Effect of Short-term Debt to Total Assets Ratio on Financial Performance of Medium-sized and Large Enterprises in Kenya

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Abstract

The purpose of this study was to establish the effect of short-term debt to total assets ratio on the financial performance of medium-sized and large enterprises in Kenya. The study drew on secondary data consisting of audited financial statements from 60 large enterprises listed at the NSE and 30 medium-sized enterprises which are among the Top-100 medium-sized enterprises totaling to 90 enterprises for a six year period (2011 to 2016). The main objective of the study was to establish the effect of short-term debt to total assets ratio on financial performance of medium-sized and large enterprises in Kenya. Short-term debt to total assets ratio was used as capital structure proxy while ROE and ROA were used as measures of financial performance. The study was anchored on positivism paradigm and guided by the following capital structure theories: Irrelevance theory, static trade-off theory, pecking order theory and free cash flow theories. Descriptive statistics (mean and standard deviation) and inferential statistics (Pearson Correlation, simple regression) were used to analyze data. Simple regression was used to establish the extent the independent variable (SDTAR) affected the dependent variable (financial performance) while Pearson correlation was used to measure strength of the effect of short-term debt to total assets ratio on financial performance. The hypothesis was tested using calculated value of F and the critical value of F. The study established that SDTAR had a significant negative effect on ROE and ROA. In conclusion the study established that a decrease in financial performance was attributed to an increase in short-term debts total assets ratio. It was recommended that the enterprises reduce the usage of short-term debts in financing operations so as to improve their financial performance. It was also recommended that future studies to look into the effects of credit terms or policies to establish the cost of short-term debts in Kenya, and further studies to be undertaken to investigate into other factors that account for the variability in financial performance of medium-sized and large enterprises in Kenya.

Keywords: Short-term Debt, Total Assets, Financial Performance, Capital Structure

1.0 Introduction

In a highly dynamic, vibrant and competitive investment environment, capital structure decisions are crucial for any enterprise. These decisions are important in that they enable enterprises to maximize their financial performance, affect the value of the enterprises and also impact on enterprises' abilities to deal with their dynamic, vibrate and competitive environment. Modigliani and Miller (1958) presented the irrelevance of capital structure on enterprise value under the perfect market conditions where investors have free access to market information, no tax and transaction costs difference between capital gains and dividends. However, the practical situation is that real economies were far from perfect and this led to many financing decisions theories to be developed over time in order to demonstrate why capital mix and its importance in enterprise's financial performance. Later, Modigliani and Miller (1968) revised the conditions and explained that interest expenses are tax deductible and concluded that the enterprise value should increase with higher debt ratios. Over time other theories that come into play included: static trade-off theory (Kraus and Litzenberger, 1973), pecking order theory (Donaldson 1961 and Myers 1984), dynamic trade-off theory, the market timing theory (Baker and Wurgler 2002) and the free cash flow theory (Jensen, 1986). The sources of finance for an enterprise include long-term debt, short-term debt, preference stock and common stock financing. Capital structure theory addresses the means of acquiring finance available to an enterprise and the best mix of such sources that reduces overall cost of capital while maximizing returns and enabling management to achieve the desired goals (Abor, 2005). This study is about short-term debts total assets ratio and its effect on financial performance of medium-sized and large enterprises in Kenya.

1.1 Short-term debt to total assets ratio

Over time researchers have established many variables that influence or determine capital structure or financing

decisions and financial performance of enterprises. In general enterprises finance part of their assets with equity capital and the other part with other resources like long-term debts and short-term debts. Enterprises can choose their capital structures from many alternatives of capital structures that include arranging lease financing, use of warrants, issue bonds or trade bond swaps. Enterprises also issue distinct capital structures in countless combinations that affect their overall market value (Abor, 2005). Dare and Sola (2010) argued that capital structure can take any of the following forms: 100% debt and 0% equity, 100% equity and 0% debt or E% equity and D% debt. Debt capital is made up of long-term debts and short-term debts. Enterprises can use 100% long-term debt and 0% short-term debt, 100% short-term debt and 0% long-term debt or S% short-term debts and L% long-term debts in financing their assets. Capital structure decisions are therefore fundamental and critical in any business life cycle due to its impact on sustainability and ability to satisfy external objectives and maximizing shareholders wealth (Ishaya and abduljeleel, 2014). Short-term debt to total assets ratio shows how much of the enterprise's total assets are financed using loans and financial debts lasting for one year or less. In his seminal paper Meyers (1977) argues that enterprises that employ short-term debts are likely to have more growth options in their investment opportunities. The signaling hypothesis views the issuance of short-term debts as a positive signal of the enterprise's low credit risk. Diamond (1991) asserts that the enterprises with the highest credit ranking prefer to issue short-term debts because of small refinancing risks. He also shows that low-rated enterprises are restricted to short-term debts as lenders shy away from long-term commitments. The usage of short-term debts increases availability of external finance and stimulate better financial performance of enterprises. Schiantarelli and Srivastava (1996) argues that short-term debt is not conducive to greater productivity and asserts that long-term debts may lead to improvements in productivity. Short-term debt is positively related to ROE since it is less expensive hence leading to increased level of profits (Abor 2005). This study established that short-term debts to total assets ratio influenced or affected negatively the financial performance as measured by return on equity and return on assets of medium-sized and large enterprises in Kenya.

1.2 Financial performance

The objectives of profit-seeking enterprises include maximizing shareholders' wealth, survival and growth. The supporters of financial performance as means of measuring enterprise performance argue that these objectives are necessary because they form the main objectives of enterprises. The objective to maximize wealth is usually expanded into three sub-objectives: to make profit; to continue surviving – surviving is the ultimate measure of success of a business. Without survival then there will be no fulfillment of other objectives. In order to survive in a dynamic, vibrate and competitive economic environment in the long-run an enterprise must be financially successful, maintain growth and other development improvements. Therefore, financial performance is a process of measuring the results of an enterprise's policies and operations in monetary terms (Erasmus, 2008). Financial performance of an enterprise is a sign of success. Growth of an enterprise can be identified in a number of ways including profitability, revenue or sales, and return on investment, return on assets, cash flow, market share, number of employees and number of products. All these are driven by financial performance of an enterprise. Therefore, financial performance is the ultimate goal of medium-sized and large enterprises in Kenya. All the strategies designed and activities performed thereof are meant to realize this objective, better financial performance. Therefore, financial performance can be defined as the ability of an enterprise to make or get profits (Saidi 2004) or it is the enterprise's ability to achieve planned estimates as measured against expected outputs (Gleason and Barnum, 1982). It can also be defined as the enterprise's ability to achieve objectives by using resources in an efficient and effective manner (Daft, 1995) and, Soliha and Taswan (2002), argued that financial performance is net profit margin that can be achieved by an enterprise while conducting its activities. All enterprises have financial performance measures as part of their performance evaluation indictors, although there is debate as to the relative importance of financial and non-financial indicators. Webster (2012) defined financial performance as what is accomplished. The following major ratios were used in measuring financial performance of enterprises: return on asset (ROA), return on equity (ROE), gross profit margin (GPM), net profit margin (NPM), return on capital employed (ROCE) and return on investment (ROI) in determining the relationship between capital structure and selected corporate performance proxies. Murthy and Sree (2003), Alexandru *et al*., (2008), and San and Heng (2011) used return on capital, return on assets, return on equity, earnings per share, operating margin, and net margin as measures of financial performance. Therefore, performance of an enterprise is the results of activities of an organization over a given period. Lumpkin and Dess (1996) argued that it is necessary to recognize the multi-dimensional nature of the performance construct. In the view of Zahra (1993), financial and non-financial measures should be used in assessing organizational performance. Literature shows that a quantity of measures of an enterprise's financial performance include measures such as return on assets, return on equity and gross margin (Majumdar and Chhibber, 1999; Abor, 2005; Ebaid, 2009; and Gleason, *et al*, 2000) whereas financial leverage is measured by the following ratios: current liabilities to total assets, long-term liabilities to total assets and total liabilities to total assets (Abor, 2005 & 2007 and Ebaid, 2007). However, the concept of financial performance is still controversial in finance due to its multi-dimensional meaning. The study revealed financial performance as

measured by return on equity and return on assets is negatively and significantly affected by short-term debts to total assets ratio.

1.3 Medium-sized and large enterprises in Kenya

Medium and large enterprises make vital contributions to the economic wellbeing, creating jobs and growth in prosperity of developed and developing economies. In the U.K medium sized enterprises are the enterprises that employ 50-249 employees and contribute over 16% of employment while large firms employ 250 and more people contributing about 36% of employment. In the U.S, Germany and France medium-sized firms contribute 14%, 22% and 26% respectively while large firms contribute 51%, 34 and 23% respectively in terms of employment. In terms of revenue, medium-sized enterprises contribute; U.K 22%, U.S 12%, Germany 21% and France 26% while large firms contribute 42%, 62%, 38% and 29% respectively (Cridland 2013). In Kenya, the following definitions of Medium-sized and large Enterprises are applied; Medium-sized enterprises have 51-100 workers with a turnover of Ksh.51 million- Ksh.1 billion (Republic of Kenya 2005 and Zachary, 2016) while large enterprises have more than 100 worker and turnover of more than Ksh.1 billion. It is estimated that there are 735,000 medium and large licensed enterprises in Kenya that produce 60% of the gross domestic product (GDP) and have employed over 900,000 people by 2011 (MSME 2011 and Kenya Economic Report, 2013). The importance of medium-sized and large enterprises is and will continue to be in the forefront of investors, academicians and policy makers in both developed and developing economies. Therefore there is need to investigate the effect short-term debt to total assets ratio on their performance measured by return on equity and return on assets.

The Kenyan Government is aware of the important role played by medium-sized and large enterprises in the economy since they are found in all the sectors; formal and informal sectors, of the economy and provide the largest number of employment opportunities, income generation and poverty eradication (Republic of Kenya, 2009). According to Kenya National Bureau of Statistics (KNBS) medium-sized enterprises and large firms provide approximately 40% of employment and contribute over 40% of the new jobs created annually. They also contribute about 70% to GDP. This is an indication that they play an important role in accelerating economic growth, generating employment, driving Vision 2030 and contributes towards eliminating poverty in Kenya. Medium-sized and large enterprises in Kenya play vital roles in the Kenyan economy in employing the available resources to produce products and services and create providing employment opportunities mostly for primary and secondary school leavers. Therefore, because of their importance and vital contributions to the economic wellbeing, creation of jobs and growth in prosperity of the Kenyan economy, it was necessary to research on the effect of short-term debt on their financial performance.

2.0 LITERATURE REVIEW
2.1 THEORETICAL REVIEW

There is no one acceptable universal capital structures theory choice and there are no reasons to expect one (Myers 2001). However there are some useful theories that support capital structures that enterprises choose. These theories either predict the presence of optimal capital structures for each enterprise or state that there is no clear capital structure. These theories include; static trade-off theory (Kraus and Litzenberger 1973 and Myers 1984) which assumes that enterprises have established a capital structure determined by trading off costs and benefits of using of equity and debt finances. The trade-off theory postulates that enterprise managers work towards the balancing of benefits of interest tax shields and current value of the costs of financial distress (Myers, 2001). It posits that some form of optimum capital structure should exist pursuant to the balance between current value of interest tax shields and the bankruptcy costs. The theory recognizes that debt interest is a deductible expense which reduces the tax debt and increases the tax shield. However, a higher debt in a company makes it very risky for investors to invest in that company leading them to demand a higher premium on the stock or higher dividend. The theory also assumes that an enterprise has an optimum capital structure depended on the tradeoff between the bankruptcy cost and tax advantage of borrowing achieved at the point where the margin of the current present value of tax on extra debt is equal to the increase in the present value of financial distress costs (Owalobi and Anyang 2013); Dynamic trade-off model is used when considering the option values embedded in deferring leverage decisions to the next period. In practice, enterprises operate for a long period thereby making the dynamic trade-off theories more relevant to the real world in explaining the relationship between an enterprise's capital structures and financial performance. The core point of these theories is that an enterprise will pursue an optimal debt ratio and any deviation resulting from random shocks will be adjusted without time lag and transactional expenses. This proposition supports the view that an enterprise will maintain high levels of debt to avail tax savings benefits (Kane *et al* (1984), Brennnan and Schwartz (1984), Goldstein *et al* (2001) and Strebulaev (2007)). However, the assumption that firms rebalance debt ratios swiftly without any transaction costs is questionable. Fischer *et al* (1989), argued that enterprises take time to rebalance and let their capital structures to deviate from the optimal capital structure and rebalance only at maximum or minmum limits due to the fact that readjustment of debt ratios involve transactional costs. In dynamic settings retained earnings and transaction costs are of great

importance as profitable enterprises may prefer to retained earnings to minimize the cost of raising funds in the future. Therefore, the optimum financial choice today depends on the expected optimal capital structure in the next period; Donaldson (1961) founded the pecking-order theory when he carried out a survey of 25 large United States enterprises and revealed that that management strongly prefer to use internal funds when available and prefer not to use external equity of funds unless internal sources are not available. Later Myers and Magluf (1984) argued that information is the base that managers and investors depend upon when making decisions regarding issuing equity or borrowing funds. The theory does not declare a well-defined target capital structure. However, it explains why internal finance is more popular than external finance and why debt is considered the best option for firms. Debt finance is seen attractive, cheaper, and more profitable and considered flexible. The theory describes an enterprise's debt position as accumulated outcome of previous investments and capital structure decisions. Accordingly, enterprises with positive net present value investments will finance new investments first using internal funds, and in the absence of internal funds, will finance the investments with safe debt, then risky debt and then with equity if there is no any other alternative; The market timing theory states that enterprises time their equity issues and issue new shares when market prices are perceived to overvalued and buy their/own shares back when they are undervalued. This overvaluation and undervaluation in share prices affect the capital structures of enterprises. The theory assumes that the economic agents are rational and enterprises issue equity shares directly after favourable information is released. This reduces information asymmetry problem between management and shareholders of the enterprises. The decrease in information asymmetry increases share prices in the market and in turn enable enterprises to set their own market timing opportunities. The second assumption of the theory is that it assumes that agents have irrational behaviour (Baker and Wurgler, 2002). Free cash flows are cash flows that are above what is necessary to maintain existing assets and finance projected new investments (Richardson, 2006). In measuring overinvestments he decomposed total expenditure into capital expenditure to maintain the existing assets and capital investment in new projects or investments. Jensen (1986) defined free cash flow as the cash flow in excess of that required in financing all projects that have positive net present values when discounted at the relevant costs of capital. Free cash flows are negatively associated with purchase of assets for enterprises with low growth (Steven, *et al* 2003). Zhou and Al (2012) indicated that financial performance is negatively correlated with free cash flow. Therefore, investors and managers medium-sized and large enterprises should analyze available free cash flows and avoid the financial performance destructive projects that generate risks of over-investments and losses.

2.2 Empirical studies

Empirical literature review is a directed search of previous published works, including books and periodicals that have discussed theories and presented results relevant to the current topic under discussion (Zikmud, 2010). The following are the previous studies that relate to short-term debts and financial performance: Abdul (2012) in his study researched on the relationship between capital structures decisions and firm performance: a study of the engineering sector of Pakistan. The purpose the study was to establish the relationship between capital structures decisions and firm performance of firms in the developing market economies like Pakistan. Pooled Ordinary Least Square regression was used to analyze the data from 36 engineering sector enterprises in the study. Short-term debt to total assets, long-term to total assets and total debt to total assets ratios were used as measure of capital structure while firm performance was measured by ROA, ROE, GPM and Tobin's Q. Size acted as a control variable in the study. The study established that there is a negative relationship between short-term debt and ROE and ROA. However, Abor (2005 and 2007) found a significant and positive relationship between short-term to asset ratio and ROE. Farida, *et al* (2014) studied the impact of capital structures on firm's financial performance of food sector in Pakistan. The objective of the study was to investigate the effect of capital structure on firm's financial performance by taking data from organizations in the food sector quoted at Karachi Stock Exchange in Pakistan. The firm's financial performance was measured by using five dependent variables which are ROA, EPS, NPM, ROE and ROCE. Four independent variables were used to quantifying capital structures – debt equity ratio, total debt to total assets ratio, short-term debt to total assets ratio and long-term debt to total assets ratio. The population of the study was 49 firms in the food sector listed at the stock exchange in Pakistan. The study applied correlation and descriptive analysis. They established that the impact of short-term to total assets ratio on ROE was significantly positive and insignificant negative on return on assets and Roanne (2013) determined a negative relationship between short-term debt to total assets and return on equity and return on assets. Maniagi *et al* (2013), studied capital structure and performance: Evidence from quoted non-financial firms at Nairobi Securities Exchange (NSE) Kenya. The objective of the study was to examine the relationship between a firm's capital structure and performance of 30 companies listed on NSE for 5 years period 2007-2011. Return on assets, return on equity, earnings per share, dividend payout and market price to book ratio of stock were used as measures of performance while short-term debt to asset ratio, long-term debts to total assets ratio and total debt to assets ratio as proxies of capital structure. Secondary data from companies listed on Nairobi Securities Exchange's (NSE) website and companies' website were used in examining the relationship. The researchers applied panel least

square regression analysis. Data was analyzed using quantitative approaches notably descriptive statistics, correlation analysis and pooled multiple analyses. It was an empirical type of research which utilized secondary data from companies listed on NSE. Stratified sampling technique was used in the study. The sample size used was 30 enterprises obtained from a population of 50 enterprises. Size was used as a moderating variable and was represented by natural logarithm of sales of the enterprises. The findings show that short-term debts to total assets ratio is positive and significantly correlated with return on equity and negatively on return on assets. Anthony *et al* (n.d), studied capital structure and profitability of selected listed non-financial enterprises in Ghana. The general objective of the study was to examine the capital structures and their effects on the profitability of non-financial listed enterprises on the Ghanaian Stock Exchange. Panel data methodology was used to examine the effects of capital structures on the profitability of twenty selected non-financial enterprises. They examined the relationship between short-term debt to total assets ratio and ROE and found that ROE was positively and insignificantly correlated with short-term debt to total assets ratio and significantly negative on return on assets. Over time, enterprises discover what they are good at and learn how to do things better (Arrow, 1962; Jovanoic, 1982; Ericson and Pakes, 1995). Firms discover and specialize in ways to standardize, coordinate and speed up production processes, as well as to reduce costs and improve quality of products. Older enterprises may also benefit from their reputations that allow them to earn higher margins on sales. Mohammad (2015) investigated the relationship between capital structures and firms financial performance and revealed that there is a positive correlation between ROE and SDTAR and a weak negative significant correlation between ROA and SDTAR. Sorana (2015) studied the impact of capital structures on financial performance in Romanian companies. ROA and ROE were used as financial performances measures. The independent variables were three debt ratios: the ratios of total liabilities, long-term liabilities and short-term liabilities to total assets and the equity ratios. The study used time series cross-sectional data over the 2003-2010 periods. The study established that independent variables and dependent variables were negatively correlated indicating that all the three ratios have negative impact on ROA and ROE. Hence, the study revealed that short-term debts to total assets ratio had a negative impact on ROE and ROA. Niway (2016) studied the impact of capital structures choice on enterprise's financial performance of manufacturing LPCs in Ethiopia using seven years data 2006-2010. ROA and ROE were used as financial performance measures whereas SDTAR, LDTAR and TDTAR as capital structure measures and firm size as a control variable. The study revealed a negative and significant relationship between all capital structure variables and the two financial performance measures (ROE and ROA). Hassan, *et al* (2016) in their study used random effect regression analysis to show the impact of debt on profitability. They established a significant but negative relationship between short-term debt, long-term debt, total debt and ROA.

3.0 RESEARCH METHODOLOGY
The study was anchored on the positivist research paradigm. The position of the positivists is derived from natural science and characterized by testing hypotheses developed from the existing theories (deductive or testing of theories) through measurements of observable social realities (Saunders, Lewis and Thornhill, 2009). The paradigm assumes that reality is fixed, directly measurable, knowable and there is one truth, one external reality and thus provides an objective reality against that the researchers can compare their claims to ascertain the truth (Creswell, 2008). Positivism presumes that the social world exists objectively and externally. Knowledge is valid only if it is based upon observations or general laws that exist or theoretical models that can be developed and are generalizable, can explain cause and effect relationship and lead themselves to predicting outcomes (Creswell, 2008; Saunders *et al*., 2009). This is appropriate for this study since study seeks to determine the effect of short-term debts total assets ratio on the financial performance of medium-sized and large enterprises in Kenya, which is a quantitative study and hence eliminating subjectivity. The study was an explanatory study and its design was ex-post design because secondary data were used to show the effect of short-term debt to total assets ratio on enterprise's financial performance. The research design that plans to use past data, instead of experimental data is called ex-post design (Gebregziabher, 2009). The study used Cronbach coefficient to measure the reliability in relation to the operationalization of the constructs in this study. The study's minimum test of reliability was based on Cronbach's alpha of 0.7 and was generated by the statistical package for social sciences (SPSS). Data was collected from 90 enterprises; 60 large enterprises listed at Nairobi Securities Exchange and 30 medium-sized enterprises which have been Top-100 Medium-sized enterprise in Kenya as listed in the KPMG list 2011-2016 but not quoted at Nairobi securities exchange. Descriptive statistics (mean and standard deviation) and inferential statistics (Pearson correlation and simple regression) were used to analyze the data. A simple regression model was used to test the research hypothesis at a significance level of 0.05 (95% confidence level). The simple regression model used was $Y = \beta_0 + \beta_1 X_1 + \varepsilon$:

Where:

Y= financial performance measured by return on equity (ROE) and return on assets (ROA);

β_0= constant;

β_1= the slope that represents the degree in which financial performance changes as short-term debt to total assets

ratio changes by one unit;

X_1= short-term debt to total assets ratio and

ε=error term.

4.0 Data Analysis and Research Findings

This section presents data analysis and the findings of the study. The data analysis and findings were presented in the form of descriptive statistics, correlation results and regression results tables.

Table 4.1 Descriptive Statistics

Variable	No.	Minimum	Maximum	Mean	Std. Deviation
SDTAR	540	0.0048	1.2859	0.351687	0.2487969
ROE	540	-4.6275	3.4959	0.262808	0.4859129
ROA	540	-0.5429	0.6784	0.094545	0.1370434

SDTAR – short-term debts to total assets ratio: ROE - return on equity; ROA – return on assets

Table 4.1 above established that short-term debt to total assets ratio (SDTAR) mean value was 0.3517 with highest ratio being 1.2859 and lowest 0.0048 which indicated that short-term debt used to finance operations was on average 35.1687% of total assets; lowest was 0.48% of total assets and highest being 128.59% of total assets. While the other hand the mean value of return on equity (ROE) was -4.6275, highest return was 3.4959 and the mean return on equity was 0.262808 revealing that the minimum return on equity was on average was -462.75% of total equity, and maximum was 349.59% of total equity. Return on assets (ROA) was on average minimum -54.29% of total assets and a maximum of 67.84% of total assets. The study showed that all the variables for capital structure proxies and financial performance measures have positive mean values. On average total debt of the enterprises under study was 278.3876% of equity capital, long-term debt is 25.68% of the total assets, and short-term debt 35.1687% of total assets.

The established a very strong internal consistency reliability of the template used to collect the data with Cronbach's Alpha of 0.971.

Correlation analysis was performed on the data to determine strength of the effect that exists between financial performance and short-term debt to total assets ratio. ROE and ROA were used as financial performance measures. The results for the effect of short-term debts to total assets ratio on financial performance were presented in table 4.2 shown below:

Table 4.2: Correlations for Capital Structure and Financial performance

	ROE	ROA	STDTAR
Pearson Correlation – ROE	1.000		
Pearson Correlation - ROA	0.810	1.000	
Sign.	0.000		
Pearson Correlation - SDTAR	-0.129	-0.216	1.000
Sign	0.001	0.001	

SDTAR - short-term debt to total assets ratio; ROE- return on equity; ROA- return on assets

The correlation coefficient between return on equity and short-term debt to total assets ratio was established as -0.129 with a p-value of 0.001. This revealed a negative and significant effect of short-term debt to total assets ratio on ROE. The correlation coefficient between return on assets and short-term debt to total assets ratio was -0.216 with a p-value of 0.001. The coefficients indicated a significant negative effect of short-term debt to total assets ratio on financial performance of the medium-sized and large enterprises in Kenya. Their significance probabilities (p-values) were less than 5% indicating that the effect of short-term debt to total assets ratio on the financial performance was statistically significant at 5% level of significance. The study also revealed that return on equity and return on assets had the strongest correlation (0.810 with a p-value of 0.000).

Regression analysis was used to establish the effect of short-term debt on financial performance of enterprises under study. Simple regression was run to establish the regression model between SDTAR (capital structure proxy) as an independent variable and the financial performance measures return on equity and return on assets representing financial performance as dependent variable.

The objective of the study was: establish the effect of short-term debts to total assets ratio on financial performance was investigated as follows:

From the below table 4.3, Model 1 and Model 2 established that 1.7% (R^2) and 4.7% (R^2) of the variability in the ROE and ROA were accounted for by short-term debts to total assets ratio (SDTAR) while 98.3% and 95.3% of variability in ROE and ROA respectively were accounted for by other factors or variables. R indicated a significant negative effect of short-term debts to total assets ratio on financial performance, as measured by return on equity and return on assets.

Table 4.3: Model Summary[b] for Short-term Debt to Total Assets Ratio and financial performance

Model	R	R square	Adjusted R square	Std. error of the estimate	Durbin Watson
Model 1 ROE 1	0.129[a]	0.017	0.015	0.4823	1.510
Model 2-ROA 1	0.216[a]	0.047	0.045	0.1339	1.449

a. Predictors (constant): Short-term debt to total assets ratio;
b. Dependent variables: ROE-return on equity and ROA-return on assets

The values of F at a degree of freedom of (1,539) were, Model 1 9.138 with p=0.003 and Model 2 26.319 and p= 0.000 in table 4.4 below were used to measure the improvement due to the fitting of the regression. The study revealed that the final models ROE= $\beta_0 + \beta_1 X_1 + \varepsilon$ and ROA= $\beta_0 + \beta_1 X_1 + \varepsilon$ showed that SDTAR (X_1) statistically significantly improved the ability to predict the return on equity and return on assets.

Table 4.4: ANOVA Tests for Short-term Debt to Total Assets Ratio and financial performance

MODEL	Sum of squares	df	Mean square	F	Sig.
Model 1 ROE 1 Regression	2.125	1	2.125	9.138	0.003[b]
Residual	125.139	538	0.233		
Total	127.264	539			
Model 2-ROA 1 Regression	0.472	1	0.472	26.319	0.000[b]
Residual	9.651	538	0.092		
Total	10.123	539			

a. Dependent variables: ROE-return on equity and ROA-return on assets;
b. Predictor: Short-term Debt to Total Assets Ratio

The following model was used to show the effect of short-term debt to total assets ratio on financial performance of medium-sized and large enterprises:

$Y = \beta_0 + \beta_1 X_1 + \varepsilon$

Where:

Y = financial performance measured by return on equity (ROE) and return on assets (ROA)

β_0 = Constant (Y intercept)

β_1 = coefficient of short-term debt to total assets ratio

X_1 = short-term to total assets ratio (SDTAR)

ε = error term

Table 4.5: Regression Results for Short-term Debt to Total Assets Ratio and financial performance

Model	Unstandardized coefficients	Standardized coefficients		t	Sig.
	B	Std error	Beta		
Model 1 ROE 1 constant	0.352	0.036		9.777	0.000
SDTAR	-0.252	0.083	-0.129	-3.023	0.003
Model 2 ROA 1 constant	0.136	0.010		13.657	0.000
SDTAR	-0.119	0.023	-0.216	-5.130	0.000

a. Dependent variables: ROE-return on equity and ROA-return on assets;
b. Predictor: Short-term Debt to Total Assets Ratio

In table 4.5 above Model 1 established that the Y intercept 0.352 was the predicted value of effectiveness of return on equity when SDTAR was zero, implying that without the inputs of SDTAR, the effectiveness of return on equity would be 0.352 while in Model 2 the study indicated that Y intercept of return on assets was 0.136. The unstandardized coefficients of SDTAR established a negative coefficients of SDTAR on return on equity (-0.252) and return on assets (-0.119). The effect of short-term debt to total assets ratio on return on equity and return on assets are as shown below:

ROE = 0.352 – 0.252SDTAR …………………………..……………Regression Model 1
ROA = 0.136 – 0.119SDTAR …………………….………...…………..Regression Model 2

From table 4.5, at the significance level of 0.05, Model 1 and Model 2 showed that short-term debt to total assets ratio is statistically significant (t=-3.023; p=0.000 and t=-5.130; p=0.000) in predicting return on equity and return on assets respectively.

The standardized beta value of SDTAR was -0.129 in Model 1. This standard show the number of standard deviations that return on equity changed as a result of one standard deviation change in short-term debts to total assets ratio. The beta of SDTAR (-0.129) had negative impact in Regression Model 1. While model 2, has a

standardized beta value (β) of -0.216 indicating that short-term debt to total assets ratio had negative impact in the Regression Model 2.

The study established a statistically significant negative effect of short-term debt to total assets ratio on return on equity and return on assets and therefore as short-term debt to total assets ratio increased return on equity and return on assets decreased. Any decrease change in financial performance was attributed to an increased change in short-term debt. The result of the study was inconsistent with the findings of Farida *et al* (2014*),* Roanne (2013), Mohammad (2015) and Abor (2005, 2007) who established a positive correlation between ROE and SDTAR. However, it was consistent with the results of Abdul (2012), Zeitun and Tian (2007), Ebaid (2009) and Maniagi *et al* (2013) who found a negative correlation between return on equity and SDTAR in their studies. In Model 2 it was revealed that the correlation between the return on assets and short-term debt to total assets ratio was significantly negative (ROA and SDTAR – 0.265) indicating a significant negative effect of short-term debt to total assets ratio on return on assets. Therefore, as short-term debt to total assets ratio increased, return on assets decreased. The result was   inconsistent with the findings of Abor (2007) and Maniagi *et al* (2013) who found a positive correlation between ROA and SDTAR. However the result was consistent with the findings of Abdul (2012), Ahmad *et al* (2012 and Ngoc-Phi-Anh and Jeremy (2011), Mohammad (2015), Farida *et al* (2014) and Roanne (2013) who found a negative correlation between ROA and SDTAR in their studies.

Hypothesis Testing - H_1: "Short-term debts to total asset ratio has a significant negative effect on the financial performance of medium-sized and large enterprises".

In Model 1, the study established calculated value of F as 9.138; p=0.000 at a degree of freedom of (1,538) and the critical value of F = 3.84 at a significance level of 0.05. By comparing the two F values, H_1 was accepted as the calculated F value was greater than the critical value of F. therefore; short-term debt to total ratio has a significant negative effect on the financial performance as measured by return on equity. In Model 2; for return on assets, the calculated F value is 26.319 with p=0.000 with a critical F value of 3.84, H_1 was accepted as the calculated F value is greater than the critical F value. Hence, short-term debt to total assets ratio has a significant negative effect on the financial performance as measured by return on assets. In summary it was established that short-term debt to total assets ratio has a significant negative effect on financial performance of medium-sized and large enterprises in Kenya.

5.0 Summary, Conclusions and Recommendations
5.1 Descriptive Statistics
On average medium-sized and large enterprises financed 35.17% of total assets through short-term debt with a minimum of 0.48% and a maximum of 128.59% of total assets. The mean value of return on equity is 26.28% with a minimum of -462.75% and a maximum of 348.58% while that of return on assets was 9.45% with a minimum of -54.29% and a maximum of 67.86%. All these indicated that medium-sized and large enterprises in Kenya are not the same and operated at different levels.

5.2 Effect of short-term debt to total assets ratio on financial performance
The objective of the study was to evaluate the effect of short-term debt to total assets ratio on financial performance of medium-sized and large enterprises in Kenya. Using this objective the hypothesis was developed as: H_1 'Short-term debt to total assets ratio has significant negative effect on financial performance of medium-sized and large enterprises in Kenya'. Ordinary Least Square regression was carried to evaluate the effect of short-term debt to total assets ratio on financial performance. The regression model $Y = \beta_0 + \beta_1 X_1 + \varepsilon$ was fitted to the data and the model was found to be significant.

The values of R and R-squared (R^2) were 0.129 and 0.017 respectively for return on equity and 0.216 and 0.047 respectively for return on assets. R revealed that short-term debt to total assets ratio had a significant negative effect on return on equity and a significant negative effect on return on assets. R-squared revealed that the explanatory power of long-term debts to total assets ratio was 0.017 and 0.047 for return on equity and return on assets respectively. This indicated that 1.7% of the variation in return on equity and 4.7% return on assets was explained by the model $Y = \beta_0 + \beta_1 X_1$. The F statistic of 9.138 for return on equity and 26.319 for return on assets showed that the overall model was significant as it was more than the critical F value of 3.84 with (1,538) degree of freedom at p=0.05 level of significance.

The results of regression coefficients to the model ROE = 0.352 - 0,252SDTAR were both statistically significant at 0.05 level of significance in predicting return on equity. This indicated that the null hypothesis was rejected and therefore short-term debts to total assets ratio affected return on equity negatively. While the regression coefficients to the model ROA = 0.136 - 0.119SDTAR, the coefficients of the constant and SDTAR were statistically significant at a significance level of 0.05 in predicting return on assets. These indicated that short-term debt to total assets ratio affected the return on assets negatively. The constant terms Model 1 and Model 2 implied that when short-term debts to total assets ratio is zero return on equity was 0.352 and return on assets was 0.136 respectively. The coefficient of -0.252 indicated that improvement in short-term debt to assets ratio by one

unit, decreases return on equity by -0.252 units while that of return on assets was -0.119.

5.3 Conclusion

From descriptive statistics, it can be concluded that medium-sized and large enterprises employ different levels of short-term debts and therefore they are not the same. The objective of the study was to evaluate the effect of short-term debt to total assets ratio on financial performance of medium-sized and large enterprises in Kenya. The study showed that there was a significant negative effect between short-term debt total assets ratio and financial performance of medium-sized and large enterprises in Kenya. The result indicated that short-term debt to total assets ratio had a significant negative effect on the financial performance of medium-sized and large enterprises in Kenya. Hence, it was concluded that a decrease in financial performance was attributed to an increase in short-term debt ratio. This meant that as the short-term to total debt ratio increases financial performance decreases. The negative effect is explained by higher cost of short-term debts and strong covenant attached to short-term debts in Kenya. The explanatory power of short-term debts to total assets ratio in explaining return on equity and return on assets is very much low than as established in studies of other countries. This indicates that financial performance of medium-sized and large enterprises in Kenya are not majorly influenced by short-term debt but by other internal and external related factors. Hence, from the study it was concluded that the fundamental analysis of medium-sized and large enterprises' short-term to total debt ratio has little role to play in guiding an investor's choice in an enterprise with a better return on equity and return on assets. However, the study has given a better insight to show the importance of the effect of short-term debt to total assets ratio on the financial performance, from owners' perspective (ROE) and from total enterprise's perspective (ROA), of medium-sized and large enterprises in Kenya. Signaling hypothesis views issuance of short-term debt as positive signal of enterprise's low credit risk. Enterprises with highest credit ranking prefer to issue short-term debts due to small refinancing risks. Low-rated enterprises are restricted to short-term debts as lenders shy away from long-term commitments. Hence, given that total assets financed by short-term debts range from 0.48% to 128.59%, it can be concluded that some of the enterprises are low-rated and restricted to use short-term debts and some have high credit ranking and prefer to issue short-term debts to finance their assets.

5.4 Recommendations

Short-term debt to total assets ratio affected the financial performance of medium-sized and large enterprises in Kenya negatively and the effect was significant. Hence, it was recommended that in order to improve the financial performance, as measured by return on equity and return on assets, of the medium-sized and large enterprises in Kenya, the management of these enterprises should reduce or avoid financing their operations with short-term debt. The management should find other cheap sources of funding the viable projects of the enterprises. The management should also assess and establish the quality of their short-term assets that make the short-term debt. The management should assess cost, terms and conditions of and negotiate for better covenants associated with short-term debts.

5.5 Recommendation for Future Studies

It is recommended that future studies to look into credit terms or policies to establish the cost of short-term debts in Kenya, and further studies to be undertaken to investigate into other factors that account for the variability in financial performance of medium-sized and large enterprises in Kenya.

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