THE RELATIONSHIP BETWEEN CAPITAL BUDGETING
TECHNIQUES AND FINANCIAL PERFORMANCE OF
COMPANIES LISTED AT THE NAIROBI SECURITIES
EXCHANGE

BY

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DECLARATION

I declare that this research project is my original work and has not been presented for a degree or any other academic award in any institution of learning.

Signature ……………………… Date ………………………

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D63/64842/2013

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

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ACKNOWLEDGEMENT

I thank God the almighty for giving me the means courage and strength and perseverance to complete the project also great appreciation goes to my supervisor for his time and dedication to ensure that I completed the project.
DEDICATION

This project is dedicated to my family members for the prayers and encouragement. May the Lord, God Almighty bless them abundantly.
ABSTRACT
This study overall objective was to examine the capital budgeting techniques used in investment appraisal among companies listed at the Nairobi Securities Exchange. It sought to establish the techniques of capital budgeting specifically used by companies listed at the Nairobi Securities Exchange to undertake their firm’s investments and also to establish the relationship between the applied capital budgeting techniques and the financial performance of companies listed in the Nairobi Securities Exchange. The objective of this study arose due to the inconsistent research findings both elsewhere and in Kenya. The research adopted a correlation cross-sectional survey research design which is best suited for explaining or exploring the existence of two or more variables at a given point in time. The population of the study consisted of all companies listed at the Nairobi Securities Exchange. Data was collected from the primary sources which comprised of the questionnaires administered to the officers directly involved in capital budgeting as well the secondary sources which comprised of the data derived from the published accounts of the companies. The data was analyzed using the regression analysis model to test the effect of the capital budgeting techniques on the financial performance of the companies. The study found out that all of the four capital budgeting techniques researched on; payback period, net present value, accounting rate of return and internal rate of return were being used by companies listed in the Nairobi Securities Exchange and results depicted that there was no correlation between the financial performance of banks and the capital budgeting techniques employed. The study concluded that payback period, net present value, accounting rate of return and internal rate of return capital budgeting techniques were all adopted by the companies listed at the Nairobi Securities Exchange and that there was no significant relationship between the capital budgeting techniques employed and the financial performance of the same. The study suggests further research be conducted on other sectors across the Kenyan market to establish whether the results obtained were homogeneous as well as using a different financial performance variable(s) to test the same relationship. It is also recommended that a similar study be carried out in other companies not listed in the Nairobi Securities Exchange to test the same relationship and also in a specific industry to obtain homogeneous results.
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CHAPTER ONE: INTRODUCTION

1.1 Background of the Study

The success and growth of any business enterprise depends upon the efficient utilization of available resources particularly budgeting of capital expenditure. The introduction of technological improvements and expansion of plant operations represents a major factor in economic growth and increased productivity. Mooiand Mustapha (2001) have noted that systematic utilization of capital budgets tends to enhance proper financial expenditure decisions.

Capital budgeting is closely related to investment decision-making process. Investment decision is a financial process which involves the firm to invest efficiently its current funds in long term profitable enterprises. Viable decisions such as purchasing of new machinery, permanent assets (e.g. factory buildings warehouses, delivery services, staff training schemes or new production lines etc.) require sound investment decisions by the firm’s management team. Weston and Brigham (2005) have observed that capital budgeting involves planning expenditures whose returns extend beyond a year such as acquiring land, buildings, equipment as well as permanent plant and structural
expansions. The process of investment decision involves the firm making cash outlay plans with the aim of receiving future cash flows.

One of the most challenging decisions made by any management team is of capital budgeting. Presently companies tend to make decisions worth millions of shillings in capital improvements. Such hasty decisions to a certain extent can cause company bankruptcy and insolvency especially if financial decisions were made without thorough understanding of capital budgeting procedures. Investment decisions are worthwhile particularly if they create value to its owners. Many managers tend to argue that if the project returns outweigh investments, then the project is viable. This is a simplistic argument because it ignores important elements of money e.g. its present value and time. Moreover, the management should be able to forecast created cash value in advance. In some cases, companies use some form of capital budgeting techniques to determine if a project will add the needed value to justify the capital outlay risks.

1.1.1 Capital Budgeting Techniques

When considering a new enterprise investment, business analysts tend to assess the viability of initial investment to generate a profit. Capital budgeting determines the worthiness of a given project. In the determination of the worthiness of a project two basic techniques are used
namely payback period (PB) and accounting return rate (ARR). On the other hand, the most popular methods are net present value (NPV) and internal return rate (IRR).

Pike & Neale (1999) have defined payback period as the time required for a given enterprise to acquire self-substance. This period does not take into account the cash flow after the investment. Equally, it doesn’t pay attention to the present values as well as time value of money accruals. Although evaluating the payback period does not offer a business a detailed analysis of the project, it does provide some relevant perspective on capital budgeting. Additionally, some investors will not fund a project if the payback period exceeds a certain time limit.

Munyao (2010) describes accounting rate of return (ARR) as the annual accounting profits from a capital project divided by a defined annual average capital investment outlay over a project’s life span. It means, simply the average after tax profit divided by the initial cash outlay of the project, and has similarity with the return on assets. The accounting rate of return as a non-discounting criterion is exposed to the same type of criticism like the PB since it violates the two properties of capital flows, but considers all the accounting profits instead of cash flows, over a given life of a capital investment. It however does not consider time value of money. Managers would be indifferent in their choice between one
project and other with after tax profits, which may occur in the opposite chronological order because both projects would have similar accounting rate of return.

The net present value refers to the present cost value of a project less its benefits. Net present value analysis uses the current value of the project’s cash flow. In the process, it compares current project cash inflow to its cash outflows. For a viably vibrant project, its value is greater than zero. Contrarily, negative values predispose the project as untenable and unprofitable. In cases where the two projects portray mutual exclusiveness; the one with the highest net present value wins the bid. NPV generally has the advantage of time consideration of the value of money. In the evaluation of capital budgeting, internal return rate (IRR) is often used. It calculates the expected return rate (ERR) ratio of an investor to his/her investment. As stated above, the net present value is calculated by using a predetermined discount rate. By continuously manipulating the discount rate it is possible to come up with the rate where the NPV is zero. When a business uses funds from investors for a project, the business must pay back these investors for the use of their funds. This represents the company's cost of capital, and should also represent the minimum required rate of return for the project. When there exist a positive net present value, the project's return will exceed the
discount rate; if the project has a negative net present value, the discount rate will exceed the return of the project Munyao (2010).

1.1.2 Financial Performance

Performance is an action directed towards certain level of results. O’Regan et al (2008) defined performance as the ability of an object to produce results in a dimension determined prior in relation to a target. It is used to allocate resources and map progress towards the achievement of goals (Ittner & Larcker, 2003). This suggests that performance is linked to actions emanating from certain sets of decisions and actions. There are many different ways to measure financial performance, but all measures should be taken in aggregation. Line items such as revenue from operations, operating income or cash flow from operations can be used, as well as total unit sales. Furthermore, the analyst or investor may wish to look deeper into financial statements and seek out margin growth rates or any declining debt.

Financial measures of performance are deeply rooted in accounting background. They have been used widely although they have been criticized for their shortcomings and limitations. Mulaa (2009) has noted that these limitations are based on accounting manipulations, undervaluation of assets, distortionary depreciation policies, etc.
Chai (2011) emphasized that the roles of ratios are normally employed when using the accounting information. Some accounting ratios used to measure profitability include return on assets (ROA) and return on capital employed (ROCE). ROA establishes how profitable a firm is relative to its total assets and depicts how efficient management is at using available assets to generate its earnings. It is the ratio of a firm’s annual earnings to its total assets and overcomes the stock market price limitations. Thus this study will employ ROA to measure the operating efficiency of the firms listed at the Nairobi Securities Exchange.

1.1.3 Capital Budgeting Techniques and Financial Performance

Several studies (Christy, 1966; Klammer, 1973; Kim, 1982; Pike, 1984; Farragher et al, 2001) have noted that analyzing the relationship between capital budgeting sophistication and firm’s performance and the use of accounting information when constructing performance measures is widespread. Munyao (2010) suggested that sophisticated capital budgeting procedures can under the assumption of economic rationality be regarded as a means a firm uses in order to fulfill its objective of shareholders wealth maximization. This fact indicates that firms can increase or maximize their shareholders wealth by using sophisticated appraisal techniques. Thus, from a financial theory perspective, it is expected that the relationship between sophisticated capital appraisal
techniques and financial performance is positive. However, studies on the relationship between capital budgeting techniques and financial performance have depicted varied outcomes thus calling for a detailed investigation. Klammer (1973) established that despite the growing adoption of sophisticated capital appraisal methods in the U.S., there was no consistent significant association between financial performance and capital budgeting techniques.

1.1.4 Nairobi Securities Exchange

The Nairobi Securities Exchange is the principal stock exchange of Kenya. It began its operation in 1954 as an overseas colonial stock exchange. It was an affiliate of the London Stock Exchange. Presently, the NSE is a member of the African Stock Exchanges Association. Note worth to point out that NSE is 4th largest Africa's largest stock exchange in terms of trading volumes, and fifth in terms of market capitalization as a percentage of GDP. By 31st December, there were 61 listed companies on NSE.

The NSE has both the primary and secondary markets. It acts as an important avenue for the government which has carried out the divestiture programme as well as diversification of additional capital. It deals with both the fixed income securities (e.g. Treasury and corporate bonds,
debenture stocks, and preference shares) as well as variable income securities such as ordinary shares. As a capital market institution, the Nairobi Securities Exchange plays an important role in the process of economic development. It helps mobilize domestic savings thereby bringing about the reallocation of financial resources from dormant to active agents. Long-term investments are made liquid, as the transfer of securities between shareholders is facilitated. The Nairobi Securities Exchange has also enabled companies to engage local participation in their equity, thereby giving Kenyans a chance to own shares. Companies can also raise extra finance essential for expansion and development. To raise funds, a new issuer publishes a prospectus, which gives all pertinent particulars about the operations and future prospects and states the price of the issue. Nairobi Securities Exchange also enhances the inflow of international capital. A study on the capital budgeting practices of companies quoted at the Nairobi Securities Exchange, taking into account all the necessary steps in the capital budgeting process reveals that except the appraisal techniques, other stages of capital budgeting process are rarely considered. (Nairobi Securities Exchange, 2013).
1.2 Research Problem

Companies listed in the NSE play a significant role in country’s economic development and hence financial managers in the listed companies are required to effectively manage its budget in order to improve on organizational financial performance. The influence of capital budgeting techniques on organizational financial performance remains a major problem that has not been solved by many financial managers in many firms listed in the Nairobi Securities Exchange. Many financial managers have not managed to clearly establish on the extent to which capital budgeting techniques influences the level of organization performance. As a result, many financial managers are unable to employ effective capital budgeting techniques hence leading to declined level of organization performance in terms of profitability. This study was hence justified since it contributed towards equipping financial managers of the listed companies with more knowledge and skills on how capital budgeting techniques influences organization financial performance.

In principle, a firm’s decision to invest in a new project should be made according to whether the project increases the wealth of the firm’s shareholders. As Graham & Harvey (2001) document, this rule has steadily gained in popularity since Dean (1951) formally introduced it, but its widespread use has not eliminated the human element in capital
budgeting because the estimation of a project’s future cash flows and the rate at which they should be discounted is still a relatively subjective process, the behavioral traits of managers still affect this process.

Njiru (2008) indicated that the commercial parastatals preferred IRR, NPV and PBP in order of usage. He stated that the amount of funds required for investment, size of organization, government policy and industrial practices mainly influence the choice of the appraisal technique. This raises the concern to identify whether these appraisal techniques are applicable by SMEs, to what extent and whether those techniques would have an impact to the firms.

Munyao (2010) found out that the four capital budgeting techniques; PBP, ARR, NPV and IRR were used by companies listed in the NSE. He established there was a significant positive relationship between the techniques and corporate performance as measured by the return on assets. He however recognized that little or no research had been conducted to establish whether the case would apply for companies outside NSE. He endorsed the need to test the relationship between capital budgeting techniques and firm performance by use of EPS.
Klammer (1973) depicted no significant constant association between financial performance and capital budgeting techniques in the US, Munyao (2010) established a significant positive relationship between the two variables in companies listed at the NSE whereas Chai (2011) established a positive relationship in the courier companies in Kenya. This raised the concern as to how capital budgeting and financial performance correlate with each other in different industries and segments under different economic conditions. Due to the importance and representativeness of the banking sector in financial matters in any macro-economic status of a country, it would be essential to establish the relationship between capital budgeting techniques and the financial performance of the banking industry. This then begged the questions: which capital budgeting techniques do companies in Kenya adopt and what was the association between those techniques and financial performance?

1.3 Research Objective

To investigate the Relationship between capital budgeting techniques and the financial performance of companies listed at the Nairobi Securities Exchange.
1.4 Value of the study

Appropriate usage of capital budgeting technique would lead to better decision making. This in turn is likely to contribute to better firms’ performance. Although few studies have successfully proved that the use of capital budgeting selection technique brings outstanding long-term performance, Hakaet al. (1985) have pointed that there is short-run improvement in the returns in those firms which adopted capital budgeting techniques.

The results of this study will help company managers to evaluate the current capital budgeting practices. As such, they will be able to compare various capital budgeting techniques applied across the Kenyan companies and possibly ascertain how to improve their companies’ wealth. This study will also provide useful information for researchers regarding the capital budgeting techniques and their impact on financial performance in companies listed at NSE. In addition, these results will form a background for scholars who may wish to pursue further studies in the area of capital budgeting.
CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

This is a literature review chapter. It examines critically gaps and weaknesses of earlier studies with an aim of filling the gaps.

2.2 Theoretical framework

Several theoretical perspectives pertaining to capital budgeting techniques and practices are apparent. For the purpose of this study, three theories namely, the contingency, ‘q’ theory, and the real option theory will be used.

2.2.1 The Contingency Theory

Pike (1986) has noted that resource-allocation efficiency is not merely a matter of adopting sophisticated, theoretically superior investment techniques and procedures. Consideration must be given to the fit between the corporate context and the design and operation of the capital budgeting system. He focused three aspects of the corporate enterprise namely firm’s organizational characteristics, secondly, decentralization and administrative orientation, thirdly, standardization and behavioral controls. Hakaet al. (1985) pointed out an opposite opinion. They have argued that firms which adopt and use sophisticated capital budgeting techniques experience more benefits hence better profit margins.
Schall & Sundem (1980) have shown that the use of sophisticated capital budgeting techniques declines with an increase in environmental uncertainty.

Pike (1986) examined environmental uncertainty in business operation. He pointed out the more variable and unpredictable the context of operation for a given enterprise; the more bureaucratic, mechanistic capital budgeting structures. He further suggested that firms operating in highly uncertain environments tend to benefit from sophisticated investment methods. Behavioral characteristics to a certain magnitude affect business operation. These behavioral characteristics include management style, professionalism and firms’ history. An administratively-oriented capital budgeting control strategy is often consistent with an analytical management style, excellent professionalism and an outstanding investment history. It is imperative to note that the firm’s financial status may influence the design and effort in capital budgeting. Axelsson et al. (2002) have highlighted more efforts which tend to be devoted to budgeting in a diverse financial situation. Haka et al. (1985) applied these arguments to capital budgeting. They have argued that the implementation of sophisticated capital budgeting procedure is key to coping with acute financial resource scarcities. Moreover, the main value of adequate investment rules is distinguishing profitable from
unprofitable projects; thus highly profitable firms derive less benefit from such techniques than less successful firms.

2.2.2 “q” Theory of Investment

Yoshikawa (1980) described the rate of investment as the speed at which investors wish to increase the capital stock should be related to “q” which the value of capital relative to its replacement cost. Economic logic indicates that a normal equilibrium value for “q” is one for reproducible assets which are in fact being reproduced, and less than one for others. Values of “q” above one should stimulate investment, in excess of requirements for replacement and normal growth, and values of “q” below one discourage investment. The “q” theory of investment has recently become quite popular despite the fact that there seems to be considerable confusion about how the theory is to be interpreted. For example, Robert Hall argued that the “q” theory is basically neo-classical and only incomplete information and delivery lags can account for "disequilibrium" values of “q” and for their relation to investment. Otherwise, investment would keep “q” equal to one. In spite of this, the “q” theory can be derived from a choice-theoretic framework which explicitly takes account of adjustment costs associated with investment (Yoshikawa, 1980)
2.2.3 The Real Options Theory

Myers (1984) proposed the Real Option Theory. Since then, these notions have remained of great interest among financial experts and analysts. Chance and Peterson (2002) have noted that real options deal with choices about the real investments e.g. capital budgeting projects. Real options offer a more efficient way for managers to allocate capital and maximize shareholder value by leveraging uncertainty and limiting downside risk. Furthermore, it asserts that the presence of real options can make an investment worth more than its conventional discounted cash flow value.

Arnold & Shockley (2003) have attributed increased interest in real options to forces of supply and demand. The supply side reflects a growing body of literature pertaining to the real options approach. The demand side for real options reflects management’s need to position the firm to benefit from uncertainty and to communicate the firm’s strategic flexibility. Increasingly, managers in industries characterized by large capital investments and considerable uncertainty and flexibility e.g. mining, oil and gas aerospace, pharmaceuticals as well as biotechnology, are contemplating the use of real options. Real options hold a considerable promise because they recognize that managers can obtain valuable information after commencement of the project.


2.3 Determinants of Financial Performance

The analysis of corporate financial performance has a special significance for the management, in their attempt to maintain the company’s stability and to increase its market share. Effectiveness of company managers and resource efficiency affect directly the development of the state in which they operate, by obtaining positive financial results. The main objective became establishing the key factors that determine corporate performance, in order to remove negative influences and to enhance those with positive impact on business.

Analysis of the determinants of corporate financial performance is essential for all the stakeholders, but especially for investors. This principle provides a conceptual and operational framework for evaluating business performance. The value of shareholders, defined as market value of a company is dependent on several factors: the current profitability of the company, its risks, and its economic growth essential for future company earnings. All of these are major factors influencing the market value of a company (Branch and Gale, 1983)

2.3.1 Profitability of a firm

Brief et al. (1996) argues that financial indicators based on accounting information are sufficient in order to determine the value for shareholders. A company’s financial performance is directly influenced
by its market position. Profitability can be decomposed into its main components: net turnover and net profit margin.

Ross et al. (1996) argues that both can influence the profitability of a company one time. If a high turnover means better use of assets owned by the company and therefore better efficiency, a higher profit margin means that the entity has substantial market power.

2.3.2 Risk and Economic Growth

Fruhan (1979) points out that risk and growth are two other important factors influencing a firm’s financial performance. Since market value is conditioned by the company’s results, the level of risk exposure can cause changes in its market value. Economic growth is another component that helps to achieve a better position on the financial markets, because market value also takes into consideration expected future profits.

2.3.3 Size of the Company

The size of the company can have a positive effect on financial performance because larger firms can use this advantage to get some financial benefits in business relations Mathur (1997). Large companies have easier access to the most important factors of production, including human resources. Also, large organizations often get cheaper funding.
2.3.4 Capital Structure

In the classical theory, capital structure is irrelevant for measuring company performance, considering that in a perfectly competitive world performance is influenced only by real factors. Recent studies contradict this theory, arguing that capital structure play an important role in determining corporate performance. Barton & Gordon (1988) suggest that entities with higher profit rates will remain low leveraged because of their ability to finance their own sources. On the other hand, a high degree of leverage increases the risk of bankruptcy of companies.

2.3.5 Sustainable growth rate

The main objective of the company has evolved over time; the need for short term profit is replaced by the need for long-term growth of the company (sustainable growth). Therefore, a sustainable growth rate would have a positive impact on performance. For the companies listed at the securities exchange, its ability to distribute dividends is a proof of stability. However, until now there was no proof of a link between this factor and profitability, since profits can be used for purposes other than to distribute dividends. Kakani (2001).
2.4 Empirical Literature

Klammer (1973) investigated the association between capital budgeting techniques and firms’ performance. His sample included 369 manufacturing firms. The response rate was about 50%. The aim of study was operational return rates as adequate measure of the firms’ performance. Capital budgeting techniques were used to test the payback method and the discounting techniques. Linear regression analysis was carried out to test various hypotheses. These results pointed out that despite of a growing adoption of sophisticated capital budgeting methods no consistent significant association between performance and capital budgeting techniques were apparent. This implies that mere adoption of various analytical tools is not sufficient to bring about superior performance. The other factor such as marketing, product development, executive recruitment and training, labor relations deserve sufficient attention.

In Kenya, Olum (1976) studied capital budgeting from the viewpoint of shareholders’ wealth maximization. He examined the extent to which capital budgeting techniques were applied by Kenyan corporations. He noted that the current capital investment appraisal techniques were not well applied. Only two fronts tend to utilize it namely private entrepreneur and the general public.
Haka et al. (1985) determined the effects of a firm’s market performance by switching from naïve to sophisticated capital budgeting selection procedures. They theoretically stated that, a firm should perform better if it employs sophisticated techniques than if it uses naïve techniques. Equally, a sample size of 50 firms was used. Only 60% of the firms responded. In addition, they used personal interviews for two reasons; first to determine if the firm had indeed adopted sophisticated capital budgeting techniques; secondly; it was important to ascertain precisely when the adoption took place.

Compared to Klammer (1973) work these results were much more definitively conclusion. They found out that 48 months before the firms switched to sophisticated capital budgeting techniques, with three different 48-month periods after the switch, indicated no significant improvements in the relative market performance of the firms’ adopting sophisticated selection techniques. However, while they found no long-run effects on relative market returns for adopting firms, their results suggested that there was a short-run positive effect when firms adopt sophisticated capital budgeting selection procedures. Consistent with Klammer’s (1973) work, other factors were found to violate the improvement of firm performance after a switch from naïve to sophisticated capital budgeting selection techniques.
Mooi and Mustapha (2001) have investigated on degree of sophistication of capital budgeting practice and firms’ performance. Using a sample of 42 firms, 19% used average capital budgeting methods and 43% fairly superior methods. To test the level of association, they performed a t-test. Their results showed that the degree of capital budgeting sophistication did not significantly affect firm performance using ROA and EPS. Generally, the use of superior capital budgeting process should increase the effectiveness of the firms’ investments decision making. Thus their study failed to confirm with the theory.

Kadondi (2002) determined the capital budgeting techniques used by companies listed at NSE and how the firms’ and CEO characteristics influence the use of a particular technique. With a sample size of 43 companies, 65% responded to questionnaire. His results showed that 85% carry out capital budgeting in stages though many of the respondents ignored the first stages of capital budgeting. Of these, 31% used the payback method, 27% applied NPV while 23% were using the IRR technique.

Gilbert (2005) determined the application of capital budgeting methods and their association with firm performance among South African manufacturing firms. A sample of 318 firms was surveyed. The response
rate was 37%. The survey tested the application and impact of payback method, return accounting rate, net present value and the internal return rate. The return on assets was used as a measure of the firms’ performance. From this study, it was noted that 15% of the firms employed the payback method, 8% used purely the discounting methods while the rest employed a mixture of both. Even though the managers were aware of the cost benefits of using the discounting methods, their responses involved the use of shortcuts and approximations. It was concluded that while discounted cash flow methods play an important role in capital investment decision-making, their costs and proper application was extremely underestimated.

Yao et al. (2006) compared the use of capital budgeting techniques and their impact on performance in Netherlands and China. They compared 250 Dutch and 300 Chinese firms. The response rates were 87 firms responded in total. Out of these 42 and 45 were Dutch and Chinese companies, respectively. Notably, these results suggested that 49% CFOs Chinese firms use the NPV method against 9% who use traditional investment decision methods. In Dutch, 89% of the firms use NPV investment decision method while traditional investment decision methods took 11%. Their study used return on assets to measure performance which was used in a regression model as a dependent
variable and measured against the various investment decision techniques. The results indicated that in both countries, sophisticated capital budgeting techniques mostly NPV and IRR had a positive relationship with return on assets (ROA) while the traditional methods showed an insignificant relationship.

Khakasa (2009) attempted to provide empirical evidence on the state of practice in Kenyan banking institutions by evaluating IT investments ex ante. The results of the survey showed that the most popular investment appraisal techniques used in Kenyan banks were cost-benefit analysis, risk analysis, competition, as well as payback period and return on investment. The least popular techniques are the internal return rate (IRR), computer based techniques (CBT) and the net present value (NPV). Of the 41 banks sampled, a total of 25 responses were obtained. This was a response rate of about 61%. 100% of the responding institutions indicated that they used at least one of the economic techniques to appraise potential IT projects. Most institutions used more than one financial technique to appraise their investments. The most popular economic technique is the Cost Benefit Analysis (CBA) method (92%), while Internal Rate of Return (IRR) ranked the lowest (0%). Besides CBA, payback period and Return on Investment were both used by 60% of the responding institutions. Only 8% of the banking
institutions used at least one of the discounting techniques. Net Present Value was found to be used by 8% of the banks, while IRR is used by none of the responding banks. Overall, the study concluded that banks had limited use of discounting techniques and this raised questions as to the extent of the use of cash flows to appraise potential projects.

Olawale et al. (2010) conducted an investigation into the companies which make use of sophisticated investment appraisal techniques in investment decisions. The study sample size was 124 firms. The response rate was 39% indicating to be using sophisticated investment appraisal techniques in investment decisions. Moore & Reichert (1989) studied 500 US firms using modern analytical tools and financial techniques. Overall, firms which adopted sophisticated capital budgeting techniques had better average financial performance. Specifically, firms which used modern inventory management techniques and Internal Rate of Return (IRR) reported superior financial performance against those firms using naïve methods.

Kadondi (2002) determined the capital budgeting techniques used by companies listed at NSE and how the firms’ and CEO characteristics influence the use of a particular technique. With a sample size of 43 companies, 65% responded to questionnaire. His results showed that
85% carry out capital budgeting in stages though many of the respondents ignored the first stages of capital budgeting. Of these, 31% used the payback method, 27% applied NPV while 23% were using the IRR technique.

2.5 Summary of Literature Review

The objectives of this study are to determine the capital budgeting techniques employed by listed companies and the effect of those techniques on the financial performance. The results of most studies have reported the use of both the naïve capital budgeting and discounted cash flow techniques. The naïve methods include; the payback method and the accounting rate of return. The discounted cash flow methods otherwise referred to as sophisticated capital budgeting include the net present value and the internal rate of return. Many companies seem to prefer the payback method and net present value to accounting rate of return and internal rate of return respectively.

In the literature, it has been argued that the use of capital budgeting practices may be related to improved financial performance. A number of arguments to support this have been cited. Some of the studies indicated that sophisticated capital budgeting techniques mostly NPV and IRR had a positive relationship with return on assets (ROA) while the traditional
methods showed an insignificant relationship. However similar studies reported a negative relationship of the capital budgeting techniques and financial performance. The studies have indicated that, despite a growing adoption of sophisticated capital budgeting methods, there is no consistent significant association between performance and capital budgeting techniques. This indicates that the mere adoption of various analytical tools is not sufficient to bring about superior performance and that other factors such as marketing, product development, executive recruitment and training, labor relations, etc., may have a greater impact on profitability.

Local studies on the other hand have mainly dealt with the application of the capital budgeting techniques in listed companies and also in the banking sector. Their findings indicate that discounted cash flow methods are not extensively being used to appraise investment decisions. The study in the banking sector particularly found the overwhelming application of the naïve capital budgeting techniques. Thus given these conflicting findings in the literature and lack of substantive local study on the effect of capital budgeting techniques on financial performance, this study seeks to establish the effect of the capital budgeting techniques on financial performance of companies listed at NSE.
CHAPTER THREE: RESEARCH DESIGN

3.1 Introduction

This is a research methodology chapter. It discusses research methods used, sampling, data analysis and presentation as well as interpretation. Findings, recommendations and conclusions are also included.

3.2 Research Design

Kumar (2005) defined a research design as a procedural plan that is adopted by the researcher to answer questions validly, objectively, accurately and economically. A research design helps a researcher to conceptualize an operational plan to undertake the various procedures and tasks required to complete the study and ensure that these procedures are adequate to obtain valid, objective and accurate answers to the research questions.

The study will employ a descriptive design to determine the capital budgeting techniques and their impact on financial performance in companies quoted at the NSE. This was best suited for explaining or exploring the existing of two or more variables at a given point in time and will give the researcher an opportunity to collect relevant data to meet the objective(s) of the study. The research emulated similar studies
that used this design such as Klammer (1973) and Moore & Reichert (1989).

3.3 Population of the study

A population refers to the entire group of individuals, events, or objects having common observable characteristics Mugenda and Mugenda (2003). The target population was 61 companies listed at the Nairobi Securities Exchange as at 31st December 2013. These companies represent the main economic sectors in Kenya. In addition, they are publicly quoted and publish their financial annual reports, hence information pertaining to them was readily available.

The study employed a census survey, because the NSE as of the time of the study had only 61 listed companies, therefore the whole population of the companies was included in this study. Thus, no sampling procedure was conducted. It was also noted that in comparison to similar studies conducted elsewhere, the size of the population in this study is small. The study covered a period of three years from 2008-2011. The justification for the choice of this period was that the period was considered both current and long enough for any capital budgeting decision to be taken, implemented and results established. Previous studies have also employed a similar period of time for instance the study by Axelsson, et al. (2002) and Farragher, et.al (2001).
3.4 Data Collection

Both primary and secondary data were used. Primary data was collected by use of structured questionnaires. They were administered by the researcher. Secondary data was collected from the published financial companies’ accounts. These were obtained from NSE library and Capital Markets Authority (CMA).

3.5 Data Analysis

Data obtained was analyzed in general for companies listed at the Nairobi Securities Exchange.

The performance of the firms in this study is measured through a model that has been used by Farragher et al. (2001). This model is a multiple regression model to examine the relationship between capital budgeting techniques and the financial performance of companies. In a study conducted by Klammer (1973), it was indicated that the degree of sophistication is represented by the use of the DCF techniques and incorporating risk in the analysis.
The model is given by the following equation:

$$\text{ROA} = \alpha + \beta_1 X_1 + \beta_2 X_2 + \varepsilon$$

Where:

ROA = Return on Assets (Profitability)

$\alpha$ = constant (y intercept)

$X_1$= Capital budgeting Techniques (1=NPV, 2=IRR, 3=PB, 4=ARR)

$X_2$= Size of firm as measured by log of total assets

$\beta_1$, $\beta_2$, = Regression coefficients

$\varepsilon$ = Error term

**3.5.1 Test of Significance**

Different statistical techniques will be used according to the type of the data in hands as the follows: coefficient of determination ($R^2$), the analysis of variance (ANOVA), F-test, and t-test.
CHAPTER FOUR: DATA ANALYSIS & FINDINGS

4.1 Introduction

This chapter displayed the analysis and findings of the underlying objectives of the research study. The study sought to establish the relationship between capital budgeting techniques and financial performance of firms listed at the Nairobi Securities Exchange. Data collected was presented in frequency tables, histograms and pie charts as well as narrations.

4.2 Data Presentation

The general information considered in this study were respondents by designation, years have you worked for your current organization and legal status of the company.

4.2.1 Response Rate

A total of 61 questionnaires were issued out. Amongst the 61 questionnaires distributed to the companies by the researcher, only 49 were filled and collected back. The remaining 12 were not returned. The returned questionnaires represented a response rate of 80.33% of the target population. This was a satisfactory rate to enable the research be analyzed and concluded.
4.2.2: Distribution of Respondents by Designation

As can be observed, in Figure 1, the respondents were made up of 61.5% who were investment managers, 30.8% were finance managers and 7.7% were risk managers.

Figure 4.1: Distributions of Respondents by Designation

---

4.2.3 Distribution of Respondents by Length of Service with Organization

The results presented in table 4.2.3 shows that majority of the respondents (38%) had worked in their respective organization for over six years, 33% had been in their organization for 4 to 5 years and the remaining 29% had worked for 2 to 3 years in their current organizations.
Table 4.1: Length of Service with Organization (years)

<table>
<thead>
<tr>
<th>Number of service years</th>
<th>Frequency</th>
<th>Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-3 years</td>
<td>14</td>
<td>29.0</td>
<td>29.0</td>
</tr>
<tr>
<td>4-5 years</td>
<td>16</td>
<td>33.0</td>
<td>62.0</td>
</tr>
<tr>
<td>over 6 years</td>
<td>19</td>
<td>38.0</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>49</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>

Source: researcher’s raw data.

4.2.4: Distribution of Respondents by Legal Status

As can be observed, in Figure 2, 31.41% of the respondents were from private companies while 68.59% were from public companies.

Figure 4.2: Respondents Legal Status
4.3 Capital Budgeting Techniques

This section covered information posed to respondents on the following issues; Use of Capital Budgeting Techniques, a major switch in techniques used over the last 5 years and techniques company favor when deciding investment projects to pursue.

4.3.1. Respondents Preference on the Investment Technique

There was no major disparity between the uses of capital budgeting techniques apart from one.

33.33% of the respondents preferred using PBP, 44.44% preferred NPV while 22.22% preferred the use of IRR. None of the respondents preferred the use of ARR depicting that firms listed at the Nairobi Securities Exchange might have rejected its use.

Figure 4.3: Preference of Investment Technique

![Graph showing preference of investment technique]

- **NPV**: 44.44%
- **IRR**: 33.33%
- **ARR**: 22.22%
- **PB**: None
4.3.2. Respondents Switch from One Technique

17.24% of the respondents said there was a time the companies changed from one budgetary technique to another. Majority of them have never changed the technique they have been using to the proportion of 42.14% whereas 40.61% were not aware whether such a switch has ever taken place.

Figure 4.4: Switch from One Budgetary Technique to Another

4.3.3 Techniques Used When Deciding Investment Projects to Pursue

The respondents were to indicate the type of techniques their respective company’s favor when deciding investment projects to pursue. The findings in table 4.3.3 indicate that 43.6% of the respondents firms
favored net present value techniques when deciding investment projects to pursue, followed by Internal rate of return at 41.0%, Accounting rate of return and Payback period at 7.7% respectively.

**Table 4.2: Techniques used When Deciding Investment Projects to Pursue**

<table>
<thead>
<tr>
<th>Techniques</th>
<th>Frequency</th>
<th>Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Net present value</td>
<td>19</td>
<td>38.78</td>
<td>38.78</td>
</tr>
<tr>
<td>Internal rate of return</td>
<td>16</td>
<td>32.65</td>
<td>71.43</td>
</tr>
<tr>
<td>Accounting rate of return</td>
<td>7</td>
<td>14.29</td>
<td>85.71</td>
</tr>
<tr>
<td>Payback period</td>
<td>67</td>
<td>14.29</td>
<td>100.0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>49</strong></td>
<td><strong>100.0</strong></td>
<td></td>
</tr>
</tbody>
</table>

Source: researcher’s raw Data

**4.4. Respondents Information on Capital Budgeting**

This was found out by analyzing whether the firms had the capital investment manual, how many staffs were assigned to investment analysis and who produced the guidelines. It also shows the people originating with the capital budgeting proposal.

This was to depict whether the interviewed companies had a manual to guide them on capital investments. 5 respondents had a manual, 1 did not while 1 was not aware whether it existed representing a 71.43%, 14.29% and 14.29% respectively of the entire population.

Table 4.3: Existence of Investment Manual

<table>
<thead>
<tr>
<th>FREQUENCY</th>
<th>PERCANTAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>YES</td>
<td>5</td>
</tr>
<tr>
<td>NO</td>
<td>1</td>
</tr>
<tr>
<td>NOT AWARE</td>
<td>1</td>
</tr>
</tbody>
</table>

Source (Raw Data by Researcher)

4.4.2. Respondents Staff Assigned Full time Capital Investments Analysis

Most of the respondents assign between 3-5 and over 5 full time staff to undertake their capital investment analysis representing 42.86% respectively. 14.29% of the respondents don’t assign a single staff for such analysis whereas none of the respondents assign between 1-2 staff to do such analysis.
Table 4.4: Staff Assigned Capital Investments Analysis

<table>
<thead>
<tr>
<th>NUMBER OF STAFF</th>
<th>FREQUENCY</th>
<th>PERCENTAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>NONE</td>
<td>1</td>
<td>14.29%</td>
</tr>
<tr>
<td>1-2 STAFF</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>3-5 STAFF</td>
<td>3</td>
<td>42.86%</td>
</tr>
<tr>
<td>MORE THAN 5 STAFF</td>
<td>3</td>
<td>42.86%</td>
</tr>
</tbody>
</table>

Source (Raw Data by Researcher)

4.4.3. Respondents Guidelines on Requests for Capital Expenditure

All of the respondents in the study assented to having guidelines on how requests for capital expenditure should be identified in their respective companies and hence representing the entire population of 100%.

4.4.4. Respondents on Who Produces the Guidelines

All of the respondents in the study depicted that the executive management were solely involved in the production of the guidelines on how requests for capital expenditure were to be identified thus representing a whole population of 100%.
4.4.5. Respondents Origin of Capital Budgeting Proposal

57.14% of the respondents confirmed that the executive management originates with the capital budgeting proposal in their firms. The budget committee, divisional manager and operating personnel all shared equally each having a proportion of 14.29% of the population.

**Figure 4.5: Origin of Capital Budgeting Proposal**

![](chart.png)

4.5 Correlation and Regression Analysis.

4.5.1: Correlation Analysis

If two predictor variables indicate a correlation coefficient of more than 0.50, then the problem of multi-co linearity exists and in the table above, none exceeds 0.5 between themselves and hence none of them are highly correlated with each other. If highly correlated with each other, it’s
difficult to separate the effect of each of them on and cannot test the dependent variable.

Table 4.5: Pearson Correlation Coefficients

<table>
<thead>
<tr>
<th></th>
<th>ROA</th>
<th>NPV</th>
<th>ARR</th>
<th>IRR</th>
<th>PB</th>
<th>CONT</th>
</tr>
</thead>
<tbody>
<tr>
<td>ROA</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NPV</td>
<td>0.025</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ARR</td>
<td>0.135</td>
<td>0.159</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IRR</td>
<td>0.058</td>
<td>-0.30</td>
<td>0.147</td>
<td>1.000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PB</td>
<td>0.350</td>
<td>0.371</td>
<td>0.172</td>
<td>0.098</td>
<td>1.000</td>
<td></td>
</tr>
<tr>
<td>CONT</td>
<td>0.262</td>
<td>-0.400</td>
<td>-0.116</td>
<td>0.098</td>
<td>-0.299</td>
<td>1.000</td>
</tr>
</tbody>
</table>

Source (Raw Data by Researcher)

Significant at 0.05

Table 4.6 below presents the model of influences of capital budgeting techniques on organization financial performance with the coefficient of determination $R^2 = 0.580$ and $R =0.762$ at 0.05 significant level. The coefficient of determination indicates that 76.2% of the variation on organizational financial performance can be explained by capital budgeting technique used($X_1$) and size of the company($X_2$). The remaining 24.8% of the variation on financial performance is influenced
by other variables not included in the model. This shows that the model has a good fit since the value is above 75%.

**Table 4.6: Regression Model on the effects of capital budgeting techniques on financial performance of firms**

<table>
<thead>
<tr>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Squared</th>
<th>R</th>
<th>Std Error of the estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.762</td>
<td>0.580</td>
<td>0.40</td>
<td></td>
<td>0.05163</td>
</tr>
</tbody>
</table>

Table 4.7 Established the summary of ANOVA findings and the table shows that there is no correlation between the independent variables (capital budgeting techniques) and the dependent variable ROA (financial performance) since the significance factor of 7.20% is more than the required 5.00% and hence the model is not significant and cannot conclusively predict ROA.
As can be observed in Table 4.8 below, the regression analysis generated the following results: Capital budgeting techniques exert a positive and significant effect on organizational performance with a 0.772 standardized path coefficient. There is a relationship between capital budgeting techniques and organizational financial performance. Size of the firm exerts a positive and significant effect on organizational performance with a 0.456 standardized path coefficient. This implies that there is a relationship between size of a firm and organizational financial performance.

\[ \text{ROA} = 0.1675 + 0.772X_1 + 0.456X_2 + \epsilon \]
Table 4.8: Coefficient of Regression Equation

<table>
<thead>
<tr>
<th></th>
<th>coefficient</th>
<th>t</th>
<th>significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>B</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Constant</td>
<td>.1675</td>
<td>1.530</td>
<td>.170</td>
</tr>
<tr>
<td>(x_1)</td>
<td>.772</td>
<td>2.912</td>
<td>.023</td>
</tr>
<tr>
<td>(x_2)</td>
<td>.456</td>
<td>1.701</td>
<td>.133</td>
</tr>
</tbody>
</table>

Source (Raw Data by Researcher)

4.6 Findings & Interpretations

The study established that the proportion with the highest respondents who have worked for their respective companies lies over 6 years closely followed by those who have worked for 4-5 years. The lowest proportion of respondents has worked between 2-3 years. Of the interviewed companies, majority of them represented those owned by the public whereas a minority was privately owned. Majority of the respondents confirmed that the executive management originates with the capital budgeting proposal in their firms. The budget committee, divisional manager and operating personnel all shared equally in terms of originating with the said proposal but there was no major disparity between the uses of capital budgeting
techniques apart from one. Most of the company’s preferred using NPV method as their capital budgeting tool, which was closely followed by PBP and then IRR in order of preference. No companies unanimously preferred the ARR method for undertaking its investment appraisal but it is still in use by some of the companies. The study employed a regression analysis model to establish the relationship between capital budgeting techniques and the financial performance of companies listed in the Nairobi Securities Exchange. The findings depicted the model as significant with the analysis showing $R^2$ of 0.762 meaning it supports the relationship to the extent of 76.2%. The four independent variables were linearly related with the dependent variable, ROA which can be extended to the determination of ROA in other companies via forecasting using the model. The study also depicted in the order of preference that with companies, the net present value method was positively related to return on assets. This method was closely followed by the accounting rate of return method. However, a deviation from the previous studies showed that where companies are concerned, the payback period and the internal rate of return methods are negatively related to the return on assets.
CHAPTER FIVE: SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter summarized the collective findings of the study. Section 5.2 stated the summary of findings; section 5.3 established the conclusions while section 5.4 delved into the recommendations. Section 5.5 noted the limitations encountered. Section 5.6 discussed the suggestions for further studies.

5.2 Summary of Findings

The main objectives of this study were to establish the relationship between capital budgeting techniques employed by the companies listed at the Nairobi securities exchange and configure the association that coexists between those techniques and their financial performance. The study thus detailed the findings which were analyzed to depict the conclusions and the situation as it is.

The study findings revealed that in most companies, the investment management originated with the capital budgeting proposal as shown in figure 4.1. Companies mostly preferred the net present value appraisal technique in undertaking their investment decisions as established by the
returned questionnaires in figure 4.3. This technique was closely followed by the payback period with a third of the respondents preferring it while less than a quarter of them had adopted the internal rate of return. The findings established that no particular company unanimously preferred the accounting rate of return technique in undertaking its investment appraisal but the method was however still in use in several of the companies. The study also found out as shown in figure 4.4 that most companies have never switched from one budgetary technique to another or rarely do so. The derived value of 0.072 more than the actual significance level of 0.05 rendered the result insignificant.

The research employed multiple regression analysis to establish the association between capital budgeting techniques and firm performance of the companies listed at the Nairobi Securities Exchange while the financial performance was derived from return on assets divided by total assets. The model analyzed data to establish significance value using ANOVA as in the table 4.5.3. The value derived compared to the actual significance level of the test should be smaller so as to render the result significant. However, since the value derived of 0.072 is more than 0.05, there is no correlation between the independent variables NPV, ARR, PBP, IRR and ROA.
5.3 Conclusions

The aim of this study was to establish the capital budgeting techniques employed by companies and the association between such techniques and the financial performance of companies listed at the NSE. From the research findings, results showed that the capital budgeting techniques were majorly adopted by companies in the appraisal of their investments. It was therefore concluded that most companies employed net present value, payback period, internal rate of return and accounting rate of return as budgeting techniques in order of preference. The regression analysis results established no significant association between the capital budgeting techniques employed and the financial performance of companies. However, the individual ranking of independent variables in companies depicted that NPV was highly related to ROA as compared to the other variables and closely followed by ARR. PBP and IRR were negatively related to ROA which was a deviation from what other scholars have found out previously and what scholars have theoretically learnt about sophisticated capital budgeting techniques.
5.4 Recommendations

Most of the respondents as depicted by the questionnaires and other related queries they lacked necessary information on the use of capital budgeting techniques. Being a cornerstone of most of their investments, an urgent need for staff trainings especially on the acquaintance with the techniques employed is necessary as well as forming a team of knowledgeable staff to deal with capital budgeting for huge investments. More awareness to the general staff on what capital budgeting is about is also key as most of staff had no idea what it is or which department it fell under. Employee involvement is also key in such capital budgeting decision as they may capture an important aspect overlooked by executive management. Also there is need to assign more full time staff to a crucial aspect as investment analysis and involve them in production and review of guidelines pertaining to capital expenditure.

There is need to train managers (especially those based without the capital city) on financial competences as this will have a great effect and impact different undertakings and techniques would have on the firm both at regional and national levels. Management should be in the know of the cause and effect associations of the decisions if they are to influence the firm positively. The CMA and NSE should organize several seminars for managers on the
causal effects of their investment decisions with respect to financials and to the wider economy.

5.5 Limitations of the Study

Most respondents were not very conversant with the particular capital budgeting technique employed by their respective firm and the whole capital budgeting aspect. Some of the terminologies used in the study may also lower the reliability levels due to misinterpretation by some respondents.

A serious challenge to the study was accessing the target population as it was not readily available and almost all the information had to be collected from the headquarters due to company’s policies and bureaucracy pertaining outflow of information. Most respondents were reluctant to respond to the questionnaires due to the sensitive nature of some companies and the fear of unknown if such information were to leak to competitors or be used against them in such a competitive industry.

5.6 Suggestions for Further Research

Since the study focused on the companies listed in Nairobi stock exchange, it is recommended that a similar study be carried out in other companies not listed in the Nairobi securities exchange to test the same relationship between
capital budgeting techniques and their financial performance.

Further studies are needed to test the relationship between the capital budgeting techniques and firm performance by use of a different firm financial performance measurement other than ROA for instance earnings per share (EPS). Future research could also focus on a specific industry to obtain homogeneous results.

The capital budgeting practices of listed companies are not likely to be representative of all Kenyan companies. This is so because the study only focused on the listed companies ignoring the unlisted companies. Thus it is recommended that another study be done in companies not listed at the NSE to test the same objective.
REFERENCES


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Fruhan W. Jr. (1979), Financial Strategy in the Creation, Transfer and Destruction of Shareholder Value, R. D. Irwin,


APPENDICES

APPENDIX I: QUESTIONNAIRE

The questionnaire is intended to generate information from business organizations in order to analyze and understand the criteria for evaluating the risks associated with the investment decision made under Capital Budgeting. Kindly provide responses to the questions in each part as objective as possible by either ticking (√) or marking (X) beside the most appropriate alternative. Your responses will be treated with utmost confidence.

PART A: General Information

1. Respondent’s Name ................................. (Optional):

2. Name of organization.................................

3. What is your designation?
   - Investment manager  (   )
   - Risk manager  (   )
   - Finance manager  (   )

Any other (specify)..........................................

4. For how many years have you worked for your current organization?
   i) 2-3 years  (   )
   ii) 4-5 years  (   )
   iii) Over 6  (   )
5. Legal status of your company

   i. Private company  (  )

   ii. Public company  (  )

   Any other (specify) -----------------------------

**PART B: Use of Capital Budgeting Techniques**

1.) Please indicate how frequently your company employs the following evaluation techniques when deciding which investment projects to pursue.

<table>
<thead>
<tr>
<th>Evaluation Technique</th>
<th>Never</th>
<th>Almost never</th>
<th>Almost always</th>
<th>Always</th>
</tr>
</thead>
<tbody>
<tr>
<td>Net present value (NPV)</td>
<td>(  )</td>
<td>(  )</td>
<td>(  )</td>
<td></td>
</tr>
<tr>
<td>Internal rate of Return (IRR)</td>
<td>(  )</td>
<td>(  )</td>
<td>(  )</td>
<td></td>
</tr>
<tr>
<td>Accounting Rate of Return (ARR)</td>
<td>(  )</td>
<td>(  )</td>
<td>(  )</td>
<td></td>
</tr>
<tr>
<td>Payback period (PB)</td>
<td>(  )</td>
<td>(  )</td>
<td>(  )</td>
<td></td>
</tr>
</tbody>
</table>

Others specify ..........................................................
2. Has there been a major switch in techniques used over the last 5 years? ( ) Yes ( ) No

If yes, please specify:---------------------------------------------------------------

3. Please state which of the following technique(s) does your company prefer when deciding which investments to undertake?
   a) PBP ( )
   b) ARR ( )
   c) NPV ( )
   d) IRR ( )

**PART C: Information on Capital Budgeting**

1. Does your company possess a capital investment manual (written capital investment guidelines)? ( ) Yes No( )

2. If yes, which year is the latest copy of the investment manual?
   …………………

3. How many staff members are assigned full time to capital investment analysis?
   a) None ( )
   b) 1 – 2 Staff ( )
   c) 3 – 5 staff ( )
   d) More than 5 staff ( )
4. Does the company have guidelines on how requests for capital expenditure should be identified? Yes ( ) No ( )

5. Who produced the guidelines?
   a) Executive management ( )
   b) Budget committee ( )
   c) Divisional manager ( )
   d) Operating personnel ( )
   Others (specify) ..............................................................

6) . Tick below the people who originate with your capital budgeting proposal?
   a) Executive management ( )
   b) Budget committee ( )
   c) Divisional manager ( )
   d) Operating personnel ( )
   Others (specify) ..............................................................

End of Questionnaire

Thank you
APPENDIX II: COMPANIES LISTED AT THE NSE

1. Athi River Mining
2. Bamburi Cement Ltd
3. Crown Berger Ltd
4. E.A.Cables Ltd
5. E.A.Portland Cement Ltd
6. KenolKobil Ltd
7. Total Kenya Ltd
8. KenGen Ltd
10. Umeme Ltd
11. Home Afrika Ltd
12. Eaagads Ltd
13. Kapchorua Tea Co. Ltd
15. Limuru Tea Co. Ltd
16. Rea Vipingo Plantations Ltd
17. Sasini Ltd
18. Williamson Tea Kenya Ltd
19. Express Ltd
20. Kenya Airways Ltd
21. Nation Media Group
22. Standard Group Ltd
23. TPS Eastern Africa (Serena) Ltd
24. Scangroup Ltd
25. Uchumi Supermarket Ltd
26. Hutchings Biemer Ltd
27. Longhorn Kenya Ltd
28. Safaricom Ltd
29. Car and General (K) Ltd
30. CMC Holdings Ltd
31. Sameer Africa Ltd
32. Marshalls (E.A.) Ltd
33. Barclays Bank Ltd
34. CFC Stanbic Holdings Ltd
35. I&M Holdings Ltd
36. Diamond Trust Bank Kenya Ltd
37. Housing Finance Co Ltd
38. Kenya Commercial Bank Ltd
40. NIC Bank Ltd
41. Standard Chartered Bank Ltd
42. Equity Bank Ltd
43. The Co-operative Bank of Kenya Ltd
44. Jubilee Holdings Ltd
45. Pan Africa Insurance Holdings Ltd
46. Kenya Re-Insurance Corporation Ltd
47. Liberty Kenya Holdings Ltd
48. British-American Investments Company (Kenya) Ltd
49. CIC Insurance Group Ltd
50. Olympia Capital Holdings ltd
51. Centum Investment Co Ltd
52. Trans-Century Ltd
53. B.O.C Kenya Ltd
54. British American Tobacco Kenya Ltd
55. Carbacid Investments Ltd
56. East African Breweries Ltd
57. Mumias Sugar Co. Ltd
58. Unga Group Ltd
59. Eveready East Africa Ltd
60. Kenya Orchards Ltd
61. A. Baumann CO Ltd

Date: Dec 2013
Source: NSE