EFFECT OF CAPITAL BUDGETING TECHNIQUES ON THE FINANCIAL PERFORMANCE OF REAL ESTATE INDUSTRY IN NAIROBI COUNTY, KENYA

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DECLARATION

This research project is my original work and has not been submitted to any other university for an academic award.

Signature…… Date…….

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D61/77319/2015

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

Signature…… Date…….

DR. OKIRO KENNEDY

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DEDICATION

This project is generally dedicated in all sincerity, due respect and honor to all my family members for the prayers and encouragement. This project is particularly dedicated to KAZOHERA Venerand who sponsored my studies. May the Lord bless them abundantly.

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LIST OF ABBREVIATIONS

ANOVA:	Analysis of Variance
ARR:	Average/Accounting Rate of Return
CAPM:	Capital Asset Pricing Model
CBT:	Capital Budgeting Techniques
CEO:	Chief Executive Officer
CFO:	Chief Financial Officer
CIMA:	Chartered Institute of Management Accountant
CMA:	Capital Markets Authority
DCF:	Discounted Cash Flows
HR:	Human Resource
IRR:	Internal Rate of Return
MIRR:	Modified Internal Rate of Return
NPV:	Net Present Value
NSE:	Nairobi Securities Exchange
PBP:	Payback Period
PI:	Profitability Index
ROA:	Return on Assets
SOE:	State Owned Enterprises
SPSS:	Statistical Package for the Social Sciences
TCA:	Total Cost Approach
US:	United States
WACC:	Weighted Average Cost of Capital

ABSTRACT

The real estate industry is very important for its contribution to the economic growth of a country. This study aimed at establishing how various CBT had impacted on the financial performance of Nairobi's real estate industry. This research analyzed past literature by identifying relevant themes and then thematic text analysis was employed. Thus, this research is subjective and adopted inductive approach in order to answering research questions. As this research covered last 10 years of research papers carried out in the area of capital budgeting from 2006 to 2015, this study adapted research strategy of longitudinal research design. The population of the study consisted of 149 registered real estate companies in Nairobi County, Kenya. The sample size for the study was 50 firms selected from the targeted 149 firms. The researcher collected primary data using questionnaires. The collected data was checked for completeness, coded and captured into MS Excel for analysis. Descriptive and inferential statistics were used to analyze data by way of means (measure of central tendency) and standard deviation (measure of dispersion). The study found out that real estate companies rely on NPV in decision making, ARR is useful in decision making at real estate companies, real estate companies rely on IRR in making replacement decisions and independent project decisions, IRR as an appraisal technique considers time value, real estate companies rely on PI to make replacement decisions, PBP is useful among the real estate firms as it helps making lease or buy decisions, ARR helps real estate companies to make mutually exclusive decisions and that other techniques of capital budgeting are useful in making lease or buy decisions. The study concludes that NPV is consistent with the concept of maximizing the shareholders' wealth; NPV affects financial performance of real estate companies. IRR affects financial performance of real estate companies. There is also an effect of ARR on financial performance of real estate companies. PI also affects financial performance of real estate companies. The study recommends that NPV should be particularly used by real estate firms in making mutually exclusive decisions and independent project decisions, real estate firms should choose a method that considers the time value of money, real estate companies rely on PI to make independent project decisions and contingent project decisions, real estate firms should also adopt the use of PBP in making independent project decisions, real estate firms should adopt ARR in making mutually exclusive and independent project decisions and that real estate companies ought to adopt other techniques of capital budgeting in making lease or buy, mutually exclusive project and independent project decisions.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Capital investment is a tricky affair considering the fact that the investment would take a while for recouping. In order to make wise investment decisions, it is important that organizations are availed with a way of evaluating various investment options at their disposal. Capital budgeting enables organizations to evaluate various investment options for optimal shareholders' wealth creation. For this purpose, it is important that future cash flows from a given project are estimated to help the management make a wise decision (Brewer, Garrison and Noreen, 2011).

The requirement for important data and examination of capital planning options has propelled the development of a progression of models to help firms in making the best designation of assets (Cooper, Morgan, Redman and Smith, 2002). There are a modest capital project investment appraisal related procedures created to assess capital planning and non-monetary thought has turned out to be more noticeable also in settling on an official conclusion about which systems seem, by all accounts, to be more mainstream and why (Hasan, 2013).

According to the Chartered Institute of Management Accountant (CIMA) of England a budget is an arrangement evaluated in money related things arranged and affirmed before a characterized timeframe more often than not demonstrating arranged salary to be produced and consumption to be caused amid that period and the cash-flow to be utilized to accomplish a given target and this meaning of CIMA spreads planning exercises

generally in the private part ventures (Mooi and Mustapha, 2001). The real target of planning in both the general population and private part is to guarantee proficient and successful use of assets and for the acknowledgment of the goals of the association or any neighborhood government. However the nonattendance of planning in both the neighborhood government and lower nearby government will come about into the poor operation of this administration framework as there might be no objectives and target to be accomplished henceforth driving into poor money related administration.

Whatever causes certain investment project appraisal strategy to be acknowledged over the others is an interesting inquiry yet to be completely examined, the components impacting the reception of a specific procedure, and systems which are more reasonable to assess distinctive sorts of speculation. Previous studies have adopted various investment appraisal mechanisms with the aim of judging which investment option offers organization optimal returns. In order to make optimal decisions, it is important that the investment managers understand the rationale behind each of the investment projects' appraisal technique. This can help in selecting the right strategy for assessing a specific venture. For both experts and scientists, more inside and out learning on capital planning adds to better assessment of capital planning choices.

Since capital project investment speculation is a key component in corporate execution, corporate administrators ought to see how capital venture choices are made on the off chance that they are to take an interest in enhancing corporate execution. Figuring out which firm-particular and natural variables influence an association's capital planning practices is difficult. In this way, a reasonable comprehension of an organization's inside

and outside situations is fundamental (Hasan, Shao and Shao, 1997). A firm working under an alternate arrangement of association setting versus another, the fitting strategy that can help in settling on better choices among the available options, or the technique that can be material for assessing different types of investment options by paying little attention to firm attributes.

Changes in the operating environment have introduced high levels of uncertainty which makes it difficult for investment managers to estimate a project's future cash flow with accuracy. This therefore means that they have to critically and analytically evaluate the options at their disposal for optimal organizational returns (Klammer et al., 1991). Choosing appropriate capital project appraisal techniques ensures that the limited resources available in an organization are invested optimally in that the registered return on investments is optimally high. Different capital budgeting practices have been adopted by different firms.

1.1.1 Capital Budgeting Practices

Capital budgeting likewise called investment appraisal is a process used to evaluate the viability of various huge capital and long term investment opportunities presented to an organization so as to establish their likely returns through estimation of future cash flows. Normally, these capital projects take long time to maturity and demand high investment which means that once started, it may not be easy for an organization to abandon them without incurring the losses. This therefore calls on the managers to apply the capital budgeting techniques appropriately to ensure that they invest the resources at their disposal optimally (Petereson and Fabozzi, 2009).

In spite of the fact that we have numerous formal capital planning procedures, with the end goal of this study the specialist will major on two classes of capital planning assessment models. These include: non-reduced strategies likewise alluded to as customary techniques (payback period, and normal/bookkeeping rate of return) and income marking down strategies additionally alluded to as current techniques (net present esteem, inside rate of return and benefit list) (Oyaro, 2009).

The PBP is a standout amongst the most mainstream and generally perceived customary techniques for appraising capital investment projects, it is characterized as the quantity of years required to recoup the capital outlay in a given investment project, if the venture creates consistent yearly money inflows, the payback time frame can be processed partitioning money expense by the money inflow (Seitz & Ellison, 2005). This procedure on one hand, does not assess the money inflows earned after the PBP, it is not a proper strategy for measuring the benefit of a speculation extend, as it doesn't consider the whole money inflows yielded by the venture, it neglects to consider the example of money inflows, i.e., size and timing of money inflows, and the authoritative troubles might be confronted in deciding the most extreme worthy PBP. Then again, the PBP gives an understanding to the liquidity of the venture (the early recuperation of speculation) an organization can have more great short-run consequences for profit per share by setting up a shorter PBP (Pike, 2007).

The ARR technique utilizes bookkeeping data, as uncovered by money related articulations, to quantify the benefit capacities of the speculation proposition. It is discovered by isolating the normal pay after charges by the normal speculation (Suzette and Howard, 2011). The ARR is extremely easy to comprehend and utilize, can be

promptly computed utilizing the bookkeeping information and utilizations the whole stream of wages in ascertaining the bookkeeping rate. In any case, it utilizes bookkeeping, benefits, not trade streams out assessing the ventures, overlooks the time estimation of cash, benefits happening in various periods are esteemed similarly and does not consider the lengths of tasks lives (Hasan, 2013).

The NPV technique is a procedure of figuring the present estimation of money streams (inflows and outpourings) of a venture proposition, utilizing the cost of capital as the fitting marking down rate, and discovering the net benefit. The NPV takes into consideration the loss of value of a currency with passage of time. Similarly, it considers all streams of cash flow generated by an investment project over its useful lifetime which makes it more reliable because it maintains the purchasing power of an investor. The NPV is however difficult to apply because of its assumptions that the rebate rate is generally associated with an organization's cost of capital which is not always known. However, in real life setting, it is not easy to comprehend with certainty an organization's cost of capital especially in new and sophisticated projects being undertaken for the first time ever.

The IRR likens the present esteem money inflows with the present estimation of money surges of a venture. It is called IRR because of the fact that it is based exclusively on the cost on capital in an organization which may not be easily determined. Like NPV technique, the IRR takes into account the streams of cash flows throughout the lifespan of a given investment project, and meets the requirement or expectations of clients on the rate of return for capital outlay. The IRR however includes computation challenges as it

varies from one organization to another thus may not give similar standings in all circumstances. It may yield negative rate or various rates in specific situations.

The PI refers to the proportion of the present estimation of future money benefits, at the required rate of come back to the underlying money outpouring of the speculation. It demonstrates the relative productivity of any venture, or the present esteem per shilling of starting expenses. The choice manages for the PI is to acknowledge when the PI is more prominent than one and reject when it is lower than one. The PI is profitable as it considers the time estimation of cash and gives a superior assessment strategy than NPV particularly under capital proportioning. By the bye, the PI is scrutinized as not thinking about money surges past the present time frame, and exact expectation of money streams which is unimaginable. It likewise calls for exact estimation of the cost of capital.

1.1.2 Financial Performance of Real Estate Industry

Financial Performance is characterized as the achievement of a given assignment measured against preset norms of exactness, fulfillment, cost viability and effectiveness. At the end of the day, it alludes to how much an accomplishment is being or has been refined. Money related execution manages the accomplishment of an association measured in fiscal terms. The measures of an association's budgetary execution are gathered into five classes: liquidity, productivity, dissolvability, reimbursement limit and monetary proficiency (Ongore and Kusa, 2013). Land shares are exchanged in fluid markets. They in this manner give data about financial specialists' valuations of land reflected in exchange costs. Obviously, this data is consolidated with data about a scope of different issues. For instance, land offers experience the ill effects of various expense

treatments from the immediate market and are regularly adapted. By and by, it might be conceivable to conform land share files for these elements, and in any event acquire a data set that is valuable for the examination of the immediate market.

All land lists will show distinctive execution on account of the diverse techniques for development and the distinctive routes in which various subjective issues are dealt with. In any case, it ought not to be suspected that there is, on one hand, a land market that must be measured subjectively and, then again, a value market that can be measured utilizing target records. Value lists are likewise portrayed by various issues that prompt to the estimation of value market execution being subjective as well. These issues incorporate the trouble of characterizing business sector capitalization (whether to utilize free buoy or full market capitalization); the challenges in characterizing nationality and part and the challenges in deciding the proper scope.

1.1.3 Capital Budgeting and Financial Performance

Among the said capital planning procedures, the specialist will look to expand the methods which have been considered in Nairobi land industry in settling on their capital planning choices (Petereson and Fabozzi, 2009). The NPV strategy utilizes the changes in the purchasing power of a currency over time as a result of changes in inflation and other variables to ensure that an investment project is worthwhile. To confirm this test, an independent company proprietor would first determine the cash inflows and outflows required for the long term investment project so as to determine the worthiness of undertaking it (Stein, 2006). Once established, the entrepreneur converts the future cash

flows accordingly so as to revert them into the present status to resolve the differences in time lapse (Seitz& Ellison, 2005).

The IRR technique applies the NPV strategy in turn around. This technique finds the markdown rate, given the undiscounted money streams of the venture, which brings about a NPV of zero (Olum, 2006). To apply this strategy, a chief partitions the venture required by the net yearly money inflow the venture is relied upon to create. This count yields the IRR figure. This element can be turned upward in a NPV table to recognize the fitting interior rate of return. This IRR is then contrasted and the organization's base adequate rate of return. In the event that the venture guarantees a higher return, it is acknowledged (Seitz & Ellison, 2005).

The TCA permits independent venture proprietors to assess different activities at one time. In this strategy, the chief alters all money inflows and outpourings for each contending option and after that analyzes them (Peterson& Fabozzi, 2002). All activities with positive NPVs are adequate; be that as it may, the venture with the best NPV is the most gainful (Pike, 2007). This technique can be tedious, on the grounds that costs that don't contrast crosswise over contending ventures are computed, despite the fact that they are insignificant (Oyaro, 2009). At the point when reserves accessible for tasks are constrained, a private company proprietor can compute the venture PI, to figure out which venture is favored. By separating the net present estimation of a venture by the speculation favored, the proprietor is computing an estimation of NPV acquired per dollar contributed. This is known as the PI. Higher venture PI values infer more alluring activities.

1.1.4 Real Estate Industry in Kenya

The real estate industry in Kenya has seen a boom that started some place in the mid to late 2000s on the grounds that the property market is reacting to expanded request. In Nairobi, the capital and biggest city of Kenya, there is one of the biggest ostracize groups in the landmass because of the huge number of multinationals that have selected Nairobi as their entry point for the African in general and East and Central African in particular. The resurrection of property improvement in Nairobi has pulled in worldwide consideration. In its 2012 Wealth Report, land administration organization, Knight Frank, positioned Nairobi as the quickest developing land advertise on the planet, outpacing urban communities.

Throughout the years Kenya has stayed a standout amongst the most alluring African nations to live in, with properties in Kenya keeping on drawing in global purchasers. With its unmistakable Indian Ocean coastline, savannah prairies, dry hedge and bumpy woods, houses available to be purchased in Kenya draw in purchasers who cherish nature at its finest. Open doors for creating business in the eco-tourism industry are in wealth, while Kenya's monetary and social centers (Nairobi and Mombasa) offer sufficient open door for land advancement and speculation. Putting right in the property business is an ability that sets aside opportunity to learn however which, if aced, can promise you an agreeable life since you will have the capacity to effectively control your resources for getting greatest benefits.

Since capital planning choices affect the firm for quite a while, they should be painstakingly arranged. A terrible choice can significantly affect the company's future

operations. Moreover, the planning of the choices is critical. Numerous capital planning ventures take years to actualize. In the event that organizations don't arrange likewise, they may find that the planning of the capital planning choice is past the point of no return, in this way expensive as for rivalry. Choices that are made too soon can likewise be tricky in light of the fact that capital planning ventures for the most part are huge speculations, along these lines early choices may produce pointless expenses for the firm. To settle on great venture choice directors need to comprehend their association's upper hand (Brealey et al., 2008). A decent system positions the firm to create the most estimation of its advantages and the association's development openings accordingly assets ought to be distributed to an all-around situated firm. Regardless of the possibility that the venture assessment methods, income figure and screening and other capital planning process has been done well, however disregarding the corporate procedure in the basic leadership process will make the entire procedure improbable.

1.2 Research Problem

The rate which is used in converting future cash flows into the present time is a key determinant of whether projects are undertaken or not (Meier, Christofides and Salkin, 2011). This compounding rate is applied by organizations to convert future streams of cash flows into the present for the purposes of reaching a final decision on what projects to undertake and what not to undertake. The most commonly applied techniques include the NPV and IRR. In real estate industry, a company will need to clearly use applicable methods to estate the worthy of an investment they intend to make (Petereson & Fabozzi, 2009). This will determine if such investment will be worthy undertaking at that particular time and as well as investing the intended capital.

Business is about investing in the much more suitable available opportunity to generate more revenues, the main aim of profit making businesses. The financial managers are entitled to use the available data to make the decision on among given projects which to invest and when. In many instances, the finance managers lack knowledge on which data to analyze in the process of coming up with which projects to invest on and when. In the year 2010, Shinoda studied capital budgeting management practices in Japan and established that the firms applied two commonly used investment project appraisal techniques of PBP and NPV. In a separate study, Suzette and Howard (2011) sought to identify the most commonly used technique in appraising long term investment projects among South Africa firms. The results showed that NPV and IRR were the most commonly applied project appraisal techniques. They also found out that some companies use multiple techniques in evaluating the project. Katjiruru (2016) reviewed capital budgeting decisions in Namibia's state-owned enterprises and established that capital budgeting practices in SOE's seem to have improved in Namibia with the majority of companies using the sophisticated DCF techniques.

Locally, Njiru (2008) established that commercial government owned institutions gave more preference to IRR, NPV and PBP in appraising their investment options. The key factors considered by these institutions included the purpose for which the investment was being made, the size of the institution, policies and procedures governing such investment activities, among others. These techniques enabled investment managers to determine the viability of different projects in contributing to the overall return on investment. Hasan (2013) examined capital budgeting techniques among small and

medium enterprises (SME) in accordance with the Australian Research Council's Standard Industrialization codes. The findings show that even though the PBP was the most commonly applied technique for small companies, more complex techniques like NPV and IRR were utilized to a limited extent.

This study differed from earlier ones as it aimed at establishing how various CBT had impacted on the financial performance of Nairobi's real estate industry. This involved establishing on which relevant data to analyze thus close the knowledge gap in making the investment decisions of firms with the limited/available capital.

1.3 Research Objective

The objective of this study was to analyze how various CBT have impacted on the financial performance of the real estate industry in Nairobi County, Kenya. To achieve this objective, the study was guided by the following specific research objectives:

i. To determine the extent of application of NPV on financial performance of the real estate industry in Nairobi County, Kenya.
ii. To determine the effect of IRR on financial performance of the real estate industry in Nairobi County, Kenya.
iii. To establish the effect of ARR on financial performance of the real estate industry in Nairobi County, Kenya.
iv. To determine the effect of PBP on financial performance of the real estate industry in Nairobi County, Kenya.
v. To establish the influence of PI on financial performance of the real estate industry in Nairobi County, Kenya.

1.4 Value of the Study

Capital planning choice is helpful to securities investment specialists. They utilize valuation models while making interest in securities, for example, stock and bonds. These security valuation models consider the diverse capital planning strategies to decide the money streams from securities. The types of investment project undertaken needs planning in advance to ensure ideal capital structure and cost effective sources are used to raise the required cash. Capital planning choice is similarly valuable in optimizing the sources of capital applied by an organization, particularly when looking at the cost of various sources at the disposal of an organization.

For land businesses, the aftereffects of this study will give them a diagram of how the distinctive capital planning systems have affected on execution over a period and settle on suitable choices for future arranging. This will likewise give the business a space on the best capital planning strategies to utilize while settling on venture choices. Besides, to the administration, the aftereffects of the study will detail proper tax collection laws to tap on more incomes and adjust trade streams out the market. At last, to the analysts and researchers who may wish to seek after further studies in the region of capital planning, this study will give helpful data in regards to the capital planning methods and their effect on the execution of land industry in Kenya.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter presents literature review as written by other scholars and research in regard to the study variables. It specifically covers the theoretical review, determinants of real estate performance, empirical studies, conceptual framework and the summary of literature reviewed.

2.2 Theoretical Review

This section discusses a number two theories namely: Classical Theory and the Liquidity Preference Theory. These theories are explained in details below.

2.2.1 Classical Theory

This theory argues that the level of equilibrium in a financial market is determined by the interaction between the supply and demand. The equilibrium is said to be attained whenever the supply of capital intersects with the demand curve for capital in an economy (Blang, 1992). This is normally efficient in efficient markets with minimal information asymmetries. This means that any slight information is assimilated fast enough to inform the market participants on what actions they need to take to ensure that they safeguard the interests of their shareholders.

The theory holds that in efficient markets, the cost of capital is kept optimal thus leaves no room for arbitrage. In circumstances of high fluctuations in a given market, organizations need huge reserves to cushion their operations or look for other sources of capital for their investment.

2.2.2 The Liquidity Preference Theory

This school of thought was formulated by Keynes to explain the ability of organizations in meeting their obligations as and when they fall due. It argues that investors hold cash for three main purposes including: investment, consumption and speculations (Keynes, 1936). Therefore, depending on the purposes for which money is held in an organization, the different investment opportunities arising may not influence the cost of capital. The theory argues that in order for financial institutions to part with cash, they need to be given something in return in the form of interest.

2.3 Determinants of Real Estate Performance

Land speculators have for some time understood the challenges in estimating the profits of property speculation because of the passage of time and the changes in the macroeconomic variables (Fisher and Boltzmann, 2005). Dealing in real estate is surrounded by many risks including depreciation of value as there is no standard market for property. The pricing of real estate property has been based on a number of bases including: time weighted rate of return, time, inward rate of return and reenactment technique.

Hammers and Chen (2005) identified different measures land dealings by breaking down return on investment into measurable variables. Further measures were proposed by Fisher (2005) who applied IRR to a diversified portfolios containing business properties in different countries across the world including: US stocks and US bonds. In a separate study, Ooi and Liow (2004) applied methodical risks associated with the conventional CAPM to measure return on land investments. Remarkable determinants of land industry execution are:

2.3.1 Profitability

Profitability is the essential objective of all business ventures as they seek to optimize the share value of the shareholders. Without profitability, the business will not achieve the desire level of success over the long time because profitability is an indicator of the efficiency with which the management applies the resources entrusted to them by the shareholders in the generation of wealth. Therefore, measuring present and past benefit and anticipating future profitability is important in decision making regarding a firm's future prospects. Management benefits are measured with a salary proclamation. This is basically a posting of pay and costs amid a timeframe on an annual basis for the whole business.

An income statement is customarily a summary of a firm's operations used to gauge how well the management team have utilized the firm's resources in creation of wealth for the shareholders. In any case, an ace forma pay explanation measures the performance of an organization be comparing its current performance to the past records and the postulated future performance. Benefit can be decayed into its principle segments: net turnover and

net overall revenue. In accordance with Ross et al. (1996), both can impact the profitability of an organization at a given time. In the event that a high turnover implies better utilization of advantages possessed by the organization and in this way better proficiency, a higher net revenue implies that the element has generous market control.

2.3.2 Market Value

Market value is the contrast between the present market estimation of an organization and the capital given by speculators; this incorporates both shareholders and bondholders. On the off chance that the esteem is higher, then the organization has an additional esteem, on the off chance that it is lower, it has a lesser esteem. Advertise esteem is likewise normally used to allude to the market capitalization of a traded on an open market organization, and is gotten by duplicating the quantity of its remarkable shares by the present share cost. Advertise esteem is most effortless to decide for trade exchanged instruments, for example, stocks and fates, since their market costs are broadly spread and effectively accessible, however is somewhat more difficult to discover for over the counter instruments like settled salary securities. Be that as it may, the best trouble in deciding business sector esteem lies in assessing the estimation of illiquid resources like land and organizations, which may require the utilization of land appraisers and business valuation specialists individually.

2.3.3 Capital Structure

Capital structure is the most extreme amongst obligation and value that augments the estimation of the firm. The target of a firm ought to be coordinated towards the expansion of the company's esteem. Late studies contend that capital structure assumes an

imperative part in deciding corporate execution. Barton and Gordon (1988) propose that substances with higher benefit rates will stay low utilized in view of their capacity to fund their own sources. Then again, a high level of influence builds the danger of insolvency of organizations.

2.3.4 Sustainable growth rate

The fundamental target of the organization has developed after some time; the requirement for fleeting benefit is substituted by the requirement for long haul development of the organization (manageable development). Along these lines, an economical development rate would positively affect execution. For the organizations recorded at the securities trade, its capacity to appropriate profits is a proof of strength. Notwithstanding, up to this point there was no verification of a connection between this variable and gainfulness, since benefits can be utilized for purposes other than to disseminate profits (Kakani, 2010).

2.3.5 Size of the Company

Another element in deciding the execution of a firm is its size. The measure of the organization can positively affect money related execution in light of the fact that bigger firms can utilize this favorable position to get some monetary advantages in business relations (Mathur, 1997). Expansive organizations have simpler access to the most essential components of creation, including HR. Additionally, expansive associations regularly get less expensive financing.

2.4 Empirical Studies

Roopali and Verma (2014) led an observational knowledge into various phases of capital planning among Indian organizations recorded on Bombay Stock Exchange. The approach included an audit of past capital planning overview writing till the year 2012 which encouraged in conveying to light a portion of the ignored ranges of capital planning. The destinations included getting an understanding into the past capital planning review writing to recognize the disregarded territories of capital planning; study CFO's supposition about the relative level of significance, trouble and danger of various phases of capital planning and to examine the effect of various organization related factors/firms particular characteristics like size of organization's capital spending plan, nature of industry, organization age, CEO training and CEO age on the level of trouble of various phases of capital planning. The study discoveries showed that money related examination and venture choice was thought to be the most vital phase of capital planning took after by venture definition and income estimation. Extend execution and venture audit were observed to be the nearly less vital phases of capital planning.

Ross (1986), in a top to bottom investigation of the capital planning ventures of 12 vast assembling firms, he found that despite the fact that strategies that joined reduced income were utilized to some degree, firms depended rather intensely on the shortsighted PBP demonstrate, particularly for smaller activities. Likewise, when marked down income procedures were utilized, they were frequently rearranged. For instance, a few firms' disentangling suspicions incorporate the utilization of the same monetary life for all tasks despite the fact that the real lives may be distinctive. Facilitate, firms frequently did not

modify their investigation for hazard. Reviews come about likewise show that venture endorsement at numerous organizations (in eight out of twelve firms concentrated on) takes after various criteria relying upon the locus of the choice.

Wong, Farragher and Leung (1987) reviewed a specimen of vast organizations in Hong Kong, Malaysia and Singapore in 1985. They found that PBP was the most well known essential method for assessing and positioning activities in Malaysia. In Hong Kong, they observed PBP and ARR to be similarly the most famous. They reasoned that, as opposed to US organizations where DCF procedures are essentially more famous than non-DCF strategies as essential assessment measures, organizations in Hong Kong, Malaysia and Singapore want to utilize a few techniques as essential measures in assessing and positioning proposed venture ventures. It is additionally watched that organizations in Hong Kong, Malaysia and Singapore don't embrace much hazard investigation, neither endeavoring to survey chance nor conform assessment criteria to reflect chance. The most well-known hazard appraisal procedures were affectability investigation and situation examination (high-medium-low conjectures).

Bierman (1993) finds that 73 of 74 Fortune 100 firms utilization of DCF investigation, with IRR being favored over NPV. The PBP strategy additionally remains an extremely famous strategy by and by, however not as an essential system. 93 for each penny of the respondents utilize far reaching WACC for marking down free money streams and 72 for every penny utilize the rebate rate appropriate to extend in light of its hazard attributes.

Drury, Braund and Tayles' (1993) study of 300 assembling organizations with yearly deals surpassing £20 million showed that payback (86%) and IRR (80%) were the most broadly utilized venture examination procedures. The most broadly utilized venture chance examination method is affectability investigation. 49 for every penny of the respondents don't utilize factual examination for hazard investigation and 95 for each penny of the respondents never utilize either CAPM or Monte Carlo reproduction because of absence of comprehension. Therefore, most firms really utilized both techniques. 93 percent of organizations figured a WACC as a feature of their capital planning process. A couple organizations obviously utilized the same WACC for all activities, however 73 percent balanced the corporate WACC to represent extend hazard, and 23 for each penny made acclimations to reflect divisional hazard.

Wokabi (2014) concentrated on the relationship between capital planning methods and monetary execution of non-budgetary firms recorded at NSE. The study utilized an evaluation study, in light of the fact that NSE had just 50 non-money related firms that were recorded, along these lines the entire populace of the organizations was incorporated into this study. In this way, no inspecting methodology was led. The study utilized both essential and auxiliary information. The information was gathered through polls which were controlled by the analyst utilizing drop and pick later technique. The optional information was gathered from the distributed records of the organizations. The distributed records were gotten from CMA and NSE library. The study was built up holding all elements (capital planning procedures, size of the firm and age of the organization, variables influencing degree of profitability). The discoveries introduced

likewise demonstrates that taking all other autonomous factors at zero, a unit increment in capital planning methods will prompt to an expansion in the scores of rate of profitability.

Irungu (2014) concentrated on the relationship between capital planning methods and money related execution of organizations recorded at the NSE. The examination embraced a relationship cross-sectional study investigate plan which is most appropriate for clarifying or investigating the presence of at least two factors at a given point in time. The number of inhabitants in the study comprised of all organizations recorded at the NSE. Information was gathered from essential sources which included the polls controlled to the officers straightforwardly included in capital planning also the auxiliary sources which involved the information got from the distributed records of the organizations. The information was broke down utilizing the relapse examination model to test the impact of the capital planning methods on the monetary execution of the organizations. The study discovered that the majority of the four capital planning systems inquired about PBP, NPV, ARR and IRR were being utilized by organizations recorded as a part of the NSE and results portrayed that there was no relationship between the budgetary execution of banks and the capital planning strategies utilized.

Kiget (2014) concentrated on capital planning procedures embraced by organizations recorded at the NSE. This study connected a clear study outline. The objective populace included every one of the organizations recorded at the NSE as at December 31st, 2013. A specimen size of 42 firms was chosen from an aggregate populace of 62. Essential information was gathered utilizing a poll. Information examination was done utilizing SPSS and Microsoft Excel to produce quantitative reports. The most used capital

planning strategy was IRR trailed by NPV system while PI procedure was third. Different procedures used included marked down Payback strategy, ARR method and MIRR system. For those slightest used, the respondents' distinguished inability to consider time estimation of cash as they key purpose behind not having any significant bearing a few strategies took after by absence of recognition with the system and lumbering calculations included.

2.5 Conceptual Framework

The framework presents a diagrammatic representation of the conceptualization of the study which seeks to set up the effect of CBT on the financial performance of real estate industry.

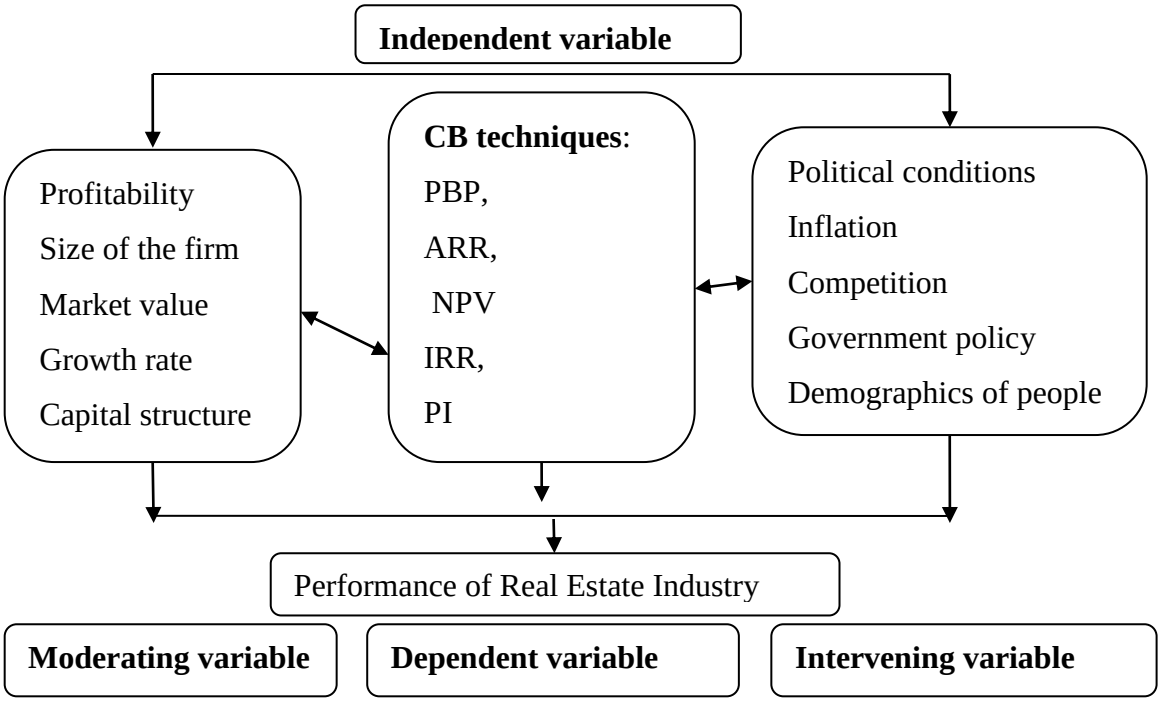

Figure 2.1: Conceptual Framework

The independent variable in this case is the capital budgeting techniques (PBP, ARR, NPV, IRR, and PI) while the dependent variable is the financial performance of real estate industry. The relationship is moderated by the profitability, size of the firm, market value, growth rate and capital structure while political conditions, inflation, competition, government policy and demographics of people are intervening variables.

2.6 Summary of Literature Review

This literature review sort to address how capital budgeting has impacted financial performance of real estate companies in Nairobi County, Kenya over the last 10 years. The review clearly distinguished between the various techniques which consider time value of money on impacting financial performance and those which don't put any emphasis in money value over time. Previous studies on the relationship between the CBT and financial performance have been referenced just to expound on the balance between the two variables.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

The main objective of this study was to find out how various CBT have impacted the financial performance of real estate companies in Nairobi County, Kenya over the last 10 years. The methodology covered research design, population, sample size, methods of data collection and data analysis.

3.2 Research Design

The study applied descriptive research design using survey method as not all the target population elements were included in the study. This design was considered appropriate as the respondents were required to provide information on the phenomenon of the study as is without varying its conditions as is the case in experiments.

3.3 Population of the Study

The study population comprised of all the registered real estate companies in Nairobi County, Kenya. Nairobi has 149 registered real estate companies as at 31stDecember2015 (Yellow Pages, 2016).

3.4 Sample Size and Sampling Procedure

The sample size was 50 firms in accordance with Mugenda and Mugenda (2003) postulation that a sample of between 10-30% of a target population is considered adequate for generalization of the findings to the entire population provided that the

sample if scientifically selected. The study applied simple random sampling technique to allow each member of the population an equal chance of inclusion in the study.

3.5 Data Collection

The researcher collected primary data using questionnaires. The study had structured questionnaires designed to collect from the company representatives. To ensure uniformity in responses and encourage population participation, the questionnaires were kept short and uniformly structured for the respondent to give the degree of agreeing/dis-agreeing with the aspect in the question. The respondents also had an option of choosing neutral position.

The researcher's preference of questionnaires in this study was because the respondents directly interacted with the variables of the study and clearly understood the variables. According to Mugenda and Mugenda (2012), questionnaires are used commonly to obtain detailed information about a population under study. The researcher targeted to collect data from up to 50 real estate firms in Nairobi County with a spread capital to get as much accurate data as possible.

3.6 Data Analysis

The research data was gathered exclusively through questionnaires designed in line with the research objectives. This was sought to ascertain how the firm has performed with the various techniques and if any desire to change in future. The collected data was checked for completeness, coded and captured into MS Excel for analysis. Descriptive and inferential statistics were used to analyze data by way of means (measure of central

tendency) and standard deviation (measure of dispersion). The data collected was then presented in form of tables, charts and graphs. The research was made using SPSS to estimate the result of the regression/correlation between the variables.

The financial performance of the firms in this study was measured through a model that has been used by Farragher et al. (2001). Multiple regressions were used to analyze the relationship between the independent and dependent variables to predict the score of the dependent variable from the independent variable. This model is a multiple regression model to examine the relationship between CBT and the financial performance of companies. The model is given by the following equation:

$$\mathbf{ROA} = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \varepsilon$$

Where;
ROA = Firm's financial Performance (Return on Assets)
α = constant (y intercept)

X_1= NPV,

X_2=IRR,

X_3=PI,

X_4=PBP,

X_5=ARR

β_1, β_2, β_3, β_4, β_5 = Regression coefficients

ε = Error term

3.6.1 Inferential Statistics

In order to test the significance of the model in explaining the variations in firm financial performance attributable to the CBT, this study conducted an Analysis of Variance

(ANOVA). On extracting the ANOVA statistics, the study reviewed the significance value. The study was tested at 95% confidence level and 5% significant level. If the significance value was found to be less than the critical value at the set degrees of freedom, then the study would conclude that the model is significant in explaining the relationship.

3.6.2 Operationalization of Study Variables

Table 3.1: Operationalization of the study Variables

Variable	**Measure**	**Question number**
Dependent		
Firm's Financial Performance	Return on Assets	25
Independent		
NPV	Extent of application in capital project appraisal	7, 8, and 9
IRR	Extent of application in capital project appraisal	10, 11, and 12
PI	Extent of application in capital project appraisal	13, 14, and 15
PBP	Extent of application in capital project appraisal	16, 17, and 18
ARR	Extent of application in capital project appraisal	19, 20, and 21

CHAPTER FOUR

DATA ANALYSIS, PRESENTATION AND INTERPRETATION

4.1 Introduction

This chapter assesses the results of the analyzed data as collected from the field. The study relied on data collected exclusively using of a questionnaire. The findings in this chapter are presented using Tables, Figures, Means and Standard deviation.

4.1.1 Response Rate

The study targeted 50 registered real estate companies operating in Nairobi Kenya and therefore 50 questionnaires were issued out to representatives of these firms in Nairobi. However, out of the total 50 questionnaires issued, 38 were dully filled which gave a response rate of 76%. The findings are presented in Table 4.1.

Table 4.1: Response Rate

Response Rate	Frequency	Percentage
Response	38	76
Non Response	12	24
Total	**50**	**100**

4.2 General Information

The general information about the real estate companies and their representatives were carefully established. These information included years the companies have been in existence, years respondents had worked with their organizations and the size of investment that respondents have handled.

4.2.1 Years of Organizational Operations

Findings on the period that the involved real estate companies had been in operations are presented in Figure 4.1.

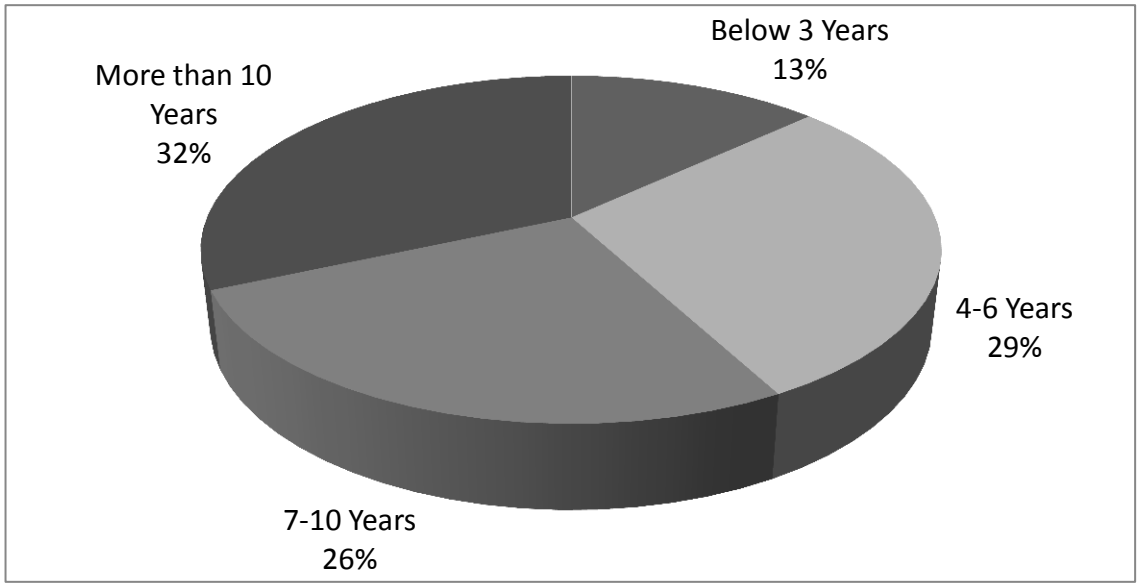

Figure 4.1: Years of Organizational Operations

From Figure 4.1, 13% of the real estate companies have been in operation for less than 3 years, 29% for 4-6 years, 26% for 7-10 years and 32% for more than 10 years. The findings indicate that most of the real estate companies have been in operation for a relatively longer period and therefore have experienced CBT and their effect on financial performance.

4.2.2 Position Held in Organization

The study further sought to determine the various positions that respondents had worked with real estate companies. The results are shown in Figure 4.2.

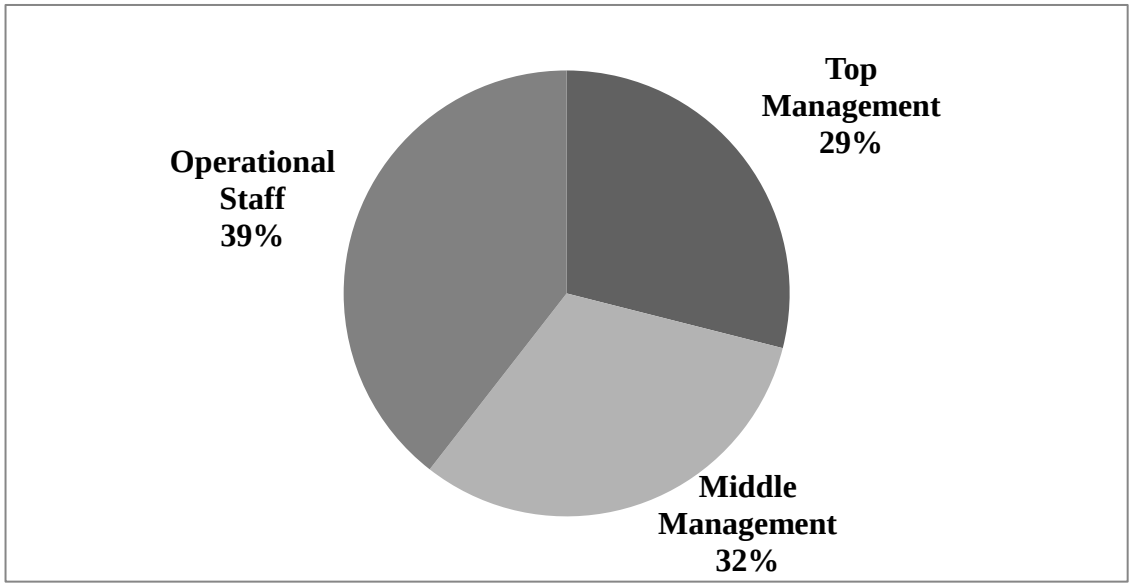

Figure 4.2: Position Held in Organization

From Figure 4.2, 39% of the respondents were operational staffs, 32% were middle managers and 29% were top managers. These findings imply that all the levels of employees were involved in the study and therefore diverse opinions were sought.

4.2.3 Period of Years Worked

Data findings on the duration in terms of years that respondents had worked with real estate companies are summarized in Figure 4.3.

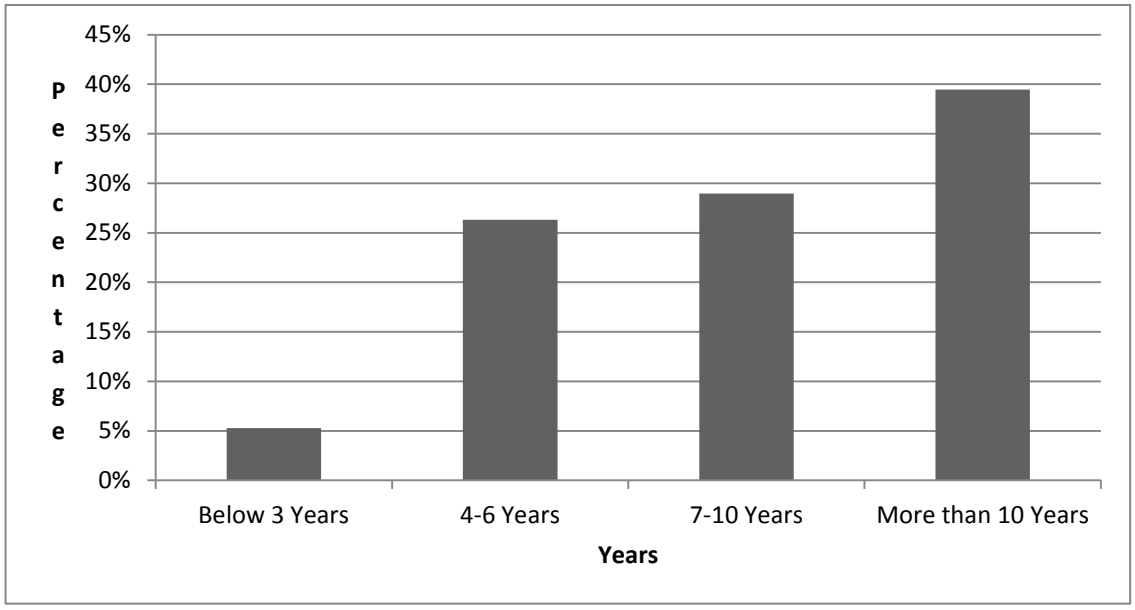

Figure 4.3: Period of Years Worked

From Figure 4.3 above, 5% of the respondents had worked in real estate industry for less than 3 years, 26% for 4-6 years, 29% for 7-10 years and 39% for more than 10 years. These findings indicate that the respondents had worked in real estate industry for a relatively longer period and therefore were more knowledgeable on capital budgeting techniques and their effect on financial performance of real estate firms. This therefore indicates that reliable information was sought from the respondents for the study.

4.2.4 Average Capital Project Size Analyzed

The study sought to investigate the number of capital projects and their average sizes that respondents formally analyze in their respective real estate companies every year.

Table 4.2: Average Capital Project Size Analyzed

	Frequency	Percentage
Kshs. 2 M to 4M	11	29
Kshs. 4 M to 6 M	10	26
Kshs. 6M to 8M	10	26
Kshs. 8M to 10 M	5	13
Above Kshs. 10 M	2	5
Total	**38**	**100**

From the findings in Table 4.2, 29% of the respondents have handled project size of 2-4 Million shillings, 26% for 4-6 Million shilling and 6-8 Millions shilling each, 13% for 8-10 Million shillings and 5% have handled above 10 Million shilling projects. The findings indicate majority of the respondents have dealt with project investment and capital budgeting decisions and therefore were knowledgeable for the study.

4.3 Capital Budgeting Techniques

The study sought to analyze how various CBT have impacted on the financial performance in the real estate industry in Nairobi County, Kenya. Therefore, a number of CBT were selected and respondents were requested the extent to which each of this CBT is applied by their organizations in appraising investment projects.

Table 4.3: Capital Budgeting Techniques

Capital Budgeting Techniques	Mean	Std. Dev
NPV	4.0526	.76925
IRR	3.1053	.83146
ARR	4.2105	.52802
PBP	3.1842	.83359
PI	3.6842	.47107
Benefit/Cost Ratio	2.6316	.78572
Other	2.8684	.62259

The study findings revealed that real estate companies rely on NPV in decision making as supported by a mean of 4.0526 and standard deviation of 0.76925. IRR was also found to

be useful in decision making at real estate companies as supported by a mean of 3.1053 and standard deviation of 0.83146. The study further revealed that ARR is useful in decision making at real estate companies for the mean was 4.2105 and standard deviation was 0.52802. The study also revealed that real estate companies rely on PBP in decision making as the mean was 3.1842 and standard deviation was 0.83359. Real estate companies also rely on PI in making capital appraisal decision for the mean was 3.6942 and standard deviation was 0.47107. The study also revealed that benefit/cost ratio is applied by real estate companies in making decisions as the mean was 2.6316 and standard deviation was 0.62259.

4.3.1 Net Present Value NPV

Several statements were established on NPV as a technique of project appraisal in real estate companies. The findings are generalized in subsequent sections.

4.3.1.1 Extent of Use of NPV in Real Estate Companies

The study sought to establish the extent to which NPV as a technique of capital budgeting is applied in decision making.

Table 4.4: Extent of Use of NPV in Real Estate Companies

	Mean	Std. Dev
Replacement	3.8158	.39286
Lease or Buy	3.8158	.83359
Mutually Exclusive Projects	3.9211	.78436
Independent Projects	4.3421	.58246
Contingent Projects	3.0526	.76925

The study revealed that real estate companies apply NPV in making replacement decisions as supported by mean of 3.81158 and standard deviation of 0.39286. NPV also

help real estate companies in making lease or buy decision as the mean was 3.8158 and standard deviation of 0.83359. Mutually exclusive decisions for the projects are based on NPV in real estate companies as supported by a mean of 3.9211 and standard deviation of 0.78436. The study also established that independent project decisions at real estate firms are based on NPV technique for the mean was 4.3421 and standard deviation of 0.58246. The study further established that NPV is useful in making contingent project decisions as supported by a mean of 3.0526 and standard deviation of 0.76925.

4.3.1.2 NPV Appropriateness in Appraisal

The study sought to determine the effectiveness of NPV as a technique of capital budgeting in real estate firms operating in Nairobi.

Table 4.5: NPV Appropriateness in Appraisal

	Mean	Std. Dev
It considers the time value of money	3.8421	.85507
It considers all cash flows during the life of the project	3.9737	.88491
It assumes that the cash inflows are reinvested	3.0526	.76925
It handles non-conventional cash flows	3.8947	.76369
It is consistent with the concept of maximizing the shareholders' wealth	4.1842	.56258

As to whether real estate companies use NPV because it considers time value of money had a mean of 3.8421 and standard deviation of 0.85507. On whether NPV as a capital budgeting technique considers all cash flows during the life of the project had a mean of 3.9737 and standard deviation of 0.88491. Regarding whether NPV assumes that cash inflows are reinvested had a mean of 3.0526 and standard deviation of 0.76925. In respect to whether NPV handles non-conventional cash flows had a mean of 3.8947 and

standard deviation of 0.76369. On whether NPV is consistent with the concept of maximizing the shareholders' wealth had a mean of 4.1842 and standard deviation of 0.56258.

4.3.1.3 Inappropriateness of NPV in Appraisal

The study sought to examine the inadequacy of NPV as a technique used in capital budgeting in real estate firms.

Table 4.6: Inappropriateness of NPV in Appraisal

	Mean	Std. Dev
It does not consider the size of the investment	2.8684	.62259
It assumes that the discounting rate is already known	4.1579	.63783
It does not give a percentage measure, only absolute amount which does not give the best project among different sizes mutually exclusive alternatives	2.8947	.83146

The findings of the study revealed that NPV as an appraisal method does not consider the size of investment as indicated by a mean of 2.8684 and standard deviation of 0.62259. The study further revealed that NPV assumes that the discounting rate is already known for the mean was 4.1579 with a standard deviation of 0.63783. The study also established that NPV does not give a percentage measure, only absolute amount and this does not give the best project among different sizes mutually exclusive alternatives for the mean was 2.8947 with standard deviation of 0.83146.

4.3.2 Internal Rate of Return IRR

The study sought to examine the usefulness of IRR as a technique of capital budgeting in real estate firms in Nairobi. The findings are summarized in subsections.

4.3.2.1 Extent of Use of IRR in Decision Making

The study sought to establish the useful of IRR of as technique of capital budgeting in decision making.

Table 4.7: Extent of Use of IRR in Decision Making

	Mean	Std. Dev
Replacement	3.6316	.58914
Lease or Buy	3.1579	.82286
Mutually Exclusive Projects	2.6842	1.14148
Independent Projects	3.5526	.50390
Contingent Projects	2.9474	.76925

The study revealed that real estate companies rely on IRR in making replacement decisions as supported by a mean of 3.6316 and standard deviation of 0.58914. Real estate companies also rely on IRR to make lease or buy decisions for the mean was 3.1579 and standard deviation was 0.82286. Mutually exclusive project decisions are also made based on IRR technique for the mean was 2.6842 and standard deviation was 1.14148. The study also revealed that independent project decisions are made using IRR appraisal technique as the mean was 3.5526 and standard deviation was 0.50390. The study findings also revealed that contingent decisions are made using IRR appraisal technique for the mean was 2.9474 and standard deviation of 0.76925.

The findings above indicate that real estate firms consider IRR as an important technique in capital budgeting. The findings concur with Fremgen (1973) who found that firms considered the IRR model to be the most important model for decision-making.

4.3.2.2 Appropriateness of IRR in Decision Making

The study sought to determine the effectiveness of IRR as a technique of capital budgeting when applied in real estate firms.

Table 4.8: Appropriateness of IRR in Decision Making

	Mean	Std. Dev
It considers the time value of money	3.5526	.50390
It considers all cash flows during the life of the project	3.3421	.87846
It gives a percentage measure	3.7632	1.14925
It is consistent with the concept of maximizing the shareholders' wealth.	3.3684	.94214

The study found out that IRR as an appraisal technique considers time value of money as supported by a mean of 3.5526 and standard deviation of 0.50390. The study also revealed that IRR considers all cash flows during the entire life of the project as the mean was 3.3421 and standard deviation of 0.87846. The findings of the study further indicated that IRR gives a percentage measure as the mean was 3.7632 and standard deviation was 1.14925. The study further revealed that IRR is consistent with the concept of maximizing the shareholders' wealth as the mean was 3.3684 and standard deviation of 0.94214.

4.3.2.3 Inappropriateness of IRR in Decision Making

The study sought to assess the disadvantages of IRR as a technique of capital budgeting when used in decision making at real estate firms.

Table 4.9: Inappropriateness of IRR in Decision Making

	Mean	Std. Dev
It cannot handle non-conventional cash flows	3.5526	.50390
Financing type decision may misinterpret the calculation result	2.7895	.52802
In mutually exclusive project, the IRR might incorrectly rank the projects	2.8421	1.34619
It does not consider the size of the investment profitability	2.9211	.67310

The study revealed various inadequacies of IRR as an appraisal technique of capital budgeting. It was established from the study that IRR cannot handle non-conventional cash flows as the mean was 3.5526 and standard deviation was 0.50390. It was also established that IRR financing type decision may misinterpret the calculation result for the mean was 2.7895 and standard deviation of 0.52802. The study findings revealed that IRR might incorrectly rank the projects in mutually exclusive project for the mean was 2.8421 and standard deviation was 1.34619. The study findings established that IRR does not consider the size of the investment profitability because the mean was 2.9211 and standard deviation of 0.67310.

4.3.3. Profitability Index

PI as a technique of capital budgeting was established and the study sought to determine its attributes in decision making, its effectiveness and its ineffectiveness.

4.3.3.1 Extent of Use of PI in Decision Making

The study sought to examine the extent of use of PI in decision making in real estate companies.

Table 4.10: Extent of Use of PI in Decision Making

	Mean	Std. Dev
Replacement	3.1316	.81111
Lease or Buy	2.6579	.58246
Mutually Exclusive Projects	2.2632	1.05739
Independent Projects	3.7368	.68514
Contingent Projects	3.6316	.58914

The findings of the study established a number of investment decisions made using PI technique of capital budgeting. The study found out that real estate companies rely on PI to make replacement decisions as supported by a mean of 3.1316 and standard deviation of 0.81111. The study findings revealed that lease or buy decisions are made using PI technique at real estate companies as the mean was 2.6579 and standard deviation was 0.58246. The study also established that real estate companies use PI to make mutually exclusive decisions for the mean was 2.2632 and standard deviation of 1.05739. PI is also useful in making independent project decisions as the mean was 3.7368 and standard deviation of 0.68514. The study established that contingent project decisions are made using PI technique at real estate firms as the mean was 3.6316 and standard deviation was 0.58914.

4.3.3.2 Appropriateness of PI

The study sought to determine the effectiveness of PI as a technique of capital budgeting in real estate companies.

Table 4.11: Appropriateness of PI

	Mean	Std. Dev
It considers the time value of money	4.0000	.92998
It considers all cash flows during the life of the project	2.9211	.67310
It gives a percentage measure	4.3684	.78572
It is consistent with the concept of maximizing the shareholders' wealth.	3.2105	.99071

The study revealed a number of effectiveness that arise from the use of PI in decision making. It was revealed that PI considers the time value of money since the mean was 4.000 and standard deviation of 0.92998. The study revealed that PI considers all cash

flows during the life of the project as the mean was 2.9211 and standard deviation of 0.67310. The study findings revealed that PI gives a percentage measure as the mean was 4.3684 and standard deviation was 0.78572. The study revealed that PI is consistent with the concept of maximizing the shareholders' wealth for the mean was 3.2105 and standard deviation was 0.99071.

4.3.3.3 Inappropriateness of PI

The study sought to find out causes of inappropriateness of PI as a technique of capital budgeting in real estate firms.

Table 4.12: Inappropriateness of PI

	Mean	Std. Dev
It requires an estimate of costs of capital before making a decision	4.0526	.69544
Correct decision cannot be obtained when used to compare two mutually exclusive projects	3.2895	.86705

A number of shortcomings of PI as a technique of capital budgeting were revealed from the study. It was found out that PI requires an estimate of costs of capital before making a decision since the mean was 4.0526 and standard deviation of 0.69544. The study also revealed that correct decision cannot be obtained when used to compare two mutually exclusive projects for the mean was 3.2895 and standard deviation was 0.86705.

4.3.4 Pay Back Period PBP

PBP as a technique of capital budgeting was established and respondents were requested to indicate its extent of use in decision making and its inappropriateness when used in making decisions.

4.3.4.1 Decision Making using PBP

The study sought to establish the use of PBP in decision making among the real estate firms.

Table 4.13: Decision Making using PBP

	Mean	Std. Dev
Replacement	3.1842	.83359
Lease or Buy	3.2368	1.45999
Mutually Exclusive Projects	2.3947	.94553
Independent Projects	3.5526	1.05772
Contingent Projects	2.7105	.73182

As to whether PBP is useful in making replacement decisions had a mean of 3.1842 and standard deviation of 0.83359. On whether PBP is used in making lease or buy decisions had a mean of 3.2368 and standard deviation of 1.45999. On whether PBP is useful in making mutually exclusive project decisions had a mean of 2.3947 and standard deviation of 0.94553. On whether PBP is used by real estate firms to make independent project decisions had a mean of 3.5526 and standard deviation of 1.05772. On whether PBP is used in making contingent project decisions had a mean of 2.7105 and standard deviation of 0.73182.

These findings indicate that most real firms do not readily rely on PBP as a technique of capital budgeting. However, this is contradictory with the findings of Ross (1986), who established that firms relied rather heavily on the simplistic PBP model, especially for smaller projects. In addition, when discounted cash flow techniques were used, they were often simplified.

4.3.4.2 Appropriateness of PBP

Findings on the appropriateness of PBP when used in decision among the real estate companies are presented in Table 4.14.

Table 4.14: Appropriateness of PBP

	Mean	Std. Dev
The length of the PBP gives an indication about the risk factor (considers the liquidity)	2.9211	.67310
Easy to calculate and to understand	2.7632	1.14925

The study found out that PBP as a technique of capital budgeting gives an indication about the risk factor as the mean was 2.9211 and standard deviation was 0.67310. It was also established that PBP is easy to calculate and understand as the mean was 2.7632 and standard deviation was 1.14925.

4.3.4.3 Inappropriateness of PBP

The study sought to investigate the ineffectiveness of PBP as a technique of capital budgeting as applied in real estate firms.

Table 4.15: Inappropriateness of PBP

	Mean	Std. Dev
It does not consider the time value of money	2.5263	.60345
It does not reflect the profitability of the project	3.3947	.49536
It does not consider the cash flows after the payback period	3.3421	1.02077

It was revealed that PBP does not consider the time value of money for the mean was 2.5263 and standard deviation was 0.60345. The study further revealed that PBP does not reflect the profitability of the project for the mean was 3.3947 and standard deviation was

0.49536. The study established that PBP does not consider the cash flows after the pay-back period as the mean was 3.3421 and standard deviation was 1.02077.

4.3.5 Accounting Rate of Return ARR

ARR as a method of capital budgeting was identified and respondents were requested to indicate its attributes in terms of its applicability in decision making, effectiveness and its ineffectiveness.

4.3.5.1 ARR and Decision Making

The study sought to determine the application of ARR in decision making among the real estate firms.

Table 4.16: ARR and Decision Making

	Mean	Std. Dev
Replacement	3.0526	.92845
Lease or Buy	3.1316	1.45511
Mutually Exclusive Projects	4.2632	.44626
Independent Projects	3.1842	.83359
Contingent Projects	2.3684	1.07606

The study revealed that ARR is useful in real estate firms in making replacement decisions as the mean was 3.0526 and standard deviation of 0.92845. The studies further established that lease or buy decisions in real estate firms are made using ARR as supported by a mean of 3.1316 and standard deviation of 1.45511. It was also established that real estate firms use ARR in making mutually exclusive decisions as the mean was 4.2632 and standard deviation of 0.44626. It was found out that independent project decisions are made using ARR as the mean was 3.1842 and standard deviation was

0.83359. It was also revealed that real estate firms use ARR in making contingent project decisions as the mean was 2.3684 and standard deviation was 1.07606.

4.3.5.2 Appropriateness of ARR

The study sought to determine the appropriateness of ARR as a technique of capital budgeting among the real estate firms.

Table 4.17: Appropriateness of ARR

	Mean	Std. Dev
It considers all incomes in the project's life	3.4211	.72154
Easy to calculate and to understand	3.5526	.50390

The study findings indicated that ARR considers all incomes in the project's life for the mean was 3.4211 and standard deviation was 0.72154. It was also established that ARR is easy to calculate as the mean was 3.5526 and standard deviation of 0.50390.

4.3.5.3 Inappropriateness of ARR

The study sought to investigate the ineffectiveness of ARR as a technique of capital budgeting among the real estate firms.

Table 4.18: Inappropriateness of ARR

	Mean	Std. Dev
It ignores the time value of money	4.0000	.73521
It ignores the cash inflows (considers the accounting income)	2.5000	1.20247
It ignores the lives of the projects	3.1316	.81111

The findings of the study indicated that ARR ignores the time value of money since the mean was 4.000 and standard deviation was 0.73521. It was also revealed that ARR ignores cash inflows (considers the accounting income) since the mean was 2.500 and

standard deviation was 1.20247. The study found out that ARR ignores the lives of the projects as the mean was 3.1316 and standard deviation was 0.81111.

4.3.6 Other Techniques of Capital Budgeting

The study sought to establish availability of other techniques of capital budgeting among the real estate firms.

Table 4.19: Other Techniques of Capital Budgeting

	Mean	Std. Dev
Replacement	2.8684	1.21190
Lease or Buy	3.8947	1.50296
Mutually Exclusive Projects	4.2368	1.07639
Independent Projects	3.4737	.76182
Contingent Projects	3.0000	.73521

The study established the usefulness of other techniques of capital budgeting in decision making in real estate industries. The findings of the study revealed that other techniques of capital budgeting are employed in making replacement decisions as the mean was 2.8684 and standard deviation was 1.21190. The study revealed that real estate companies have other techniques of capital budgeting which are useful in making in making lease or buy decisions as the mean was 3.8947 and standard deviation was 1.50296.

The study found out that other techniques of capital budgeting are used in making mutually exclusive project decisions for the mean was 4.2368 and standard deviation was 1.07639. It was also revealed that other techniques of capital budgeting are used in making independent project decisions as the mean was 3.4737 and standard deviation was 0.76182. The study revealed that real estate companies use other techniques of

capital budgeting in making contingent project decisions as supported by a mean of 3.000 and standard deviation of 0.73521.

4.4 Effect of Capital Appraisal Method on Performance (Return on Assets)

The study sought to investigate the effect of the identified CBT on financial performance of real estate firms. Financial performance was determined by the return on assets.

Table 4.20: Effect of Capital Appraisal Method on Performance (Return on Assets)

	Mean	Std. Dev
NPV	3.8947	1.18069
IRR	3.9211	1.02355
ARR	3.5526	.50390
PBP	2.6053	.49536
PI	4.0789	1.04962
Benefit/Cost Ratio	2.6842	.47107
Other	3.1579	.82286

The study found out that NPV affects financial performance of real estate companies as the mean was 3.8947 and standard deviation was 1.18069. It was revealed that IRR affects financial performance of real estate companies as the mean was 3.9211 and standard deviation was 1.02355. There is also an effect of ARR on financial performance of real estate companies for the mean was 3.5526 and standard deviation of 0.50390. The study also revealed that PBP also effects financial performance of real estate companies for the mean was 2.6053 and standard deviation of 0.49536. The study found out that PI has an effect on financial performance as the mean was 4.0789 and standard deviation of 1.04962.

It was also revealed that benefit/cots ratio affects financial performance as the mean was 2.6842 and standard deviation was 0.47107. The study established that other capital budgeting techniques affect financial performance of real estate companies for the mean was 3.1579 and standard deviation was 0.82286.

4.5 Regression Analysis

Multiple regression analysis was conducted to establish relation between variables of the study. Findings are summarized in subsequent tables.

Table 4.21: Model Summary

R	R Square	Adjusted R Square	Std. Error of the Estimate
.791	**.626**	**.567**	**.89660**

From the above findings, the value of R is 0.791, R square is 0.626 and adjusted R squared is .567. This therefore implies that 62.6% changes in firm financial performance is contributed by the NPV, IRR, PI, PBP and ARR.

Table 4.22: ANOVA

Model	Sum of Squares	Df	Mean Square	F	Sig.
Regression	24.876	5	4.975	10.694	.000
Residual	14.888	32	.465		
Total	**39.764**	**37**			

The ANOVA findings at 95% confidence level and 5% significant level indicate that F calculated is 10.694 while F critical from the F Table is 2.51. Since the value of F calculated is greater than F critical (10.694> 2.51), this is a good indicator that the overall model was significant in establishing the relationship between variables.

Table 4.23: Regression Coefficients

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	.003	.127		.024	.981
NPV	.630	.564	.988	1.117	.027
IRR	.463	.572	.646	.809	.042
PI	.719	.256	.887	2.809	.008
PBP	.355	.494	.383	.719	.047
ARR	.699	.416	.821	1.682	.010

The resultant equation becomes:

$$\mathbf{Y= 0.003+ 0.630X_1 + 0.463\ X_2+ 0.719X_3 + 0.355X_4+0.699X_5 +\varepsilon}$$

Where Y = Firm's Financial Performance (Return on Assets), X_1= NPV, X_2 =IRR, X_3=PI, X_4=PBP, X_5=ARR and **ε** is an error term.

Therefore, when all the variables are held constant, financial performance of real estate companies would be at 0.003, a unit increase in NPV holding other variables constant would increase financial performance by 0.630, a unit increase in IRR holding other variables constant would increase financial performance by 0.463, a unit increase in PI holding other variables constant would improve financial performance by 0.719, a unit increase in PBP holding other variables constant would improve financial performance of real estate companies by 0.355 and a unit increase in ARR holding other variables constant would increase financial performance by 0.699.

These findings concur with Wokabi (2014) who found out that taking all other independent variables at zero, a unit increase in capital budgeting techniques will lead to an increase in the scores of return on investment. However, all the p values were significant since they were all lower than 0.05.

CHAPTER FIVE

SUMMARY OF FINDINGS, DISCUSSION, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter presents the summary of the research findings of the collected and analyzed data. The chapter also presents the discussion of the analyzed results. The chapter also looks at the conclusion of the study based on study objectives. There is also the recommendation of the study and areas for further research.

5.2 Summary of the Findings

This section presents the results of the study on each variable of the study.

5.2.1 Capital Budgeting Techniques

The study revealed that real estate companies rely on NPV in decision making as supported by a mean of 4.0526 and standard deviation of 0.76925. The study further revealed that ARR is useful in decision making at real estate companies for the mean was4.2105 and standard deviation was 0.52802. Real estate companies also rely on PI in making capital appraisal decision for the mean was 3.6942 and standard deviation was 0.47107.

5.2.2 Net Present Value NPV and Firm Performance

The study revealed that real estate companies apply NPV in making replacement decisions as supported by mean of 3.81158 and standard deviation of 0.39286. NPV also help real estate companies in making lease or buy decision as the mean was 3.8158 and standard deviation of 0.83359. Mutually exclusive decisions for the projects are based on

NPV in real estate companies as supported by a mean of 3.9211 and standard deviation of 0.78436. The study also established that independent project decisions at real estate firms are based on NPV technique for the mean was 4.3421 and standard deviation of 0.58246.

The study revealed that NPV as a capital budgeting technique considers all cash flows during the life of the project for the mean was 3.9737 and standard deviation was 0.88491. NPV also handles non-conventional cash flows since the mean was 3.8947 and standard deviation was 0.76369. NPV is consistent with the concept of maximizing the shareholders' wealth had as the mean on the statement was 4.1842 and standard deviation was 0.56258. It was however, established that NPV only assumes that the discounting rate is already known for the mean was 4.1579 with a standard deviation of 0.63783.

5.2.3 Internal Rate of Return IRR and Firm Performance

The study found out that real estate companies rely on IRR in making replacement decisions as supported by a mean of 3.6316 and standard deviation of 0.58914. The study also revealed that independent project decisions are made using IRR appraisal technique as the mean was 3.5526 and standard deviation was 0.50390. The study found out that IRR as an appraisal technique considers time value of money as supported by a mean of 3.5526 and standard deviation of 0.50390. The findings of the study further indicated that IRR gives a percentage measure as the mean was 3.7632 and standard deviation was 1.14925.

IRR as an appraisal technique of capital budgeting however suffers from a number of inefficiencies. It was established from the study that IRR cannot handle non-conventional cash flows as the mean was 3.5526 and standard deviation was 0.50390. The study

findings established that IRR does not consider the size of the investment profitability because the mean was 2.9211 and standard deviation of 0.67310.

5.2.4 Profitability Index and Firm Performance

The study found out that real estate companies rely on PI to make replacement decisions as supported by a mean of 3.1316 and standard deviation of 0.81111. PI is also useful in making independent project decisions as the mean was 3.7368 and standard deviation of 0.68514. The study further established that contingent project decisions are made using PI technique at real estate firms as the mean was 3.6316 and standard deviation was 0.58914.

It was revealed that PI considers the time value of money since the mean was 4.000 and standard deviation of 0.92998. The study findings revealed that PI gives a percentage measure as the mean was 4.3684 and standard deviation was 0.78572. It was however established that PI requires an estimate of cots of capital before making a decision since the mean was 4.0526 and standard deviation of 0.69544. The study also revealed that correct decision cannot be obtained when used to compare two mutually exclusive projects for the mean was 3.2895 and standard deviation was 0.86705.

5.2.5 Pay Back Period PBP and Performance

The study found out that PBP is useful among the real estate firms as it helps making lease or buy decisions since the mean was 3.2368 and standard deviation was 1.45999. PBP is also used by real estate firms to make independent project decisions for the mean was 3.5526 and standard deviation was 1.05772. The study found out that PBP as a technique of capital budgeting gives an indication about the risk factor as the mean was

2.9211 and standard deviation was 0.67310. The study further revealed that PBP does not reflect the profitability of the project for the mean was 3.3947 and standard deviation was 0.49536. The study established that PBP does not consider the cash flows after the payback period as the mean was 3.3421 and standard deviation was 1.02077.

5.2.6 Accounting Rate of Return ARR and Performance of Firm

The findings of the study indicated that ARR helps real estate companies to make mutually exclusive decisions as the mean was 4.2632 and standard deviation of 0.44626. It was found out that independent project decisions are made using ARR as the mean was 3.1842 and standard deviation was 0.83359. It was revealed that ARR considers all incomes in the project's life for the mean was 3.4211 and standard deviation was 0.72154. It was also established that ARR is easy to calculate as the mean was 3.5526 and standard deviation of 0.50390.The findings of the study indicated that ARR ignores the time value of money since the mean was 4.000 and standard deviation was 0.73521. The study found out that ARR ignores the lives of the projects as the mean was 3.1316 and standard deviation was 0.81111.

5.2.7 Other Capital Budgeting Techniques

The study established real estate companies have other techniques that are useful in capital budgeting. The study revealed the other techniques of capital budgeting are useful in making lease or buy decisions as the mean was 3.8947 and standard deviation was 1.50296. Other techniques of capital budgeting are also used in making mutually exclusive project decisions for the mean was 4.2368 and standard deviation was 1.07639. It was also revealed that other techniques of capital budgeting are used in making

independent project decisions as the mean was 3.4737 and standard deviation was 0.76182.

5.2.8 Capital Appraisal Methods and Firm Performance

The study found out that NPV affects financial performance of real estate companies as the mean was 3.8947 and standard deviation was 1.18069. It was revealed that IRR affects financial performance of real estate companies as the mean was 3.9211 and standard deviation was 1.02355. There is also an effect of ARR on financial performance of real estate companies for the mean was 3.5526 and standard deviation of 0.50390. The study found out that PI has an effect on financial performance as the mean was 4.0789 and standard deviation of 1.04962.

From regression analysis results, 62.6% changes in firm's financial performance is contributed by the NPV, IRR, PI, PBP and ARR. Furthermore, when all the variables are held constant, financial performance of real estate companies would be at 0.027, a unit increase in NPV holding other variables constant would increase financial performance by 0.533, a unit increase in IRR holding other variables constant would increase financial performance by 0.575, a unit increase in PI holding other variables constant would improve financial performance by 0.201, a unit increase in PBP holding other variables constant would improve financial performance of real estate companies by 0.421 and a unit increase in ARR holding other variables constant would increase financial performance by 0.504.

5.3 Discussion

The study established that independent project decisions at real estate firms are based on NPV technique. The study revealed that NPV as a capital budgeting technique considers all cash flows during the life of the project. NPV is consistent with the concept of maximizing the shareholders' wealth. The findings are consistent with Bierman Harold (1993) who found out that 99% of the Fortune 500 companies used IRR, while 85% used NPV. It was however, established that NPV only assumes that the discounting rate is already known.

The study found out that real estate companies relied on IRR in making replacement decisions. The study also revealed that independent project decisions were made using IRR appraisal technique as it gives a percentage measure. IRR as an appraisal technique of capital budgeting however suffers from a number of inefficiencies. It was established from the study that IRR cannot handle non-conventional cash flows. These findings concur with the study of Kiget (2014) studied capital budgeting techniques adopted by companies listed at the NSE. This study which found that the most utilized capital budgeting method was IRR followed by NPV technique while PI technique was third. Other techniques utilized included discounted Payback technique, ARR technique and MIRR technique. For those least utilized, the respondents identified failure to take into account time value of money as they key reason for not applying some techniques followed by lack of familiarity with the technique and cumbersome computations involved.

The study found out that real estate companies relied on PI to make independent project decisions. Contingent project decisions were made using PI technique at real estate firms.

It was revealed that PI considers the time value of money. The study findings revealed that PI gives a percentage measure. It was however established that PI requires an estimate of costs of capital before making a decision.

The study found out that PBP is useful among the real estate firms as it helps making independent project decisions. The study further revealed that PBP does not reflect the profitability of the project. The study established that PBP does not consider the cash flows after the payback period. The findings concur with Bierman (1993) who opined that 73 of 74 Fortune 100 firms use of DCF analysis, with IRR being preferred over NPV. The PBP method also remains a very popular method in practice, though not as a primary technique.

The findings of the study indicated that ARR helps real estate companies to make mutually exclusive decisions. It was found out that independent project decisions are made using ARR. It was revealed that ARR considers all incomes in the project's life. It was also established that ARR is easy to calculate. The findings of the study indicated that ARR ignores the time value of money. The study found out that ARR ignores the lives of the projects.

The study established real estate companies have other techniques that are useful in capital budgeting. The finding is consistent with Kiget (2014) who established that other techniques of capital budgeting are also used in making mutually exclusive project decisions. It was also revealed that other techniques of capital budgeting are used in making independent project decisions.

The study found out that NPV affects financial performance of real estate. It was revealed that IRR affects financial performance of real estate companies. The study found out that PI has an effect on financial performance. These findings contradicts the study of Irungu (2014) who established that all of the four capital budgeting techniques researched on; PBP, NPV, ARR and IRR were being used by companies listed in the NSE and results depicted that there was no correlation between the financial performance of banks and the capital budgeting techniques employed.

5.4 Conclusion

The study concludes that real estate companies apply NPV in making mutually exclusive decisions for the projects. NPV is also useful among the real estate firms in making independent project decisions. The study concludes that NPV as a capital budgeting technique considers all cash flows during the life of the project. NPV is consistent with the concept of maximizing the shareholders' wealth. However, NPV only assumes that the discounting rate is already known.

The study further concludes that real estate companies rely on IRR in making replacement decisions as supported. Independent project decisions are also made using IRR appraisal technique. IRR as an appraisal technique gives a percentage measure. IRR as an appraisal technique of capital budgeting however cannot handle non-conventional cash flows.

The study concludes that found out that real estate companies rely on PI independent project decisions. Contingent project decisions are also made using PI technique at real estate firms. PI considers the time value of money. PI gives a percentage measure. PI

however requires an estimate of costs of capital before making a decision. The study also concludes that PBP is useful among the real estate firms as it helps in independent project decisions. PBP does not reflect the profitability of the project. PBP also does not consider the cash flows after the payback period.

The study further concludes that ARR helps real estate companies to make mutually exclusive decisions. ARR is easy to calculate. However, ARR ignores the time value of money. The study also comes to a conclusion that real estate companies have other techniques that are useful in capital budgeting. The study concludes that other techniques of capital budgeting are useful in making lease or buy decisions. Other techniques of capital budgeting are also used in making mutually exclusive project decisions.

The study concludes that NPV affects financial performance of real estate companies. IRR affects financial performance of real estate companies. There is also an effect of ARR on financial performance of real estate companies. PI also effect financial performance of real estate companies.

5.5 Recommendation for the Study

The study recommends that management of real estate firms in Kenya should adopt NPV in their project appraisals. NPV should be particularly used by real estate firms in making mutually exclusive decisions and independent project decisions. Management of real estate companies should realize and understand considers all cash flows during the life of the project. The management of real estate firms should also choose and select a capital budgeting technique that is overally consistent with the concept of maximizing the

shareholders' wealth. There is also need to choose a capital budgeting technique that does not already known.

The study recommends that management of real estate firms should adopt IRR in making replacement decisions and independent project decisions. Real estate firms should choose a method that considers the time value of money. There is also need to select a method which does not only give a percentage measure but an absolute measure too.

The study further recommends that real estate companies rely on PI to make independent project decisions and contingent project decisions. Management of real estate firms should also be aware that PI considers the time value of money. An appraisal method selected by real estate firms should not require an estimate of costs of capital before making a decision.

The study recommends that real estate firms should also adopt the use of PBP in making independent project decisions. Real estate companies should ensure that a selected capital budgeting technique reflect the profitability of the project. The selected technique should also consider all the cash flows after the payback period.

The study recommends that real estate firms should adopt ARR in making mutually exclusive decisions and independent project decisions. Real estate companies should ensure that a selected method of capital budgeting considers all incomes in the project's life. There is also need to adopt techniques that are easy to calculate. The study recommends that real estate companies ought to adopt other techniques of capital budgeting in making lease or buy, mutually exclusive project and independent project decisions.

5.6 Suggestion for Further Research

This study was carried out in real estate industry. The findings of the study cannot therefore be generalized to other industries for example banking, insurance and tourism sectors of the economy. Future studies should cover other industries to bring out specific inherent capital budgeting techniques that affect financial performance in these industries. Future studies should also be carried among the listed companies on Nairobi Security Exchange in specific segments for example agriculture segment.

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APPENDICES

APPENDIX I: RESEARCH QUESTIONS

SECTION A: GENERAL INFORMATION

1. Name of the organization (Optional)_____
2. Number of years the organization has been in existence

   Below 3 yrs [ ] 4-6 yrs [ ] 7-10 years [ ]

   More than 10 yrs [ ]
3. What is your position in the organization? _____
4. How many years have you been working with this organization?

   Below 3 yrs [ ] 4-6 yrs [ ] 7-10 years [ ]

   More than 10 yrs [ ]
5. What is the number of capital projects and its average size that you formally analyze in your organization per annum?

Project size	**Tick as appropriate**	**Indicate number**
Less than Ksh. 2 million		
Ksh. 2 M to 4M		
Ksh. 4 M. to 6 M		
Ksh. 6M to 8 M		
Ksh 8M. to 10 M		
More than Ksh. 10M		

SECTION B: CAPITAL BUDGETING TECHNIQUES

6. Below are several capital budgeting techniques applied by organizations. Kindly indicate the extent to which each of this capital budgeting technique is applied by your organization in appraising investment projects. Use a scale of 1-5 where: 1= not at all, 2= little extent, 3= Not sure, 4= great extent and 5= very great extent.

Technique	**1**	**2**	**3**	**4**	**5**
Net present value (NPV)					
Internal rate of Return (IRR)					
Accounting Rate of Return (ARR)					
Payback period (PBP)					
Profitability Index					
Benefit/Cost Ratio					
Other					

(a) Net Present Value NPV

7. To what extent does your company use NPV in making the following decision?

	1	2	3	4	5
Replacement Decisions					
Lease or Buy Decisions					
Mutually Exclusive Projects Decisions					
Independent Projects Decisions					
Contingent Projects Decisions					

8. What makes NPV more appropriate in project appraisal?

	1	2	3	4	5
It considers the time value of money					
It considers all cash flows during the life of the project					
It assumes that the cash inflows are reinvested					
It handles non-conventional cash flows					
It is consistent with the concept of maximizing the shareholders' wealth					

9. What makes NVP less appropriate in project appraisal?

	1	2	3	4	5
It does not consider the size of the investment					
It assumes that the discounting rate is already known					
It does not give a percentage measure, only absolute amount. Which does not give the best project among different sizes mutually exclusive alternatives					

(b) Internal Rate of Return IRR

10. To what extent does your company use IRR in making the following decision?

	1	2	3	4	5
Replacement Decisions					
Lease or Buy Decisions					
Mutually Exclusive Projects Decisions					
Independent Projects Decisions					
Contingent Projects Decisions					

11. What makes IRR more appropriate in project appraisal?

	1	2	3	4	5
It considers the time value of money					
It considers all cash flows during the life of the project					
It gives a percentage measure					
It is consistent with the concept of maximizing the shareholders' wealth.					

12. What makes IRR less appropriate in project appraisal?

	1	2	3	4	5
It cannot handle non-conventional cash flows					
Financing type decision may misinterpret the calculation result					
In mutually exclusive project, the IRR might incorrectly rank the projects					
It does not consider the size of the investment Profitability					

(c) Profitability Index PI

13. To what extent does your company use PI in making the following decision?

	1	2	3	4	5
Replacement Decisions					
Lease or Buy Decisions					
Mutually Exclusive Projects Decisions					
Independent Projects Decisions					
Contingent Projects Decisions					

14. What makes PI more appropriate in project appraisal?

	1	2	3	4	5
It considers the time value of money					
It considers all cash flows during the life of the project					
It gives a percentage measure					
It is consistent with the concept of maximizing the shareholders' wealth.					

15. What makes PI less appropriate in project appraisal?

	1	2	3	4	5
It requires an estimate of cots of capital before making a decision					
Correct decision cannot be obtained when used to compare two mutually exclusive projects					

(d) Pay Back Period PBP

16. To what extent does your company use PBP in making the following decision?

	1	**2**	**3**	**4**	**5**
Replacement Decisions					
Lease or Buy Decisions					
Mutually Exclusive Projects Decisions					
Independent Projects Decisions					
Contingent Projects Decisions					

17. What makes PBP more appropriate in project appraisal?

	1	**2**	**3**	**4**	**5**
The length of the PBP gives an indication about the risk factor (considers the liquidity)					
Easy to calculate and to understand					

18. What makes PBP less appropriate in project appraisal?

It does not consider the time value of money	**1**	**2**	**3**	**4**	**5**
It does not reflect the profitability of the project					
It does not consider the cash flows after the payback period					

(e) Accounting Rate of Return ARR

19. To what extent does your company use ARR in making the following decision?

	1	2	3	4	5
Replacement Decisions					
Lease or Buy Decisions					
Mutually Exclusive Projects Decisions					
Independent Projects Decisions					
Contingent Projects Decisions					

20. What makes ARR more appropriate in project appraisal?

	1	2	3	4	5
It considers all incomes in the project's life					
Easy to calculate and to understand					

21. What makes ARR less appropriate in project appraisal?

It ignores the time value of money	**1**	**2**	**3**	**4**	**5**
Easy to calculate and to understand					
It ignores the cash inflows (considers the accounting income)					
It ignores the lives of the projects					

(f) **Other used techniques, if any:** ……

22. To what extent does your company use the other technique in making the following decision?

	1	2	3	4	5
Replacement Decisions					
Lease or Buy Decisions					
Mutually Exclusive Projects Decisions					
Independent Projects Decisions					
Contingent Projects Decisions					

23. What makes the other technique more appropriate in project appraisal?

_____

24. What makes the other technique less appropriate in project appraisal?

_____

25. To what extent has each of the following capital appraisal method affected the performance (Return on Assets) of your organization? Use a scale of 1-5 where: 1= not at all, 2= little extent, 3= Not sure, 4= great extent and 5= very great extent.

TECHNIQUE	1	2	3	4	5
Net present value (NPV)					
Internal rate of Return (IRR)					
Accounting Rate of Return (ARR)					
Payback period (PB)					
Profitability Index					
Benefit/Cost Ratio					
Other					

APPENDIX II: LIST OF REAL ESTATE COMPANIES IN NAIROBI COUNTY

1. Acorn Properties Ltd
2. Active Homes
3. Add Property Consultants
4. Afriland Agencies
5. Alliance Realtors Ltd
6. Ark Consultants Ltd
7. Arkpoint Properties Ltd
8. Axis Real Estate
9. Barloworld Logistics (Kenya) Ltd
10. Beryt Properties Investments Ltd
11. Betterdayz Estates
12. Bluehills Real Estate Ltd
13. British American Asset Managers
14. Canaan Properties Ltd
15. Capital City Limited
16. CB Richard Ellis Ltd
17. Chapter Consultants Ltd
18. Colburns Holdings Ltd
19. Coral Property Consultants Ltd
20. Cornerstone International Ltd
21. Country Homes and Properties
22. Cretum Proprties
23. Crown Homes Management
24. Crystal Valuers Limited
25. Daykio Plantations Limited
26. Diversity Property Ltd
27. Double K Information Agents
28. Dream Properties
29. Dunhill Consulting Ltd
30. Eackelberg & Co. Ltd
31. East Gate Apartments Limited
32. Eastwood Consulting Limited
33. Easy Properties Ltd (K)
34. Ebony Estates Limited
35. Economic Housing Group
36. Elegant Investments Ltd
37. Elgeyo Gardens Limited
38. ENA Properties Ltd
39. Etion Property Consultants
40. Exotic homes Properties
41. Fairway Realtors And Precision Valuers
42. Frank Valuers & Properties Management Ltd
43. FriYads Real Estate
44. Gampr Investments Ltd
45. Gimco Limited
46. Greenspan Housing
47. Guardian Properties Ltd
48. Hajar Services Limited
49. Halifax Estate Agency Ltd.
50. HassConsult
51. Heri Properties Ltd
52. Heritage Property Consultants
53. Hewton Limited
54. Home Afrika Ltd
55. Homelands Holdings Ltd
56. Homes and lifestyles

57. Housing Finance
58. Jacent Properties Limited
59. JamiaValuers & Estate Agent Management
60. Jeankins Investments Ltd
61. Jimly Properties Ltd
62. Jogoo Road Properties
63. Josekinyaga Enterprises Ltd
64. Joskinyagat Ltd
65. Josmarg Agencies
66. Kali Security Co Ltd
67. Karen Link Ltd
68. Karengata Property Managers
69. Kenya Prime Properties Ltd
70. Kenya Property Point
71. Kilifi Konnection
72. Kimly Properties Ltd
73. Kiragu & Mwangi Limited
74. Kitengela Properties Limited
75. Knight Frank Limited
76. Konaken Investment Ltd
77. Kusyombunguo Lukenya
78. Land & Homes
79. Landmark Realtors Ltd
80. Langata Link Estate Agents
81. Langata Link Ltd
82. Lantana Homes
83. Legend Management Ltd
84. Legend Valuers& Estate Agents
85. Liberty Real Estate Ltd
86. Lloyd Masika Limited
87. Lowanjo Properties Ltd
88. Lynex Holdings
89. Maestro Properties Ltd
90. Mamuka Valuers (M) Ltd
91. Mark Properties Ltd.
92. Market Power Limited
93. Masterways Properties Ltd
94. Menga Management Ltd
95. Mentor Group Ltd
96. Merlik Agencies
97. Metrocosmo Ltd
98. Milligan International Ltd
99. Mombasa Beach Apartments
100. Monako Investment Ltd
101. Mudas Properties Services Ltd
102. Muigai Commercial Agencies Ltd.
103. Myspace Properties (K) Ltd.
104. N W Realite Ltd
105. Nairobi Homes Ltd
106. Nairobi Real Estates
107. Neema Management Ltd
108. Neptune Shelters Ltd
109. Ngumo Properties Ltd
110. Nile Real Appraisee Ltd
111. Norkan Investments Ltd
112. Oldman Properties Ltd
113. Oloip Properties
114. Opus Property Ltd
115. Ounga Commercial Agencies
116. Palace Projects Limited
117. Paradise Properties Ltd

118. Paragan Property Ltd
119. Perscale Properties Ltd
120. Pinnacle Properties Ltd
121. Property Ins Ltd
122. Property Investment Network
123. Property Point Ltd
124. property zote.com
125. Raju Estate Agency Limited (REAL)
126. Rank Global Ltd
127. Real Appraisal Ltd
128. Realken International Ltd
129. Regent Management Ltd
130. Ryden International Ltd
131. Savannah Consulting Ltd
132. SEB Estate Ltd
133. Silverrock Properties Ltd
134. Sortmaster Properties Ltd
135. Sundown Valuers & Realters Ltd
136. Suraya Property Group Limited
137. Terestam Properties Management Ltd
138. Town House Agencies
139. Tuco Properties Ltd
140. Tysons Limited
141. Tysons Ltd
142. Urban Bliss Realstore
143. Urban Properties Consultants & Development Ltd.
144. Valentine First Venture(K) Ltd
145. Value Build Management Ltd
146. Vera Property Ltd
147. VillaCare Kenya
148. Wakama Estate Agency Ltd
149. Wesco Property Consultations Ltd

Source: (Yellow Pages, 2016).