



Company Age and Short-term Debt of Companies Listed on the Nairobi Securities Exchange, Kenya

Oliver Mukweyi Pyoko ^{a*} and Renson Muchiri ^b

^a ICT Authority, Kenya.

^b KCA University, Kenya.

Authors' contributions

This work was carried out in collaboration between both authors. Both authors read and approved the final manuscript.

Article Information

DOI: 10.9734/AJESS/2024/v50i11241

Open Peer Review History:

This journal follows the Advanced Open Peer Review policy. Identity of the Reviewers, Editor(s) and additional Reviewers, peer review comments, different versions of the manuscript, comments of the editors, etc are available here: <https://www.sdiarticle5.com/review-history/110455>

Original Research Article

Received: 20/10/2023

Accepted: 26/12/2023

Published: 12/01/2024

ABSTRACT

Firms that are listed on the Nairobi Securities Exchange are looking for more cash to support their business operations and carry out particular development projects, thus they are gradually increasing the amount of debt finance that makes up their capital structure. This study aimed to investigate the effect of firm age on short term debt of firms listed on Nairobi Securities Exchange. This study was underpinned on form life cycle theory and pecking order theory. The study used secondary data which was obtained from the listed firms from 2007-2011. Panel data was used and the result showed a positive and significant relationship between firm age and short term debt of firm. From the results, the study recommends that management of companies should carefully consider the company's age and the impact on debt maturity structure. They should also align short term debt strategies with company's prospect and long term financial goals. Older firms with stable growth patterns may find short term debt suitable, while younger firms with higher growth expectations may benefit from other debt financing.

*Corresponding author: Email: ompyoko@gmail.com;

Keywords: Firm age; firm life cycle theory; pecking order theory; short term debt.

1. INTRODUCTION

Short term debt is an element of the financial system. Short-term assets and liabilities are broadly speaking, funds and obligations that will be utilized, liquidated, matured, or paid off within a year. Short-term assets ought to be financed by short-term debts [1]. Short-term thinking is primarily concerned with evaluating options that impact existing assets and commitments. Short-term debt is calculated as short-term liabilities divided by total assets. Garcia-Terul and Martinez-Solano [2] discovered a relationship between a company's ability to grow and its level of short-term debt. Anecdotal proof suggests a positive correlation between financial performance and short-term debt financing Yazdanfar & Hman, [3]. A firm that employs more short-term debt is more inclined to encounter financial limits and be impacted by a shock to the credit supply since it must renegotiate more frequently.

It has been observed by several scholars and researchers that short-term debt affects profitability. Businesses can employ short-term finance, which may have an effect on their profitability based on how costly that particular funding source is for that particular business, according to Bursa's [4] research. Businesses may think that increasing performance and profitability in their financing structure requires a particular percentage of short-term obligations. According to Diamond and He [5] German companies that have a high proportion of short-term debt in comparison to long-term debt did better than their peers. Using short-term liabilities, such as trade payables and accrued costs, can boost a company's profitability because they might be less expensive to use than potential sources of finance, claims Tailab [6].

In the United States of America, there is a noteworthy decline in debt maturity among companies with larger cash holdings, but not among those with smaller cash holdings. As of June 2023, the value of short-term debt was 8,017.1 USD billion, down from 8,129.6 USD billion in June 2023 Clarfelt, [7] In the United Kingdom, businesses' short-term debt load grew to more than 100% of their yearly revenue in 2022 Schomberg, [8]. In 2022, short-term debt comprised 208.6% of the nation's nominal GDP, up from 207.3% in 2021 Rizzo, [9] China's short-term debt value increased from 1,338.0 USD

billion in 2022 to 1,399.7 USD billion in 2023 (Tang, 2023).

Numerous African governments used a range of measures to mitigate the COVID-19 pandemic's consequences on the continent's economy and society, which significantly affected the continent's ability to sustain debt [10]. Ghana's fiscal and external circumstances have significantly gotten worse following the Covid-19 epidemic, the global financial markets' decline, and the conflict in Ukraine [11]. In addition to pre-existing fiscal and short-term debt worries, all of these external shocks have resulted in an increase in public and external debt in the majority of firms.

Ghana lost access to foreign markets in late 2021, and by 2022, the country's economy had severely deteriorated as a result of sharp drops in international reservations, a sharp devaluation of the currency, and rapidly rising inflation [12]. In Uganda, the global decline in coffee prices made it more difficult for Uganda's economy to generate foreign exchange, which had a detrimental effect on the country's capacity to service its debts and accelerated the accrual of arrears. With a debt-service ratio of about 80%, the anticipated total amount of outstanding and paid-out debt is 105% of GDP. This poses a serious obstacle to Uganda's economic recovery and future expansion [13].

Firms undergo modifications during their life cycle. Regarding performance, every stage has its own special characteristics [14]. Being physically fit from birth or in the early stages gives businesses a competitive edge. Growing older brings experiences, but as time passes, physical infrastructure loses value and tends to generate lower rent a situation that could become bad at some point [15]. The accumulation of experience over time can lead to "routinization" or "set in," resulting in inertia, resistance to change, and permanent sunk costs [16]. Age-related increases in a company's profitability are limited; after reaching a peak, strategic advantages wear down and the company may eventually ossify [17].

The firm's age is a crucial component in determining its foundation [18]. The age of a firm is determined at the time of study; as a firm age and achieves economies of scale, it can produce a good at a lower cost. However, in order to compete with their rivals, established

businesses must modify their operating practices to fit the new environment, as stated by Chinaemerem and Anthony [19]. A firm's age-uniqueness affects managers' propensity for risk and decision-making, particularly rapid change [20].

In Kenya, short-term debt increases a company's ability to raise capital to improve efficient and seamless operations and more than 70% of jobs and greater than 50% of company funding in Kenya are generated through short-term loans. The National public sector debt reached 33% by the end of 2020 Fedelino, Kaufman, & Estevao, [21]. The total amount of Kenya's governmental debt as of May 2023 was around 9.68 trillion Kenyan shillings (Ksh), or roughly 66.4 billion US dollars. Kenya's short-term debt was valued at USD 2.4 billion as of December 2021 Kiprotich, [22]. In general, Kenya's public debt has been rising.

Nairobi Security Exchange is one of Kenya's public exchanges where securities of publicly traded firms can be traded [23]. It was founded in 1954 as a non-profit association of brokers under the Society Act. It was in charge of fostering the securities industry and managing trade [24]. Significant changes have occurred to the NSE since its establishment, such as the implementation of trading laws, the Central Depository System, market automation, and the division of shares from mutual company-to-company Ltd [23]. When it comes to market value as a percentage of GDP, it ranks fifth, whereas when it comes to the volume of shares traded, it ranks fourth.

Firms that are listed on the Nairobi Securities Exchange are looking for more cash to support their business operations and carry out particular development projects, thus they are gradually increasing the amount of debt finance that makes up their capital structure. The capital market regulator (CMA) estimates that right offerings raised \$988 million for the companies listed on the Nairobi Stock Exchange between 2004 and 2014 Anyanzwa, [25]. Big public businesses' debt-to-equity-to-equity ratios seem to be rising, whereas small companies' ratios seem to be falling.

2. THEORETICAL REVIEW

2.1 Firm Life Cycle Theory

This theory is based on Mueller D's [26] invention of the firm life-cycle theory.

According to Ryu and Won's [14] theory, organizations undergo four distinct life-cycle stages, which are start-up, growth, maturity, and stagnation, just like products. Each stage is characterized by unique features. According to the hypothesis, businesses that are just getting started or are in the introduction stage are typically small and struggling due to high capital costs da Silva Roma, [27]. organizations in the growth stage tend to be larger and more established than those in the birth stage. They benefit from cheaper external capital-raising costs than companies that are just starting up [28]. Firms that face external challenges during the decline stage suffer from falling returns and encounter stagnation. When profitability falls, they attempt to increase their short-term performance by reviving or shutting down business lines [16]. Furthermore, older businesses are less able to react quickly to adverse market conditions that could have a negative impact on returns due to their more bureaucratic organizational structure. At this point, the company wants to maximize earnings by avoiding costly modifications and keeping competitive product prices, while innovation is waning. At this point, businesses are cautious and want to safeguard what they've already managed to achieve.

2.2 Pecking Order Theory

This theory was put forward by Myers [29]. The premise of this argument is that managers of companies possess more information or understanding about their businesses than do investment specialists. An asymmetric discrepancy in the information is implied. All other things being equal and taking information asymmetry into account, management will raise capital through debt when they are optimistic about the company's future. However, in order to show that the business expects steady cash flow, managers who envision an uncertain future will issue equity and pledge to repay debt holders in the form of bonus and principal [30]. Along the same lines, this demonstrates that companies routinely utilize their own funds when accessible, and, in the event that more capital is required, they choose debt rather than fresh stock issues. Myers called it the "pecking order theory" since there was no explicit aim for equity debt and there was both internal and external equity, with the first one at the highest level and the other one at the bottom of the theory.

2.3 Empirical Review

Yilun [31] aimed to elucidate the impact of business size and age on Chinese firms' profitability. Utilizing secondary data to obtain stock data from China's public enterprises between 2008 and 2018, the study employed a fixed effect model to investigate the different associations. Firm age was the independent variable, and profitability was the dependent variable. The study's conclusion showed that there is a negative correlation between the profitability of the Chinese enterprises that were chosen and the age of the company.

In the business sector, Mallinguh, Wasike, and Zoltan [32] assessed the relationship between firm age and financial leverage performance. The study examined 146 medium-sized enterprises (MEs). The study adopted a cross-sectional research design. The results showed that, in addition to ownership, the percentage of foreign ownership, firm age, industry, and financial leverage all significantly affect performance. The relationship between firm age and performance is greatly impacted by foreign ownership, but not by leverage. Both foreign ownership and leverage do not significantly alter the relationship between the company sector and financial performance.

Firm age was utilized in a study by Solanke and Mohammed [33] to evaluate the leverage of listed financial enterprises in Nigeria. The study examined the relationship between firm age and the leverage of Nigerian financial enterprises that are listed. Data was collected from annual reports of 49 financial firms during the course of a 12-year period (2008–2019). Inferential statistics and descriptive data are used to estimate a firm's age, and leverage. The study discovered age positively and significantly affects the leverage used by the financial sector. The report indicates that companies commonly use loan funding to gain access to readily available tax havens, which ultimately increases profitability.

Rwakihembo, Aryatwijuka, Kalinda, and Nimusiima [34] investigated how firm age affected Ugandan private limited firms' financial performance. The research employed a positivist paradigm and a cross-sectional design. A systematic self-administered questionnaire was utilized to gather quantitative data from carefully selected accountants, auditors, CEOs, and board members. 394 private companies in Central and

Western Uganda were included in the sample. The connection was assessed using both Pearson correlation and standard regression analysis techniques. The study found significant relationships between financial performance and firm age.

3. METHODOLOGY

This study used descriptive research design because of the nature of the problem and the quantitative data that are already available. The study used a panel data model to investigate how the firm age affect the short-term debt of the company. The study investigated companies listed on the NSE from 2007 to 2011 this made up the study's target population.

The study utilized census technique. The study made use of secondary panel data from the corporations' annual reports and financial statements Data analysis was performed in order to convert obtained data into a format that can be used for interpretation and conclusion. Because the study was based on panel data, the analysis was based on panel regression. As a result, the panel regression technique was utilized to test hypotheses, and conclusions was drawn after. The 0.05 significance level, or 95 percent confidence interval, was used to guide the test of hypotheses.

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} = Age (Date of incorporation up to 2011)

β = Vector of Coefficient

4. RESULTS AND DISCUSSION

The table presents the regression for firm age 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 1. Panel regression on short term debt

Fixed-effects (within) regression			Number of obs = 520			
Group variable: Company			Number of groups = 52			
R-sq:	within = 0.3345		Obs per group: min =	10		
	between = 0.2292		avg =	10.0		
	overall = 0.2359		max =	10		
			F(9,459) = 25.64			
Corr(u_i, X_b) = -0.1377			Prob > F = 0.0000			
Short term debt	Coef.	Std. Err.	T	P>t	[95% Conf.	Interval]
Age	0.0044373	0.0023675	1.87	0.062	-0.0002152	0.0090898
_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	

result, firm age is significantly as well as positively related to the short term debt. This means that a point increase in the short term debt would increase firm age by 0.0044.

This finding suggest that firm age plays an important role in shaping debt financing decisions, with firms demonstrating a greater propensity for short term usage. This result is consistent with firm life cycle theory as older firms having established financial profiles and access to financing options hold higher levels of short term debts. Also consistent with pecking order theory as firms having established reputations and transparent financial information face lower signalling cost associated with debt issuance. The results supports Solanke and Mohammed [33] which result showed a positive and significant effect between variables.

5. CONCLUSION AND RECOMMENDATION

The study examined the effect of firm age on short term debt, using panel regression analysis, the study reveals a positive and significant relationship between firm age and short term debt. This implies that older firms tend to hold higher levels of short term debt compared to younger firms. This finding suggests that firm age plays a crucial role in shaping debt financing decisions, with older firms demonstrating a greater propensity for short-term debt usage.

From the results, the study recommends that management of companies should carefully consider the company's age and the impact on debt maturity structure. They should also align short term debt strategies with company's

prospect and long term financial goals. Older firms with stable growth patterns may find short term debt suitable, while younger firms with higher growth expectations may benefit from other debt financing. The NSE authority should also monitor the overall level of corporate debt, particularly among older firms with higher short term debt, to evaluate potential systematic risks and implement appropriate measures if necessary.

Further studies can be carried out on firm age and short term debt on firms listed on various east African country securities exchange. Studies also can be carried out on banking institutions or other financial institution in Kenya.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

REFERENCES

1. Guin L. Matching Principle. Murray State University, Tutorial; 2019.
2. García PJ, Martínez P. On the determinants of SME cash holdings: Evidence from Spain. *Journal of Business Finance & Accounting*. 2019;35(1-2):127-149.
3. Yazdanfar D, Öhman P. Debt financing and firm performance: an empirical study based on Swedish data. *The Journal of Risk Finance*. 2019;16(1):102-118.
4. Bursa Efek Indonesia. *Laporn Keuangan Perusahaan Manufaktur Otomotif Tahun 2019*. Jakarta, Indonesia; 2019.

5. Diamond DW, He Z. A theory of debt maturity: the long and short of debt overhang. *The Journal of Finance*. 2019; 69(2):719-762.
6. Tailab M. The effect of capital structure on profitability of energy American firms. *International Journal of Business and Management Invention*. 2019;3(12):1-23.
7. Clarfelt TA. Budget planning, budget control, business age, and financial performance in small businesses; 2023.
8. Schomberg H. The impact of industry, firm age, and education level on financial management performance in small and medium-sized enterprises (SMEs). *Journal of Entrepreneurship in emerging economies*; 2023.
9. Rizzo G. An analysis of the effects of aging and experience on firms' performance. In *Economic Growth and Development in Ethiopia* Springer, Singapore. 2023;255-276.
10. Matemilola BT, Bany-Arifin AN, Azman-Saini WNW, Nassir AM. Impact of institutional quality on the capital structure of Firms in developing countries. *Emerging Markets Review*. 2019;39: 175–209.
11. Crane A, Matten D, Glozer S, Spence L. *Business ethics: Managing corporate citizenship and sustainability in the age of globalization*. Oxford University Press, USA; 2019.
12. Dadi S. The impact of demographic and social factors on firm performance in Kenya. *Journal of Business and Economic Development*. 2023;2(4):255-261.
13. Banungo D, Atawever E. (Eds.). *New firms and regional development in Europe*. Routledge; 2019.
14. Ryu SL, Won J. The value relevance of operational innovation: insights from the perspective of firm life cycle. *Sustainability* .2022;14(4):2058.
15. Can G, Demiraj R, Mersni H. The effect of life cycle stages on capital expenditures: evidence from an emerging market. *European Medical Journal of Business*; 2023.
16. Yang C, Hua Y, Hua Z. R&D investment along the firm life-cycle: New evidence from high-tech industries. *International Journal of Technology Management*. 2022; 88(2-4):353-388.
17. Akbar A, Akbar M, Tang W, Qureshi MA. Is bankruptcy risk tied to the corporate life cycle? Evidence from Pakistan. *Sustainability*. 2019;11(3):678.
18. Kartiningsih D. The Effect of Firm Characteristics on Profitability of Food and Beverages Companies Listed in Indonesia Stock Exchange. *International Journal of Business, Economics and Law*. 2020; 22(1):69-76.
19. Chinaemerem OC, Anthony O. Impact of capital structure on the financial performance of Nigerian Firms. *Oman Chapter of Arabian Journal of Business and Management Review*. 2019;34(969):1-19.
20. Imtiaz. Determinants of Capital Structure and Testing of Applicable Theories: Evidence from Pharmaceutical Firms of Bangladesh. *International Journal of Economics and Finance*. 2019; 8(3):23-32.
21. Fedelino J. *SPSS survival manual: A step-by-step guide to data analysis using IBM SPSS*. McGraw-hill Education (UK); 2021.
22. Kiprotich S. Firm Age and Financial Performance: A systematic review of research paradigms, sampling issues, and instruments development. *International Journal of Economics & Management Sciences*. 2022;6(2):1-5.
23. NSE report NSE Annual Report 2019 - Nairobi Securities Exchange; 2019. Available:www.nse.co.ke
24. NSE report NSE Annual Report 2020 - Nairobi Securities Exchange; 2020. Available:www.nse.co.ke.
25. Anyanzwa J. Nairobi listed firms turn to debt financing to raise capital. *The East African*, posted 14th March 2015; 2018. Available:http://www.theeastafrican.co.ke/business/Nairobi-listed-firms-turn-to-debt-financing-to-raise-capital/-/2560/2653420/-/7c6vtaz/-/index.html
26. Mueller D. Firm size, firm age, and firm growth on corporate social responsibility in Indonesia: The case of real estate companies; 1972.
27. da Silva Roma CM, Louzada LC, da Silva Roma PM, Goto H, Souma W. Earnings management, policy uncertainty, and firm life cycle stages: evidence from publicly traded companies in the USA and Brazil. *Journal of Financial Economic Policy*. 2020;13(3):371-390.
28. Habib A, Hasan MM. Corporate life cycle research in accounting, finance, and corporate governance: A survey, and directions for future research. *International Review of Financial Analysis*. 2019;61:188-201.

29. Myers SC, Majluf NS. Corporate financing and investment decisions when firms have information that investors do not have. *Journal of Financial Economics*. 1984; 13PG:187-221.
30. Myers SC. Capital Structure. *Journal of Economics Perspective*. 2001;15(2):81-102.
31. Yilin P. Doing good or choosing well? Corporate reputation, CEO reputation, and corporate financial performance. *The North American Journal of Economics and Finance*. 2020;39:223-240.
32. Mallinguh E, Wasike C, Zoltan Z. The Impact of Firm Age on the Performance of Financial Leverage in the Business Sector. *International Journal of Business*. 2020;8(2).
33. Solanke AA, Mohammed YI. The Influence of Firm Age on the Leverage of Listed Financial Firms. *Journal of business ethics*. 2022;130(1).
34. Rwakihembo J, Aryatwijuika W, Kalinda P, Nimusima P. The Influence of Firm Age on the Financial Performance of Private Limited Companies. *Journal of Financial Economics*. 2023; 3(4).

© 2024 Pyoko and Muchiri; This is an Open Access article distributed under the terms of the Creative Commons Attribution License (<http://creativecommons.org/licenses/by/4.0>), which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

Peer-review history:

The peer review history for this paper can be accessed here:
<https://www.sdiarticle5.com/review-history/110455>