



## CAPITAL STRUCTURE AND PROFITABILITY OF LARGE-SCALE RETAIL SUPERMARKETS IN KENYA

Andrew Shitanda Nyongesa<sup>1</sup>,

Atieno Margaret<sup>2i</sup>

<sup>1</sup>Department of Accounting and Finance,  
Kaimosi Friends University,  
Kenya

<sup>2</sup>Dr., Department of Accounting and Finance,  
Kaimosi Friends University,  
Kenya

### Abstract:

Capital structure decisions ensure that supermarket managers stipulate optimum capital structure for the organization. Despite the implementation of capital structure decisions, poor financial performance has plagued most of large-scale retailers for the past 20 years, forcing some to close some of its outlets. Uchumi supermarket, Tuskys supermarkets among other supermarkets have been making heavy losses leading to the closure of some of their branches. Uchumi has closed 35(95%) branches, Tuskys 61(95.3%) branches, and Choppies 13(87%) branches. According to an external audit report in 2020, Nakumatt owed creditors Ksh.38 billion yet the company gave over Ksh. 1 billion as interest-free soft loans to its directors. The objective of this study is to assess the effect of capital structure decisions on the profitability of large-scale retail supermarkets in Kenya. The study was anchored on the pecking order theory. The study employed a cross-sectional research design. A census sampling technique was employed where all the selected supermarkets were considered. Secondary data was collected from audited financial statements. Panel data was analyzed using descriptive and inferential statistics. Descriptive statistics comprised of minimum values, maximum values, mean and standard deviation and inferential statistics consisted of correlational analysis and random effects models. The study findings indicated that capital structure decisions have a negative and statistically significant effect on the profitability of large-scale retail supermarkets in Kenya. This is supported by a regression coefficient of  $-0.3479$  and a p-value of 0.000. The study suggested that the management of retail stores should balance between debt and equity financing to ensure an optimum capital structure that maximizes profitability.

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<sup>i</sup> Correspondence: email [omondimargy@gmail.com](mailto:omondimargy@gmail.com)

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## 1. Introduction

Capital structure decisions refer to the composition of a relative proportion of various sources of finance for a firm. The sources majorly include shareholder funds (equity) and borrowing from outside agencies (debt). Capital structure decisions are crucial for any business organization in any sector or economy since they determine the capital structure mix of the firm. It is usually difficult for business firms to identify the right combination of debt and equity. Capital structure decisions are important because of the need to maximize returns by ensuring that the firm has a balanced optimum capital mix. A balanced optimal capital structure helps determine the financial success of large-scale retail supermarkets in Kenya (Al-Slehat, 2020). Supermarkets are self-service retail establishments that sell a variety of foods, drinks, and household goods. The industry is one of the most significant contributors to Kenya's GDP, with an 8% contribution rate and it is the 3<sup>rd</sup> largest contributor to private sector employment (KNBS, 2021; KNBS, 2021). Despite the implementation of capital structure decisions, large-scale retail supermarkets have been experiencing poor financial performance due to inadequate capital resulting in the closure of several branches of giant supermarkets. For instance, Uchumi supermarket, Tusksys supermarkets, Choppies supermarkets, and Shoprite supermarkets have been making heavy losses leading to the closure of some of their branches. Uchumi has closed 35(95%) branches, Tusksys 61(95.3%) branches, and Choppies 13(87%). Shoprite and Nakumatt have closed all their branches. The closure of these branches has led to the loss of employment and a decline in the overall economic performance of the industry by 5.7% (Kenya Retail Report, 2021). According to an external audit report in 2020 Nakumatt owed creditors Ksh.38 billion yet the company gave over Ksh. 1 billion as interest-free soft loans to its directors (KIPPRA, 2020). Therefore, this study sought to investigate the effect of capital structure decisions on the profitability of large-scale retail supermarkets in Kenya.

## 2. Objective of the Study

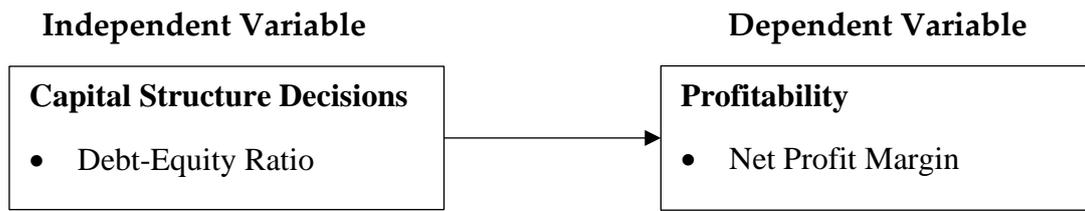
The main objective of the study was to assess the effect of capital structure decisions on the profitability of large-scale retail stores in Kenya.

### 2.1 Study Hypothesis

**H<sub>01</sub>:** Capital structure decisions have no significant effect on the profitability of large-scale supermarkets in Kenya.

## 3. Conceptual Framework

This section conceptualizes capital structure decisions and profitability.



The independent variable used in the study was capital structure decisions. capital structure decisions were operationalized as a debt-to-equity ratio. The dependent variable was profitability decisions which was measured in terms of net profit margin.

## 2.2 Theoretical Review

A review of significant theories regarding capital structure decisions is presented in this section

## 2.3 Pecking Order Theory

The pecking order theory was developed by Myers, in 1984. Myers argued that firms prefer internal funding to external funding. If the company needs external capital, debt is preferred above outside equity, which is only used as a last resort. As a result of the knowledge asymmetry, the enterprises do not have the optimum debt-to-equity ratio. Firms take a conservative approach to dividends and rely on debt financing to increase the firm's value. One implication of the pecking order theory is that profitable firms always prefer internal funding to take up new debt or equity.

Businesses prioritize their internal capital sources while growing their asset base, revenue, liquidity, and profitability and utilizing fewer external financing sources. Profitable firms are observed to be less leveraged than non-profitable businesses. This hypothesis is based on the assumption that debt issuance sends a market signal that the company is confident in its capacity to service debt regularly. In contrast, equity issuance is a market signal that the company is potentially overvalued. Pecking order theory also predicts that firms favor short-term over long-term debt (Fama & French, 2002).

Large companies tend to amass loans to maintain and keep up with dividend payments, but small companies behave in a positive way. Equity analysts project large companies to experience at least adverse selection challenges due to better coverage. Issuing debt is preferred over issuing equity as long as the company has the capacity to service debt (Zender & Lemmon, 2010; Zender & Lemmon, 2010).

The option of using internal and external financing is preferred, and a limited amount of external financing through issuing equity is used for reinvestment and fundraising reasons. Pecking order theory predicts that high-growth companies have a debt ratio since they will opt for more debt than equity. This implies that debt capital is preferred to issuing new equity capital in the case of external funding. A firm's choice of capital structure impacts its profitability greatly (Effiong, Inyang, Akum, Asuquo, & Onyeogaziri, 2018).

This theory was relevant to the study since large-scale retail stores in Kenya tend to take loans from different organizations and selling equity shares; hence, a high amount

of capital is used in funding daily activities and venturing into new investments. Therefore, a detailed understanding of the pecking order theory was required to investigate whether large-scale retail supermarkets' choice of financing affects the profitability of the supermarket.

### **3. Literature Review**

This study reviews previous studies related to capital structure and profitability of large-scale retail supermarkets in Kenya.

Mtani and Masanja (2018) investigated how capital structure management impacted the success of the grocery businesses in Tanzania's Arusha city. A relational research methodology and questionnaires gathered data for the study. Descriptive and regression statistics were used to analyze the collected data. The relationship between working capital and financial performance was assessed using the t-test, ANOVA, correlation, and regression techniques. The study's conclusions demonstrated that working capital management had a significant impact on how financially successful supermarkets in Arusha were.

Cheruyot and Wahome (2019) investigated the influence of the debt-equity ratio on financial distress management in supermarkets in Nakuru town, Kenya. The study adopted a descriptive research design, and the target population was 182 management and finance officers, where 80 respondents were sampled using Nassuma (2000) formula. Questionnaires were used to collect data, and the data collected were analyzed using SPSS version 24. The study established that the debt-equity ratio significantly influences financial distress management.

Mukaddam and Sibindi (2020) explored the connection between the retail industry's financial performance and capital structure in South Africa. Data was gathered over a ten-year period, from 2010 to 2019, and focused on 18 South African wholesale and retail enterprises listed on the Johannesburg Securities Exchange. The study's data analysis included panel data econometric techniques. The study found a connection between the capital structure of South African retail firms and their financial success.

Wairimu (2020) assessed the impact of capital structure on firms' performance in the case of Naivas Supermarket in Nairobi County. 10 Naivas Supermarket outlets served as the study's target demographic. It used a case study research design. The study made use of secondary data from the outlets' audited financial reports. With the aid of SPSS, the data was processed in order to produce both inferential and descriptive statistics. The study's findings proved that supermarket profitability was significantly and favorably impacted by capital structure.

#### **3.1 Research Methodology**

The study's research techniques are explained in this section.

### 3.2 Research Design

The study adopted a cross-sectional research design. The study took a cross-section of large-scale retail supermarkets in Kenya. The Cross-sectional research design was appropriate for the study because it provided a detailed and highly accurate picture of the financial performance of large-scale retail supermarkets in Kenya (Cooper & Schindler, 2017).

### 3.3 Target Population

The study's target population comprised all the large-scale retail supermarkets in Kenya. The study was conducted in supermarkets with an annual turnover of 0.5 billion and five or more branches in major cities and towns in Kenya. The target population included Naivas supermarket, Quick Matt supermarkets, Chandarana Food Plus supermarket, Carrefour supermarkets, Clean Shelf supermarket, Khetias supermarket, Society stores, Mathai supermarkets, and East Matt supermarket.

**Table 1:** Target Population

Supermarket
Naivas Supermarket
Quickmatt Supermarket
Chandarana Food Plus Supermarket
Carrefour Supermarket
Cleanshelf Supermarket
Khetias Supermarket
Society Stores Supermarket
Mathai Supermarket
Eastmatt Supermarket

**Source:** (Euromonitor International, 2020).

### 3.4 Sampling Techniques

The census-sampling technique was used for this research. Thus, every large-scale retail supermarket was used to establish the effect of financial decisions on the profitability of large-scale retail outlets. The technique was preferred in this study since it provides more accurate and exact information as no unit is left out hence objective results. Census is a collection of information on all units in the population. Census ensures accurate information is collected from the entire population (Pandey & Pandey, 2015).

### 3.5 Data Collection

Secondary data was obtained from the audited financial reports of Kenya's selected large-scale retail supermarkets. The panel data consisted of the time series and cross-sections. The cross-sectional data entails the supermarkets, while the time series was the years between 2017-2021. The study used financial reports from January 2017 to December 2021. The secondary data collected included; total equity, long-term debts and net income.

### 3.6 Data Processing, Analysis, and Presentation

The data collected was processed and cleaned using Microsoft Excel before exporting to STATA. Panel data was analyzed using descriptive and inferential statistics. Descriptive statistics comprised mean, minimum value, maximum value and standard deviation, and inferential statistics included panel linear regression, correlation analysis, and the Hausman test for a fixed and random effect. The statistical software STATA aided solving for panel methodology. The study employed panel data regression analysis model. The Hausmann specification test established that the random effect model was appropriate for the study. Findings were presented in tables, graphs, and figures. The effects of capital structure decisions and the profitability of retail outlets were modeled using the following regressions equations

$$NPM_{it} = \beta_0 + \beta_1 CSD_{it} + \varepsilon_{it} \quad (1)$$

NPM<sub>it</sub> – Represents net profit margin.

β<sub>0</sub> – Constant

β<sub>1</sub> – Regression coefficients.

CSD – Represents capital structure decisions

i – Denotes the observations (large-scale supermarkets)

t – Represents the time dimensions from 2017 to 2021

it – The error term

## 4. Data Analysis, Results, and Discussions

The section contains findings and a discussion of the study results.

### 4.1 Descriptive Statistics

Descriptive statistics were conducted to understand the distribution of variables used. Table 2 presents descriptive statistics of profitability and capital structure decisions of large-scale retail supermarkets in Kenya.

**Table 2:** Descriptive statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
NPM	35	.3051329	.1726504	0.0140285	.7370295
CSD	35	.4683523	.2926167	0	1.060481

Source: (Study data, 2023).

The descriptive statistics results are in Table 2. Show that in total, there were 35 observations which were from 7 large-scale retail supermarkets over a period of five years (panel data). The mean for profitability measured using net profit margin was 0.3051329 with a minimum of 0.0140285 and a maximum of 0.7370295. The maximum and minimum values of the net profit margin over the study period were positive. The positive values indicated that all the large-scale retail supermarkets under the study made a profit within the study period. The mean of 0.3051329 for net profit margin, which

was higher than the standard deviation value of 0.1726504, indicated that profitability varied during the study period. This meant that some large-scale retail supermarkets were making high net profits while others were making very low net profits.

Capital structure decisions measured using the debt-equity ratio had a mean of 0.4683523 with the lowest value of 0, a maximum value of 1.060481, and a standard deviation of 0.2926167, implying that debt-to-equity ratio varied during the study period. The lowest value of 0 showed that there was a large-scale retail supermarket operating with zero debts, therefore, financing their operations using equity capital. The maximum value of 1.060481 for the debt-to-equity ratio implies that this firm was operating on more debts than equity. These results posited that the debt-to-equity ratio of large-scale retail supermarkets varies from one supermarket to another

#### 4.2 Correlation Analysis

The study conducted correlation analysis for the various variables to examine the nature of the statistical association between capital structure and profitability. Table 3 shows the correlation matrix of capital structure decisions and profitability.

**Table 3:** Correlation Analysis

Variable	NPM	CSD
NPM	1.0000	
CSD	-0.5896* 0.0000	1.0000

Source: Study data \*represents a 5% significant level.

The correlation results in Table 3 established capital structure decisions were negatively and significantly related to profitability. This is supported by an r of -0.5896 and a P-value of 0.0002. This meant that higher debt-equity ratio results in reduced profitability of retail stores. These results agree with Mukaddam & Sibindi (2020) that capital structure decisions had a negative and significant association among retail firms in South Africa. These findings also corroborate with Cheruyot & Wahome (2019) that the debt-equity ratio significantly influences financial distress management.

#### 4.3 Regression Coefficients Analysis

The study used a random effect model to establish the effect of capital structure decisions on the profitability of large-scale retail supermarkets in Kenya. The regression results were discussed in line with the study objectives. The regression results are presented in Table 4.

**Table 4: Random Effects Model**

NPM	Coef.	Std. Err.	Z	P> z
<b>CSD</b>	-.3479	.0896	-4.19	0.000
<b>_cons</b>	.4681	.0456	10.26	0.000
R-sq: corr (u <sub>i</sub> , X) = 0 (assumed) within = 0.2472 Wald chi2(3) = 17.59 between = 0.7003 Prob > F = 0.0000 overall = 0.3477				

**Source:** Study Data (2023).

The random effects result in Table 4 established that the overall model was statistically significant. This is supported by the reported Prob > chi2 of 0.000 which is less than 0.05 level of significance. These findings also established that capital structure decisions are good predictors of the profitability of large-scale retail supermarkets in Kenya. This is supported by the overall R-squared of 0.3477. This meant that capital structure decisions explain 34.77% of the variation in the profitability of large-scale retail supermarkets in Kenya, while other factors not considered in this study contribute 65.33% of the profitability. As per the results, the estimated model is shown below:

$$NPM_{it} = 0.4681 - 0.3479 CSD_{it} \quad (2)$$

From the regression model (2), the constant 0.4681 shows that if the capital structure decisions are not implemented, the profitability of large-scale retail supermarkets measured on net profit margin would be 0.4681. The objective of the study was to establish the influence of capital structure decisions on the profitability of large-scale retail supermarkets in Kenya. The null hypothesis of this objective was that capital structure decisions had no significant influence on the profitability of large-scale retail supermarkets in Kenya. Table 4. shows that capital structure decisions have a negative and significant effect on the profitability of retail stores in Kenya. This is supported by regression coefficients of -0.3479 with P-values of 0.000<0.05 and Z-statistics -4.19 smaller than the Z-critical of -1.96, implying that capital structure decisions have a negative and significant effect on profitability, thus rejecting the null hypothesis.

These results meant that a unit increase in the debt-equity ratio would lead to a subsequent decrease in the profitability of retail stores by 0.3479 units. This implied that increased debt capital in the capital structure would lead to decreased profitability of large-scale retail stores due to debt covenants such as interest paid to debt holders. The results agree with Cheruyot & Wahome (2019) that the debt-equity ratio significantly influenced the financial distress management of retail outlets in Nakuru County. The findings are also consistent with Mukaddam & Sibindi (2020) study, which established capital structure had a negative and significant relationship with the financial performance of retail stores in South Africa.

## 5. Summary, Conclusions, and Recommendations

### 5.1 Summary

The study sought to assess the effects of capital structure decisions on the profitability of large-scale retail supermarkets in Kenya. The study was guided by the pecking order theory. Study data were obtained from the audited financial statements of large-scale retail supermarkets in Kenya. The correlation results established that capital structure decisions and profitability of large-scale retail stores are negatively and significantly associated. This is validated by an  $r$  of  $-0.5896$  and a  $p$ -value of  $0.0002$ . Regression of coefficients findings established that capital structure decisions measured using the debt-equity ratio and profitability of large-scale retail supermarkets are negatively and significantly associated. This is demonstrated by a regression coefficient of  $-0.3479$  and a  $p$ -value of  $0.000$ . This means that a unit increase in the debt-equity ratio would lead to a subsequent decrease in the profitability of large-scale retail stores. Therefore, the study adopted the alternative hypothesis that capital structure decisions significantly affect the profitability of large-scale retail supermarkets.

### 5.2 Conclusions

Based on inferential statistics, the study found that capital structure decisions negatively correlate to large-scale retail stores' profitability. This is backed up by an  $r$  of  $-0.5896$ . The regression model found that capital structure decisions negatively and significantly affect the profitability of large-scale retail stores in Kenya. This is validated by a regression coefficient of  $0.3479$  and a probability value of  $0.000$ . Therefore, the study concluded capital structure decisions negatively and significantly affect the profitability of large-scale retail supermarkets.

### 5.3 Recommendations

The study established that capital structure decisions negatively affect profitability. Capital structure decisions were measured using a debt-equity ratio that measures debt control. The study recommends that the management of large-scale retail stores balance funding a company using equity capital and debt capital. A higher total debt-to-equity ratio indicates that the firm uses more debt to finance its operations. In contrast, a lower debt-to-equity ratio indicates that the sector is financing a smaller proportion of its activities through debt than through equity.

Higher debt can make a company more vulnerable to business downturns and result in unpredictable earnings due to increasing interest costs. Therefore, Managers in large-scale retail supermarkets should balance equity and debt capital and aim for a debt load compatible with a favorable debt-to-equity ratio to function without worrying about defaulting on loans. They should also develop diversifying strategies and policies to control the debt-equity ratio, thus improving the firm's profitability.

### Conflict of Interest Statement

The authors declare no conflicts of interest.

### About the Authors

**Andrew Shitanda** is a PhD student at Kaimosi Friends University, Kenya.

**Dr. Atieno Margaret** is a Lecturer at Kaimosi Friends University, Kenya in the School of Business and Economics, Department of Accounting and Finance.

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