EFFECT OF FIRM SIZE ON SHORT TERM DEBT OF FIRMS LISTED ON THE NAIROBI SECURITIES EXCHANGE, KENYA

Abstract

The capacity of a firm, the diversity and number of production capabilities, or the quantity and multiplicity of services a firm may simultaneously give to its consumers can all be considered as part of the firm's size. Short-term obligations should be used to fund short-term assets. The study evaluated the effect of firm size on short term debt on companies listed on Nairobi securities exchange. The study was anchored on agency theory and the growth firm theory. The study utilized descriptive research design. The study used secondary data from annual accounting report of quoted firms on Nairobi securities exchange. Data analysis was performed in order to convert obtained data into a format that can be used for interpretation and conclusion, therefore analysis was based on panel data, the analysis was based on panel regression. Result demonstrated a negative and significant effect between firm size and short term debt. The study recommends that management of firms' especially larger firms should access long term financing which can be more long term investment which can enhance firms' growth and competitiveness and smaller firms should not rely on short term debt.

Keywords: Agency Theory, Firm Size, Growth of Firm Theory, Short Term Debt

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Background of the Study

The capacity of a firm, the diversity and number of production capabilities, or the quantity and multiplicity of services a firm may simultaneously give to its consumers are all considered as part of the firm's size (Masira, 2018). Due to economies of scale, size of a corporation is now a very crucial factor in how well it can compete with rivals by lowering costs and seizing greater possibilities. Furthermore, based on this idea, the firm's size is a factor in determining the firm's profitability, and various experts have found a positive correlation between size and profitability. According to Akinyomi and Olagunj (2018) "Firm size has recently been considered a key factor in clarifying the profitability of organizations and an array of studies have attempted to investigate the influence of firm size on profitability". Based on these conditions, firms operate in more profitable environments with less competition. As firm size grows, bankruptcy costs fall. Because prospective bankruptcy expenses represent a smaller portion of a company's worth for larger businesses than for smaller businesses, firm size should be associated positively with

borrowing capacity (Arlita, 2019). In addition, larger enterprises have access to long-term finance through economies of scale in transaction costs that are not accessible to smaller firms. In Kenya, a firm's size has been regarded as a crucial predictor of its financial performance (Otoritas, 2018). Larger companies exhibit greater profitability, whereas smaller companies lack the potential to compete with larger companies. Larger businesses have better chances of obtaining financial foundation credit. Due to their improved credit standing and decreased risk of bankruptcy, they can be eligible for loans at lower interest rates (Bintara, 2020). Large liquidity provided by a firm's size makes it challenging to expand the business because it may restrict cash flow operations. Although there is no relationship between firm size and performance, businesses anticipate rising tax obligations to affect performance (Gathogo & Ragui, 2018).

Short term Debt is a component of the financial system. In broad terms, finances and debts that will be used, liquidated, matured, or paid off within a year are referred to as short-term assets and liabilities. Short-term obligations should be used to fund short-term assets (Guin, 2019). Evaluation of options that influence current assets and current obligations is the main focus of short-term thinking. Short-term liabilities divided by total assets is used to calculate short-term debt. Garcia-Terul and Martinez-Solano (2018) found a correlation between short-term debt and a company's potential for growth. According to anecdotal evidence, short-term loan financing and financial performance are positively correlated (Yazdanfar & Hman, 2019).

Numerous academics and researchers have noted that short-term debt has an impact in firms. According to Bursa (2019) enterprises might believe that a specific proportion of short-term liabilities in their financing structure is ideal for boosting performance. Diamond and He (2018) noted that companies in Germany with a significant amount of short-term debt relative to their long-term debt outperformed their counterparts. According to Tailab (2019), using short-term liabilities like trade payables and accrued costs can increase a company's profitability because they may be less expensive for the company to use than prospective sources of funding. Additionally, because there are fewer binding agreements involved, short-term sources of funding may boost profitability.

In 1954, the Nairobi Securities Exchange (NSE) was established. NSE is essential to the expansion of Kenya's economy since it promotes saving and investment while also facilitating access to affordable financing for both domestic and foreign businesses. The Kenyan Capital

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Markets Authority has regulatory authority over NSE. Financial and non-financial companies are both listed on the Nairobi Securities Exchange. According to NSE (2018), non-financial firms are those that are not engaged in the business of providing services to financial intermediaries.

In a market economy, a firm's size, profitability, and likelihood of survival typically vary from one to another. According to Muchiri, Muturi, and Ngumi (2018), a sizable portion of firms listed at Nairobi Securities Exchange (NSE) have been suffering poor profitability, which discourages investors from dealing in such firms. In contrast to 4.2% growth in 2016, the number of enterprises listed on the Nairobi Securities Exchange increased by 3.7% in 2017 (NSE, 2019). Lenders avoid funding to these companies due to a decline in financial performance (Muchiri, Muturi, & Ngumi, 2016). As an illustration, Kenya Airways Limited recorded a net loss of Kshs. 26.2 billion ($258 million) for the fiscal year 2015–2016, up from Kshs. 25.7 billion the year prior (NSE, 2019). Following an agreement between the Kenyan government, suppliers, and holders of debentures, Uchumi Supermarket Limited was resurrected (NSE, 2019).

Theoretical Review

Agency Theory

Agency theory was postulated by Jensen and Mecking (1976) which is defined as a particular percentage of debt in the company's financial structure which reduces the agency costs that result from disputes between managers and owners of the business (Leland, 1998). Reducing conflicts between agencies would result in reduced agency expenses, which could contribute to revenue growth. Jensen and Meckling (1976) noted that the usage of debt in the company can aid in reining in and monitoring managers to make sure they pursue goals that are advantageous to the company. According to Buferna, Bangassa, and Hodgkinson (2005), the presence of debt in the financial structure encourages managers to foster a company's expansion in order to generate cash flows that would cover debt repayment. As a result, the firm's profitability increases (Dawar, 2014). According to this idea, using short-term debt or any other type of debt decreases agency conflicts between a firm's managers and shareholders, which in turn fosters economic development (Rashid, 2015).

Theory of Growth of the Firm

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Penrose developed this theory in 1959. According to Penrose's theory, firms' present-period growth rates are the only thing that determines their long-term or ideal size (Penrose, 1959). The theory suggested that retained earnings, borrowing, and fresh stock issues could all be used to raise money for expansion. In developing nations with underdeveloped capital markets, retained earnings are one of the most crucial sources for funding new initiatives (Penrose, 1959). Companies at the start-up phase, however, are unlikely to have enough financial resources from retained earnings and will confront a constraint in their growth project because their initial investments are still in their infancy or because their investment projects are significantly larger than their current earnings. Businesses in this circumstance might look for external sources of funding, but the amount they can borrow may be constrained by internal variables like high debt-to-equity ratios, which would put both the borrower and the lender at heightened risk (Penrose, 1959). In other instances, the ability to finance expansion projects may be constrained by unstable financial markets.

Empirical Review

Although Masira (2018) found a positive association firm size and profitability of total debt in Chinese firms, the fixed effects model prevents this relationship from being statistically significant. The correlation of the firm size to long-term debt, however, will be negative and extremely significant, which shows that the relationship between the two is not favourable. But because of China's large equity market capitalization, the negative association won't arise from informational asymmetries. Because of their reputation in the market and the allure of capital gains, large enterprises are considered to have easier access to capital markets for equity financing, which is why there is a negative correlation between size and long-term debt.

Sritharan (2018) examined firm size influence on profitability of Sri Lankan diversified holdings firms. This study contributes to the available literature by examining how firm size affects the profitability of diverse holdings companies listed on the Colombo Stock Exchange. It also examines the background of Sri Lankan businesses. The study examined data for the five years starting in 2008 and applied econometric estimating models. According to the study's findings, return on assets, a measure of profitability, and business size are positively correlated. Additionally, this analysis shows that there is a bad correlation between profitability and total debt ratio.

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Isik, Unal and Unay (2018) investigated on the effect of firm size on profitability of Turkish manufacturing sector using a dynamic panel method of approach. To determine if firm size indicators have a substantial impact on business profitability, a dataset of 112 manufacturing companies listed on the BIST (Borsa Istanbul) exchange was employed. The Finnet database, which includes financial details on Turkish companies listed in BIST, served as the source of the data set. The nine-year span from 2005 to 2013 was covered by the sample data used for the analysis. Negative equity companies were removed from the data set. Firms with less than six years of data were disqualified. As a result, the study's final sample consisted of an unbalanced panel of 112 publicly traded industrial companies in Turkey. Firm size was discovered to have a positive relationship on the profitability of the manufacturing sectors.

In a research by Muturi (2019), evaluated how firm size affected the profitability of manufacturing companies listed on the Nairobi Stock Exchange. The study's correlation design was used in its execution. The manufacturing industry was the target market. The secondary data came from the annual financial statements of all prequalified manufacturing companies in Kenya that were in business from 2012 to 2018. The use of panel descriptive statistics was used to analyse the data. The analysis concluded that Carbacid investments were characterized by firm size. According to the firm size of each manufacturing company, Carbacid Investments had the largest firm size. The financial condition of the company was at its maximum average, which defined its size. The number of employees was not a primary indicator of the firm's size.

Methodology

Cooper and Schindler (2003) define research design as an action and time-conducted strategy established on research objectives, a directed range of sources and categories of info, a structure for articulating the link among study variables, and a method for each research activity. The research will be conducted using a descriptive research design. According to Mugenda and Mugenda (2013), descriptive research is a study that aims to collect information from a demographic in order to determine the participants' current state in relation to the parameters. The design that will be used is a case study type because it will help to determine the relevance of the variables association.

The population of interest was comprised of all fifty four firms that were listed on the NSE between 2007-2011. The study used census sampling method, thereby capturing all the intended

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audience. The study chose to use secondary data from the semi-annual as well as the annual financial statements of the firms listed on the NSE for a period of five years. This data allowed for the calculation measures relevant to this study. The data constituted a mixed of cross-sectional as well as time series data and was therefore treated as panel data. The use panel data has advantages over both cross sectional and time series data. The Ms-Excel and STATA were used to clean, explore and analyse that data. Data was analysed using panel regression methods. This is because neither cross sectional data or time series data analysis could not give out the best result because of the combined variation in both the firms and time.

Panel data is used to increase data observations and therefore very helpful in looking at change dynamics. The data was initially analysed using pooled ordinary least squares (OLS) regression model. Panel data regression models that were used in the analysis of the data included random effects. Random effects model separates the differences across components (panels) and individual are random and uncorrelated with the independent variable. Hence error term thus captures the random effects due to the panels and the random errors. Random effects are treated as unique errors, for each panel, that have a distribution that is normal with zero mean as well as variance σ^2. The random effects method needs you to specify the individual characteristics which may or may not in any way influence the independent variables. There is however a problem where some variables may not be available in the analysis leading to the omitted variables bias in the model. It also allows generalization beyond the sample in the model. The random effect model:

$Y_{it} = \alpha + X_{it}\beta + \varepsilon_{it} + \mu_{it}$

Where

ε_{it} = within entity error term

μ_{it} = between entity error term

Y_{it} = Short term Debt for i^{th} firm in t^{th} year.

X_{it} = Firm Size (ln (Total Assets))

β = Vector of Coefficient

Results and Discussion

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Table 1. Panel Regression Result

Group variable: Company				Number of groups =	52	
R-sq:	within = 0.3345			Obs per group: min =	2	
	between = 0.2292			avg =	10.0	
	overall = 0.2359			max =	10	
				F(9,459) =	25.64	
corr(u_i, Xb) = -0.1377				Prob > F =	0.0000	
Short term debt	Coef.	Std. Err.	T	P>t	[95% Conf.	Interval]
Firm Size	-0.0142221	0.0090147	-1.58	0.115	-0.0319373	0.0034931
_cons	0.5774872	0.1326202	4.35	0.000	0.3168691	0.8381053
sigma_u	0.21772789					
sigma_e	0.05938035					
rho	0.9307692	(fraction of variance due to u_i)				
F test that all u_i=0:	F(51, 459) = 15.59			Prob > F = 0.0000		

The table presents the regression for firm size and short term debt. From the table, the overall r-squares is 23.59% which means overall 23.59% of the variations in short term debt were explained as shown by independent variable. The within r-squared is 33.45% which means that 33.45% of the variations within variable are explained as shown by model. The between r-squared is 22.92% which means that 22.92% of the variations between the variables were explained as shown by model. . From the above table, firm size is significantly as well as negatively related to the short term debt. This means that a point increase in the Long term debt would reduce firm size by 0.0014 and over time there will be a reduction in short term debt.

Conclusion and Recommendation

From the result above, firm size was found to be having a negative relationship that was significant with short term debt. This meant that bigger firms employ significantly longer levels of short term debt. This was to be expected because such firms were able to finance their activities from the funds that were internal which they must have been accumulating over time. Such firm also have short term assets which can be used to finance their activities and therefore

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do not need to go for the short term debt. This results is in support of agency theory that had suggested a relationship that was negative between size and short run debt. Although Masira (2018) found a positive association firm size and profitability of total debt in Chinese firms and also Sritharan (2018) found a positive effect between firm size and profit.

From the findings, the study recommends that management of firms' especially larger firms should access long term financing which can be more long term investment which can enhance firms' growth and competitiveness. Management can focus on securing long term debt since it has low interest rate and provides greater financial flexibility, reducing the risk of refinancing challenges associated with short term debt. Smaller firms that may be faced with more expensive borrowing cost for short term debt, management can reduce relying on short term debt, this can reduce financial risks especially during fluctuations in interest rate. The firm executives should continue to watch and maintain good financial performance. Further studies can be carried out on the effect of firm size on total debt for cooperative societies and insurance companies.

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References

Akinyomi and Olagunj (2018). Effect of Firm Size on Profitability: Evidence from Nigerian Manufacturing Sector. *Prime Journal of Business Administration and Management*, September 30, 1171-1175.

Arlita, D.P., & Surjandari, D.A. (2019). The Effect of Profitability, Liquidity, Asset Structure, Growth Opportunity, Institutional Ownership on Capital Structure (Case Study at Property and Real Estate Companies in Indonesia Stock Exchange Period 2013-2017). *Scholars Bulletin Abbreviated,* 5(8): 461-470.

Bintara, R. (2020). The Effect of Working Capital, Liquidity and Leverage on Profitability. Saudi *Journal of Economics and Finance Abbreviated,* 4(1): 28-35.

Bursa Efek Indonesia. (2019). Laporn Keuangan Perusahaan Manufaktur Otomotif Tahun 2019. Jakarta, Indonesia.

Dawar, V. (2014). Agency theory, capital structure and firm performance: some Indian evidence. *Managerial Finance,* 40(12), 1190-1206.

Diamond, D. W., & He, Z. (2018). A theory of debt maturity: the long and short of debt overhang. *The Journal of Finance*, 69(2), 719-762.

Diamond, D. W., & He, Z. (2018). A theory of debt maturity: the long and short of debt overhang. *The Journal of Finance*, 69(2), 719-762.

Doğan, M. (2018). Does Firm Size Affect the Firm Profitability? Evidence from Turkey. Research *Journal of Finance and Accounting*, 4(4), 53-59.

García, P. J., & Martínez, P. (2008). On the determinants of SME cash holdings: Evidence from Spain. *Journal of Business Finance & Accounting*, 35(1- 2), 127-149.

Gathogo T, & Ragui, M. (2018) Determinants of firm size of default among farmers in Ghana, *Journal of Development and Agricultural Economics*,4(13): 339-345.

Guin, L. (2019). Matching Principle. Murray State University, Tutorial.

Jensen, M. C., & Meckling, W. H. (1976). Theory of the firm: managerial behaviour, agency costs and ownership structure. *Journal of Financial Economics*, 3, 305 - 360.

Masira R., (2018) Assessing factors affecting the firm size of microfinance institutions: a case study of village credit institutions of Gianyar, Bali. *GadjahMada International Journal of Business*, 8(2), 247-273.

NSE report (2018). NSE Annual Report 2016 - Nairobi Securities Exchange. Available at www.nse.co.ke. NSE report (2019). NSE Annual Report 2017 - Nairobi Securities Exchange. Available at www.nse.co.ke

Otoritas Jasa Keuangan. (2018). Peraturan Otoritas Jasa Keuangan Republik Indonesia Nomor 35/POJK.052018 tentang Penyelenggaraan Usaha Perusahaan Pembiayaan. Jakarta, Indonesia.

Penrose, E. T. (1959). The theory of the growth of the firm. New York: Sharpe.

Rashid, A. (2015). Revisiting agency theory: Evidence of board independence and agency cost from Bangladesh. *Journal of business ethics*, 130(1), 181-198.

Tailab, M. (2018). The effect of capital structure on profitability of energy American firms. *International Journal of Business and Management Invention*, 3(12).

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Yazdanfar, D., & Öhman, P. (2019). Debt financing and firm performance: an empirical study based on Swedish data. *The Journal of Risk Finance*, 16(1), 102-118.

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