

**THE RELATIONSHIP BETWEEN BUSINESS LIFE CYCLE AND
CAPITAL STRUCTURE OF COMPANIES LISTED AT THE NAIROBI
SECURITIES EXCHANGE**

BY

EVANS MWAURA MUTURA

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DECLARATION

This is to declare that this research project is my own original work and has not been presented for the award of any degree in any University.

EVANS MWAURA MUTURA

D61/71096/2014

Signed: _____ Date: _____.

Supervisor

This project has been submitted for examination with my approval as the University supervisor.

Signed:  _____ Date: December 7, 2020 _____.

DR. WINNIE NYAMUTE

Lecturer, Department of Finance and Accounting

School of Business, University of Nairobi

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My sincere thanks to my family and friends who greatly assisted and cheered me on.
God bless you all.

DEDICATION

I dedicate this project to my family members.

ABBREVIATIONS AND ACRONYMS

BLC: Business Life Cycle

CS: Capital Structure

NSE: Nairobi Securities Exchange

SPSS: Statistical Package for Social Sciences

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ABSTRACT

Most if not all finance managers are daunted with the task of minimizing the cost of capital and at the same time maximizing the value of their firms. The study focused on determining the interaction between capital structure and business lifecycle of Kenyan listed firms. The design adopted was cross sectional descriptive and 65 listed firms were targeted. Census was used and information was gathered from secondary sources over a period of 6 years (2013-2018). The study conducted an analysis using means, standard deviations and regression analysis. The study noted that business life cycle significantly predicts the capital structure of the entity. The study concluded that firms in different business life cycles are characterised by different components of capital structures. The study recommends that any firm that seeks to optimize its capital structure should first of all determine and establish its business life cycle. The finance managers should therefore pay close attention on business life cycle as they make decisions regarding the use of debts or equities which are the key components of capital structure in any business entity.

CHAPTER ONE: INTRODUCTION

1.1 Background of the Study

It is very critical in any economy that companies thrive and that their stability and continuity in the ever increasing competition is assured. All business evolves through a financial life cycle from growth to death and this is well established in literature. Friesen and Miller (1984) established the key stages in business life cycle as covering birth, growth, maturity, revival and decline. Though, of importance is that these firms require financing in each life stage. In the field of capital structure (CS), the discussion has been on why firms prefer different mix of capital and equity to fund their operations. This has remained a hotly contested issue in the field of finance with inconclusive results established. The available empirical investigation on factors shaping CS of the firm results into conflicting findings including the positive and negative effect. One study proposed that the life cycle of the firm may have an effect on capital structure since there shall be variation on financial demands of the firm over a given time (Damodaran, 2001; Bender & Ward, 1993).

The agency theory, pecking order theory, signaling theory and the capital structure irrelevance theory are some of the theories that have been put forth. The capital structure irrelevance theory indicates that when the market conditions are assumed to be perfect, the form of financing of the firm has no influence on its value (Modigliani & Miller, 1958). The information asymmetry theory indicates a situation where one party in the contract may be having advantageous information as opposed to other parties and this may make the party to generate profits (Ross, 1977). On the other hand, the pecking order theory argues that firms usually have fixed orders as

they seek to get sources of funds. The order is such that the firm first leverages on internal sources of funds after which debts would follow and as a last resort, the firm can float new issues (Myers, 1984). The agency theory is useful in providing the interaction between the principal and the agents in the effort to minimize on conflicting interests (Jensen & Meckling, 1976).

Listed Kenyan firms are classified into different segments based on their industry of operation. At the same time, listed firms belong in different lifecycles with different capital structures. The differences in capital structures are because of different proportion of debts and equities. For instance, a critical examination of KQ's statement of financial position indicates a rise in long term debts from Kshs.31.4 billion to Kshs.50 billion and surprisingly to Kshs.104 billion over the periods 2013, 2014 and 2015 respectively. In the same periods, there was a rise in leverage from 1.01 in the year 2013 to 1.78 and later on (17.47) in 2014 and 2015 respectively (KQ, 2017).

1.1.1 Business Life Cycle

All organisms (plants, animals and humans) undergo a life cycle where they are born, grows, reach old age and eventually die. Each cycle represents specific challenges and opportunities that force the organisms to exhibit certain characteristics to survive through the various stages. The life cycle theory assumes that organizations undergo through the same set of stages where they are born, grows and eventually die (Adizes, 1998). Black (1998) in his study compared organizational life stage theory to that of the product life cycle theory which was widely researched in the marketing world.

The theory looked at the product movement from when they have come into the market and looked at their pricing, output and profitability and how these play out in the market (Dean, 1950 & Levitt, 1965). Gort and Keppler (1982) looked at industrial revolution and hypothesized that industries too emulates the life cycle evolution of growth and decline. The term business lifecycle simply describes how the firm progresses within various phases over a given time. In this study, business lifecycle will be measured using the cash flow patterns also referred to as Signage as suggested by Dickinson (2011). This is illustrated in Table 1.1 below.

Table 1.1: Measurement of Business Life Cycle

| C/f type | Introduction | Growth | Mature | Shake-out | Decline |
|-----------------|---------------------|---------------|---------------|------------------|----------------|
| Operating | - | + | + | +/- | - |
| Investing | - | - | - | +/- | + |
| Financing | + | + | - | +/- | +/- |

Source; Dickinson (2011)

1.1.2 Capital Structure

Capital structure (CS) is the combination of debts and equities that firms leverage on in the effort to finance the operations. CS is deemed to be among the critical components in corporate finance which is geared towards maximization of the wealth of shareholders. Given the fact that the cost of capital plays a key role in discounting of the cash flows, any deviations in capital structure decisions of the firm would have an effect on the value of the entity. CS is the judicious mix of retained earnings, debts and equities used in finance investments in the company. It is the optimum levels of debts and equities that maximize firm's value while minimizing the costs of capital.

It is a decision of how much debts and equities to be used by entities in financing their investments.

Capital structure decisions are complex since they affect the overall operation of the business and the wealth of shareholders (Adesina, Nwidobi & Adesina, 2015). As it will be seen later, Modigliani and Miller (1958) came up with the irrelevance theory of capital structure which stated that in a world without corporate taxes, the firm's CS has no relevance to its value. This theory was later challenged by the introduction of market imperfections e.g. personal taxes. The theory of CS is a field that has been widely researched in the world but no universal theory exists. Myers concluded that there is no optimal capital structure and that none will be coming soon (Myers, 2001).

1.1.3 Business Life Cycle and Capital Structure

Studies on CS have been conducted in isolation, for instance, Bender and Ward (1993) tried to look at the capital structure life cycle which showed that business risk tends to reduce over the life cycle of an entity. This is likely to increase the level of financial risk in the entity. Hovakimian, et al (2001) noted that entities firms will highly use debts over time as they progress towards the stage of maturity in their lifecycles. Damodaran (2001) agree with this assertion by indicating that firms at the growth stage rely more on equities for financing as opposed to mature entities which rely more on debts for financing.

The advocates of the capital structure life cycle theory collectively agreed that leverage will be greater at the initial and earlier stages of the firm. However, few studies have been conducted in support of this assertion. Morgan and Abetti (2004) carried out an analysis of venture capital financing with focus on high tech entities.

It was noted that high tech firms are so risky such that only private equity can be used as a source of financing. Frielinghaus et al, (2005) noted that at birth, firms are usually characterised by greater risk and will try by all means to avoid financial risks. This is in contravention to firms at a mature phase that have an ability to ensure that extra risks are absorbed especially where there is debt financing. Firms operating at a declining stage on the other hand have gone through business risks and would make all efforts to avoid the use of debts.

The two studies of CS and business life cycle (BLC) have generally been approached separately apart from a few studies which tried to link the two. Even though the capital structure life stage theory is highly not researched and only mentioned in a few studies. There needs to be more empirical as well as theoretical examination in this area especially in the local market. The classical theories, that is the pecking order and trade off theory identified profitability, research and development, age, size, fixed assets, growth and risk as the main determinants of capital structure.

1.1.4 Companies Listed at the Nairobi Securities Exchange

The Nairobi Securities Exchange (NSE) was formed in 1954 as an association of stock brokers to help firms raise capital through issue of securities (debts and equities). NSE is a market where securities are transacted. By facilitating the transaction in securities, NSE helps firms to raise finances used for funding projects that improve on performance. In 2018, there were 65 firms listed on NSE under different segments (Appendix I).

NSE currently stands in the fourth position in Africa in terms of the volume of shares exchanged (Musyoki & Iraya, 2013). All activities and operations at NSE are closely

monitored by the Capital Market Authority (CMA). Listed firms are divided into segments based on their industry and nature of operations.

1.2 Research Problem

The CS decision is very key in all organizations. Most finance managers are faced with the task of minimizing the cost of capital and also ensuring that the wealth of shareholders is maximized. Though, as an organization goes through the different life stages the unique characteristics at each stage may push an organization to exhibit a different financial structure to suit their needs. In their study Lin Tian, Liang Han, Song Zhang (2015) found that the capital structure changes along life cycle stages of a company. This is influenced by the different financing needs that do change at every point of life stage (Damodaran, 2001; Bender & Ward, 1993). Little research and empirical evidence has been done on the capital structure life cycle theory and how the relationship can help companies better plan their finances in each lifecycle.

Even though some studies were done on the capital structure decisions along the lifecycle, they were carried out at different times and as well focused on different geographical areas. Rocha Teixeira and dos Santos, (2005) did a study to determine whether firms had different financing structure along their life cycle and concluded that firms use pecking order as an invaluable tool for the analysis. The capital structure was not seen to be optimal but it was adjusted depending on the financial needs present at the life cycle stage. With specific focus on SMEs, Maurizio et al. (2011) concluded that CS varied depending on the different degrees of information opacity. Even though the two studies above were limited by the fact that they focused on small businesses which lacked access to external finances and information as well.

In the Kenyan market, Kinyua (2005) looked at the key factors that shape and determine CS of SMEs where size and profitability of the firm were the key identified determinants. The analysis was however limited among SMEs which are not listed. Open disagreements exist regarding differential financing arrangements and the debt/equity ratio at each life stage and this has been attributed to differences in management determination as well as different industry affiliations and environments. This was from the conclusions in Berger and Udell 1998 study; Harris and Raviv 1991 study; Beck et al. 2002; Rajan and Zingales 2004 and Utrero-González 2007. This study sought to establish if there exists a relationship between the life cycle of a company and its capital structure.

1.3 Objective of the Study

The study sought to test the relationship between capital structure and business lifecycle of companies listed at the Nairobi Stock Exchange.

1.4 Value of the Study

It is critical for managers to choose a CS which ensure that their firm's value is maximized as the entity progresses across the key stages of the life cycle. This paper advocates for a continuous change in the financial policy to suite the cash needs of a company at different times as it evolves. Business advisors and financial consultants would be interested in knowing how to design the capital structure for firms as they evolve. This would help them ensure that financial markets and products/firms are well balanced.

The findings of this study would help in establishing the interaction between CS and the life cycle of the firm. Researchers and academicians would form a basis for

further studies into the capital life stage theory with a perspective of the Kenyan market. Industrial evolution in the country is closely tied to the accessibility of finances. Government policy makers would be able to advocate for financial policies that support the growth of firms which would in turn protect the job market.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter will look at the various theories done in isolation in the two fields as well as the studies that have hypothetically tried to link the two fields of study.

2.2 Theoretical Review

The key theories that guided the study are discussed in subsequent sections:

2.2.1 Capital Structure Irrelevance Theory

This theory was advanced by Modigliani and Miller (1958) where it argues that the financing decisions may not have an effect on the value of the firm when some conditions are considered. These conditions are largely considered as perfect world that assumes absence of taxes, limited transaction costs, efficiencies in the market and low costs of bankruptcy. In 1963, MM changed the premise linked to taxes as the outflow of debt interests are netted from taxes hence increasing the firm value.

It was observed that debts may increase the risk of the firm becoming bankrupt and thus, the CS of the firm is deemed to be optimal when there exists a balance between the costs of bankruptcy and the benefits that would accrue from financing of debts. Later on, personal taxes were incorporated where Miller (1977) noted that with personal taxes, the advantages that accrue from financing of debts would later be reduced. This has resulted into a number of theories that have examined the issue surrounding CS of the firm. These theories are the static trade-off theory, the agency theory, the pecking order theory, information asymmetry theory and the capital structure life stage theory.

2.2.2 Information Asymmetry or signalling Theory

Modigliani and Miller's in one of their propositions stated that the market contained substantial information regarding the activities of a company. The model assumed that there was imperfect and asymmetric information among the market players. A classic example is where you have informed managers and other uninformed parties and as such the informed party will tend to communicate to the other party through a signal. There are numerous signals that are used in finance which allows the investor to make a perfect difference between companies.

This theory was later relaxed by Stephen Ross (1977) and Leland and Pyle (1976) with their information asymmetry theory of CS. Leland and Pyle (1976), in their study noted that the value of a firm was positively affected by the managerial ownership where each change represented a change in the financial policy. Leland and Pyle (1977) argued that a higher ownership of capital was characterized by higher debt. Bond holders highly recognize the high debt levels in the company and this is seen to signal confidence in the company's future growth and investments.

Myers and Majluf (1984) noted that managers possess more information than the investors. This according to them will enable the managers take advantage of a new equity issue if the stocks are overvalued in the market. Stiglitz and Edlin (1992) concluded that in this scenario, managers will use this advantage to ensure shareholders' wealth is maximized. Managers will lower the treats of cut throat competition by using the information within their reach to invest strongly or invest in projects with higher information asymmetry.

2.2.3 Pecking Order Theory

It is Myers (1984) who advanced this theory and it asserts that firms will have preference to use internal sources of funds in financing capital projects after which debts shall follow and floatation of new issues as a last resort. It is information asymmetry that shape and determine the pecking order theory since the management of the firm has more information on the entity as compared to the owners of the firm. As such, the management is willing and able to issue new stocks when the prices are deemed too low. Investors who are aware of this interpret a share issue as bad news resulting in a dip of stock prices when a stock issue is announced. Debt is therefore preferred when information problems exist.

Given that equity was considered as the last option in the pecking order theory, Myers (1984), argued that it was difficult to determine an optimum capital structure. The preference for internal funds to externals according to the theory was due to nil flotation costs as well as the omission of disclosure requirements associated with the funds. The pecking order theory postulates that firms with higher growth opportunities with the ever increasing demand for funds will have higher leverage levels due to the lack of manager's support towards issuance of stock. Due to this, managers will prefer external sources of funds.

2.2.4 Agency Cost Theory

This theory argues that the CS of the firm shall be optimized when the conflict of interest between the agent and the principal have been reduced. Jensen and Meckling (1976) noted that this was key when considering funding decisions as a conflict existed between shareholders and debt holders. Management is encouraged to take

actions by the shareholders holders and in effect this will transfer funds from one party to the other demanding a higher return on the part of debt holders if a window of opportunity existed. The debt and interest chargeable on debt may however reduce the agency conflict that may exist.

Management will be focused on meeting the interest payments when they fall due lest they lose their jobs. Thus, it is not discounted cash flow that informs and shape investment decision of the firm but when it is able to establish the conflict of interest between the management and shareholders and the entity. Meckling and Jensen (1976) consider the conflicting interests that may arise between the management and shareholders in explanation of how this distorts investment decisions of the firm.

2.2.5 Life Cycle Theory

Products have been stated to evolve from the time they are introduced to the market according to market literature. At the first stage the pioneer companies will market their products and hence the trend-setters will accrue a higher price for the pioneering efforts. At this stage the profit and output is low. In the growth phase the product will traverse the wider consumer market which will be occasioned by price adjustments in order to attract the larger audience. At this point the profits and output volumes have risen sharply. Once maturity stage settles, the product faces saturation and sales are stagnate with minimal replacement.

Output is stagnant and prices are either fairly stable or dropping, and so does profitability. In the declining stage, the market reduces and this is caused by innovations which tends to replace the products with mature tendencies. Here both profitability and output are on a downward trend. Gort and Klepper (1982) applied

this hypothesis to industries and they concluded that likewise the firms will be born, grow and die. Friesen and Miller (1984) narrowed to organizational life stage theory which concluded on five common life stages: birth, growth, maturity, revival and decline. Adizes (1979) in his study observed that different behaviour patterns emerged at each life stage and of key was the flexibility and control that a company exhibited in its life stage as opposed to the company's chronological age, sales or assets, or number of employees.

In economics the lifecycle hypothesis was related to the consumption patterns of individuals. Modigliani and Brumberg (1954) in their hypothesis looked at utility maximization. They argued that such decisions will be subjected to a decision process. In this regard individuals were grouped into working and retirement period and that such consumptions will depend on the income available. People were concluded to be net savers and major determinants of such savings are the rate of growth of per capita income, and the population age.

2.3 Determinants of Capital Structure of the Listed Firms

A discussion of factors that determine capital structure of the listed entities is covered in this section.

2.3.1 Business Lifecycle

Firms in different stages of life cycle will require different components of debts and equities to finance the activities and operations. A study was conducted on corporate life cycle and how its influences CS of firms in the context of Czech automotive industry by Pinková and Kamínková (2013). The study covered 50 firms and

information was obtained from auxiliary sources. It was shown that BLC and CS are interlinked in some ways.

2.3.2 Leverage

Leverage concerns the decision to use debts by entities in effort to ensure that projects are financed. A levered firm is the one with some proportion of debts in its CS. In its simplest form, CS is viewed as a mix of these debts and equities used in maximizing the value of the firm and the wealth of shareholders. Leverage is commonly measured by taking the value of debts against the value of equities (debt-equity ratio).

2.3.3 Firm Size

On the basis of size, firms can be classified as large or small. The various criteria of determining the size of the firm include the total value of assets, the number of employees, the amount of sales revenues generated and the branch network. Large sized firms usually do enjoy economies of scale that arise from their operations as compared to firms with smaller size. Large sized firms are able to leverage on their sizes to access more debts hence bringing leverage in their capital structures. Firm size has traditionally been measured by the natural logarithm of the total value of assets.

2.3.4 Asset Tangibility

Olakunle and Oni (2014) conducted a study on asset tangibility and its influence on capital structure. The study was carried out in Nigeria among the listed firms. The theories that guided the study included the pecking order, the agency and the trade-off. It was shown that asset tangibility has direct influence on firm's CS. Martina

(2015) examined the influence of tangible assets on CS using a case of SMEs in Croatian context. A total of 500 firms were sampled and covered and information was gathered over a time horizon from 2005-2010. The study established that tangible assets have positive influence on CS of the entity.

2.3.5 Ownership Structure

Wellalage and Locke (2015) studied ownership structure and how it impacts on CS using a case of unlisted firms in New Zealand. The control variables included leverage and insider ownership. A positive relationship was identified between CS and ownership structure. Omet (2006) did a study on ownership structure and its influence on CS using a case of Jordan. The investigation covered the time frame from 1995 all through to 2003; the study established that ownership structure has significant influence on CS of the firm.

2.3.6 Business Risk

Alnajjar (2015) looked at business risk and its influence on CS using a case of firms in Jordan. The study covered a time horizon from 2009 all through to 2011. The study established a positive influence between business risk and capital structure of the firm. Mohammed (2012) did a study to establish the influence of business risk on CS with reference to listed firms in Nigeria. The study noted a positive relationship between business risk and CS. Chakraborty (2015) examined the influence of business risk on CS using a case of firms in India. The study covered a time horizon from 2001 all through to 2012. The findings indicated an interaction between risk and CS of the firm.

2.4 Empirical Literature Review

Rocha Teixeira and dos-Santos (2005) in their study tried to establish the above and they noted that pecking order theory provided great insight into their analysis. The life stage given its uniqueness will dictate the financing strategies that a company will employ leading to a fluctuation of the debt ratio along the life cycle stages. Other studies were carried on small and medium companies and a classic study was the one done by Maurizio La Rocca, Tiziana La Rocca, Alfio Cariola (2011). These firms were considered to lack access to information what was referred to as information opacity. This opacity they argued was one of the main determinants of the capital structure. Firms would consume debt as they set out and later once they have matures they will tend to use less debt and go for internal sources. The ones with consolidated businesses, the pecking order theory applied to a greater extent. This pattern was similar across different entities and was proved to be consistent over time.

Lin Tian, Liang Han, Song Zhang (2015) studied the impact of business life cycle stages on the CS of Chinese manufacturing firms between the years 1999 to 2011. The three used what they called the cash flow patterns to group the companies into the different life stages as opposed to a firm's age. These cash flow patterns were concluded to be more accurate in measuring the life cycle stage as age was not indicative of the happenings in a company.

They concluded that capital structure changed along the life cycle of a company and that these variations transitioned at each stage. Kaplan and Stromberg (2003) argued in their study that the changing degree of information opacity that firms face will

derive its financial life cycle given that the financial needs do change over time. Firms will generate cash and as well face several risks as they seek for growth opportunities along their life cycle hence exhibiting different capital structure. Frielinghaus (2005) noted that CS and the life cycle stages of the firm. This was support of the pecking order theory of capital structure at early stage of business life cycle, firms rely more on debts to finance the operations but this gets to reduce as the firm moves across the successive life cycles. Frielinghaus applied Adizes (1979) model used 10 life stages in which they showed the different patterns of behaviours at each stage.

2.5 Summary of Literature and Research Gaps

Studies done on capital life cycle have been limited to specific geographies and the data has been inconsistent with contradicting views. No study has been done in Kenya to analyze the capital life stage relationship hence the study will help address the knowledge gap and open up more studies in this area. The study will answer the following questions: Do Kenyan firms have different capital structures at different life stages or is there an optimal capital structure? How do these determinants vary/changes in the course of a firm's lifecycle?

2.6 Conceptual Framework

Figure 2.1 is the conceptual framework of the study.

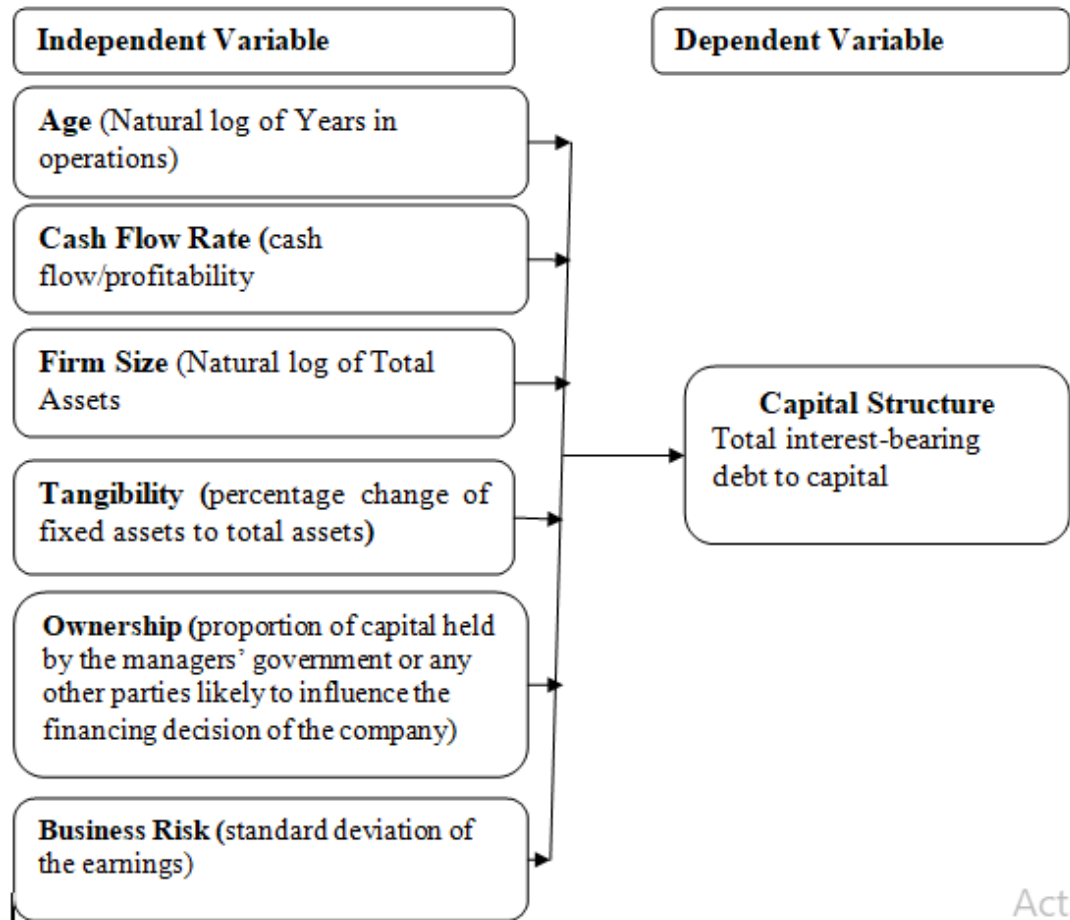


Figure 2.1: Conceptual Framework

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CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

The chapter details the adopted design and the targeted respondents of the study. The means of gathering information as well as processing of this information are also discussed.

3.2 Research Design

The adopted design was cross sectional descriptive and it was ideal in establishing the relationship between life cycle and the capital structure. Cross sectional research design was used to analyse the data due to its cost effectiveness and the short time period it took to collect the data.

3.3 Population

A total of 65 listed firms in Kenyan context were targeted by the study. The market information for unquoted companies was not available; hence the study results were inferred to represent the financial life cycle hypothesis for both the quoted and unquoted companies.

3.4 Data Collection

The study relied on information that was obtained from auxiliary sources over a time frame from 2013 all through to 2018. Thus, the period considered by the study was 6 years. Information on operating, investing and financing cash flow activities was gathered and used in clustering the various life cycles of the firms covered. Dickson

(2011) life cycle model was used to group the companies into the various life stages using the company's cash flow patterns.

3.5 Data Analysis

The analysis was conducted across the identified and clustered firms in their respective life cycles. The grouping of firms in their respective cycles was informed by the cash flow patterns of the firms. The debt ratio was used to capture the capital structure whilst the firm characteristics of age, cash flow/profitability rate, tangibility, asset size, business risk and ownership were used as the dependent variables at the various life stages. A multiple regression model was used to predict one variable from one or more variables (Saunders et. al., 1997) and the various coefficients tabulated for each life cycle stage.

Leverage (L) = f [Age, Cash flow rate, Size, Tangibility, Ownership, Risk] + α

$$L = aC + bA + cS + dT + eO + fR + \alpha$$

Where:

L equals total leverage which is a ratio of total interest-bearing debt to capital

C is the cash flow/profitability measured as the ratio of earnings before interest and taxes

A equals age of the firm measured as the number of years in business

S is size of the firm measured as the natural logarithm of total assets

T is Tangibility rate measured by the percentage change of fixed assets to total assets

O is ownership structure measure as the proportion of capital held by the managers' government or any other parties likely to influence the financing decision of the company

R is the business risk measured as the standard deviation of the earnings

α is a constant term

And a, b, c, d and e are coefficients.

CHAPTER FOUR

FINDINGS AND DISCUSSIONS

4.1 Introduction

The chapter presents the results of the analysis on the information that was gathered from auxiliary sources with aid of data collection sheets. A total of 65 listed firms at the NSE were targeted by the study. From these firms, complete data was gathered from 50 firms resulting into a response rate of 76.9%. This response rate was echoed by Mugenda and Mugenda (2003) who noted that response rate of over 70% is good for presentation of the results.

The study collected information on cash flow statements particularly on cash flow from operating, investment as well as financing activities from these 50 firms. The gathered information was then used to classify these firms in their respective lifecycles as indicated in Table 4.1.

Table 4.1: Business Lifecycle of Respective Firms

| Life Cycle | Number of Firms |
|-------------------|------------------------|
| Introduction | 4 |
| Growth | 14 |
| Mature | 23 |
| Shakeout | 6 |
| Decline | 3 |
| Total | 50 |

4.2 Introduction Business Lifecycle and Capital Structure

Introduction was the first business lifecycle that the study covered. Out of the 65 firms targeted by the study, four firms were clustered as being at the introduction phase of their business lifecycles. The analysis of the results

4.2.1 Descriptive Statistics

The findings of descriptive statistics of the variables of the study for the firms at the introduction phase of their business cycle are indicated in Table 4.2. Out of the 50 firms, 4 of them were classified under the introduction phase for a period of 6 years giving the value of n as 24.

Table 4.2: Descriptive Statistic at the Introduction Phase

| | n | Min | Max | Mean | Std. Dev |
|----------------|----------|------------|------------|-------------|-----------------|
| Leverage | 24 | .01 | 1.00 | .3518 | .27638 |
| Age | 24 | 1.62 | 1.93 | 1.7914 | .10262 |
| Cash flow Rate | 24 | 1.15 | 2.11 | .5075 | .76096 |
| Size | 24 | 6.09 | 7.45 | 6.9359 | .49503 |
| Tangibility | 24 | .01 | 2.22 | .6851 | .68195 |
| Concentration | 24 | 4.22 | 8.21 | 6.4457 | 1.00833 |
| Business Risk | 24 | 4.29 | 8.50 | 6.1039 | .99617 |

From Table 4.2, the introduction phase of the business lifecycle is characterized by firms that averagely have a leverage of 0.3518 with the average age of over 1 year with a cash flow rate of 50.75%, an average size of 6.9359, tangibility being at 68.51% with concentration of 6.4457 and business risk of 6.1039. There was no significant variation in the variables of the study in the introduction phase of the lifecycle as supported by low values of standard deviations of less than 1.

4.2.2 Model Prediction

The prediction of the introduction business life cycle and CS was modelled using regression analysis. Table 4.3 gives the results of the Model Summary.

Table 4.3: Model Prediction

| | | Leverage | Age | Cash flow Rate | Size | Tangibility | Concentration | Business Risk |
|----------------|---------------------|----------|-------|----------------|--------|-------------|---------------|---------------|
| Leverage | Pearson Correlation | 1 | | | | | | |
| | Sig. (2-tailed) | | | | | | | |
| Age | Pearson Correlation | -.028 | 1 | | | | | |
| | Sig. (2-tailed) | .895 | | | | | | |
| Cash flow Rate | Pearson Correlation | -.026 | -.095 | 1 | | | | |
| | Sig. (2-tailed) | .003 | .660 | | | | | |
| Size | Pearson Correlation | .275 | .076 | -.380 | 1 | | | |
| | Sig. (2-tailed) | .193 | .724 | .067 | | | | |
| Tangibility | Pearson Correlation | .045 | -.073 | .146 | -.195 | 1 | | |
| | Sig. (2-tailed) | .836 | .735 | .497 | .360 | | | |
| Concentration | Pearson Correlation | .236 | -.083 | -.088 | .430* | .003 | 1 | |
| | Sig. (2-tailed) | .266 | .701 | .684 | .036 | .988 | | |
| Business Risk | Pearson Correlation | .130 | -.017 | -.255 | .726** | .057 | .526 | 1 |
| | Sig. (2-tailed) | .016 | .936 | .230 | .000 | .790 | .008 | |

Therefore, taking 5% or 0.05 as the level of significance, it can be inferred that cash flow rate ($p < 0.05$) and business risk ($p < 0.05$) are two critical variables influencing leverage of firms operating in the introduction phase of their business lifecycles.

4.3 Growth Business Cycle and Capital Structure

The growth lifecycle was determined by the sign of the operating, investing as well as financing activities of their cash flows. From the 65 firms that were targeted, a total of 14 firms were classified as being in the growth phase of their business lifecycles. The results of the analysis are detailed in subsequent sections.

4.3.1 Descriptive Statistics at the Growth Business Life Cycle

Table 4.4 gives the results of means and standard deviations of the firms operating in the growth business life cycle.

Table 4.4: Descriptive Statistics at the Growth Business Life Cycle

| | N | Min | Max | Mean | Std. Dev |
|----------------|----------|------------|------------|-------------|-----------------|
| Leverage | 84 | 1.31 | 3.27 | 1.4607 | .35771 |
| Age | 84 | .95 | 2.06 | 1.7191 | .23580 |
| Cash flow Rate | 84 | 2.59 | 5.19 | 2.9499 | .69701 |
| Size | 84 | 4.03 | 8.35 | 6.4598 | .90190 |
| Tangibility | 84 | -.62 | .95 | .1631 | .23198 |
| Concentration | 84 | 3.40 | 8.50 | 6.2851 | 1.15951 |
| Business Risk | 84 | .00 | 8.03 | 6.3656 | 1.04659 |

The results in Table 4.4 indicate that leverage of firms operating in the growth business lifecycle averages at 1.4607, with the age of over 1 year, cash flow rate of 2.9499, size of 6.4598, tangibility of 16.31%, concentration of 6.2851 and business risk of 6.3656. Most of the variables had low value of standard deviation of less than 1; signifying that there was no significant variation in these variables across the study period.

4.3.2 Model Prediction

The model in the growth business life cycle was predicted using regression analysis and Table 4.5 gives the results of the Model Summary.

Table 4.5: Model Summary

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|--------------|-------------------|-----------------|--------------------------|-----------------------------------|
| 1 | .906 ^a | .821 | .807 | 30.49165 |

a. Predictors: (Constant), Business Risk, Size, Cash flow Rate, Age, Concentration, Tangibility

From Table 4.5, the value of R square is 0.821; showing that 82.1% variation in leverage of firms operating at the growth business lifecycle cycle is explained by

their business risk, size, cash flow rate, age, concentration, tangibility. Consider Table 4.6 for the ANOVA results.

Table 4.6: Analysis of Variance

| | Sum of Squares | df | Mean Square | F | Sig. |
|--------------|-----------------------|-----------|--------------------|----------|-------------------|
| Regression | 327673.340 | 6 | 54612.223 | 58.739 | .000 ^b |
| Residual | 71590.052 | 77 | 929.741 | | |
| Total | 399263.392 | 83 | | | |

a. Dependent Variable: Leverage

b. Predictors: (Constant), Business Risk, Size, Cash flow Rate, Age, Concentration, Tangibility

The results in Table 4.6 indicates that F calculated is 58.739 with a p-value $p < 0.05$; this means that the overall model prediction in the growth phase of the business life cycle used in the study was significant. The results of the beta coefficients are shown in Table 4.7.

Table 4.7: Regression Coefficients

| | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
|----------------|------------------------------------|-------------------|----------------------------------|----------|-------------|
| | B | Std. Error | Beta | | |
| (Constant) | -44.333 | 38.478 | | -1.152 | .253 |
| Age | 13.135 | 15.095 | .045 | .870 | .387 |
| Cash flow Rate | 2.953 | .553 | .626 | 5.344 | .000 |
| Size | 3.859 | 3.861 | .050 | 1.000 | .321 |
| Tangibility | 89.511 | 35.110 | .299 | 2.549 | .013 |
| Concentration | -.369 | 3.380 | -.006 | -.109 | .913 |
| Business Risk | -1.058 | 3.546 | -.016 | -.298 | .766 |

a. Dependent Variable: Leverage

The equation below is a prediction of the model from Table 4.7:

$$L = -44.333 + 2.953C + 13.135A + 3.859S + 89.511T - .369O - 1.058R \dots \dots \dots (II)$$

Where:

L equals total leverage; C is the cash flow/profitability; A equals age; S is size; T is Tangibility; O is ownership structure and R is the business risk

Thus, at 5% level of significance, cash flow rate and tangibility have p-values less than 0.05; this implies that they have significant effect on financial leverage of the firms operating in their growth phases of the business life cycles.

4.4 Mature Business Cycle and Capital Structure

The mature business life cycle was determined on the basis of the key activities in the cash flow statements. A total of 23 firms were classified as being in the mature phase of the business life cycle. The results of the analysis are indicated in subsequent sections.

4.4.1 Descriptive Statistics on Mature Business Cycle

Consider Table 4.8 giving the results of means and standard deviation for the firms operating under the mature business life cycle.

Table 4.8: Descriptive Statistics on Mature Business Cycle

| | N | Minimum | Maximum | Mean | Std. Dev |
|----------------|----------|----------------|----------------|-------------|-----------------|
| Leverage | 138 | -.46 | 1.572 | 2.2259 | .78057 |
| Age | 138 | .70 | 2.09 | 1.6750 | .30828 |
| Cash flow Rate | 138 | -2.90 | 4.3.73 | 1.7017 | .83317 |
| Size | 138 | 3.55 | 8.37 | 6.7526 | .86927 |
| Tangibility | 138 | .00 | 8.99 | .2920 | .91706 |
| Concentration | 138 | 3.66 | 8.86 | 6.2684 | .95751 |
| Business Risk | 138 | 3.22 | 9.41 | 6.2880 | .94896 |

From Table 4.8, on average, firms operating in the mature stage of the business life cycle have leverage of 2.2259; age of over 1 year, size of over 6.0, cash flow rate of over 2; tangibility of over 0.2920 and concentration and business risk of less than 7.00. These variables have low values of standard deviation where most of them are less than 1; showing that there was no variation in the study variables over the period covered.

4.4.2 Model Prediction

The study conducted regression analysis to predict the relevant model in the mature phase of the business lifecycle. The results of the Model summary of the study are indicated in Table 4.9.

Table 4.9: Model Summary

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|-------|-------------------|----------|-------------------|----------------------------|
| 1 | .938 ^a | .880 | .874 | 58.85069 |

a. Predictors: (Constant), Business Risk, Tangibility, Age, Size, Concentration, Cash flow Rate

The findings in Table 4.9 indicate that the value of R square is 0.880; this shows that 88.0% change in leverage of firms operating in the mature business life cycle is explained by their business risk, tangibility, age, size, concentration and cash flow rate. The results of the ANOVA conducted at 5% are indicated in Table 4.10.

Table 4.10: Analysis of Variance

| | Sum of Squares | df | Mean Square | F | Sig. |
|--------------|--------------------|------------|-------------|---------|-------------------|
| Regression | 3311496.109 | 6 | 551916.018 | 159.357 | .000 ^b |
| Residual | 453705.923 | 131 | 3463.404 | | |
| Total | 3765202.032 | 137 | | | |

a. Dependent Variable: Leverage

b. Predictors: (Constant), Business Risk, Tangibility, Age, Size, Concentration, Cash flow Rate

The results in Table 4.10 indicate that value of F calculated as 159.357 with $p < 0.05$. Thus, the study model was okay for use. Table 4.13 coefficients are summarized in Table 4.11.

Table 4.11: Regression Beta Coefficients

| | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
|----------------|-----------------------------|------------|---------------------------|--------|------|
| | B | Std. Error | Beta | | |
| (Constant) | 8.129 | 63.434 | | .128 | .898 |
| Age | -1.464 | 16.485 | -.003 | -.089 | .929 |
| Cash flow Rate | -.117 | .040 | -.278 | -2.910 | .004 |
| Size | -1.607 | 5.964 | -.008 | -.269 | .788 |
| Tangibility | 215.450 | 17.297 | 1.192 | 12.456 | .000 |
| Concentration | -4.379 | 5.483 | -.025 | -.799 | .426 |
| Business Risk | 4.323 | 5.595 | .025 | .773 | .441 |

a. Dependent Variable: Leverage

Consider the following predicted model based on the results in Table 4.11:

$$L = 8.129 - .117C - 1.464A - 1.607S + 215.450T - 4.379O + 4.323R \dots \dots \dots \text{(III)}$$

Where:

L equals total leverage; C is the cash flow/profitability; A equals age; S is size; T is Tangibility; O is ownership structure and R is the business risk

Thus, at 5%, the study noted that cash flow rate and tangibility ($p < 0.05$) are significant factors influencing leverage of firms operating in the mature business life cycle.

4.5 Shakeout Business Lifecycle and Capital Structure

Shakeout was another business life cycle that the study focused on. Six firms were categorized into the shakeout phase of the business life cycle. The results are indicated in subsequent sections.

4.5.1 Descriptive Statistics on Shakeout Business Lifecycle

The results of descriptive statistics on the variables of the study in the shakeout phase of the life cycle are indicated in Table 4.12.

Table 4.12: Descriptive Statistics on Shakeout Business Lifecycle

| | N | Minimum | Maximum | Mean | Std. Deviation |
|----------------|----------|----------------|----------------|-------------|-----------------------|
| Leverage | 36 | .00 | .86 | 1.3821 | 2.55772 |
| Age | 36 | 1.23 | 2.03 | 1.7675 | .24574 |
| Cash flow Rate | 36 | -.55 | 1.52 | 4.8992 | 1.83971 |
| Size | 36 | .00 | .87 | .1945 | .23604 |
| Tangibility | 36 | 2.64 | 7.58 | 5.5469 | 1.19902 |
| Concentration | 36 | 3.69 | 7.24 | 5.6827 | .88699 |
| Business Risk | 138 | 3.22 | 9.41 | 6.2880 | .94867 |

From the results in Table 4.12, leverage of the firms at the shakeout phase of the business life cycle is averages at 1.3821, with an age of above 1 year, cash flow rate of 4.8992, size of .1945, tangibility of 5.5469, concentration of 5.6827 and with a business risk of 6.2880.

4.5.2 Model Prediction

The interaction between the study variables was determined using regression analysis. Table 4.13 gives the results of the Model Summary.

Table 4.13: Model Summary

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|--------------|-------------------|-----------------|--------------------------|-----------------------------------|
| 1 | .836 ^a | .698 | .636 | 178.99010 |

a. Predictors: (Constant), Business Risk, Age, Concentration, Cash flow Rate, Size, Tangibility

Table 4.13 gives the value of R square as 0.698; this means that 69.8% change in leverage of firms operating in the shakeout phase of their life cycle is explained by their business risk, age, concentration, cash flow rate, size, tangibility. The ANOVA results are shown in Table 4.14.

Table 4.14: Analysis of Variance

| | Sum of Squares | df | Mean Square | F | Sig. |
|--------------|-----------------------|-----------|--------------------|----------|-------------------|
| Regression | 2149040.638 | 6 | 358173.440 | 11.180 | .000 ^b |
| Residual | 929086.199 | 29 | 32037.455 | | |
| Total | 3078126.836 | 35 | | | |

a. Dependent Variable: Leverage

b. Predictors: (Constant), Business Risk, Age, Concentration, Cash flow Rate, Size, Tangibility

Table 4.14 with F calculated as 11.180 confirm that the overall regression model used in the study was significant. The results of the beta coefficients are indicated in Table 4.15.

Table 4.15: Regression Coefficients

| | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
|----------------|-----------------------------|------------|---------------------------|-------|------|
| | B | Std. Error | Beta | | |
| (Constant) | -311.738 | 319.651 | | -.975 | .338 |
| Age | 23.474 | 125.419 | .019 | .187 | .853 |
| Cash flow Rate | .777 | .125 | .696 | 6.225 | .000 |
| Size | -22.381 | 54.801 | -.109 | -.408 | .686 |
| Tangibility | -8.800 | 73.283 | -.043 | -.120 | .905 |
| Concentration | 106.962 | 167.439 | .085 | .639 | .528 |
| Business Risk | 89.582 | 59.677 | .362 | 1.501 | .144 |

a. Dependent Variable: Leverage

The following equation is predicted based on the findings in Table 4.15:

$$L = -311.738 + .777C - 23.474A - 22.381S - 8.800T + 106.962O + 89.582R \dots \dots \dots (IV)$$

Where:

L equals total leverage; C is the cash flow/profitability; A equals age; S is size; T is Tangibility; O is ownership structure and R is the business risk

Hence, the results of the study at 5% indicate that only cash flow is significant factor affecting leverage of the firm that is operating in the shakeout phase of the business cycle.

4.6 Decline Life Cycle and Capital Structure

Out of the 65 firms targeted by the study, three of them were clustered as operating under the decline life cycle.

4.6.1 Descriptive Statistics

The results on means and standard deviation as descriptive statistics on decline life cycle are indicated in Table 4.16.

Table 4.16: Descriptive Statistics

| | N | Minimum | Maximum | Mean | Std. Dev |
|----------------|----------|----------------|----------------|-------------|-----------------|
| Leverage | 18 | -2.00 | 2.40 | 3.5089 | .71765 |
| Age | 18 | .70 | 2.01 | 1.5155 | .49623 |
| Cash flow Rate | 18 | -.29 | 1.49 | 1.3147 | 1.14191 |
| Size | 18 | 5.68 | 8.66 | 6.7553 | .77575 |
| Tangibility | 18 | -.57 | .73 | .1027 | .25147 |
| Concentration | 18 | 2.73 | 8.38 | 6.3947 | 1.24263 |
| Business Risk | 18 | 4.55 | 7.90 | 6.3937 | .98738 |

From Table 4.16, leverage of firms operating in the decline phase of the life cycle averages at 3.5089, that an average age of over 1 year, cash flow rate of 1.3147, size of 6.7553, tangibility of 10.27%, concentration of 6.3947 and business risk of 6.3937 and business risk of 6.3937.

4.6.2 Model Prediction

Regression was used to predict the interaction between decline business life cycle and leverage. Table 4.17 gives the result of the model summary.

Table 4.17: Correlation Model Prediction

| | | Leverage | Age | Cash flow Rate | Size | Tangibility | Concentration | Business Risk |
|----------------|---------------------|----------|------|----------------|------|-------------|---------------|---------------|
| Leverage | Pearson Correlation | 1 | .208 | | | | | |
| | Sig. (2-tailed) | | .408 | | | | | |
| Age | Pearson Correlation | .208 | 1 | | | | | |
| | Sig. (2-tailed) | .408 | | | | | | |
| Cash flow Rate | Pearson Correlation | .832 | .085 | 1 | | | | |
| | Sig. (2-tailed) | .000 | .739 | | | | | |
| Size | Pearson Correlation | -.211 | .096 | -.342 | 1 | | | |
| | Sig. (2-tailed) | .401 | .705 | .165 | | | | |
| Tangibility | Pearson Correlation | .743 | .176 | .692 | .002 | 1 | | |
| | Sig. (2-tailed) | .000 | .485 | .001 | .995 | | | |
| Concentration | Pearson Correlation | -.042 | .149 | -.160 | .596 | -.073 | 1 | |
| | Sig. (2-tailed) | .868 | .555 | .527 | .009 | .774 | | |
| Business Risk | Pearson Correlation | .560 | .027 | .463 | .233 | .837 | .147 | 1 |
| | Sig. (2-tailed) | .016 | .914 | .053 | .353 | .000 | .560 | |

Therefore, at 5% level of significance, it can be inferred that cash flow rate ($p < 0.05$), tangibility ($p < 0.05$) and business risk ($p < 0.05$) all have significant effect on leverage for firms operating in the decline business life cycle.

4.7 Discussions

The capital structure of firms in the introduction phase of the business life cycle is largely influenced by cash flow rate and business risks. Frielinghaus et al, (2005) pointed the companies at the birth stage stages will exhibit high business risk and will avoid financial risk contrary to firms in prime and mature stages that will be able to absorb the extra risk that comes with debt financing. Firms in the declining life stages experienced an increase in business risk and would need to avoid more debt.

In the growth phase of the business life cycle, the cash flow rate and tangibility determine the capital structure of such firms. A study was conducted on corporate life cycle and how it influences the CS of an entity by Pinková and Kamínková (2013) where it was established that there exists a relationship between the BLC and the CS of the firm.

Similarly, the capital structure of firms in the mature business life cycle is significantly determined by cash flow rate and tangibility. Maurizio et al. (2011) noted that firms would consume debt as they set out and later once they have matured they will tend to use less debt and go for internal sources. At the same time, the CS of firms operating in the shakeout phase of the life cycle is significantly influenced by cash flow rate. The same case applies with firms operating in the decline phase where cash flow rate was found to have a significant effect on CS of the firms operating in the decline business life cycle. Gort and Klepper (1982) noted that in the declining stage, the market reduces and this is caused by innovations which tend to replace the products with mature tendencies. Here both profitability and output are on a downward trend.

The comparison of the five phases of lifecycle yields the following results. First, cash flow rate is a significant variable predicting leverage (capital structure) of the firms across the entire phases of the lifecycles. In other words, profitability will determine the level of leverage of the firm as it moves through its lifecycle phases. Secondly, it can be shown that the age, size and ownership structure all have significant influence on leverage as the firm moves across its lifecycle.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter is set out to provide a summary of the findings from the analysis of the secondary data that was gathered over a six year time horizon. Besides the summary, the chapter also has conclusions and the recommendations as informed by the key results of the analysis. The limitations as well as areas that require further research are also discussed in this chapter.

5.2 Summary of the Findings

An analysis of the interaction between CS and BLC was conducted. Capital structure was operationalized into leverage while business life cycle was operationalized into five key phases as determined by cash flow patterns referred to as Signage as suggested by Dickinson (2011). The study gathered information from cash flow statements on operating, investing as well as financing activities to classify the firms into respective business life cycles. The study considered a six year time horizon stretching from 2013 all through to 2018. The rationale for use of this period was that information was readily available that helped in the process of analysis of the findings. In total, 65 firms were targeted by the study within this period. However, information was readily available from 50 firms thus a total of 11 firms were excluded from the analysis. The key reason attributed to exclusion of some of these firms from the analysis was non availability and incomplete data that could not support the analysis of the findings.

Introduction was the first business life cycle that the study considered. A total of four firms were clustered under introduction business life cycle. Correlation analysis was utilized to achieve this objective. It was shown that cash flow rate and business risk are two critical variables influencing leverage of firms operating in the introduction phase of their business lifecycles.

The study also considered growth as the second BLC as determined by the patterns of the cash flows. The study classified 14 firms as operating in growth as their business life cycles. From the results, the value of R was relatively high indicating that there exists a close link between growth business life cycle and the firm's CS. The ANOVA results indicate that the overall model used was significant and thus suitable for predicting how growth BLC influences CS of the firm. The significance as determined by p-values indicated that cash flow rate and tangibility have significant effect on financial leverage of the firms operating in their growth phases of the business life cycles.

Mature business lifecycle was also considered by the study where from the targeted firms, 23 of them were clustered as operating in this life cycle. The model summary in this analysis was supported by a high value of R, showing that the mature BLC strongly influence the CS of the firm. The ANOVA results gave a very high value of F calculated which imply that significant study model was used in the study. At 5%, it was shown that cash flow rate and tangibility are significant factors influencing leverage of firms operating in the mature business life cycle.

The study further considered Shakeout as another business life cycle that firms commonly go through. The study clustered 6 firms as operating within this shakeout phase of the life cycle. The results of the model summary gave a high value of R; an indication that Shake out phase of the business life cycle strongly influences the CS of the firm. On the basis of the level of significance shown as 0.05 (5%), it was noted that only cash flow is significant factor affecting leverage of the firm that is operating in the shakeout phase of the BLC.

The last cycle that the study focused on was the decline life cycle of the business. A total of three firms were clustered as operating under the decline life cycle. The study further established that cash flow rate, tangibility and business risk all have significant effect on leverage for firms operating in the decline business life cycle

5.3 Conclusion

Business life cycle has been shown an important variable influencing the CS of any firms. It has also been shown that firms operating in different life cycles do exhibit different capital structure features and attributes and choices including whether to use too much debts or more equities and less of debts. The pattern and movement of the cash flows of the firm determines the type of life cycle that the business can be classified under. The broad clusters of business life cycles that firms can operate in include the introduction, growth, maturity, shake out as well as decline.

Firms operating in each of this business life cycle will exhibit different features and attributes. For instance, the capital structure of firms in the introduction phase of the BLC is largely influenced by cash flow rate and business risks. In the growth phase of the business life cycle, the cash flow rate and tangibility determine the CS of such

firms. Similarly, the CS of firms in the mature business life cycle is significantly determined by cash flow rate and tangibility. On the other hand, the capital structure of firms operating in the shakeout phase of the life cycle is significantly influenced by cash flow rate. The same case applies with firms operating in the decline phase where cash flow rate was found to have a significant effect on CS of the firms operating in the decline business life cycle.

5.4 Recommendations of the Study

Any firm that seeks to optimize its CS should first of all determine and establish its business life cycle. This is because different firms operating under different business life cycles have different capital structure components. The finance managers should there pay close attention on business life cycle as they make decisions regarding the use of debts or equities which are the key components of capital structure in any business entity.

Firms operating in the introduction phase of the business life cycle should give more emphasis on their cash flow rates and business risks since they significantly influence their capital structure decisions. For firms operating in the growth phase of the business life cycle, the Finance Managers should place more emphasis on cash flow rates as well as the degree of tangibility of the assets in place. For firms in the shake out as well as decline business life cycles, more emphasis should be placed on cash flow rate since it has significant influence on capital structure.

5.5 Limitations of the Study

The study was limited to listed firms in Kenyan context. More specifically, the study focused on 65 firms listed at the NSE. From all these listed firms, complete information for analysis of the results was readily available from 50 firms. The study looked at business life cycle and its interaction with CS of an entity.

The study was conducted with the use of information obtained from auxiliary sources. The study considered a six year time frame from 2013 all through to 2018. The rationale for use of this period was that information was readily available and it was the most current. The choice of use of information from auxiliary sources was because it was less time consuming.

5.6 Areas for Further Research

Further research is required to corroborate the findings on the interaction between business life cycle and other aspects like the ability of the firm to perform financially apart from its CS. Future studies should also be conducted in firms operating in different contexts for instance the listed firms operating at the East Africa Security Exchange. The key emphasis of future studies should also be on firms operating in specific segments and bourses in the security exchange unlike focusing on the entire listed firms.

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APPENDICES

Appendix I: Listed Firms In Kenya

1. Eaagads Ltd
2. Kapchorua Tea Co. Ltd
3. Kakuzi
4. Limuru Tea Co. Ltd
5. Rea Vipingo Plantations Ltd
6. Sasini Ltd
7. Williamson Tea Kenya Ltd
8. Car and General (K) Ltd
9. Barclays Bank Ltd
10. Stanbic Holdings Plc
11. I&M Holdings Ltd
12. Diamond Trust Bank Kenya Ltd
13. HF Group Ltd
14. KCB Group Ltd
15. National Bank of Kenya Ltd
16. NIC Group PLC
17. Standard Chartered Bank Ltd
18. Equity Group Holdings
19. The Co-operative Bank of Kenya Ltd

20. Express Ltd
21. Sameer Africa PLC
22. Kenya Airways Ltd
23. Nation Media Group
24. Standard Group Ltd
25. TPS Eastern Africa (Serena) Ltd
26. Scangroup Ltd
27. Uchumi Supermarket Ltd
28. Longhorn Publishers Ltd
29. Atlas Development and Support Services
30. Deacons (East Africa) Plc
31. Nairobi Business Ventures Ltd
32. Athi River Mining
33. Bamburi Cement Ltd
34. Crown Paints Kenya PLC.
35. E.A.Cables Ltd
36. E.A.Portland Cement Ltd
37. KenolKobil Ltd
38. Total Kenya Ltd
39. KenGen Ltd
40. Kenya Power & Lighting Co Ltd
41. Umeme Ltd
42. Jubilee Holdings Ltd

43. Sanlam Kenya PLC
44. Kenya Re-Insurance Corporation Ltd
45. Liberty Kenya Holdings Ltd
46. Britam Holdings Ltd
47. CIC Insurance Group Ltd
48. Olympia Capital Holdings ltd
49. Centum Investment Co Ltd
50. Trans-Century Ltd
51. Home Afrika Ltd
52. Kurwitu Ventures
53. Nairobi Securities Exchange Ltd
54. B.O.C Kenya Ltd
55. British American Tobacco Kenya Ltd
56. Carbacid Investments Ltd
57. East African Breweries Ltd
58. Mumias Sugar Co. Ltd
59. Unga Group Ltd
60. Eveready East Africa Ltd
61. Kenya Orchards Ltd
62. Flame Tree Group Holdings Ltd
63. Safaricom PLC

64. Stanlib Fahari I-REIT
65. New Gold Issuer (RP) Ltd

Source; NSE (2018)

Appendix II: Data Collection Sheet

| Year | Debts | Equity | Total Assets | Capital held by managers/govt | Earnings | Age of firm |
|-------------|--------------|---------------|-------------------------|--|-----------------|------------------------|
| 2013 | | | | | | |
| 2014 | | | | | | |
| 2015 | | | | | | |
| 2016 | | | | | | |
| 2017 | | | | | | |
| 2018 | | | | | | |

Appendix III: Raw Data On Cash Flow

| Firm | OPERATING | INVESTING | FINANCING | Business Life Cycle |
|------------------------------|-----------|-------------|-----------|---------------------|
| B O C Kenya | 127289.5 | -77904.3333 | -102183 | Mature |
| Carbacid Investments | 330657.3 | -142757 | -100783 | Mature |
| Crown Paints Kenya | -13252.7 | -234301.5 | 253800 | Introduction |
| Flame Tree Group Holdings | 72135 | -75236 | -41321.5 | Mature |
| BAT Kenya | 4542720 | -761682.667 | -3775367 | Mature |
| East African Breweries | 39961.83 | 5258798.333 | -5059610 | Shakeout |
| Eveready East Africa | -71522.8 | 180041.8333 | -68793.8 | Decline |
| Kakuzi | 635465 | -438728.833 | -95550 | Mature |
| Kapchorua Tea Company | 47799.33 | -5073.83333 | -21108.3 | Mature |
| Mumias Sugar Co | -540040 | -361899.167 | 654902.2 | Introduction |
| Sameer Africa | 29929.83 | -128074.167 | -24745.2 | Mature |
| Sasini | 43771.17 | 151748.8333 | -208985 | Shakeout |
| Unga Group | 569199.5 | -460625.333 | 11780.17 | Growth |
| Car & General (K) | 202955.8 | -122235.667 | -85783 | Mature |
| Kenya Airways | 2743167 | -23933166.7 | 19335000 | Growth |
| Longhorn Publishers | 58871.17 | -95173.3333 | 103863.2 | Growth |
| Nation Media Group | 2070200 | -284500 | -1189200 | Mature |
| Standard Group | 343843.7 | -416239 | 93197 | Growth |
| TPS Eastern Africa | 671550 | -876963 | 93663.5 | Growth |
| WPP Scangroup | 352111.3 | 138366.3333 | 35300.17 | Shakeout |
| ARM Cement | 135663.7 | -2458374.83 | 829946.3 | Growth |
| Bamburi Cement | 4848833 | -2499000 | -2128000 | Mature |
| East African Cables | 132075.2 | -145612.667 | 77084 | Growth |
| East African Portland Cement | -47263.5 | -242625.667 | 184273.3 | Introduction |
| Olympia Capital Holdings | 23804.67 | -2009 | -33868.5 | Mature |
| KenolKobil | 2597807 | -483141.167 | -1630321 | Mature |
| Total Kenya | 4060605 | -1481774.67 | -616964 | Mature |
| Safaricom | 64677346 | -34237287.8 | -3E+07 | Mature |

| | | | | |
|-------------------------------|----------|-------------|----------|--------------|
| KenGen Company | 17927001 | -28819985.3 | 11379153 | Growth |
| Kenya Power & Lighting Co | 24129435 | -37803537 | 12272313 | Growth |
| Umeme | 2.37E+08 | -89064833.3 | 18882000 | Growth |
| Barclays Bank of Kenya | -4398000 | 1749166.667 | -4963500 | Decline |
| Britam (Kenya) | 4616965 | -4544485.5 | 698773.8 | Growth |
| Centum Investment Co | 963274.8 | -3440990.83 | 3241746 | Growth |
| CfC Stanbic Holdings | 15507136 | -4514368.33 | -1646299 | Mature |
| CIC Insurance Group | 756946.3 | 153159 | -474462 | Shakeout |
| Co-operative Bank of Kenya | 11950063 | -9921838.5 | 120926.8 | Growth |
| Diamond Trust Bank Kenya | 1609082 | 3317730.5 | 2344257 | Shakeout |
| Equity Group | 27489000 | -24175500 | -5383000 | Mature |
| Home Afrika | -9.8E+07 | 1235196.333 | 46425742 | Decline |
| Housing Finance Co Kenya | 293594.5 | -646273.667 | -339304 | Mature |
| I&M Holdings | 5879909 | -1842836.5 | 629064.3 | Growth |
| Jubilee Holdings | 3321848 | -675814.833 | -751031 | Mature |
| KCB Group | 8695795 | -4375553 | -4901131 | Mature |
| Kenya Re | 1955640 | -1254217.33 | -478297 | Mature |
| Liberty Kenya Holdings | 1252903 | -835107 | -282966 | Mature |
| Nairobi Securities Exchange | 135790.8 | -37285.8333 | -33811 | Mature |
| National Bank of Kenya | 239460.5 | -865780.667 | -157064 | Mature |
| Sanlam Kenya | -743493 | -11458.5 | 459300.8 | Introduction |
| Standard Chartered Bank Kenya | 11519992 | 68004.83333 | -5722552 | Shakeout |