CAPITAL BUDGETING PRACTICES OF KENYA’S 2008 TOP 100 MID- SIZED COMPANIES

BY

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UNITED STATES INTERNATIONAL UNIVERSITY AFRICA

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A Project Report Submitted to the Chandaria School of Business in Partial fulfillment of the Requirement for the Degree in Masters in Business Administration

UNITED STATES INTERNATIONAL UNIVERSITY AFRICA

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STUDENT’S DECLARATION

I, the undersigned, declare that this is my original work and it has not been submitted to any other college, institution or university other than the United States International University Africa in Nairobi for academic credit.

Signed: ___________________________       Date: ___________________________

Philip Karanja Chege (ID 624547)

This project has been presented for examination with the approval as the appointed supervisor.

Signed: ___________________________       Date: ___________________________

Professor Joseph Kimura

Signed: ___________________________       Date: ___________________________

Dean, Chandaria School of Business
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ABSTRACT

The study forms a part of a lengthy tradition of surveys of industry practice on capital budgeting. Capital budgeting is one of the most important decisions that face the financial manager (as well as other senior managers). Using a sample survey, this study sought to identify the capital budgeting practices commonly used by the 2008 Top 100 mid-sized Companies in Kenya. This study specifically sought to also address the following research questions: the most popular methods of capital budgeting evaluation techniques used by the Top 100 companies; the most prevalent methods used by the Top 100 companies to determine the cost of capital and any other factors used financial officers in making capital budgeting decisions.

The research design used is exploratory in nature. The sample frame was the list of 2008 Top 100 Mid-sized Companies as surveyed by KPMG Kenya and Nation Media Group (‘Top 100 Survey’). The population comprised the one hundred mid-sized Companies and the sample size was thirty. To identify the sample, stratified probability sampling technique was applied. A self-administered questionnaire was used to collect data on which a quantitative analysis using standard descriptive statistics was applied. MS Excel program was used to analyze the raw data, which was then presented using graphs and tables.

This study differs from its predecessors in several important respects. First, it is the first one to attempt to uncover capital budgeting practices of Kenya’s Top 100 medium-sized companies. Another important difference is that existing published evidence is usually based on a large sample of firms, often covering a wide array of topics, and as such provides no opportunity to explore subtleties of the subject topic. In contrast, this study used a carefully chosen group of the Top 100 medium sized companies in Kenya and collected data from their financial officers.

The findings of this research demonstrate that current practice of the Top 100 companies surveyed reflects the recommendations of corporate finance texts in many aspects. The most preferred method used in capital budgeting decisions is net present value (NPV) and some instances companies surveyed used more than one technique including discounted payback and payback methods as suitable alternatives. The project cash flows are discounted at the weighted average cost of capital (WACC) computed by the company. The WACC is based on target weights for debt and equity. The cost of debt was adjusted to
allow for interest tax shields, but only by a minority of the companies surveyed. The discount rate is reviewed regularly, at least annually, and the inputs used in the calculation are adjusted over time. The capital asset pricing model (CAPM) is the most preferred asset pricing model in practice, despite academic criticism and the development of alternative multifactor asset pricing models. The study also revealed that in some instances, managers do not use formal capital budgeting techniques instead relying on their judgment in cases where capital budgeting are urgent and depending on whether routine or one-off.

Nevertheless, this study faced a number of limitations that and the researcher has suggested areas for future in-depth investigation so as to update the knowledge of the practices of Top 100 and identify gaps between theory and practice besides suggesting areas for future research. As the areas include probing the specific weightings allocated to debt and equity and the quality of information used for capital budgeting.
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To the management and staff of USIU, I give my gratitude for the support accorded me while studying at the institution. To all my lecturers, I appreciate the knowledge freely shared and the delivery of your lectures. I particularly would like to appreciate Dr. Amos Njuguna, Associate Professor in the School of Business, USIU, who believed in me enough to push for nothing but the best.

And last but not least, to my family and friends, thank you for the support and encouragement. I particularly wish to single out my wife, Patriciah Nderitu, without whose encouragement and understanding it would have been impossible for me to finish this work.

May God bless you all.

Philip Karanja

DEDICATION

This study is dedicated to my late father, Peter Chege, who taught me that that even the largest task can be accomplished if it is done one step at a time. It is also dedicated to my mother, Tabitha Wanjiku, who believes that the world is mine to conquer.
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<tr>
<td>BLCI</td>
<td>Business Leaders Confidence Index</td>
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CHAPTER ONE

1.0 INTRODUCTION

1.1 Background of the Problem

Morgan (2008), defines capital budgeting as a procedure of planning expenditures incurred on assets with one year or more cash flow projections. According to Bierman and Smidt (2012) capital budgeting is a many-sided activity that includes searching for new and more profitable investment proposals while investigating engineering and marketing considerations to predict the consequences of accepting the investment and making economic analyses to determine the profit potential of each investment proposal. The various applications that make good use of the process include launching of a new product in the market or the purchase of new equipment, investments in property, research and development projects and large advertising campaigns (Morgan, 2008). It is businesses’ preference to intricately study a project prior to actualization, considering the weight of the impact on the company’s financial performance.

A major theoretical developments in capital budgeting have been developed over the last several decades into corporate practice since the publication of Sharpe's (1964) Capital Asset Pricing Model (CAPM). For Graham and Harvey (2001) the adoption of the CAPM in the practice of capital budgeting has been widespread as evidenced by American researchers. While the CAPM was being increasingly applied in practice, at least in the US, it has also experienced academic attack (Fama and French, 1992). Concurrently, new approaches to asset pricing and capital budgeting have sprouted. Copeland and Antikarov (2001) observe that developments in real options, for instance, have reached the textbook level; however relatively little is known about the effects of these changes on capital budgeting traditions.

Several surveys on capital budgeting practice have been conducted in other parts of the world, though little evidence of the same is available in Kenya. For instance, studies conducted for Australian firms include those by McMahon (1981), Lilleyman (1984), Freeman and Hobbes (1991) and Kester, et al (1999) confirms that a range of issues such as which capital budgeting techniques were used, how firms ranked the importance of these techniques, and how discount rates were determined has also been covered.
Two prominent studies; Graham (2001) that considered how finance officers make capital budgeting and capital structure decisions and Ryan (2002) base their study on capital budgeting practices of Fortune 1000 companies in the United States of America.

Moreover, Brigham and Houston (1998) observed that the idea behind capital budgeting is that firms are truly profitable and create value if and only if their income exceeds the cost of all capital they use to finance operations. They add that a firm’s cost of capital is affected by its financing and investment policies. However, some determinants of the cost of capital are beyond the firm’s control. Included in this category are the level of the interest rates in the economy, tax policies and the firm’s regulatory environment Brigham et al., 1998.

Over the past four decades, financial research has recorded how business use capital management methods and how large corporations determine the cost of capital used in capital budgeting decisions (Miller, 1960). Financial managers and academics have not been in full agreement as to the choice of the best capital budgeting method. According to Miller (1960), Ryan and Ryan (2002) payback technique is the most preferred method, while Istvan (1961) reports a preference for accounting rate of return. Early studies generally report discounted cash flow models to be the least popular capital budgeting methods and this might be attributed to the lack of financial sophistication and limited use of computer technology in that era (Istvan, 1961). It has thus become useful for finance academics to consider differences between theory and practice as a reason to revisit the theory.

A more recent international survey indicates that among companies from six Asia Pacific countries confirmed that the rate of CAPM usage was significantly high in Asia Pacific countries surveyed covering Hong Kong, Malaysia, Indonesia, Singapore and the Philippines (Kester et al., 1999).

A good number of capital budgeting surveys have been conducted overseas and found that discounted cash flow (DCF) based techniques especially internal rate of return (IRR) and net present value (NPV) were dominant and the CAPM was the most popular approach in estimating the cost of capital (Payne et al., 2000). Graham and Harvey (2001) also found that IRR and NPV were the most frequently used capital budgeting techniques. Other techniques such as the payback period were less popular, but were still being used by a
majority of companies (Arnold and Hatzopoulos, 2000) whereas Block (1997) found that
the payback method was preferred by small firms.

Kenya's Top 100 mid-sized companies Survey (‘Top 100 Survey’) was a project initiated
by KPMG Kenya in conjunction with Nation Media Group. The Survey endeavors to
ascertain Kenya's fastest growing medium sized companies with a view of showcasing
business excellence and highlight some of the country's most successful entrepreneurship
scenarios (KPMG, 2009).

According to KPMG (2009), a Top 100 Mid-sized Company is one with ranking ahead of
its peers in terms of profit growth, revenue growth, returns to shareholders and cash
generation/liquidity. A Top 100 company is characterized by successful progressive growth
in market position with respect to the industries in which it operates and over time,
consequently yielding returns for its shareholders and a fairly sound financial position.

The KPMG report further indicates that in the 2008 Kenya Top 100 Company Survey, a
total of 419 midsized companies responded. The businesses had significant foreign
presence through in-country operations and exports (Waititu, 2008). Moreover, the majority
are largely owner managed (86%) with two thirds of these managers being over 40 years
old, 88% have a guiding mission statement and only 16% of them plan ‘long-term’ (5 years)
while 36% have midterm plans (3 years). Mid-sized companies demonstrate a significantly
higher business confidence compared to large companies (Waititu, 2008). The Business
Leaders Confidence Index (BLCI) measures Business Confidence on a scale of 0 to 100,
where 0 represents no confidence at all and 100 represents absolute confidence (Harris and
Ghauri, 2000).

1.2 Statement of the Problem
Several surveys on capital budgeting practice have been conducted in other parts of the
world. Studies conducted for Australian firms include Freeman and Hobbes (1991) and
Kester, et al. (1999). In the two surveys, a wide range of issues on capital budgeting
techniques were surveyed including, how firms ranked the importance of these techniques,
and how discount rates were determined. In the United States, two prominent studies
include Graham (2001) that considered how finance officers make capital budgeting and
capital structure issues and Ryan (2002) which focused on capital budgeting practices of
Fortune 1000 companies.
According to Graham and Harvey, (2001) the American evidence suggests that the adoption of the CAPM in the practice of capital budgeting has been widespread. Despite this being one of the favorite topics in collegiate finance in Kenya, there are few studies showing how capital budgeting has permeated into corporate Kenya.

In the United States, two prominent studies include Graham (2001) that considered how finance officers make capital budgeting and capital structure issues and Ryan (2002) which focused on capital budgeting practices of Fortune 1000 companies. In Kenya, a similar research on the Top 100 Companies would give valuable insights into the factors that finance managers consider when making capital budgeting decisions.

In Canada, Payne, Heath and Gale (1999) carried out survey in US and Canadian companies that compared the capital budgeting practice and found that DCF methods were very dominant in both countries. However, in respect to estimating the cost of capital, WACC was more popular in the US than in Canada where managers relied more on personal judgment and experience of the personnel than did their US counterparts. This study will explore whether there are systematic relationships between company financial choices and managerial factors including the extent of top management’s stock ownership, age, tenure, and education of the Chief Executive Officers (CEO).

This study seeks to bridge the knowledge gap by unveiling popular capital budgeting evaluation techniques and methods used to determine the cost capital by Top 100 companies. The research will also seek to explore the most important factors that influence capital budgeting.

1.3 Purpose of the Study
The purpose of this study is to identify the most popular capital budgeting practices that are prevalent amongst Kenya’s Top 100 companies.

1.4 Research Questions
This research seeks to address the following questions:

1.4.1 What are the most popular methods of capital budgeting evaluation techniques used by the Top 100 Companies in Kenya

1.4.2 What are the most prevalent methods used by the Top 100 Mid-sized companies to determine the cost of capital?
1.4.3 What factors do financial officers of these organizations consider while making capital budgeting decisions?

1.5 Importance of the Study
Capital budgeting decisions are crucial to a firm's success for several reasons. This study is important in the following ways to the following players in Kenya’s company, small and medium enterprises.

1.5.1 Finance Practitioners
The survey seeks to identify the most prevalent capital budgeting practices used by top 100 mid-sized companies in Kenya. In highlighting these practices, finance practitioners in Kenyan companies will find it worthwhile to observe how other companies evaluate capital budgeting decisions and perhaps modify or enrich their own practices.

1.5.2 Company Managers
The study will also enable management to explore whether and how these capital budgeting policies are related to company performance. More generally, it will pave way for a richer understanding of corporate decision-making by analyzing the management responses in the relation to various company characteristics, such as size, price to earnings (P/E) ratio, credit rating, leverage, capital budgeting, dividend policy, and industry performance.

1.5.3 Shareholders
The study will also focus on systematic relationships between corporate financial choices and managerial factors, such as the extent of top management’s stock ownership, age, tenure, and education of the key financial decision makers. This is closely related to the agency problem and in effect is related to shareholders wealth since company ownership directly affects the choices made in running the company.

1.5.4 Academics
The extent to which corporate finance academic theory and financial capital budgeting practice differ or conform in Kenya will be put to test. This should in turn be used to enrich the underperforming areas with the objective of closing this gap to ensure the academic world produce finance experts who will excel in the business world by reducing the gap between theory and practice.
1.6 Scope of the Study
This study focuses on Kenya’s top 100 mid-sized companies. Though the study respondents’ were mainly CFOs, a number of questions were investigated about such as the characteristics of the chief executive officers. This assumes that CEOs are the ultimate decision-makers and that CFOs act as agents for the CEOs. The study shall focus on major capital budgeting decisions made in the last five years to make inferences.

1.7 Definition of Terms
1.7.1 Beta.
Brigham and Houston (1998) define Beta is a measure of the volatility, or systematic risk, of a security or a portfolio in comparison to the market as a whole. Beta is used in the capital asset pricing model (CAPM), a model that calculates the expected return of an asset based on its beta and expected market returns. Beta is also proxy for the market risks that shareholders have to consider.

1.7.2 Capital Asset Pricing Model (CAPM)
The CAPM model, developed by Modigliani and Miller in 1958 (Modigliani, F and Miller, M., 1958), describes the relationship between risk and expected return and is used in the pricing of risky securities.

\[ \bar{r}_a = r_f + \beta_a (r_m - r_f) \]

where

- \( r_f \) = risk free rate
- \( \beta_a \) = beta of the security
- \( r_m \) = expected market return

The actual ideology supporting CAPM is that investors need to be compensated for risk and time value of money. The time value of money is represented by the risk-free (RF) rate in the formula and guarantees the investors of compensation when they place any investment over a period of time.

The remaining part of the formula is a representation of risk and calculates the amount of compensation the investor needs for incurring an additional risk. This is calculated by
considering a risk measure (beta) that compares to the market premium (Rm-rf) and the returns of the asset to the market over a period of time (Gitman and Vandenberg, 2000).

1.7.3 Capital Budgeting

Capital budgeting can be defined as the process of determining how a firm should allocate scarce capital resources to available long-term investment opportunities (Mayes, 2004). There are many options to invest in, and by using capital budgeting, a firm can find the best potential investment.

1.7.4 Discounted Cash Flow (DCF) Analysis

This refers to a financial modeling tool that uses projected cash flows generated by an investment. DCF analysis calculates value based on all expected cash flows related to (a) the investment or project, (b) the life of the investment, and (c) the opportunity cost of investing in a project of similar risk profile represented by the discount rate (Salvatore, 1995).

1.7.5 Discount Rate

The discount rate represents the opportunity cost of capital. A discount rate is the desired return that could be represented by (a) the specific return an investor expects for an alternative investment, (b) the interest rate on debt, or (c) another interest rate. The discount rate reflects the time value of money, and uncertainty and risk (Salvatore, 1995).

1.7.6 Internal Rate of Return (IRR)

IRR refers to the average annual percentage return expected from a project, where the sum of the discounted cash inflows over its life is equal to the sum of the discounted cash outflows. The IRR therefore represents the discount rate that results in a zero NPV of cash flows (Brigham and Houston, 1998).

1.7.7 Net Present Value (NPV)

This refers to a single value that represents the difference between the sum of the expected discounted cash inflows and outflows attributable to a capital investment or a project, using a discount rate that properly reflects the relevant risks of those cash flows (Reilly and Brown, 2003).
1.7.8 Real Options

Real options represent the right, but not the obligation, to take different courses of action with respect to real assets (rather than financial instruments). Where discounted cash flow is based on a deterministic cash flow projection, with little allowance for management flexibility, real options introduce flexibility to defer, abandon, scale back, or expand investments. They should be considered as part of an evolutionary process to improve the valuation of investments and the allocation of capital (Reilly and Brown, 2003).

1.7.9 Required Rate of Return

A firm’s required rate of return is its hurdle rate. It is so called because all investments must earn a high enough rate to clear the hurdle, or required rate of return. If an investment does not clear the hurdle rate, then it will not cover the investment’s cost of financing.

The minimum required rate of return is also known as a firm’s cost of capital (Mayes 2004).

1.7.10 Weighted Average Cost of Capital (WACC)

The opportunity cost to all capital providers (debt and equity) of investing in an alternative project of similar relevant risk profile, weighted by the project’s relative contribution to a company’s total capital, and calculated using market values of debt and equity (Salvatore, 1995).

1.8 Chapter Summary

This chapter has given an introduction on the nature, importance and implications capital budgeting theory. It has brought to light that capital budgeting is a critical managerial tool and an elaborate process that ensures company survival, growth and profitability.

The next chapter presents a literature review as per the three research questions; most popular methods of capital budgeting used by the Top 100 Companies in Kenya and the methods used to determine the cost of capital.

The final part will give a detailed analysis of the factors that financial managers consider in capital budgeting.

Chapter three provides the methodology of the study while chapter four presents an in-depth analysis and review of the research findings. Chapter five provides a summary of
discussions on the research findings draws conclusions and offers recommendations based on the major findings.
CHAPTER TWO

2.0 LITERATURE REVIEW

2.1 INTRODUCTION
This chapter commences with an in-depth exploration of the most popular capital budgeting practices used by firms in other parts of the world. It then proceeds to highlight the salient features of the various methods that firms use to make decisions of long-lived investments. The final part gives a detailed analysis of the strategic factors that financial managers consider in making optimal and feasible combination(s) of project(s) faced with resource constraints.

2.2 Popular Capital Budgeting Evaluation Techniques

2.2.1 Capital Budgeting Defined
Pandey (2005) asserts that capital expenditure includes all those expenditures which are expected to produce benefits to the firm exceeding one year, and encompasses both tangible and intangible assets. In practice, most companies follow the traditional definition, covering only expenditure on tangible fixed assets (Pandey, 2005). Capital expenditure results either in the acquisition of an asset or an improvement or extension to existing assets as result of additions to the earning capacity of that asset either by increasing the output or reducing the cost of production.

A capital expenditure is a strategic plan of cash for a project that has the purpose of yielding cash inflow over duration of time exceeding one year (Dayanada, 2002). Some of the instances of projects include plant and equipment, investments in property, research and development projects, large advertising campaigns, or any other project that demands capital expenditure and produces a future cash flow (Morgan, 2008). According to Ryan and Ryan (2002), company capital budgeting and cost of capital estimation are among the most important decisions made by the financial manager. In this process, it is crucial that management use accurate methods that will result in the maximization of shareholder wealth.

Pandey (2005) asserts that there are five phases of capital expenditure planning and control: identification or origination of investment opportunities, analysis of benefits and costs, evaluation of the net benefit, authorization for progressing and spending capital expenditures, and control of capital projects.
The available literature emphasizes the evaluation phase that of financial and economic evaluation of the investment proposals with Dayanada (2002) arguing that this is the most crucial and complex stages of capital He attributes two reasons for this bias; first, this phase is easily amenable to a structured, quantitative analysis. Secondly, academicians conjecture that it is at this stage, the decision makers evaluate whether the project is consistent to the truisms of maximizing shareholders wealth.

The goal of any firm is to maximize its shareholders value. This value is a function of a firm’s investment opportunities measured through its share price. The share price is based on the risk, return and magnitude of cash flows generated (Gitman, 2009). The investment decision itself relates to the capital structure of a company and it is also related to the long-term financing forms of capital.

2.2.2 Review of Prior Capital Budgeting Studies (1960 to 1999)
Over the past four decades, financial research has recorded how businesses use capital management methods and how corporations determine the cost of capital used in capital budgeting decisions. Financial managers and academics have not been in full agreement as to the choice of the best capital budgeting method. There is limited evidence of similar research on this topic in Kenya and thus research from overseas remains instrumental.

In Australia, capital budgeting surveys done by Truong, Partington and Peat (2008) and Freeman and Hobbes (1991) revealed the growing popularity of discounted cash flow (DCF) techniques and dependence on the weighted average cost of capital (WACC) as the discount rate. Freeman and Hobbes established that 75% of respondents reported using net present value (NPV) and 72% employ internal rate of return (IRR) technique. They also concluded that methods such as accounting rate of return, the payback period, or discounted payback were put in practice by a substantial number of companies. McMahon, Freeman and Hobbes both established that 62% of respondent firms used the weighted average cost of capital (WACC) to ascertain the hurdle rate used in the capital budgeting procedures. Thirty nine percent, 39%, of respondents however, said they relied on the cost of borrowing as the basis for the determination of the hurdle rate.

A survey undertaken by Kester et al. (1999) confirmed that DCF method was popular in Australia while the capital asset pricing model (CAPM) was popular among 73% of the companies surveyed. Further, they established that the rate at which CAPM was used was
significantly higher in Australia as compared with other Asia Pacific countries surveyed, which included Malaysia, the Philippines, Hong Kong, Indonesia and Singapore.

A good number of Capital budgeting surveys previously conducted concluded that DCF based techniques (IRR and NPV) were more common and that the CAPM was the most popular methodology used in the estimation capital cost (Ryan et al., 2002). Whereas Graham and Harvey (2001) found that NPV and IRR were the most frequent techniques used in capital budgeting. Other techniques such as the payback period were not commonly used, though were still being used by some of the companies (McLaney et al. 2004).

Block (1997) established that the payback technique was popular among small firms. Despite the advocacy by academicians that payback could supplement and overcome the shortcomings of DCF methods, real practice options techniques were relatively less popular with ranking eight among twelve methods considered by Graham and Harvey (2001). Graham and Harvey in their research established that the CAPM was the most popular technique used in estimation of the cost of equity with 73% of respondents depending mainly on the CAPM. In Comparison to two previous surveys of US companies, Gitman and Vandenberg (2000), observed that CAPM had gained popularity. The capital budgeting practice in US firms increased with academic prescriptions as observed by Ryan and Ryan (2002).

2.2.3 Review of Current Capital Budgeting Studies (2000 and Beyond)

A survey of UK companies revealed DCF techniques were dominant as described by Arnold and Hatzopoulos (2000); 96%, of the respondents they surveyed used either NPV or IRR techniques. A recent survey by McLaney et al. (2004) in UK revealed that the CAPM was the most common model employed in estimation of the cost of capital, however 47% of the surveyed companies as compared with 73% using CAPM as reported by Graham and Harvey (2001). McLaney et al., (2004), also established that 53% of the companies in UK used the WACC for project appraisal while 67% took tax effects into account while estimating the cost of capital.

Another European survey done by Brounen, De Jong and Koedijk (2004) established decreased level of CAPM (34% to 56%) usage relative to the outcomes from other countries as studied by other researchers such as Kester et al. (1999) and Graham and Harvey (2001), who reported a 70% usage of above. The European use of capital budgeting methods was
very different from the one reported in other regions. The use of payback period technique was more common as compared with the IRR and NPV methods. The study also showed that real options technique was more popular than what was found by Graham and Harvey, with 29% to 53% of companies in European countries embracing real options in project evaluation.

In Canada, Payne, Heath and Gale (1999) conducted a survey comparing the capital budgeting practice of Canadian and US companies and ascertained that DCF techniques were popular in both countries. In reference to estimation of the cost of capital, they found that WACC was more dominant in the US than in Canada, and Canadian managers seemed to depend more on personal judgment coupled with experience than did their US counterparts. These surveys demonstrate that the DCF method is gaining popularity in making capital budgeting decisions in most public firms. They nevertheless noted that rule of thumb method in decision making continues to enjoy substantial use. The WACC is commonly used as a discount rate and the CAPM is the most common method used during estimation of cost of equity (Pandey, 2005).

Brounen et al.,(2004) asserts that these practices are appropriate considering the prescriptions of corporate finance textbooks however, the shortcomings of DCF method are well documented. Brealey, Myers and Allen (2005) highlight on DCF techniques limitation to account for the value made by the elastic nature of management decisions, and the predicament of applying a constant discount rate throughout the life of a project are commonly mentioned. The real options approach has therefore been used to mitigate the shortcomings encountered by the other techniques. One would anticipate an increase in the number of firms employing real options techniques, particularly in sectors such as information technology or biotechnology where significance is attached to the value of research and development options, or in the natural resource field where flexibility can be particularly of value as explained further below.

Following the studies done by Brennan and Schwartz in1985, a greater percentage of the early real options literature focused on natural resource applications. They further assert that there is minimal survey evidence on the use of real options. Notable exceptions are Graham and Harvey (2001) and Brounen, De Jong and Koedijk (2004) who observed that many industries are embracing “real options thinking” especially in the energy sector, biotech industry, mining industries, among others.
Interestingly, throughout the literature, NPV has always trailed IRR in management preference according to Evans and Forbes (1993). Managers have argued that the perception of a percentage return is more easily understood and comparable than an absolute dollar value increase in shareholder wealth. Therefore, in the past, managers have chosen IRR over NPV. Evans and Forbes (1993) argue that managers’ view IRR as a more cognitively efficient measure of comparison. In a comparison to past studies, it is seen that managers are moving toward NPV as a method of choice, but not to the level of IRR.

Academics have long argued for the superiority of NPV over IRR for several other reasons (Ryan and Ryan, 2002). First, NPV presents the expected change in shareholder wealth given a set of projected cash flows and a discount rate. For mutually exclusive projects, there is some dispute over the appropriate method. Second, when cash flows come in over a longer time period, NPV assumes the intermediate term cash flows are reinvested at the cost of capital. Internal rate of return, on the other hand, assumes the intermediate term cash flows are reinvested at the IRR, which for any positive NPV project is higher than the cost of capital (Pandey, 2005). Finally, NPV is not sensitive to multiple sign changes in cash flows. It is a method that presents the expected dollar amount that shareholder wealth would increase or decrease upon the acceptance of a project.

Brealy & Meyers (2000) criticizes why many companies prefer to use the IRR rather than the NPV as an investment criterion. These authors explain the many pitfalls and difficulties related to the IRR as a criterion. Gitman (2009) argues that, on a theoretical basis, the NPV method is a better approach to capital budgeting, because the use of the NPV assumes that the future cash flows generated by an investment are reinvested at the company’s cost of capital. In practice, however, many investors tend to use the IRR criterion, because businesspeople are more concerned with rates of return than the actual rand value earned. Brigham and Gapenski (1996) point out those different evaluation methods provide different information, and for an investor to make the correct decision, it would be unwise to disregard the information inherent in any of the above methods.
2.3 Capital Budgeting Techniques

2.3.1 Capital Budgeting Under Certainty

In capital budgeting under certainty, Dayananda (2002) highlights that finance managers’ work is to evaluate projects guided by the following assumptions:

(i) Decision makers are rational; they are risk averse wealth maximizers;
(ii) The financial market is perfectly competitive and efficient; there are no taxes, transaction costs, or information costs;
(iii) The future is certain; outcomes of all decisions are known today with certainty.

This eliminates the risk element associated with the future cash flows. Capital budgeting or project evaluation under certainty is classified into two: discounted cash flow (DCF) and non-discounted cash flow (NDCF) techniques.

Discounted cash flow analysis considers the time value of money, based on the premise that (a) people prefer to receive goods and services now rather than later, and (b) investors prefer to receive money today, rather than the same amount in the future, i.e., one dollar (or other currency) today is worth more than one dollar tomorrow. An investor demands a rate of return even for a risk-less investment, as a reward for delayed repayment. Even the risk-free rate of interest is normally positive, because people attach a higher value to money available now rather than in the future (IFAC, 2008).

DCF analysis is appropriate for multi-period investments, i.e., where the expected benefit and costs arise over more than one period (IFAC, 2008). For such investments, DCF supports decision-making better than evaluating an investment using payback period or accounting (book) rate of return. DCF recognizes that an investment has cash flows throughout its expected life, and that cash flows in the early periods of an investment are more significant than later cash flows. Many organizations use several methods for evaluating capital investments, an acceptable practice so long as they only supplement a DCF approach.
2.3.2 Discounted Cash flow Techniques

2.3.2.1 Payback Technique

The payback measures the length of time it takes a company to recover in cash its initial investment (Brigham and Houston, 1998). This concept can also be explained as the duration it takes the project to generate cash equal to the investment and pay the company back. It is calculated by dividing the capital investment by the net annual cash flow. In cases where the net annual cash flow is not expected to be the same, the average of the net annual cash flows may be used.

According Shinoda (2010) the major limitation of using payback period as an investment criterion is that it may cause an organization to emphasize short payback periods too much, thereby ignoring the need to invest in long-term projects that could enhance its competitive position. Moreover the payback method (unless cash flows are discounted using the opportunity cost of capital) ignores both the time value of money and cash flows after the payback period (Shinoda, 2010). If the payback periods for two projects are the same, the payback period technique considers them equal as investments, even if one project generates most of its net cash inflows in its early years, while the other project generates most of its net cash inflows in the later years (IFAC, 2008).

2.3.2.2 Annual Rate of Return Method

The annual rate of return uses accrual-based net income to calculate a project’s expected profitability. The annual rate of return is compared to the company's required rate of return. The decision criterion is that should the annual rate of return is greater than the required rate of return, the project may be accepted. According to (Brigham and Houston, 1998), the higher the rate of return, the higher the project would be ranked.

The annual rate of return is a percentage calculated by dividing the annual net income expected by the average investment. Average investment is usually obtained by adding the beginning and ending project book values and dividing by two.

The accounting rate of return criterion also ignores the time value of money. Furthermore, this technique uses accounting numbers that depend on the organization’s choice of accounting procedures. This method uses net income rather than cash flows. Although net
income is a useful measure of profitability, the net cash flow is a better measure of an investment’s performance (IFAC, 2008).

2.3.2.3 Net Present Value
This method measures the excess of cash flows expected from an investment proposal (Reilly and Brown, 2003). These future cash flows are then discounted to determine their present value. These present values are then summed, to determine the NPV (Reilly et al., 2003). The NPV decision criterion is to accept all positive NPV projects in an unconstrained environment, or if projects are mutually exclusive, accept the one with the highest NPV. Both the NPV and IRR methods discount cash flow, although NPV is theoretically preferable according to IFAC (2008). IRR indicates a potential project’s annual average return on investment in percentage terms. For this reason, it can be useful in (a) communicating an analysis of investment choices to entrepreneurs and employees without financial expertise, and (b) facilitating decisions where the discount rate is uncertain. However, it can provide misleading results in certain contexts. Calculating the IRR requires identifying the discount rate that results in a zero NPV of cash flows.

For a listed company, using NPV as an aid to making decisions is typically consistent with the creation or maximization of shareholder value (or the market price of shares). Maximizing shareholder value implies that projects should be undertaken when the present value of the expected cash inflows exceeds the present value of the expected cash outflows. Any investment that demonstrates a positive expected NPV could contribute to shareholder value, because the risk- and time-adjusted expected cash inflows outweigh the expected cash outflows (IFAC, 2008).

2.3.2.4 Internal rate of return (IRR)

Reilly and Brown (2003) define the IRR as the discount rate that gives a net present value (NPV) of zero. It is a commonly used measure of investment efficiency. The IRR method will result in the same decision as the NPV method for independent (non-mutually exclusive) projects in an unconstrained environment, in the usual cases where a negative cash flow occurs at the start of the project, followed by all positive cash flows. In most realistic cases, all independent projects that have an IRR higher than the hurdle rate should be accepted. Nevertheless, for mutually exclusive projects, the decision rule of taking the
project with the highest IRR - which is often used - may select a project with a lower NPV (Reilly et al. 2003).

In some cases, several zero NPV discount rates may exist, so there is no unique IRR. The IRR exists and is unique if one or more years of net investment (negative cash flow) are followed by years of net revenues. But if the signs of the cash flows change more than once, there may be several IRRs. The IRR equation generally cannot be solved analytically but only via iterations.

2.3.2.5 Modified Internal Rate of Return (MIRR)

According to Reilly and Brown (2003), a major shortcoming of the IRR method is that it is misunderstood to convey the actual annual profitability of an investment. However, this is not the case because intermediate cash flows are almost never reinvested at the project's IRR; and, therefore, the actual rate of return is almost certainly going to be lower. Modified Internal Rate of Return (MIRR) is a variant of IRR that assumes that cash generated is re-invested at the cost of capital (usually the WACC).

Evans and Forbes (1993), affirms that despite a strong academic preference for NPV, surveys indicate that executives prefer IRR over NPV, although they should be used in concert and that in a budget-constrained environment, efficiency measures should be utilized to optimize the overall NPV of the firm. Some managers find it more appealing to evaluate investments in terms of percentage rates of return than dollars of NPV.

2.3.2.6 Equivalent Annuity Cost (EAC) Method

The equivalent annuity method expresses the NPV as an annualized cash flow by dividing it by the present value of the annuity factor (Sinclair, 2010). It is often used when assessing costs of specific projects that have the same cash inflows. In this case it is known as the equivalent annual cost (EAC) method and is the cost per year of owning and operating an asset over its entire lifespan. It is often used when comparing investment projects of unequal life spans. The use of the EAC method implies that the project will be replaced by an identical project.
Alternatively the chain method can be used together with NPV method under the assumption that the projects will be replaced with the equivalent cash flows each time (Reilly and Brown, 2003). To compare projects of unequal length, for instance 3 years and 4 years, the projects are chained together, i.e. four repetitions of the 3 year project are comparing to three repetitions of the 4 year project. Sinclair (2010) asserts that the chain method and the EAC method give mathematically equivalent answers. The assumption of the same cash flows for each link in the chain is essentially an assumption of nil inflation and therefore a real interest rate rather than a nominal interest rate is commonly used in the calculations.

2.3.2.7 Real Options
Real options analysis has become prominent since the 1970s as option pricing models have gotten more sophisticated and better understood. According to Brigham & Ehrhardt (2005), an option, is the right but not the obligation to take some action in the future. A real option has been defined as the right - but not the obligation - to undertake some business decision; typically the option to make, or abandon, a capital investment. For example, the opportunity to invest in the expansion of a firm’s factory, or alternatively to sell the factory, is a real option (Wikipedia, 2009). A real option has also been defined as an option or option-like feature embedded in a real investment opportunity (Harvey, 2004).

As opposed to discounted cash flow (DCF) techniques which were originally developed to value passive securities such as stocks and bonds - whereby once purchased, most investors have no influence over the cash flows the assets produce, real assets are not passive investments because managerial actions can influence their results, i.e. managers have the flexibility to sell the asset, invest further, wait and see or abandon the project entirely. Traditional approaches assume a static decision-making ability, whereas real options assume a dynamic series of future decisions where management has the flexibility to adapt given changes in the business environment (Mun, 2002).

In essence, therefore, real options provide a valuation of investment opportunities over which final decisions have yet to be made but which do not have to be made until the appropriate time. The value of waiting is a reflection of the costs associated with an irreversible investment, especially if there is an element of a sunk cost. Real option analysis recognizes the incremental (or additional) value arising from flexibility (Brigham &
It is important to note that real options only have value when costs are sunk and returns uncertain. In order to exercise a real option, one must pay the exercise price - the less you pay the better. So the option’s value increases with the ratio of cash flows (returns) to investment cost (exercise price).

**2.3.3 Capital Budgeting under Uncertainty**

Uncertainty refers to a situation in which the probability of outcomes is not known i.e., random variability for which it is not possible to specify the parameters of probability distributions (Brigham and Ehrhardt, 2005). Risk on the other hand is used to describe those situations in which the probabilities of all outcomes are known for example based on past records (Dayananda et al, 2005). Most decision makers are generally risk averse meaning they would prefer measures of risk that can be translated into measurable goals as their remuneration will most likely be on performance contracts.

In capital budgets that do not involve huge capital outlay, the only apparent risk is the probability of not achieving the projected target. However, for capital projects which involve large amounts of capital the risk exposure increases and a possibility of insolvency is real. Due to this reason, there is a lot of emphasis on mitigating against the effects of the downside risk.

In practice, risk assessment is mostly a subjective exercise. Schall, et al (2009) found that 4% of firms surveyed gave no consideration to risk, 60% assessed risk subjectively, and 36% used some quantitative analysis, mostly sensitivity analysis or Monte Carlo computer simulation of an opportunity’s cash flows. Other methods reported to account for risk were to adjust (increase) the discount rate. Nineteen percent, 19%, decrease the maximum acceptable payback period, 14%, use certainty equivalence, and 3%, employ utility theory. Gitman and Forrester found that 43% of the firms they surveyed increased the discount rate, 26% used expected values of cash flows, and 13% decreased the maximum acceptable payback period.

Kim and Farragher reported that Payback Period was used as a secondary measure by 39% of their 200 respondents from large industrial corporations. Pike found in 100 large industrial firms in the United Kingdom use Payback Period, shortening the maximum acceptable payback period, increasing the discount rate for risk, and sensitivity analysis still enjoy wide support.
Traditionally, the value of a project is determined by its NPV, which is equal to the sum of the discounted future cash flows, reduced by the required initial investment (Brealey and Myers, 1991). This NPV is derived on the assumption that the discounting rate and the future expected cash flows can be predicted with certainty. Once the NPV of a project has been identified, the company then makes a decision to accept or to reject the project depending on whether it’s within their budgetary allocations and if it creates value for the shareholders. However, cash flows from a capital intensive project will most likely differ from the projections.

2.4 Cost of Capital

Closely related to the question of the capital budgeting is the cost of capital. The cost of capital is an expected return that the provider of capital plans to earn on their investment (Modigliani and Miller, 1958). It comprises the cost of debt and cost of equity (Reilly and Brown, 2003). The cost of debt is simple to calculate, as it is composed of the rate of interest paid. In practice, the interest-rate paid by the company will comprise the risk-free rate plus a risk component, which itself incorporates a probable rate of default (and a recoverable amount upon default). For companies with similar risk or credit ratings, the interest rate is largely exogenous.

Firer, Jordan, Ross and Westerfield (2008) argue that a firm’s overall cost of capital will reflect the required return on the firm’s assets as a whole. Gitman (2009) describes the cost of capital as the rate of return that a company must earn on its project investments to maintain the project’s market value and to attract funds. Brigham and Gapenski (1996) stress that the overall cost of capital of a company is critically important for the following reasons:

(i) Maximizing the value of a company requires that the costs of all inputs, including capital, be minimized; and to minimize the cost of capital, one must be able to estimate it;

(ii) Capital budgeting decisions require an estimate of the cost of capital for discounting purposes.

Firer et al., (2008), affirms that the cost of equity is more challenging to calculate as equity does not pay a set return to its investors. Similar to the cost of debt, the cost of equity is
broadly defined as the risk-weighted projected return required by investors, where the return is largely unknown (Gitman, 2009). The cost of equity is therefore inferred by comparing the investment to other investments with similar risk profiles to determine the "market" cost of equity.

The discounted cash flow techniques are greatly affected by the discount rate, so selecting the proper rate - sometimes called the hurdle rate - is critical to making the right decision. The hurdle rate is the minimum acceptable return on an investment (Reilly and Brown, 2003). It should reflect the riskiness of the investment, typically measured by the volatility of cash flows, and must take into account the financing mix. According to Salvatore (1995), managers may use models such as the CAPM or the Arbitrage Pricing Theory (APT) to estimate a discount rate appropriate for each particular project, and use the weighted average cost of capital (WACC) to reflect the financing mix selected. Brigham et al. (1998) asserts that a common practice in choosing a discount rate for a project is to apply a WACC that applies to the entire firm, but a higher discount rate may be more appropriate when a project's risk is higher than the risk of the firm as a whole.

2.4.1 Capital Asset Pricing Model (CAPM)

The CAPM is used in finance to determine a theoretically appropriate price of an asset such as a security. This model was developed by Modigliani and Miller in 1958 (Modigliani, F and Miller, M., 1958). It is the expected return on equity according to the capital asset pricing model given thus:

\[ E_s = R_f + \beta_s (R_m - R_f) \]

Where:

\( E_s \) The expected return for a security

\( R_f \) The expected risk-free return in that market (government bond yield)

\( \beta_s \) The sensitivity to market risk for the security, beta

\( R_m \) The historical return of the stock market/equity market

\((R_m-R_f)\) The risk premium of market assets over risk free assets
This model takes into consideration not only the risk differential between common stocks of the firm and Government securities but also the risk differential between the common stock of the firm and the average common stock of all firms or broad-based market portfolio. The risk differential between the common stock of the firm and the common stock of all firms is given by the beta coefficient, $\beta_s$ (Salvatore, 1995).

### 2.4.2 Weighted Average Cost of Capital (WACC)

The Weighted Average Cost of Capital (WACC) is used to measure a firm's cost of capital. The total capital for a firm is the value of its equity plus the cost of its debt (the cost of debt should be continually updated as the cost of debt changes as a result of interest rate changes). Notice that the "equity" in the debt to equity ratio is the market value of all equity, not the shareholders' equity on the balance sheet. Calculation of WACC is an iterative procedure which requires estimation of the fair market value of equity capital.

### 2.4.3 Arbitrage Pricing Theory – APT

The asset pricing theory (APT) is model based on the idea that an asset's returns can be predicted using the relationship between that same asset and many common risk factors. Created in 1976 by Stephen Ross, this theory predicts a relationship between the returns of a portfolio and the returns of a single asset through a linear combination of many independent macro-economic variables (Brigham and Houston, 1998).

The arbitrage pricing theory (APT) describes the price where a mispriced asset is expected to be. It is often viewed as an alternative to the capital asset pricing model (CAPM), since the APT has more flexible assumption requirements. Whereas the CAPM formula requires the market's expected return, APT uses the risky asset's expected return and the risk premium of a number of macro-economic factors.

Arbitrageurs use the APT model to profit by taking advantage of mispriced securities. A mispriced security will have a price that differs from the theoretical price predicted by the model. By going short an overpriced security, while concurrently going long the portfolio the APT calculations were based on, the arbitrageur is in a position to make a theoretically risk-free profit.
2.5 Factors considered by Managers in Capital Budgeting Decisions

A fundamental question in the study of corporate finance is whether financial executives can increase the value of a business firm. Gitman (2009) explains that the key activities of a financial manager include performing financial analysis and planning, and making investment and financing decisions. The object of an investment or capital budgeting decision is to find real assets that are worth more than they cost, thus contributing to the maximization of the value of the business firm and creating value for shareholders in the process.

In capital budgeting, the management not only influences the choice of evaluation criteria and the cost of capital method to be used but also the planning cycle and the cash flows to be considered. Let us first consider the choice of capital budgeting technique.

2.5.1 Choice of Capital Budgeting Evaluation Technique

The choice of capital budgeting technique for most companies follow academic theory and use discounted cash flow (DCF) and net present value (NPV) techniques to evaluate new projects. However when it comes to making capital structure decisions, corporations appear to pay less attention to finance theory and rely instead on practical, informal rules of thumb.

According to a survey by John Graham and Campbell Harvey (2001), there is clear evidence that firm size significantly affects the practice of corporate finance. For example, large companies were much more likely to use net present value techniques, while small firms tended to rely on the payback criterion. And, providing some encouragement to proponents of academics’ trade-off model of capital structure a majority of large companies said they had “strict” or “somewhat strict” target debt ratios, whereas only a third of small firms claimed to have such targets.

While the payback period method and the accounting rate of return method are the easiest to compute, most accountants would prefer to look at the net present value and the internal rate of return. These methods take into consideration the greatest number of factors, and in particular, they are designed to allow for the time value of money. If the net present value is negative, or if the internal rate of return is less than the cost of borrowing, the project should be rejected as not financially feasible.

Giang et al.,(2000) assert that most companies did not rely on a single capital budgeting technique but employed a number of techniques in their evaluation process. Graham and
Harvey (2001) also affirm that CEO and firm characteristics allowed also influence whether managerial incentives or entrenchment affected the survey responses. They studied whether having an MBA affected the choices made by company executives. All in all, the variation in executive and company characteristics permitted a rich description of the practice of corporate finance, and allowed making a number of inferences about the extent to which company actions are consistent with academic theories.

### 2.6 Chapter Summary

This chapter has focused on the literature review as per the research questions. This includes the nature of these decisions and the major capital budgeting and evaluation techniques. The chapter also demonstrated that cost of capital has a critical bearing on capital budgeting decisions. In addition, it also brought to the fore issues of managerial control and considerations in capital budgeting. Chapter three describe the methods and procedures that were used to execute the study.
CHAPTER THREE

3.0 RESEARCH METHODOLOGY

3.1 Introduction
This chapter covers a discussion of the research methodology that was used in this study and justifies its selection over the other possible designs. It starts by addressing, in detail, the research design to be used. It then goes on to discuss the population for the study, sample size, sampling technique and the research procedures employed. It will also discuss the data collection and analysis methods used. A summary of the chapter is provided at the end.

3.2 Research Design
The research method used in this study is descriptive. Descriptive studies are used to analyze characteristics associated with the subject population (Cooper and Schindler, 2000). According to Cooper and Schindler (2000), descriptive statistics discover and measure cause and effect relationships among variables. Saunders, Lewis and Thornbill (1997), state that a descriptive study paints a clear picture of phenomena being studied while Robson (1993) points out that the object of descriptive study is to portray an accurate profile of persons, events or situations. In this research, the focus is on the common practices and methods used for capital budgeting by Top 100 companies.

According to Sekaran (2003), descriptive studies are undertaken when the characteristics or the phenomena to be tapped in a situation are known to exist and one wants to be able to describe them better. Descriptive study designs will enable the researcher to collect in-depth data about the population being studied. In addition, this design is advantageous as it aids in establishing the factors that shape capital budgeting decisions.

The advantages of using the descriptive study approach is that after the research, Kenyan company leaders will be able to profile the various factors that medium sized companies focus on in capital budgeting. It may also assist them to establish similarities between companies that use a given technique.
3.3 Population and Sampling Design

3.3.1 Population

According to Cooper and Schindler (2000), a population is the total collection of elements about which we wish to make inferences. The target population in the study is the top 100 medium sized companies as identified by Kenya's Top 100 mid-sized companies Survey (‘Top 100 Survey’) done by KPMG Kenya and the Nation Media Group. That Survey seeks to identify Kenya's fastest growing medium sized companies in order to showcase business excellence and highlight some of the country's most successful entrepreneurship stories (KPMG, 2009).

Of the Top 100 companies surveyed, 47% are in the services sector, 19% in telecommunications and ICT and 14% in manufacturing industry as depicted in figure 3.1. The remaining 20% are in various other categories.


Figure 3.1: Sector Profile
In addition, 22% of these companies have annual revenues of Ksh 70 – 99 million, 40% have revenues of between Ksh. 100 – 399 million, 28% have Ksh. 400 – 799 million and only 9% have revenues of between Ksh. 850 million and Ksh. 1 billion. This is depicted in figure 3.2 below.

![Revenue Profile](image)


**Figure 3.2: Revenue Profile**

According to Steadman (2009), 65% of these companies sourced their initial capital from founder savings and none from initial public offer (IPO). To expand, these companies have high preference for borrowed capital, 53%, for expansion and low appetite for listing at only 4%.

![Sources of Initial and Expansion Capital](image)


**Figure 3.3: Sources of Initial and Expansion Capital**
3.3.2 Sampling Design

3.3.2.1 Sample Frame
The sampling frame is an objective list of the population from which the researcher can make a selection (Denscombe, 1998). Cooper and Schindler (2000) add that a sampling frame should be a complete and correct list of population members only. Saunders, Lewis and Thornbill (1997) further state that it is the complete list of all the cases in the population from which the sample may be drawn. The sampling frame for this study is the 2008 Top 100 mid-sized companies in Kenya.

3.3.2.2 Sampling Technique
The sampling technique used was probability sampling, which is defined as a controlled procedure that assures that each population element is given a known non-zero chance of selection (Cooper and Schindler, 2001). Stratified sampling was used. In this sampling procedure, data are segregated into several mutually exclusive sub-populations or strata from which a simple random sample can be taken within each stratum. (Saunders, Lewis and Thornhill, 2003).

Stratified sampling method is justified because of the following reasons: to provide adequate data for analyzing the various sub-populations; to increase the sample’s statistical efficiency; and to enable different research methods and procedures to be used in different strata (Cooper and Schindler, 2000). The population will be divided in strata based on the major sectors namely the services, telecommunications and ICT, manufacturing, hospitality, financial services and agricultural sector.

3.3.2.3 Sample Size.
The sample size must be carefully selected to be representative of the population and the researcher also needs to ensure that the sub-divisions entailed in the analysis are accurately catered for Denscombe (1998). A sample size of twenty five shall be selected from a total population of a hundred companies. The sample size of twenty five, being twenty five percent, is representative, efficient, unbiased and allows easier administration of questionnaires.
Table 3.1 Make-up of Sample Size

<table>
<thead>
<tr>
<th>Sector</th>
<th>Population</th>
<th>Percentage Sample Size</th>
<th>Actual Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Services</td>
<td>47</td>
<td>30%</td>
<td>15</td>
</tr>
<tr>
<td>Telecommunications and ICT</td>
<td>19</td>
<td>30%</td>
<td>6</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>14</td>
<td>30%</td>
<td>4</td>
</tr>
<tr>
<td>Hotels and Tourism</td>
<td>10</td>
<td>30%</td>
<td>3</td>
</tr>
<tr>
<td>Financial services</td>
<td>8</td>
<td>13%</td>
<td>1</td>
</tr>
<tr>
<td>Agricultural</td>
<td>2</td>
<td>50%</td>
<td>1</td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td><strong>100</strong></td>
<td><strong>100%</strong></td>
<td><strong>30</strong></td>
</tr>
</tbody>
</table>

Data source: Steadman Group Report, 2009

3.4 Data Collection Methods

The study used primary data collection methods. Data was collected using a structured questionnaire. Because each respondent is asked to respond to the same set of questions, questionnaires provide an efficient way of collecting responses (Saunders, Lewis and Thornbill, 1997). In addition, this method facilitates rapid data collection, allows respondents to think over the questions and facilitates easier coding and analysis of data collected (Cooper and Schindler, 2000). Whereas the questionnaire was self-administered, the researcher was available to explain any issues that may have arisen.

An administered questionnaire with both opened and closed ended questions was used in data collection. This was desirable because close-ended questions restricted the respondents to standardized responses whereas open-ended questionnaires allowed the exploration of other factors that differ per respondent. Ranks as well as rating questions were used to give an indication of the degree of the aspect being measured.

The first section of the questionnaire dealt with the demographic data such as name of the organization, name of the respondent, numbers of shares issued and subscribed and title of the respondent. This information was used to analyze vital company statistics such as name, category and numbers of shares issued and subscribed.
The second section sought to gain an understanding of the nature and size of the last five major capital budgeting decisions made in the last three years. The third section probes on the first research question, which is capital budgeting evaluation techniques used. Here the respondents were required to state and rank the evaluation technique they used. In addition, respondents were required to indicate whether they used DCF or non DCF evaluation methods.

Section four of the questionnaire investigated the method used to determine the cost of capital used in DCF evaluation techniques. Here, the respondents were to indicate and rank the cost of capital method used. Section five of the questionnaire employed open-ended questions to capture other salient capital budgeting practice factors that respondents usually consider. This section was intended to capture the firm-specific issues in capital budgeting practices as per the third research question.

3.5 Research Procedures
The questionnaires were designed by the researcher based on the three research objectives. The questionnaire was subjected to pilot testing in January 2010. The pilot test was administered to five randomly selected companies from the sample. This is number is lower than range prescribed by Cooper and Schindler (2000). The results from the pilot testing were used to assist in revision of this data collection instrument.

An administered questionnaires was used for data collection by the researcher. This method of administration is justified since the sample was relatively small and that it results in a higher response rate. Furthermore, personal administration of the questionnaire helps in data cleaning while in the field thereby ensuring that the data collected is adequate for the purposes of this research. A letter introducing the purpose of the study and copies of the questionnaire was given to each respondent in the sample. These ensured the objectives of this research were well covered.

Different modes of getting to the respondents were used. The methods included random calling and visitation of financial officers. Most forms were filled, scanned and sent back using electronic mail.

3.6 Data Analysis Methods
The data collected in the study was using quantitative and descriptive statistics by using frequency distribution and percentages for compassion purposes. Quantitative analysis is
the numerical representation and manipulation of observations for the purpose of describing and explaining the phenomena that those observations reflect

The data collected was then analyzed using the Excel spreadsheet and Statistical Package for Social Scientist (SPSS). This is because used together; the two programs afford a higher level of versatility. To facilitate data analysis each variable in the questionnaire was given a numerical representation and the respondent was coded to facilitate data analysis.

Data presentation was in form of frequency distributions and cross tabulations. According to Cooper and Schindler (2000), frequency distributions and cross tabulations provide a simple method for arraying data. In addition, cross tabulation shall be used to determine the relationship between variables. Tables, pies and bar graphs will also be used to present the findings. This data was be used to draw conclusions and recommendations.

3.7 Chapter Summary

This chapter described the methodology used in carrying out the research which included the population and the sampling design, data collection methods, research procedure and data analysis methods. Whereas the research design adopted was descriptive in nature indicating the dependent and independent variables. It focused on the capital budgeting practices of the top 100 companies which form the population under research. The sampling techniques used included stratified and purposive sampling. Self-administered questionnaires were used to collect primary data. The questionnaire developed was tested before a refined one was administered to the respondents. The chapter has also indicated that data was analyzed using Excel spreadsheet and SPSS and presented in the form of charts and tables for ease of understanding. The next chapter presents the findings of the research study.
CHAPTER FOUR

4.0 RESULTS AND FINDINGS

4.1 Introduction

This chapter presents the findings of the study received from the participants in this research. The results are divided into four major sections in accordance with structure of the questionnaire. The summary of the findings are given in tables, pie-charts, percentages, means and bar-graphs computed using the Microsoft Excel program. A total of 50 questionnaires were administered, of which 26 were completed and returned. This represented an overall 52% response rate.

4.2 General Information

4.2.1 Response Make-up

4.2.1.1 Sectorial Profile
This section presents the sectorial profile of respondents. Respondents are spread over six sector sectors. The services sector provides the highest number of responses accounting for 11 company or 45% of total responses. Manufacturing, ICT and Telecommunications, and financial service sectors each had four respondents representing in total 42% of the companies surveyed. The distribution of the proportion of respondents by sector mirrors the distribution of the population originally selected.

Figure 4.1 reports distributions of the survey sample and survey respondents by sector. The survey sample included 50 firms in the Top 100 survey questionnaires on different aspects of capital budgeting practices were sent to firms in the sample in May 2010. Firms were asked to tick an appropriate box corresponding to the sector in which they operate. Category 'Other' indicates cases where respondents failed to answer the question regarding sector classification.
Figure 4.1: Respondents’ Sectorial Profile

4.2.1.2 Respondents' Average Length of Service in Companies

Statistics in relation to positions of respondents and their length of service in the companies are presented in Figure 4.2. On average 14 out of the total 26 respondents or 54% of the respondents had worked for the respondent companies for three to five years; 40% of the respondents held senior financial positions such as chief financial officer, director of finance, financial controller, or treasurer while 10% held relevant senior positions such as chief executive officer, executive director, business development manager, manager of company planning, and business analysts. The profile of survey respondents provides assurance that the respondents had a good understanding in the capital budgeting practices of the firms that they represented.
Figure 4.2: Respondents Length of Service

4.2.1.3 Respondents' Position Held with Respondent Companies

Figure 4.3 reports the positions held by respondent answering the survey questionnaire at respondent firms. It indicates that 10 or 38% of the respondents held middle level positions and another 8% held senior level positions.
4.3 Techniques Used In Project Evaluation

Statistics in relation to the technique used by respondents in project evaluation with companies are presented in Figure 4.4. Respondents were required to indicate whether they used discounted or non-discounted cash flow methods. Majority of the companies surveyed indicated they use discounted techniques: 16 firms’ or 62% while 38% used non-discounted techniques.
Figure 4.4: Discounted or Non-Discounted Cash Flow Methods

4.3.1 Do you use any Capital Budgeting Technique?

In order to identify the usage and importance of capital budgeting techniques, eight different techniques were listed and companies asked to tick all relevant techniques as well as to rank their frequency of use of capital budgeting techniques. To discern the frequency of use, five rankings were provided: Never, Seldom, Often, Mostly and Always.

As evidenced in the Figure 4.5, 8% of the companies surveyed never and 28% seldom used any capital budgeting evaluation technique; 29% of the companies often used one or a combination of capital budgeting techniques while 28% “mostly” and 8% “always” used one or a combination of capital budgeting techniques.
4.3.2 The Most Preferred Capital Budgeting Technique(s)

As can be seen in Figure 4.6 in the next page, NPV, Payback Period and Discounted Payback Period were the techniques most frequently used by the Top 100 companies participating in the survey. NPV is the most popular method used by 43% of the respondents whereas Payback and Discounted Payback methods were used by 16% and 15% respectively of the companies surveyed.

From the above it’s evident that most companies did not rely on a single capital budgeting technique but employed a number of techniques in their evaluation process. Assuming techniques ranked moderately important, or higher were used regularly, 27% of respondents regularly used one to three techniques, while the rest regularly used more than three techniques.
4.3.3 Evaluation Techniques Used and their Importance

Figure 4.6 reports the findings on the most preferred evaluation technique used by Kenya Top 100 firms surveyed. The percentage of companies in the graph indicates the number of respondents answering this particular question.

![Figure 4.6: Most Preferred Evaluation Method](image)

Most companies did not rely on a single capital budgeting technique but employed a number of techniques in their evaluation process. NPV stands out as the most popular and important technique and 43% of companies ranked it as very important. Payback and discounted payback techniques are used by 16% and 15%, respectively, of the companies surveyed. Comparing the results of previous surveys in Australia with the current survey, NPV has clearly established its position as the most popular capital budgeting technique. Ratings of the importance of the techniques also show that NPV is viewed as the most important technique.

Despite the well-known limitations of the payback technique, it is still widely used by the surveyed firms. There are two probable explanations for this phenomenon. One explanation is that firms make capital budgeting decisions by employing several evaluation techniques in which case payback method is easy to estimate and understand. The other reason is that it might be more popular with medium sized firms Block (1997).
4.3.4 Significance of Discounted Cash flow Method

Only 11% of the companies surveyed indicated discounted cash flow methods to be of little consequence. Discounted cash flow methods were found to be of 'considerably important' or 'overriding important' to 56% and 33% of the companies surveyed respectively. Additional techniques listed by these respondents included 'Return on Funds Employed' and 'Value to Investment Ratio'. It may be conjectured that, realizing the limitations of popular evaluation techniques, managers might use supplementary financial indicators, which they considered very important, to support their analysis and decision making process.

![Figure 4.7: Significance of Discounted Cash flow Procedure](image)

Figure 4.7: Significance of Discounted Cash flow Procedure

Figure 4.8 below, presents the findings on decisions where capital budgeting is used. A wide spectrum of decisions entailed use of capital budgeting: 12% of the companies used capital budgeting for restructuring supply chain, 10% for acquisition if new assets and a similar percentage for purchase or sale of plant and equipment. Further 10% used capital budgeting for “make or buy” decisions and entry into new markets.
4.4 Practices Used in Estimating the Cost of Capital

Figure 4.9 presents information on methods used for estimating the cost of capital. A total of 27 out of the 30 respondent companies (or 90%) reported using either the WACC or CAPM to estimate the cost of capital. The company's cost of capital estimates were subject to regular review, more often than not on an annual or shorter cycle. The remaining three companies did not respond to this question.

Figure 4.9: Models/Method used in Estimating Cost of Capital

The respondents indicated that they estimated the cost of capital themselves whereas a minority used both their own estimates and estimates from external sources. The most frequently cited external sources of estimates were financial institutions and analysts.
The WACC was the most popular method used in estimating the cost of capital used by 14 or 52% of respondent companies using the model. The second most popular method (47%) was CAPM. This is surprising since it is relatively difficult to estimate the parameters in the CAPM model. In the Australian case, companies that used CAPM in estimating the cost of equity capital, used the treasury-bond rate used as a proxy for the risk-free rate, beta estimates were obtained from public sources, and the market risk premium was in the range of 6% to 8%, with 6% more likely (Truong, Partington and Peat, 2008). Also in light of increasing academic criticism of the CAPM following Fama and French (1992), it is interesting that the model still enjoys such a huge application in Kenya’s Top 100.

In computing the WACC, 67% of companies used different weights for debt and equity while 33% used the equal weights for debt and equity. In estimating WACC, 69% of respondents reported adjusting the cost of debt for the interest tax shield and 31% reported they did not. A small group of firms reported using book value weights in calculating WACC.

![Figure 4.10: Is There Variation in Weight of Debt and Equity?](image)

It is clear that the use of book value weights is in clear conflict with the prescriptions of financial theory. A similar comment might be applied to the failure to adjust the cost of debt for the value of interest tax shields, but this treatment is not necessarily erroneous. Companies should not adjust for the value of interest tax shields if those tax shields have no value.
4.5 Factors Considered by Managers in Capital Budgeting Decisions

Corporate finance theory prescribes complex and structured techniques while making capital budgeting decisions. These formal techniques are geared result in an objective meant to be neutral from the preferences of the persons making the decision. However, this survey indicates that there are several other qualitative factors that are considered by the managers in making capital budgeting decisions. The factors mentioned by the respondents are varied though they seem to fall into three major categories namely top management judgment, time considerations and the prevailing business environment.

Respondents who mentioned judgment of the top management and their preferences prevailed on capital budgeting decisions that should be undertaken. The judgment of the top management was an overriding factor for ten of the Companies surveyed and determined the ultimate capital projects that the business would embark on. The business acumen and intuition of these business people perhaps based on experience, personal preferences, business interests and corporate vision were some of the comments made by the respondents.

Time factor was also cited as another qualitative factor. In this regards, comments given included focused on the decision making period suggesting a sense of urgency or available time to make the decision. The time factor seems to affect the level of formal capital budgeting process to be conducted with the time available. Three of the companies mentioned urgency to make the decision led to them making the decision to invest before they make the formal enquiry so as to seize the opportunity. Another company indicated that the time allocated to do the formal capital budgeting process depend on whether the capital budgeting decisions was routine and minor or major and one time. For the routine decisions they left middle level managers to make decision whereas for major decisions they hired consultants to do the formal capital budgeting evaluation.

The third qualitative factor mentioned was the prevailing business environment. Seven of the respondents in this group had a variety of issues they raised that included market potential, Government policies and taxes, the performance of the economy and business opportunities. The business environment had a bearing on the size of the project, feasibility, pattern of cash flow, payback period, lifetime period or durability, amount of capital to be invested, control of the activity, project’s net present value, availability of funds, and value of returns to the firm and adaptability of technological advances.
In addition, cost of borrowing finances for capital budgeting, capacity of undertaking the project to completion, availability of technical or general skills within the organization, changes in capital, changes in market competition were other qualitative factors mentioned by the remaining respondents with three of them opting not to indicate if there were any other factors managers considered outside the formal process of capital budgeting.

4.6 Chapter Summary

This chapter reported and presented the findings on the most popular capital budgeting practices of the Top 100 companies in Kenya. The findings are based on the responses of twenty six companies surveyed.

The findings were presented according to the study’s objectives and structured based on the format of the research questionnaire. In relation to the three research questions formulated for the study, the questionnaire responses suggest the following profile for a typical respondent company. Projects are usually evaluated using NPV, but the company is likely to also use other techniques such as discounted payback and payback methods.

The project cash flows are discounted at the weighted average cost of capital as computed by the company with most companies using the same discount rate across divisions. The WACC is based on target weights for debt and equity. Asset pricing models other than the CAPM are not used in estimating the cost of capital. The cost of debt maybe adjusted to allow for tax shields, but not by an insignificant minority of companies. The discount rate is reviewed regularly, at least annually, and the inputs used in the calculation being varied over time.

The current practice of the Top 100 companies surveyed reflects the prescriptions of corporate finance theory in many aspects however, for some companies, there are significant departures from them: such as the use of book values in computing weights for the WACC. The CAPM remains the pre-eminent asset pricing model in practice, despite academic criticism and the development of alternative multifactor asset pricing models.
CHAPTER FIVE

5.0 DISCUSSION, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter gives a summary of the purpose of the research, the objectives, research methodology used and the major findings. It further compares the findings from the research with the theoretical basis presented in chapter two, that is, the literature review, from various authoritative sources. Conclusions drawn from the findings of the research are offered, recommendations given, and areas that require further research highlighted.

5.2 Summary

The purpose of this study was to determine the most popular capital budgeting practices of the 2008 Top 100 companies in Kenya. The specific objectives for carrying out the research were to establish: the most popular methods of capital budgeting evaluation techniques used by the Top 100 companies; the most prevalent methods used by the Top 100 companies to determine the cost of capital and the factors that financial officers consider in making capital budgeting decisions.

In this chapter, the researcher provided the findings with respect to the information given out by the respondents. The sample frame was the list of 2008 Top 100 Mid-sized companies as surveyed by KPMG Kenya and Nation Media Group (‘Top 100 Survey’). Stratified probability sampling technique was applied to pick out the sample of the population to be studied. The self-administered questionnaire method was used to collect data on which a quantitative analysis using descriptive statistics was applied. The MS Excel program was used to analyze the raw data which were then presented using graphs and tables.

The finding on the first research question was that discounted Cash Flow (DCF) is the primary investment evaluation technique among the top 100 mid-sized companies in Kenya. The DCF techniques widely used included IRR, NPV and payback techniques. NPV clearly established its position as the most popular followed by payback method though no clear reasons were indicated for these preferences.

On the second research question, the weighted average cost of capital, WACC, is the dominant discount rate used in DCF analysis. The WACC requires allocation of debt and
equity. The respondents indicated that the weights are allocated based on market value and not book value mix of debt and equity. Several respondents went ahead to add that the after-tax cost of debt is predominantly based on marginal pretax costs and marginal or statutory tax rates. CAPM emerged as the dominant model for estimating the cost of equity.

The third research question was to identify factors considered by managers in capital budgeting decisions. Respondents on this question indicated that business judgment the urgency of making the decisions and the nature of the decisions were overriding factors. The nature of decisions was depicted as either routine or once off. Routine capital budgeting decisions were left to business managers’ whereas once off decision in some cases required use of consultants.

5.3 Discussion of the Results
This section endeavors to compare the results attained in the research with the results by other/former researchers as outlined in the literature review.

5.3.1 Popular Capital Budgeting Evaluation Techniques
In line with the literature reviewed, this research has confirmed that discounted cash flow techniques are predominantly used in majority of the organizations sampled. Capital budgeting surveys conducted overseas concluded that DCF based techniques (IRR and NPV) were more common and CAPM was the most popular methodology used in the estimation capital cost (Gateman et al. 2000). Moreover, Graham and Harvey (2001) found that NPV and IRR were the most frequent techniques used in capital budgeting which reaffirm the study findings. In addition to the above, other techniques such as the payback period were not commonly used, though they were still being used by some of the companies.

However, contrary to a survey of UK companies where 96% of the respondents’ surveyed by Arnold and Hatzopoulos (2000) used both NPV and IRR techniques. This is puzzling given the fact that small firms lack the management talent required to implement these two technical methods. Compared to Kenya’s top 100 companies, NPV and payback techniques were used by 43% and 16% of the respondents respectively.

Despite the well-known limitations of the payback technique, it is still widely used by the surveyed firms as it is easy to estimate and understand besides being more popular with
smaller firms (Block, 1997). IRR came in at a distant third by preference perhaps due to its difficulty in computation and vagueness in interpretation (Ryan and Ryan, 2002).

Block (1997) established that payback method was popular among small firms. This was depicted by the surveyed companies as payback emerged as the third most preferred method for capital budgeting. However, given the ease of use of payback, it is not clear why NPV and IRR techniques were more popular despite the two being more technical method to use. Brigham and Ehrhardt, 2005 note that payback method have several drawbacks including the fact that it ignores cash flows after payback period besides being difficult to rank projects that have the same payback period. It is perhaps these arguments that make payback method less preferable to NPV and IRR techniques.

5.3.2 Cost of Capital

This survey found that the weighted average cost of capital (WACC) was the commonly used discount rate which is contrary to overseas surveys, where CAPM was established to be the most common method used in the estimating the cost of capital (McLaney et. al., 2004). McLaney, et. al., (2004) found that in UK, CAPM was the most common model employed in estimation of the cost of capital which was reaffirmed by Graham and Harvey (2001). McLaney, et al., also established that the companies that used WACC for project appraisal also took tax effects into account while estimating the cost of capital. This recognition of tax effects to adjust WACC is consistent to the Kenyan case where managers also adjusted WACC for tax effects on cost of debt.

5.3.3 Factors Considered by Managers in Capital Budgeting Decisions

There was no significant departure in the other factors by the managers in determination of the capital budgeting technique in this survey and others conducted overseas. Some of the factors that were given by the respondents included: size of the project, viability, pattern of cash flow, payback period, amount of capital to be invested, control of the activity, availability of funds, and value of returns to the firm and adaptability of technological advances. In overseas studies, John Graham and Campbell Harvey (2001) assert there is clear evidence that firm size significantly affects the practice of corporate finance. They observed that large companies were much more likely to use net present value techniques, while small firms tended to rely on the payback criterion which is much simpler and less technical. It can also be argued that capital budgeting is less important to small firms
compared to big firms as the time spent applying formal capital budgeting techniques by far outweigh the expected benefits.

According to Giang et al., (2000) most companies did not rely on a single capital budgeting technique but employed a number of techniques in their evaluation process. Similarly in this study, decision makers employed several capital budgeting techniques to evaluate the same decision. IFAC (2008) asserts that by using DCF techniques, the professional accountant improves organizational decision making as it allows wider assessment of strategic impact and economic rationale of a potential investment. For instance, the report notes, a potentially good project (based on NPV technique) could result in poor accounting rate of return in its early years. This implies that using several techniques concurrently to arrive at a decision would be more preferred than relying on one method.

Another rationale for using more than one technique has been fronted by Pandey (2005) in relation to use of NPV and IRR methods. While both are DCF techniques, he argues that different techniques provide different types of information to the decision makers. Thus argument is based on the fact that each technique has while having certain advantages over another; it also has inherent disadvantages based on different scenarios.

5.4 Conclusions

5.4.1 Popular Capital Budgeting Evaluation Techniques
A brief comparison of findings of this surveys and recent surveys carried out in the US, Canada and a number of European countries confirm that NPV has clearly established its position as the most popular capital budgeting technique. The ratings of the importance of the techniques also show that NPV is viewed as the superior technique which conforms to Kester, et. al.’s (1999) study. One difference, however, is that Kester, et. al.’s (1999) study found that the IRR was ranked as being of equal importance to NPV. In our survey, the IRR has lost ground and has a ranking below the payback techniques. This suggests that companies are not abandoning rules of thumb, but that they are using them in conjunction with DCF techniques.

5.4.2 Cost of Capital
This research sought to single out the “most prevalent practices” in cost-of-capital estimation through the use of information obtained from questionnaires circulated among the leading companies as established by KPMG. As capital projects take large portion of
the company’s annual expenditure, the wise selection of discount rates is of critical to senior company managers. The survey revealed wide acceptance of the WACC as the basis for setting discount rates. In addition, the survey revealed general alignment in many aspects of the estimation of WACC. This research outlined the varieties of practice in CAPM use, the arguments in favor of different approaches, and the practical implications.

5.4.3 Factors Considered by Managers in Capital Budgeting Decisions
The researcher noted that managers used more than one technique to arrive at what they considered the most optimal choice. In addition, the size of the project, the urgency and frequency of capital decisions were other factors viewed as important. The conclusion on this research question is consistent with earlier studies on the subject matter.

5.4.4 Summary
The project has been of colossal importance in guiding managers on the most prevalent capital budgeting techniques and the various considerations that are put into account by the leading companies in order to gain economic mileage in the contemporary competitive world. The focus on the top 100 companies was timely in order to use them as templates to showcase the features of capital budgeting that can likely propel a company to the apex. The collection of data was very coherent and the results ascertained is a true picture of what goes on in the developed nations. Close comparison between the past research works and this study shows close similarities and therefore a clear indication that the companies surveyed have capital budgeting techniques very similar to collegiate literature.

5.5 Recommendations
The research has effectively managed to demystify and highlight on the popular capital practices of the Top 100. However, like other studies of this kind, this survey has limitations. Several areas of researched required further in-depth analysis in order to completely demystify the capital budgeting practices of these companies with that have great capacity to grow and become majors drivers of Kenya’s economy.

5.5.1 Recommendations for Improvement
5.5.1.1 Popular Capital Budgeting Evaluation Techniques
As with all decisions in an organization, various capital budgeting techniques rely on accurate information. Such information should be relevant, timely reliable, accurate and complete. The researcher would recommend that finance practitioners ensure they have the
correct and accurate information as inputs for to various capital budgeting techniques. In addition, a determination of the best technique should be objectively determined based on available information; personal bias towards certain techniques may not lead to the most optimal capital budgeting decision.

5.5.1.2 Cost of Capital

The determination of the cost of capital is a central consideration for DCF techniques. Incorrect estimation of the cost of capital and its use in capital budgeting may make otherwise good projects appear bad and vice versa. Managers in top 100 companies should place particular emphasis on the method used to estimate the cost of capital and the ripple effect this has on their decisions. Determining the cost of capital using WACC has been noted to be particularly difficult whereas application of CAPM presents a challenge in the determination of beta.

5.4.1.3 Factors Considered by Managers in Capital Budgeting Decisions

It is probably arguable that the respondents’ capital budgeting practices had a plethora of reasons they considered as being more important than others in capital budgeting. There was also a reliance on the responses being an accurate indicator of each company's practices; confidence in this matter was enhanced by the seniority and nature of the positions occupied by respondents. It is would be instrumental that such decision makers really use they techniques they indicated they use so as to maximize the shareholders wealth.

5.5.2 Suggestion for Further Research

A pedagogical study such as this one is certainly not comprehensive enough to saturate all the areas presented by the subject matter. Acknowledging this limitation, the researcher recommends further study on the following areas. Further research would be recommended to determine how the Top 100 companies determine the various parameters used in CAPM model. Particularly, the determination of beta remains elusive as there is no single source of this parameter in the Kenyan market. The researcher recommends than an in-depth study is conducted to review various iterations employed by different top 100 companies. A further area for future study is on the length of period the companies view as the capital decision making period. It would yield a great insight in determine the average length of time consider the optimal period to determine the feasibility of a project considered acceptable. In the case of companies using DCF techniques, studies should focus on
whether these companies use a single value for cost of capital and for what duration of their capital budgeting period. Determination of how frequent the discount rates are reviewed and how this is accommodated in the capital budgeting. Last but not least, the researcher recommends a parallel study between the capital budgeting practices of the top 100 companies and those of the larger entities listed at the Nairobi Stock Exchange. Such a study may unearth essential and potent subtleties that the top 100 companies may need to consider and vice versa.

Lastly, sample surveys, such as this one, have the benefit of updating our knowledge of practice, identifying gaps between theory and practice, and suggesting areas for future research.
REFERENCES


Harris, S. & Ghauri P. (2000).” Strategy formation by business leaders: Exploring the influence of national values”. European Journal of Marketing, MCB UP Ltd


Dear Respondent,

I am carrying out a research on the common Capital Budgeting Practices Employed by the 2008 Kenya’s Top 100 Medium Sized Companies identified by the Steadman Group in the 2008 survey commissioned KPMG Kenya and Nation Media Group. This is in partial fulfillment of the requirement of the Masters of Business Administration (MBA) degree program at the United States International University, and I am doing it under the supervision of Professor J. H. Kimura. This research is significant as it will highlight the prevalent capital budgeting techniques employed by companies that are considered the future drivers of our economy.

This study uses companies listed in the 2008 Top 100 survey from which you have been selected as one of the respondents. The results of this study will provide managements, investors and other researchers with the critical information on the capital budgeting practices employed by the Top 100 in Kenya.

This is an academic research and confidentiality will be strictly observed and your name will not appear anywhere in the report. Kindly spare some time to complete the questionnaire attached.

Thank you in advance,

Yours sincerely,

Philip Karanja.
APPENDIX II: QUESTIONNAIRE

This study is a requirement for the partial fulfillment of the Master of Business Administration - Finance (MBA) program at the United States International University Africa (USIU-A). The purpose of this study is to investigate on the capital budgeting practices of 2008 Top 100 midsized companies in Kenya.

This study focuses on the Top 100 companies from which you have been selected as one of the respondents. The results of this study will provide managements and other researchers with the necessary information on the capital budgeting practices used by successful companies in Kenya like yours.

PART I: GENERAL INFORMATION

Kindly answer all the questions either by ticking in the boxes or writing in the spaces provided.

1. Name of the Organization……………………………………………………………………
2. Position ………………………………………………………………………………………
3. Business Category
   - Services
   - Manufacturing
   - Financial Services
   - Telecommunications & ICT
   - Hotels & Tourism
   - Agriculture
4. Your Position in the Organization
   - Senior level Management
   - Supervisory Level
   - Middle level management
   - General Staff
5. Age
   - 20-25 years
   - 26-30 years
   - 31-35 years
   - 36 years and over
6. How long have you worked for this organization?
PART II: CAPITAL BUDGETING TECHNIQUES

7. What capital budgeting procedure evaluation does your company use?

(i) Discounted cash flow methods □
(ii) Non Discounted cash flow methods □

8. If you discounted cash flows as per question (1) above of what importance does the present value of the cash flows from projects is in determining whether they are undertaken?

(i) Overriding importance □
(ii) Considerable importance □
(iii) Some consequence □
(iv) Little consequence □

9. Please strike (⊕) the numeric value corresponding to your frequency of usage of capital budgeting technique indicated.
<table>
<thead>
<tr>
<th>CAPITAL BUDGETING TECHNIQUE</th>
<th>Always (1)</th>
<th>Mostly (2)</th>
<th>Often (3)</th>
<th>Seldom (4)</th>
<th>Never (5)</th>
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<tbody>
<tr>
<td>a. Accounting Rate of Return (ARR)</td>
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<tr>
<td>b. Payback method (PB)</td>
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<td>c. Discounted Payback method (DPB)</td>
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<td>d. Net Present Value (NPV)</td>
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<td>e. Internal Rate of Return (IRR)</td>
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<td>f. Modified Internal Rate of Return (MIRR)</td>
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<td>g. Net Present Value Index (NPV/Initial Capital)</td>
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</tbody>
</table>
PART III: CAPITAL BUDGETING DECISIONS

10. When making the listed capital budgeting decision which technique do you use? (Tick one method for each capital budgeting decision) - *see definitions of acronym in question 9 above.*

<table>
<thead>
<tr>
<th>CAPITAL BUDGETING DECISION</th>
<th>ARR</th>
<th>Payback</th>
<th>DPB</th>
<th>NPV</th>
<th>IRR</th>
<th>MIRR</th>
<th>NPV Index</th>
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</thead>
<tbody>
<tr>
<td>a. Make or buy decisions</td>
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<td>b. Acquisition or disposal of a subsidiary</td>
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<td>c. Entry into new markets</td>
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<td>d. Outsourcing certain organizational function(s)</td>
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<td>e. Purchase (or sale) of plant and equipment</td>
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<td>f. Developing or discontinuing new product or service</td>
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<td>g. Acquisition or disposal of new premise, property, lease or rental</td>
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<td>h. Marketing programs to enhance brand recognition and to promote products or services</td>
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<td>i. Restructuring of supply chain</td>
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<td>j. Replacing existing assets</td>
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PART IV: COST OF CAPITAL ESTIMATION

11. Please tick on the method you use to estimate the cost of capital:

(i) Capital Asset Pricing Model (CAPM) ☐
(ii) Weighted Average Cost of Capital (WACC) ☐
(iii) Arbitrage Pricing Theory (APT) ☐
(iv) Other ☐
(v) Not applicable ☐

12. If you chose other, please explain …………………………………………………
…………………………………………………………………………………………
…………………………………………………………………………………………
…………………………………………………………………………………………

13. How do you estimate?

(i) The cost of debt? …………………………………………………………………
…………………………………………………………………………………………

(ii) The cost of equity? …………………………………………………………………
…………………………………………………………………………………………

14. In evaluating projects, some companies discount different components of capital (debt and equity) at different rates because of their different risk characteristics, does your company treat different components of cash flow differently?

Yes ☐ No ☐

15. If you answered yes, for question (14) above, what weights do you assign?

(i) Debt ____________________________

(ii) Equity ____________________________
PART IV: COST OF CAPITAL - OTHER CONSIDERATIONS

16. Please enumerate any five other important factors that your company considers while making capital budgeting decisions.

(i) _____________________________________________________________
(ii) ___________________________________________________________
(iii) ___________________________________________________________
(iv) ___________________________________________________________
(v) ___________________________________________________________

THANK YOU FOR TAKING YOUR TIME TO COMPLETE THIS QUESTIONNAIRE
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