Estimating the Cost of Ordinary Share Capital to Quoted Nigerian Banks

Sola Fatokun

Department of Management and Accounting, Obafemi Awolowo University, Ile-ife, Osun State, Nigeria

ABSTRACT The article estimates the cost of ordinary share capital to Nigerian banks quoted on Nigerian Stock Exchange by employing computational methods such as dividend and earnings approaches. It also shows the relationship between the cost of equity capital and the size of the banks and identifies qualitative factors that influence the estimates computed.

INTRODUCTION

The increase of capital base of Nigerian banks to N1 billion and the introduction of the Universal Banking System into the industry made the banks to seek for additional funds through issues of equity or ordinary shares in the Nigerian Stock Market to meet the standards set by the Central Bank of Nigeria (CBN). Apart from meeting the CBN's prescriptions, the funds are also meant for expansion of branch networks, acquisition of new information technology, acquisition of new lines of banking business etc. Yet the funds would not be judiciously spent or utilized if the costs of obtaining it cannot be estimated. It will be unwise to issue ordinary shares at its prohibitive costs all to be invested in projects that would fetch returns lower than issue costs.

There are different definitions for the cost of ordinary share equity but all of them say the same thing. Here, the article adopts the definition that says that the cost of ordinary share is the minimum rate of return that a bank must earn on the ordinary share capital or equity in its capital structure. The returns is influenced by various factors such as:

(a) Competition in the banking industry.
(b) Fortunes of the banks
(c) Political stability
(d) Government policy e.g. government preference for a specified sector.
(e) Dividend and investment decisions made by the banks.
(f) Interpretation of dividend and investment decisions of banks by the stock market.
(g) Monetary policy guidelines issued by the CBN.
(h) Volatility of the Foreign Exchange Market

(FEM).
(i) Volatility of International Oil Market.
(j) Interest Rate Regime
(k) General economic conditions.

This study intends to achieve two aims. First, to estimate the cost of ordinary share capital to the quoted Nigerian Banks. The estimates are obtained using various methods of computation for individual sample banks and all the banks taken together. The computed estimates are later compared with one another. Second, the study also aims to estimate the relationship between the cost of ordinary share capital and the bank size.

The aims would be achieved by following this sequence – Methodology, Sample and Data, Output of Computational Efforts, Cost of Ordinary Share Capital and Company Size and the last but not the least the conclusion.

METHODOLOGY

There are various computational systems adopted by financial researchers and analysts to estimate the cost of capital (or cost of ordinary share capital). But the frequently used computational methods in the finance literature are as follows and they are adopted to estimate the cost of ordinary capital to the sample banks:

(a) The dividend yield plus share price growth rate.
(b) The dividend yield plus an allowance for growth, based on the growth rate of dividend per share.
(c) The earnings yield =
Earnings per share/Market Price per share $\times$ 100%
(d) The earnings yield plus an allowance for

growth, based on the growth rate of rate of earnings.

(e) The dividend yield = Dividend per share / Market Price per share × 100%

Miller and Modigliani (1966) posited that dividend and share price growth are positively correlated. Also, the evidence from the study shows that share price growth is influenced by several factors, which may outweigh dividend growth in importance. This is noted in the Nigerian Stock Exchange Market during the study period 1994 to 1998. For the two foregoing reasons, these quantitative methods namely:

(i) the dividend yield plus share price growth rate and

(ii) the dividend yield plus an allowance for growth based on the growth rate of dividend per share.

are considered to be substitutes hence they may be unacceptable.

It should be noted from the onset that a few of the same banking companies were not listed on the Nigerian Stock Exchange Market throughout 1994 to 1998. For banks not so listed throughout the study period, average share prices were calculated for them and applied accordingly. Second, mid-year share prices were used as suggested by (Samuel, 1968) and for the same reasons.

Third, the growth rates of dividend and earnings were computed as the geometric variant of the annual compound growth rate as posited by (Alberts and Archer, 1973) whilst share price growth rate is the average annual growth rate.

SAMPLE AND DATA

All the banks listed on the Nigerian Stock Exchange Market between 1994 and 1998 were considered in the study and of course their annual reports and other financial details were easily obtained. The number of the banks varied between 8 and 14. In the light of absence of informational details for the computational methods defined under methodology, the number of banks in each computation varied from 2 to 5 for all-sized banks sample and from 3 to 8 for the sample of 60% largest banks. The sample of 60% largest banks was obtained for each method and year by ranking the 14 banking institutions in the order of the extent of their total asset base in 1994 (Arches and Faerber, 1966).

The sample banks engaged in retail and wholesale banking business throughout the study period.

The accounting data used for the calculation of the estimates were generated from the banks' audited financial statements and stock market reports between 1994 and 1998.

OUTPUT OF COMPUTATIONAL EFFORTS

Dividend per share was adjusted for bonus issues over the study period. All computed values were exclusive of withholding tax on dividends, companies' income tax and education tax. The inflation rate was computed as the average annual rate of change in the consumer price index between 1993 and 1997. This resulted in an average inflation of 6.058%.

Samuel (1968) applied inflation rate to the growth rate and hence to only a part of the estimated cost. But here inflation rate was applied to the nominal values obtained under each of the computational methods displayed below.

Good estimates obtained for the study period 1994 to 1998 could be assumed to be products of the following four factors.

First, the banking industry witnessed a boom in the late 1980s. This encouraged new entrants

Table 1: Sample of 14 all-sized banks.

	Average Cost of Equity Capital (%), Net of Tax in real terms	Standard Deviation (%)
(a) Dividend Yield + Share Price Growth	18.0	14.04
(b) Dividend Yield + Dividend Growth	14.248	29.01
(c) Dividend Yield	17.3	13.5
(d) Earnings Yield + Earnings Growth	9.1	33.3
(e) Dividend Yield	11.108	11.534

Table 2: Sample of 60% largest banks.

	Average Cost of Equity Capital (%), Net of Tax in real terms	Standard Deviation (%)
(a) Dividend Yield + Share Price Growth	20.18	28.42
(b) Dividend Yield + Dividend Growth	11.34	27.5
(c) Earnings Yield	16.23	14.6
(d) Earnings Yield + Earnings Growth	7.5	33.6
(e) Dividend Yield	10.5	9.41

into the industry to challenge the 'Big Three' – First Bank PLC, Union Bank PLC and United Bank for Africa PLC – and made them to abandon their traditional arm-chair banking for result-oriented banking.

The new entrants introduced various banking products at negotiable interest rates and such products were designed to reduce economic hardships of the Nigerian banking public. The products vary from personalized banking services, free commission on turnover (COT) services, Internet banking and other forms of electronic banking services which have reduced waiting time at Nigerian banks. Benefits of the products are numerous and they are offered to retain the loyalty and patronage of the teeming customers. For instance, high net-worth individuals and corporate customers were showered with banking services outside the conventional bank premises at no additional cost. This brought an unprecedented competition into the industry, which had been dominated by the 'Big Three', which is an advantage to the customers. The banks now compete vigorously using all marketing skills whether orthodox or otherwise to attract and retain the patronage of their customers. That was not the case before the new entrants but truly customers are now kings of their banks. As more banks and other depository institutions are licensed by the Central Bank of Nigeria (CBN) to offer banking services, the more intense would be the competition in the industry and the greater the conviction that customers would continue to enjoy the royal treatment from the Nigerian banks.

Second, the industry suffered a major setback. The new entrants into the industry brought with them unimaginable sharp practices that questioned orthodox banking rules and reversed the banking habits of Nigerians. So alarming were the unethical practices that economists, lawyers, financial experts, accountants, knowledgeable investors etc. were unsure of the future of the Nigerian banking industry. In the light of the sharp practices, gross violation of CBN rules, unprecedented violation of accounting conventions and utter disrespect for Companies and Allied Matters Act (CAMA) 1990 and Banks and Other Financial Institutions Decree (BOFID) 1991, numerous banks and finance houses lost their operating licences and they were later liquidated by the monetary authorities. The resulting crisis was a blessing in disguise. The survivors learnt from the weaknesses and mistakes of the dead ones. They (the survivors) activated all areas of their banking business with adequate capital base, result-oriented human resources, appropriate information technology etc. and the banking public is better for it.

Third, the Failed Bank Tribunal established by dictatorial Abacha regime to try anyone found guilty of banking offences and melt out appropriate punishment made bankers reluctant to perpetrate any fraud or disregard prevailing banking laws.

Fourth, the study period was a time of excess liquidity, unprecedented branch expansion and high profit returns.

COST OF ORDINARY SHARE CAPITAL AND COMPANY SIZE

Here, the article intends to uncover or estimate the extent of relationship between the cost of ordinary share capital and bank size using simple regression analysis. Bank size is measured as the average of total investments/assets of the sample banks between 1994 and 1998. The bank size is then regressed on the estimated cost of ordinary share capital using the computational methods of dividend yield plus dividend growth rate and dividend yield plus share price growth rate. The variables are represented below:

DD = Dividend Yield + Dividend Growth Rate
DS = Dividend Yield + Share Price Growth Rate
A = Average Total Investment (1994-1998)/ Assets

The results of the regressions are:

(i)	DD	=	$0.2056 - 0.00047A$
			(0.147) $R^2 = 0.1$
(ii)	DS	=	$0.02140 + 0.0009A$
			(0.2524) $R^2 = 0.0001$

The conclusion from the foregoing is that there is no significant relationship between bank size and the cost of ordinary share capital. This conclusion does not depart from the findings of (Archer and Faerber, 1966), (Miller and Modigliani, 1966) and (Samuel, 1968), except that (Alberts and Archer, 1973) later submitted that there is a negative relationship between bank size and cost of ordinary share capital.

CONCLUSION

There are ample opportunities to improve on the results of this research effort. The estimates of the cost of ordinary share capital obtained for

the sample banks with computational methods discussed above can be said to be within acceptable limits for an economy with over 70 banks out of which only 14 banks have their shares actively traded on the floor of Nigerian Stock Exchange Market, during the study period. As more banks are listed and more financial information is made available to researchers, it may be possible for a standard cost of ordinary share capital to be set against which subsequent estimates can be evaluated.

All the same, the various estimates are important to the teeming Nigerian investors in equity shares, intending investors, financial analysts, stockbrokers, lawyers, accountants, bankers and Nigerian banks whether listed or otherwise to weigh the cost of equity shares in the light of other sources of capital.

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APPENDIX A

GROWTH RATES

The growth rates of earnings and dividend are calculated as the geometric variant of the compounded annual growth rate. In a period of growth, the earnings and dividend per share of a bank are expected to rise continuously over the study period. Then, the geometric compounded growth rate reflects the year-to-year changes as well as re-investments.

With growth rates of earnings and dividend denoted by g_e and g_d respectively, we have:

$$g_e = \sqrt[4]{\sum_{t=1}^{4} \frac{(EPS_t - EPS_{t-1})}{(|EPS_{t-1}|)}}$$

and

$$g_d = \sqrt[4]{\sum_{t=1}^{4} \frac{(DPS_t - DPS_{t-1})}{(|DPS_{t-1}|)}}$$

where,

EPS_t	=	Earning per share in year t
DPS_t	=	Dividend per share in year t
t = 1	=	1995
t = 2	=	1996
t = 3	=	1997
t = 4	=	1998

If the term
$$\frac{\sum[(EPS_t - EPS_{t-1})]}{(|EPS_{t-1}|)}$$

is negative, the 4th root of its absolute value is taken with the negative sign noted.

So that if
$$\frac{\sum[(EPS_t - EPS_{t-1})]}{(|EPS_{t-1}|)}$$

is, say, -1.58, then
$$g_e = -\sqrt[4]{1.58} = -1.12$$
and this means a negative growth rate.

SHARE PRICE GROWTH

This is computed as follows:

$$g_e = \frac{\sum_{t=1}^{4} \frac{(PPS_t - PPS_{t-1})}{PPS_{t-1}}}{4}$$

where,

PPS_t	=	Price per share in year t
t = 1	=	1995
t = 2	=	1996
t = 3	=	1997
t = 4	=	1998

Note: Non-geometric growth is adopted for share price growth because the current share price has little or no influence on future share prices as noted on the floor of Nigerian Stock Exchange market.

APPENDIX B

LIST OF SAMPLE BANKS

1. Access Bank Nig. PLC.
2. Afribank Nig. PLC.
3. Eko International Bank Nig. PLC.
4. First Bank of Nig. PLC.
5. FSB International Bank PLC.
6. International Merchant Bank PLC.
7. NAL Merchant Bank PLC.
8. Omega Bank Nig. PLC.
9. Savannah Bank PLC.
10. Trade Bank PLC.
11. Trans International Bank PLC.
12. UBA PLC.
13. Union Bank Nig. PLC.
14. Wema Bank PLC.