran and Rydqvist, 1994) where IPO companies outperformed the market by 91.6% and 1.2% respectively.

According to Lee, Taylor, and Walter (1994), the degree of under-performance has been highest in Australia with 51.0 %, followed by Brazil with 47.0 % (Aggarwal, Prabhala and Puri, 2002). Lower, nonetheless significant under-performance has been documented in Canada, Chile, Finland, Germany and Switzerland to name a few. In the UK, Levis (1993) investigated the long-run performance of a sample of 712 UK IPOs issued during 1980-88. He reported long-run returns based on three alternative benchmarks: the Financial Times Actuaries All share (FTA) Index, the Hoare Govett Small Companies (HGSC) Index and the All Share Equally Weighted (ASEW) Index.

Levis' work confirmed the findings of long-run under-performance in the UK market. While, for the US market, Ritter (1991) reported under-performance of up to 29 % over the first three years after the IPO, for the UK market, Levis found under-performance within a range of 8 % to 23 % depending on the benchmark used. Espenlaub *et al.* (1998) re-examined the evidence on the long-run returns of IPOs in the UK over the period 1985-95. Like Levis, they compared abnormal returns using a number of alternative benchmarks and confirmed that in the long-run the IPO firms under-performed the market. They found that typically a one £6 investment after the IPO was worth less than 85 pence

after three years. This finding was remarkably similar across four of the five alternative methods that they used to calculate abnormal returns.

### **Methodology**

For the purpose of this study, the researchers drew the sample from the listed banks on the Nigerian Stock Exchange as at 31<sup>st</sup> December, 2005. The cross-sectional survey research design was used in this study. This is because the data collected on the variables (age, size, and pre-tax profit or losses) concern individual agents (banks) at given point in time. The researchers randomly selected twenty banks of the population of Nigerian banks that have floated IPOs. Therefore, the sample used in this study comprised 20 IPOs of banks in Nigeria floated on the Nigerian Stock Exchange from 1970 to 2005 and covers 57% of the total number of new issues. The sample also included those IPOs that were delisted before their third year anniversary (e.g. Diamond Bank Plc and Standard Trust Bank Plc IPOs) as a result of the just concluded re-organisation in the Nigerian banking sector. In this study, data were processed by running a regression to verify how the variables (age, size and pre-profit/loss) impact on the post performance of IPOs. In achieving this, the OLS estimates of the relationship between the post performance of the bank after the IPO and Pre-IPO factors were employed

### Model Specification

The model to be estimated could be specified as follows:

$$IPO = f(\text{AGE, SIZE, PROFIT})$$

Where IPO = the performance of IPO proxy by the money realized from the public offering.

AGE = the age of the issuing bank. This has been calculated as the difference between the date of incorporation and date listed on the NSE.

SIZE = the net assets of the bank in the year before the listing.

PROFIT = the average pre-tax profit (or losses) for the last three years before the listing.

The model in linear form is as specified follows:

$$IPO = \alpha_0 + \alpha_1 \text{AGE} + \alpha_2 \text{SIZE} + \alpha_3 \text{PROFIT} + U$$

Where; IPO, AGE, SIZE and PROFIT are as previously defined.

$\alpha_0$ ,  $\alpha_1$ ,  $\alpha_2$  and  $\alpha_3$  are the parameters to be estimated.

U = Error term.

Apriori; the expected signs of the parameters  $\alpha_1$ ,  $\alpha_2$ , and  $\alpha_3$  are all positive.

### Discussion of Results

Following from all the explanations made above, the post performance coefficients of the regression equation are represented in the table below:

Regression	Coefficient	T-Ratio	Standard Error
INT	4.4316	2.6368	1.6807
LNAGE	-0.57840	-1.5695	0.36853
LNSIZE	0.15669	0.81803	0.19154
LNPRFT	0.28426	1.0925	0.26019

$$R^2 = 0.61, F = 2.3288, DW = 2.2651, SER = 1.2352$$

The above tabular results can be represented in an equation form as shown below:

$$\begin{aligned} \text{LNIPO} = & 4.4316 & - \\ & 0.57840 \text{LNAGE} + 0.15669 \text{LNSIZE} & + \\ & 0.28426 \text{LNPRFT} & \\ & (2.6368) & (-1.5695) \\ & (0.81803) & (1.0925) \end{aligned}$$

The above result generated by cross-sectional data analysis concerning the values of Initial Public Offer represented by (IPO), the age of the bank (AGE), the size of the bank (SIZE) and profit of the bank (PRFT). The research seeks to find the relationship between the dependent variable which is the initial public offer on the determinants; AGE, SIZE and PRFT. With apriori expectation that there will be a positive relationship between the dependent variable and all the determinants, it was observed from the result that all the signs came out as expected except that of age of the bank. This thus means that whereas the Initial Public offer is positively related to the size and pre-tax profit/loss of the bank, it is negatively related to the age of the bank.

From the result it can be deduced that a 1% change in the size of the bank, the initial public offer will positively change by 0.16%. On the other hand a 1% positive change in the pre-tax profit will bring about a 0.28% positive change in IPO. On the other hand a 1% positive change in the age of the bank will bring about a 0.58% negative change in IPO.

It is noted that the  $R^2$ , which is a measure of overall goodness of fit in the analysis, is high at a level of 61%, while the remaining 39% is

captured by the error term. From the result it is seen that the t-ratio of AGE, SIZE and PRFT are (-1.5695), (0.81803) and (1.0925) respectively. These variables are not significant at 5% level. This means that although the variables may be agreed to be part of the equation, they are not reliable indicators.

Using the F-test, the tabulated F is equal to  $F_{v_1, v_2}$  and since our estimated F of 2.3288 is less than 2.74, it is significant and the independent variables put together are not good and reliable indicators of the dependent variables. From the result, the DW which is 2.2651 means there is no evidence of first order positive correlation and therefore the regression estimates are unbiased. It is obvious therefore that the factors that are regularly agreed as important in indicating post-performance of IPOs in the banking sector are not important for the Nigerian banking sector.

### Conclusion

This study attempts to fulfil the great need for evidence on post-performance of IPOs in the banking sector. It can be agreed that relationships between some pre-IPO variables (size, age and pre-tax profit/loss) and post-performance of IPOs that have not been documented, given R-squared of 60%. However, since the t-values and F-value are not significant, these results show that these pre-IPO factors cannot predict the post-IPO performance of banks. This is unexpected

result. We suspect that given that the average Nigerian investor lacks adequate capability for technical analysis, the demand for banks' IPOs may be largely herd instinct. However, for further study, there is a need to investigate these factors using time series analysis processes including co-integration. Moreover, to decompose the error term, other factors such as underwriter's reputation, herd instinct behaviour, paucity of instruments amongst others should be investigated.

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#### Appendix: Data Used For Running the Regression

	Dependent	Independent Variables as at 2004		
	Variable	AGE	SIZE(Nm)	PROFIT (Nm)
<b>BANKS</b>	<b>IPO (Nm)</b>			
Access	500,000	9	184,266	34,743
Chartered	287,367	11	1,000,367	263,291
Coop-Dev	412,000	19	1,714,714	106,117
Diamond	1,497,802	6	14,456,682	1,085,900
EIB	351,698	12	1,439,453	107,443
IBTC	935,492	16	8,531,090	1,945,410
Intercontinental	1,127,284	14	7,483,752	1,354,811
Oceanic	200,000	14	15,424,182	2,960,633
STB	500,000	7	10,694,908	2,663,677
Regent	500,480	3	1,088,330	68,751
FCMB	726,333	22	2,771,875	529,642
First Atlantic	974,283	12	1,192,222	466,542
Zenith	1,451,445	14	14,147,543	4,080,806
UTB	401,475	14	633,005	137,992
WEMA	27,208	22	78,302	17,531
Union Bank	993,000	1	3,200,800	393,800
UBA	238,839	10	4,617,674	81,904
First Bank	1,976,000	77	52,345	23,247
Trade	426,878	7	32,802	21,555

Source: Annual reports as at 2004.

Where: *AGE* of the issuing bank has been calculated as the difference between the date of incorporation and date listed on the NSE; *SIZE* of the issuing bank is the net assets of the bank in the year before the listing; *PROFIT* of the issuing bank is the average pre-tax profit (or losses) for the last three years before the listing.