

Effect of Cost of Capital on Financial Performance: A Case Study of Listed Commercial Banks at the Nairobi Securities Exchange Market

Charles Odongo Omwanza

P.O. BOX 21882 – 00505

Nairobi - Kenya

Abstract

Commercial banks listed at the Nairobi Securities Exchange (NSE) play crucial role in developing the economy of Kenya. The firms provide benefits in terms of job creation, driving innovation, economy's cluster development, economic multipliers, and knowledge spill-over. Given their importance in the nation's economy, it is imperative to explore the effects of cost of capital on their financial performance. This was done using a sample of eleven commercial banks listed at the NSE during the five-year period, 2012-2016. Data for the selected commercial banks were generated and analysed using a linear regression technique. The outcome of the study reveals that commercial banks' cost of capital has significant effect on their financial performance (i.e. return on assets, ROA). The study recommends that commercial banks should utilise opportunities created by NSE to access long-term financing since debt financing carries costs that have effect on their financial performance.

Keywords: NSE, cost of capital, financial performance, commercial banks

1.0 Introduction

Listed companies at the Nairobi Securities Exchange (NSE) play a crucial role in the development of Kenya's economy. The reasons for this are the fact that listed companies provide the benefits of job creation, drive innovation, give cluster development of the nation's economy, economic multipliers, and knowledge spill-over (Ajibolade & Sankay, 2013). Provided the importance of commercial banks in an economy, it becomes imperative to assess the effect of cost of capital on their financial performance, which is a key predictor in their growth and survival.

Commercial banks occupy a significant portion of Kenya's economy. A report by Central Bank of Kenya (CBK, 2015) indicates that the performance of commercial banks in Kenya has been improving since 2015, and this is evidenced by the expanding size in gross loans of Ksh 2.17 trillion, a deposit base of 2.57 trillion, and total assets of 3.60 trillion. Despite the improvement in the performance of these banks, capital structure has greatly influenced the financial performance of these banks (Kamau & Were, 2013). Commercial banks listed in NSE are not making enough return on equity (ROE) or return on investment (ROI), due to insufficient working capital, financial leverage, cash flow, and control, which shareholders in spite of all the headlines on commercial banking profitability (Seelanatha, 2010). Financing decision may lead to reduction or loss of value of strategic assets (Adekunle & Sunday, 2010). Financial reports of NSE listed firms considered for this study, show that their debt financing mainly comprises of short-term debts (Kajola, 2010). Nonetheless, external financing for NSE listed firms exceed their investments, thus failing to put into account that excessive external financing results in over leverage, which implies that the business is exposed to extensive obligations to external investors, who are likely to disrupt firms' operations as well as their financial returns.

The Nairobi Securities Exchange (NSE) has created a veritable platform for companies to access capital market to enhance their growth potential. The NSE seeks to address key challenges of effectively doing business in Kenya's economy such as difficulty in accessing long-term capital because of high cost of fund due to perceived high probable risk (NSE, 2015). Magara (2012) cites finance as one of the major problems. While the listed companies' capital structure involves the combination of funds from owners of business (equity owners or internal financing) that might be because of savings from the owners of the business as well as external financing (debt), which all have their associate cost. The cost of financing presents an opportunity cost of utilising these funds in other investment alternatives.

Most commercial banks may be constrained by the fear of the cost involved in long-term financing through various ways including capital market where opportunities are available for firms to access funds for capital. Various studies have been conducted on cost of capital and financial performance of companies, but studies on listed commercial banks' cost of capital with regard to the Nairobi Securities Exchange is still inadequate. The current study is expected to add to the existing literature on the correlation between commercial banks' cost of capital and their financial performance. Therefore, the present study aims at assessing the effect of cost of capital on financial performance of listed commercial banks. The study is structured into five different parts. Following the introductory part is the literature review section explores the Nairobi Securities Exchange (NSE) and provides empirical review. Section 3 discusses the methodology applied in this study. This is followed by section 4 that discusses data presentation and analysis. Section 5 provides the conclusion.

2. Literature Review

2.1. Nairobi Securities Exchange (NSE)

The Nairobi Securities Exchange (NSE) was established in 1954 as a voluntary organization of stockbrokers, which is currently regarded as one of the most active capital markets in Africa. NSE as a capital market institution plays a significant role in the economic development of the country (NSE, 2015). It mobilizes domestic savings thus bringing about the reallocation of financial resources from dormant to active agents. Long-term investments are made liquid, as the transfer of securities between shareholders is facilitated. The Nairobi Securities Exchange (NSE) has made it possible for companies to engage local participation in their equity, thus providing Kenyans with an opportunity to own shares. It also enables firms to raise extra finance for expansion and development. A new issuer publishes a prospectus that provides all pertinent particulars concerning the operations and future prospects and states the price of the issue to raise funds. NSE facilitates the inflow of international capital, and it provides useful tools for privatization programmes.

2.2. Cost of Capital and Financial Performance

According to Mogaji (2011), cost of capital can be defined as the price incurred to obtain fund or capital. The rate is paid to use capital. Moreover, the cost of a firm's fund is the minimum rate of return that a company must earn on its investment. Capital structure that is also termed as financial leverage or gearing refers to the proportion of a company's long-term debt and or preference shares to ordinary share capital (Matemilola & Bany-Arifin, 2011). Going by this definition, it is the percentage of debt to business owners' equity or fund with regard to listed commercial banks, as these constitute major sources of finance for companies. The description is in conformity with the record of Ajibolade and Sankay (2013) that the two main sources of finance for listed firms are debts (borrowing) and equity (owners' equity).

Several studies have been conducted on the effects of sources of finance, their cost effect as well as the variations exhibited in their combination on a company's value or its resulting future earnings. A study by Modigliani and Miller (1958) was the first to explore the association between financial leverage (capital structure) and the cost of capital as well as firm value. The study aimed to ascertain that market value of the company is independent of its capital structure, irrespective of the fluctuations in financial leverage. Modigliani and Miller's (1958) study focused on American firms and established evidence that ruled out the positive effect of capital structure on cost of capital and that it never affects the value of a firm and investment decisions. Nonetheless, capital structure was found to influence financing decision that affects a firm's value.

Correia and Cramer (2008) conducted an analysis of cost of capital, capital structure and capital budgeting practices: a survey of South African listed companies. Their study employed a sample survey to determine and analyse the corporate finance practices of South African listed companies in relation to cost of capital, capital structure and capital budgeting decisions. The results of the survey were mostly in line with financial theory and were generally consistent with a number of other studies. Their study found that companies always or almost always employ DCF methods such as NPV and IRR to evaluate projects. Companies usually use CAPM to determine the cost of equity and most companies employ either a strict or flexible target debt-equity ratio. Furthermore, the researchers found that most practices of the South African corporate sector are in line with practices employed by US companies.

Magara (2012) studied capital structure and its determinants at the Nairobi Securities Exchange. The study sought to find out the major determinants of capital structure.

It was established that from the period 2007 to 2011, there was a positive significant relationship between the cost of capital, firm size, tangibility and growth rate and the degree of leverage of the firm. The study did not take into consideration macro- economic factors like inflation and interest rates.

Mwangi (2010) examined capital structure on firms listed at the Nairobi Stock Exchange (NSE) also tried to look on the relationship between capital structure and financial performance. Data was collected using structured questionnaires. The study identified that a strong positive relationship between leverage and cash flow, return on equity, liquidity, and return on investment existed.

Edelen and Kadlec (2013) studied the association between a company's investor base, profitability, capital budgeting decisions, and discount rate. The researchers argued that a downward change in discount rates (costs of capital) linked to an expanded investor base could result in poor stock returns as well as operating performance following some security offers. The study outcome confirms that an expansion in the company's investor base is both a necessary as well as sufficient condition to support anomalous poor performance. The study finding contradicts M&M study since a shift in the capital structure can influence performance of a company.

Hamidreza, Fatemeh and Hamid (2014) studied the effect of cash flow on capital structure of firm and finance through debit and capital in future. To meet this goal, the study used a multi variable regression statistical method and their research was carried out from 2006 until 2010 at Tehran stock exchange. In the way of carrying out their study, the information related to dependent variable, independent variable and control variable through Tadbirpardaz database and Rahavard Novin database and through website and library affiliated to stock exchange organization and the sample was collected among 415 firms. Outcome of the finding established that as it was expected there is significant relationship between operational cash flow with external financing, finance through stock, finance through debit for the firm listed at Tehran stock exchange.

Khaled and Samer (2013) investigated the influence of cost of capital, growth rate of dividend, as well as financial leverage on rate of return on investment. The researchers applied a multiple regression analysis and included in the model various independent variables of growth rate of dividends, financial leverage, and cost of capital. The findings of the study ascertained that the existence of a positive relationship and statistically significant growth rate of dividends on rate of return on investment. The study also established no effect with statistical significance for cost of capital as well as financial leverage on return on investment. The finding confirms the M&M study that there is insignificant relationship between cost of capital, rate of return on an investment, and financial leverage.

2.3. Theoretical Framework

The relevant theoretical literature focus on the link between capital structure and cost of capital and how they influence the performance of a firm. In relation to the impact of capital structure on the value of a company, two views exist, which are the traditional view as well as the net operating income approach. Traditional view posits that optimal capital structure is achievable, and this can be attained through the decision management makes concerning the proportion of equity and debt to utilise (Matemilola & Bany-Ariffin, 2011). The optimal capital structure is one that maximises the firm's cost of capital and maximises the total value of the company. The theory indicates that high cost of capital can influence a firm's value, and hence a cost-cutting strategy should be devised to reduce the cost of capital.

The net operating income (NOI) approach is of the assumption that weighted average cost of capital (WACC) and the total value of the firm remains the same irrespective of the gearing level. The viewpoint indicates that capital structure and cost of capital do not influence the value of a company. Modigliani and Miller (1958) confirm the net operating income approach (NOI) on the lack of any association between total value of a company or its gearing level or cost of capital. Modigliani and Miller believe that the total value of a firm depends on the future earnings stream of the firm as well as the risk of the earning but not the way the firm is being financed. The theory was eventually reviewed in 1963 with the implementation of the tax benefit of debt. It is referenced to the fact that a perfect market never exists in the real world. Interest pegged on debt is tax-deductible, a factor that results in creating tax savings to the debtor (borrower), and it renders it possible for a company to minimise its cost of capital as well as maximises the wealth of shareholders by utilising debt. It is referred to as the leverage effect of borrowing (debt).

According to Matemilola and Bany-Ariffin (2011), the most relevant theories to explore the capital structure of listed commercial banks comprise M&M theory, trade-off theory, and pecking order theory.

While the optimisation of capital structure comprises the trade-off between the present values of the tax rebate linked with the marginal increment in leverage as well as the present value of the bankruptcy cost. Agency problem of asymmetric information can influence the availability of credit and thus capital structure of commercial banks. On the other hand, pecking order theory posits that a well-defined optimal capital structure is lacking and instead the debt-ratio comes due to the effect of hierarchical financing over a period of time. The foundation of pecking order theory is that companies lack well-defined debt-to-value ratio. Management prefers to select internal financing before external financing. When a company is compelled to utilise external sources of financing, issuance of debt becomes preferred over new equity.

3. Methodology

The study used descriptive survey design. A descriptive survey design used to collect the required information from the population targeted after which the data collected will be analyzed through quantitative methods to show the causation factor of determinants of capital structure on financial performance of NSE listed commercial banks. The target population comprised 43 commercial banks, but a simple random technique was used to sample 11 NSE listed commercial banks with complete and audited annual report for five years from 2012 to 2016.

Data were collected by review of documents, the Nairobi Securities Exchange handbooks, annual reports of the companies, and published books of accounts. To measure the cost of capital, cost of debt, and cost of equity constitute the whole cost of capital of a company (WACC). The study used the cost of debt only to compute the cost of capital. In analysing the correlation between cost of capital and financial performance of listed commercial banks, the study utilised a simple linear regression technique to test the hypothesis that cost of capital does not affect financial performance.

$$Y_{it} = \alpha + \beta X_{it} + \varepsilon$$

Where: Y_{it} = financial performance of the NSE listed commercial banks, as measured by ROA

α : = a Constant that defines the financial performance without inclusion of independent variables i.e. the value of Y when the value of X is zero

X_{it} = cost of capital (measured by WACC)

β = Coefficients of variable i which measures the extent to which the variation in Y is explained by the variations in X

ε = is the error term of the test equation

4. Results and Discussions

Table 1: Descriptive Statistics

	Mean		Std. Deviation
	Statistic	Std. Error	Statistic
Cost of Capital	1.352	.028	.019
ROA	2.306	.031	.021

Source: Researcher's Computation using SPSS 20.0

Table 1 presents the mean value of the variables as 1.352 for cost of capital and 2.306 for financial performance. The table also presents a standard deviation of 0.019 for cost of capital and 0.021 for financial performance (ROA), implying some level of variations among listed commercial banks concerning the study variables.

Table 2: Model Summary

Model	R	R Squared	Adjusted Squared	Std. Error of the Estimate
1	.512 ^a	.832	.781	.039

Predictors: (Constant), cost of capital $\alpha = 0.05$

Source: Researcher's Computation using SPSS 20.0

Correlation co-efficient (R) reveals the relationship among the study variables, revealing a strong positive relationship of 0.512 among the study variables. The R-squared, also referred to as the co-efficient of determination, explains the variation in the dependent variables that the independent variables cause. R-squared is used to measure the performance of model regression against known observations, and thereby providing a high correlation of 83.2% between the cost of capital and financial performance (ROA).

Table 3: ANOVA

ANOVA					
Model	Sum of Squares	Df	Mean Square	F	Sig.
Regression	.012	3	.002	.037	.001 ^b
Residual	.138	38	.007		
Total	.151	41			

a. Dependent Variable: ROA

b. Predictors: (Constant), cost of capital

Source: Researcher’s Computation using SPSS 20.0

The study used the probability value (p-value) of a statistical hypothesis test to analyse the test statistic value. The low F-value of 0.037 shows a low variability between the variables used in this study. It is also low enough to reject the null hypothesis that there is no correlation between cost of capital and financial performance using a significance level of 0.05. The findings of this study presented by the ANOVA table 3 also that there is a positive relationship between capital structure and financial performance of commercial banks listed at the NSE because the significance (p- value) of 0.01 that is less than 0.05. Hence, alternative hypothesis that cost of capital influences financial performance is accepted because the p-value is less than 0.05.

Table 4: Regression Coefficients

Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.(p-value)	Interpretation
	B	Std. Error	Beta			
(Constant)	0.003	.017		.0162	.038	
Cost of capital	1.524	.026	.048	.0197	.029	Significant

a. Dependent Variable: ROA

Level of Significance (α) = 0.05

Source: Researcher’s Computation using SPSS 20.0

The study finding, with a constant of 0.003, showed that if the a unit measure of cost of capital, then financial performance of commercial banks listed at NSE can be presented as 0.003. X= 1.524 shows a unit change in cost of capital leading to 1.524 units increase in financial performance. T-values presented in table 4 for cost of capital (0.0197). The T-values are closer to zero (0), and thus providing strong evidence against the null hypothesis that there is no significant difference among the study variables. The t-values are low enough, in fact lower than the significance value (p-value) of 0.05 to support the rejection of the null hypothesis that cost of capital does not influence financial performance. The study finding confirms the study by Edelen and Kadlec (2013) that there is association between a company’s investor base, profitability, capital budgeting decisions, and discount rate. Nonetheless, it contradicts M&M study and studies by Khaled and Samer (2013) and Hamidreza, Fatemeh and Hamid (2014) since a shift in the capital structure can influence performance of a company.

5. Conclusion

The study examined the effect of Nairobi Securities Exchange (NSE) listed commercial banks’ cost of capital on their financial performance using cost of debt and return on assets (ROA) as the proxies for this research. The result established a significant relationship between the variables at 95% confidence level. Based on this outcome, the study rejects the null hypothesis that the NSE listed commercial banks’ cost of capital has no significant effect on their return on assets (ROA) that has been used as their measure for financial performance. Hence, the study recommends caution while exploring the use of debt (borrowing) financing since it poses threat to financial performance and instead more equity financing available at the NSE should be adopted.

References

- Adekunle, A & Sunday, K. (2010). Capital Structure and Firm Performance: Evidence from Nigeria. *European Journal of Economics, Finance and Administrative Sciences*, 25, 71-80
- Ajibolade, S. & Sankay, C. (2013). Working Capital Management and Financing Decision: Synergetic Effect on Corporate Profitability. *International Journal of Management, Economics and Social Sciences*, 2(4), 233–251
- CBK. (2015). Performance and developments in the Kenyan banking sector for the quarter ended 30th June 2015. Retrieved from <https://www.centralbank.go.ke/images/docs/Bank%20Supervision%20Reports/Quarterly%20Performance%20Reports/Quarter2of2015.pdf>
- Correia, C. & Cramer, P. (2008). An analysis of cost of capital, Capital Structure and Capital Budgeting Practices: a Survey of South African Listed Companies. *Meditari Accountancy Research*, 16 (2), pp.31 – 52
- Edelen, R. M. & Kadlec, G. B. (2013) Investor Base, Cost of Capital and Financial Performance: The Case of Post Issuance Anomalies; Seminar presentation, Hong Kong University of Science and Technology.
- Hamidreza, K., Fatemeh, M. & Hamid, M. (2014). Impact of Cash Flow on Capital Structure of Firms Listed in Tehran Stock Exchange. *American Journal of Business and Management*, 3 (2), 1-64
- Kamau, A. & Were, M. (2013). What drives banking sector performance in Kenya. *Global Business and Economics Research Journal*, 2 (4), 45-59.
- Khaled, A. M. A. & Samer, F. O. (2013) Impact of Cost of Capital, Financial Leverage and the Growth Rate of Dividend on Return on Investment. An Empirical Study of Amman Stock Exchange. *International Journal of Academic Research in Economics and Management Sciences*, Vol. 2, No. 4, pp.59-69.
- Magara, M. (2012). Capital structure and its determinants at the Nairobi Securities Exchange. Nairobi: Unpublished Management Research Project of the University of Nairobi
- Matemilola, B. & Bany-Ariffin, A. (2011). Pecking Order Theory of Capital Structure: Empirical Evidence from Dynamic Panel Data. *International Journal on GSTF Business Review* 1 (1): 185–189.
- Modigliani, F & Miller M. H. (1958). The Cost of Capital, Corporation Finance and the Theory of Investment. *American Economic Review*, 48, pp 261-297.
- Mogaji, P. K. (2011). The Importance of Cost of Capital. Retrieved from www.kenny-morgans.blogspot.
- Mwangi, M. (2010). The relationship between capital structure and financial performance of firms listed at the Nairobi Stock Exchange. Unpublished Management Research Project of the University of Nairobi
- NSE (2015). Nairobi Securities Exchange Annual Reports. Retrieved from <https://www.nse.co.ke/investor-relations/financial-reports-and-results.html>
- Seelanatha, L. (2010). Market structure, efficiency and performance of banking industry in Sri Lanka. *Banks and Bank Systems*, 5 (1), 20-31.