THE EFFECTS OF PORTFOLIO MANAGEMENT STRATEGIES ON FINANCIAL PERFORMANCE OF INVESTMENTS COMPANIES IN KENYA: A CASE STUDY OF CENTUM INVESTMENTS

BEN JACKSON MICHENI CHARLES
D61/60125/2011

RESEARCH PROJECT SUBMITTED IN PARTIAL FULFILLMENT FOR THE REQUIREMENT OF DEGREE OF MASTER OF BUSINESS ADMINISTRATION SCHOOL OF BUSINESS UNIVERSITY OF NAIROBI

SEPTEMBER, 2013

DECLARATION

This research project is my original work and has not been presented for award of any degree in any university

Signature…………………… 				Date……………………………………..

Ben Jackson Micheni Charles

D61/60125/2011

This research project has been submitted for examination with my approval as university of Nairobi supervisor.

Signature………………………………					Date…………………………………..

Herick Ondigo,
Lecturer, Department of Finance and Accounting,
School of Business, University of Nairobi

DEDICATION

To my lovely Mum Cecelina Charles, my brother Peter Gitari for their support as a family and making me who I am today.

ACKNOWLEDGEMENTS

TABLE OF CONTENTS

LIST OF TABLES

LIST OF ABBREVIATIONS

APT   Arbitrage Pricing Model

CAPM   Capital Asset Pricing Model

EBS   Equity Building Society

ESOP   Employee Share Ownership Plan

FI   Financial Institution

FOSA   Front Services Activities

FSA   Financial Services Authority

GDP   Gross Domestic Product

LPM   Loan Portfolio Management

PPM   Project Portfolio Management

ROA   Return on Assets

SACCO   Savings and Credit Co-operative Society

WOCCU   World Organization Council Credit Union

ABSTRACT

The aim of this study was to establish portfolio management strategies used by Centum Investments and to determine the effects of portfolio management strategies on financial performance of Centum investments. Data was edited, classified, coded and tabulated to analyze quantitative data using statistical package for social science (SPSS version 17). Tables were used for further representation for easy understanding and analysis. This study adopted a survey research method to show the relationship between portfolio management and performance practices. The study focused on Centum Investment. Centum Investment chosen because of its geographical coverage, large customer base, profitability levels and easy of access to information. The study used secondary data. The secondary data was collected from the financial statements of Centum and books to collect information on annual earnings of the Centum. The data was summarized, coded and tabulated.

The findings also showed that that Individual security selection strategies were not positively correlated to the Leverage strategies and Yield spread strategies with -0695 and -0.639 respectively. Individual security selection and Yield curve strategies were positively correlated as shown with 0.349 at 0.001 significance level. The findings also indicate a positive correlation between the Yield curve strategies and Yield spread strategies as shown by 0.783 at 0.001 significance level. The findings of the study revealed a strong correlation between the predictor's variables (Leverage strategies, Yield spread strategies, Interest rates expectation strategies, Individual security selection strategies and Yield curve strategies). An F ratio is calculated which represents the variance between the groups, divided by the variance within the groups. The results indicated that there is more variability between the groups (caused by the independent variable) than there is within each group.

Based on the findings, division managers, portfolio managers, and client service officers should use a management information system that generates portfolio information reports either in hard copy or on-line. Most computer-based portfolio management systems allow the user to perform asset allocation modeling, investment simulation, compliance monitoring, re-balancing, trading interface, benchmarking, client statement preparation and presentation, real-time valuation, and investment risk analysis. Portfolio managers should be required to periodically verify that investment performance reports are accurate and that investment

policy compliance statements are updated whenever a material change occurs. This process should be accompanied by random or other internal reviews of investment activity and portfolio holdings to verify compliance with investment policy.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

This project explains how portfolio hedges risk in investment and gives optimum return to a given amount of risk. It also deals with the different investment decisions made by different people and focuses on element of risk in detail while investing in securities. It also gives an in depth analysis of portfolio creation, selection, revision and evaluation. The report also shows different ways of analysis of securities, different theories of portfolio management for effective and efficient portfolio construction (Campbell, 2002). It also gives a brief analysis of how to evaluate a portfolio. Holding a portfolio is part of an investment and risk-limiting strategy called diversification. By owning several assets, certain types of risk (in particular specific risk) can be reduced. Selection involves deciding what assets to purchase, how many to purchase, when to purchase them, and what assets to divest.

These decisions always involve some sort of performance measurement, most typically expected return on the portfolio, and the risk associated with this return (i.e. the standard deviation of the return). Typically the expected returns from portfolios, comprised of different asset bundles are compared. The objectives of this service are to help the unknown investors with the expertise of professionals in investment Portfolio Management. The unique goals and circumstances of the investor must also be considered. Some investors are more risk averse than others. Mutual funds have developed particular techniques to optimize their portfolio holdings. It involves construction of a portfolio based upon the investor's objectives, constrains, preferences for risk and return and liability (Ross, 1977).

The portfolio is reviewed and adjusted from time to time with the market conditions. The evaluation of portfolio is to be done in terms of targets set for risk and return. The changes in portfolio are to be effected to meet the changing conditions. Portfolio Construction refers to the allocation of surplus funds in hand among a variety of financial assets open for investment. Portfolio theory concerns itself with the principles governing such allocation. The modern view of investment is oriented towards the assembly of proper combinations held together will give beneficial result if they are grouped in a manner to secure higher return after taking into consideration the risk element. The modern theory is the view that by

diversification, risk can be reduced. The investor can make diversification either by having a large number of shares of companies in different regions, in different industries or those producing different types of product lines. There are many different ways to measure financial performance, but all measures should be taken in aggregation. Line items such as revenue from operations, operating income or cash flow from operations can be used, as well as total unit sales. Furthermore, the analyst or investor may wish to look deeper into financial statements and seek out margin growth rates or any declining debt. Whether it is for a mutual fund, leveraged fund, derivative or fund of funds, performance must be calculated. Returns are most commonly quoted in absolute terms (Campbell, 2002). But in reality they should always be compared to the strategy, and ultimately to the benchmark, they are designed to beat. One can also gauge Portfolio Performance by measuring returns. Performance measurement is an important task for both investors and investment managers.

1.1.1 Portfolio Management Strategies

Portfolio Management Strategies refer to the approaches that are applied for the efficient portfolio management in order to generate the highest possible returns at lowest possible risks. Leverage Strategy: Leverage is a way to increase your purchasing power, which can increase your potential profit while also increasing your potential risk. Typically, investors will do this either using margin, which is essentially borrowing money from Scot trade, or by buying option contracts. Leveraging Using Margin: Stock traders can leverage their position using a margin account. When using margin, stock traders are actually borrowing against the stock that they are purchasing. When purchasing new shares, they stipulate that you can borrow 50% against the stock you are buying (mehring 2005). To look at it another way, you are actually given two times more money to trade with compared to using cash. Leverage can dramatically increase your gains, but at the same time put you at greater risk on downward movements of the stock. Because of this, traders using higher leverage will typically need to have tight stops in place where they will close out their position to help minimize risk. Other than the obvious risks of using leverage; there are some other potential downfalls to leveraging using stock purchase.

Yield spread strategies: The yield spread or "credit spread" is the difference between the quoted rates of return on two different investments, usually of different credit quality. It is a compound of yield and spread. The "yield spread of X over Y" is simply the percentage return on investment (ROI) from financial instrument X minus the percentage return on investment

from financial instrument Y (per annum). The yield spread is a way of comparing any two financial products. In simple terms, it is an indication of the risk premium for investing in one investment product over another (Ross, 1977). When spreads widen between bonds with different quality ratings it implies that the market is factoring more risk of default on lower grade bonds. A yield spread is an investment strategy that involves the comparison of two different bond issues that share a common time to maturity. The purpose behind calculating the yield spread is to help the investor determine which bond issue would be the better investment.

Interest rates expectation strategies: Basic interest rate expectation strategy involves moving between long-term government bonds and very short-term treasury bills, based on a forecast of interest rates over a certain time horizon. Since long-term bonds change the most in value for a given change in interest rates, a manager would want to hold long-term bonds when rates are falling. This would provide the maximum increase in price for a portfolio. The reverse is true in a rising interest rate environment (Ross, 1977). Long-term bonds fall the most in price for a given rise in interest rates and a manager would want to hold treasury bills. Treasury bills have a very short term and do not change very much in value. A more sophisticated interest rate expectation strategy might involve the use of "zero coupon" or "strip" bonds which are far more sensitive to interest rate changes than normal bonds. Zero coupon bonds have no coupon payments and move in price as their term changes or interest rates change. Their high price volatility makes them especially suitable for speculating on interest rate movements.

Individual security selection strategies: An individual security selection strategy is a multi-step process that involves the use of fundamental, technical and quantitative research. Each of these methods has been shown to work, but nothing works all of the time (Fama, 1992). Thus, Companies seeks securities which are attractive on all three methodologies. It should be noted that the overwhelmingly most common equity investment style across accounts at most Companies is "All Cap Core". Due in part to our quantitative screening process, we feel confident filtering through large numbers of stocks to find ones with winning characteristics. However, although most of our assets are managed under an All-Cap Core methodology, we do have an investment strategy focused solely small cap equities.

Yield Curve Strategy: The yield curve strategies provide a reference tool for comparing bond yields and maturities that can be used for several purposes. One may buy a bond at a certain interest rate expecting prevailing interest rates to decline. If and when they do, the price

of the bond one holds will increase, allowing one to sell the bond for a profit. Yield curve strategies have an impressive record as a leading indicator of economic conditions, alerting investors to an imminent recession or signaling an economic upturn (Fama, 1992). They are also used as a benchmark for pricing many other fixed-income securities. By anticipating movements in the yield curve, fixed-income managers can attempt to earn above-average returns on their bond portfolios. Several yield curve strategies have been developed in an attempt to boost returns in different interest-rate environments.

1.1.2 Financial Performance

Financial Performance is the Subjective measure of how well a firm can use assets from its primary mode of business and generate revenues. This term is also used as a general measure of a firm's overall financial health over a given period of time, and can be used to compare similar firms across the same industry or to compare industries or sectors in aggregation (Fama, 1992). There are three commonly used measures of financial performance thus:

Jensen Measure: The Jensen measure is the ratio of your portfolio's return less the portfolio's expected return as determined by the capital asset pricing model, or CAPM. The CAPM is an economic theory that describes the relationship between risk and the pricing of assets. The CAPM theory suggests that the only risk that is priced by investors is risk that cannot be diversified away. The CAPM in its most simple form shows that the expected return of a security or a portfolio is equal to the rate on a risk-free security plus the asset's risk premium multiplied by the asset's beta. The Jensen's measure incorporates the CAPM into its calculation. The Jensen measure is calculated as follows:

$$a_p = r_p - [\ r_f + ß_p\ (r_m - r_f)\ ]$$

In this equation, a_p = the alpha for the portfolio, or the return over and above your benchmark; r_p = the average return on the portfolio; $ß_p$ = the weighted average beta of the portfolio; r_f = the average risk-free rate; and r_m = the average return on the market index. This measure is the ratio of the portfolio's performance (r_p) less the expected portfolio return as determined by CAPM or $[\ r_f + ß_p\ (r_m - r_f)\ ]$.

Note that this measure by itself is also sufficient to determine risk-adjusted performance. Since we know the market's beta is 1.0 (by definition), and since we both add and subtract

the risk-free rate, the CAPM return is just the market return. So if the Jensen's measure is positive, the asset has outperformed on a risk-adjusted basis (Jensen, 1995).

Treynor Measure: Treynor measure uses the portfolio's beta instead of the portfolio's standard deviation. The Treynor measure is calculated as follows:

$$(r_p - r_f) / \beta_p$$

In this equation, r_p = the average return on the portfolio, r_f = the average risk-free rate, and β_p = the weighted average beta of the portfolio. The Treynor measure is found by dividing the portfolio risk premium by the portfolio risk as measured by the beta.

An asset's Treynor measure in isolation also means little. It also must be measured against the market's Treynor measure, which is calculated by dividing the market risk premium, or the return on the market minus the risk-free rate by the beta of the market, which is 1.0. If the asset's Treynor measure is greater than the market's Treynor measure, the asset has outperformed on a risk-adjusted basis (Treynor.2002).

Sharpe Measure: The Sharpe measure is a ratio of your portfolio's excess return divided by your portfolio's standard deviation. The portfolio's excess return is found by subtracting the risk-free rate (the rate of return you are guaranteed to make with limited risk) from the amount of the portfolio's actual return. The risk-free rate is considered by most investment professionals as the amount of return you receive on a six- or twelve-month Treasury bill. Since these bills are default free (because the government can always print more bills) and since their return is nearly guaranteed, they are considered a proxy for the risk-free rate or the benchmark over which all other financial or real assets are compared. The difference between

an asset's return and the risk-free rate is called the risk premium, or excess return. The Sharpe measure is calculated as follows:

$$(r_p - r_f) / s_p$$

In this equation, r_p = the average return on the portfolio; r_f = the risk-free rate; and s_p = the standard deviation of portfolio return. The Sharpe measure is found by dividing the portfolio risk premium, or the return on the portfolio minus the risk-free rate, by the standard deviation of the portfolio. An asset's Sharpe measure in isolation means little. It must be measured

against the market's Sharpe measure. If the asset's Sharpe measure is greater than the market's Sharpe measure, the asset has outperformed on a risk-adjusted basis (Sharpe,1964). The market Sharpe measure is calculated the same way, by dividing the market risk premium, or the return on the market minus the risk-free rate by the standard deviation of the market.

1.1.3 Effects of Portfolio Management Strategies on Financial Performance

The rapid growth of the use of options in portfolio management has been accompanied by a variety of claims regarding option performance strategies. Many investors believe that they can enhance the performance of their pure-stock portfolios by incorporating different options strategies. Among them, the most popular strategies are covered-call writing and protective-put buying. In theory, there is no clear evidence on whether a specific option strategy is superior. According to the efficient market theory, an increase in returns should be accompanied by an increase in risk. Adding options to stock portfolios may also create problems of performance measurement homogeneity. Hedging is a financial transaction in which one asset is held to offset the risk of holding another asset. Typically, a hedge is used to offset price risk due to changes of financial market conditions. In this way, the development of financial derivative instruments (options, futures, forward and swap) make hedgers simple to use it to reduce risk. However, many portfolio managers use these derivative instruments to speculate instead of hedging and, in turn, increase risk. The general framework suggested by Hakanson (1978), Cox (1976) and Ross (1976) indicates that incorporating option enhances the general efficiency of financial markets by increasing the number of investment opportunities available to investors in terms of insurance and hedging, but not leads to any arbitrage opportunity.

Several studies compare the performance between unhedged and hedged positions with options or compare the performance among different hedged positions. For example, Trennepohl and Dukes (1981) investigate the performance of option writing and buying strategies using in-the-money (ITM) and out-of-the-money (OTM) options and conclude that covered option writing lowers portfolio standard deviation and improves portfolio mean returns. They also conclude that writing calls or buying puts goes along with reduction of both risk and return, compared to the unprotected stock position. Employing simulation approaches, Bookstaber and Clarke (1984) compare the performance of protective-put, covered-call, and pure-stock strategies and conclude that call writing is better than put buying as the former truncates the right-hand side of a distribution causing undesirable negative

skewness while put-buying truncates the left-hand side of a distribution causing desirable positive skewness.

1.1.4 Centum Investments Profile

Centum is the largest quoted investment company in East Africa with over 38,000 shareholders and have been listed on the Nairobi Securities Exchange since 1967. It's both a provider and manager of funds, and positions itself as an investment channel through which other investors are able to access diversified investments and management expertise for a superior return. Its portfolio is currently valued in excess of US $ 140 million and consists broadly of investments in private equity, listed equity and real estate. The private equity portfolio is the largest asset class, with notable investments in the Financial and beverage sectors.

Its vision is to be Africa's foremost investment channel, while its mission is to create real and tangible wealth by providing the channel through which investors access and build extraordinary enterprises in Africa. Its strategic objectives is**:** To upscale assets under management, to achieve return on shareholder funds that is consistently above market returns, to maintain total operating costs below 2.5% of assets under management, to diversify assets under management by geography and to develop Centrum's brand equity and reputation with key stakeholders. Centrum's Progress to Strategy includes but not limited to:

Proactive brand development: Centrum continue to align its internal processes, people, communication and identity to the brand to position Centum as Africa's foremost investment channel**,** Strengthening internal process and capacity where it has put together a very strong management team, with a diverse set of skills that is very experienced in their areas of specialization. Centum has also gone through a comprehensive process of reviewing and updating all its processes and have engaged KPMG as internal auditors to review compliance. It has also embarked on Active Portfolio Management

Here centum continues to align its internal processes, people, communication and identity to the brand to position Centum as Africa's foremost investment channel. It has put together a very strong management team, with a diverse set of skills that is very experienced in their areas of specialization. It has also gone through a comprehensive process of reviewing and updating all our processes and has engaged KPMG as internal auditors to review compliance.

7

Centum has also completed a rigorous appraisal of its investment portfolio and developed different value optimizing strategies that are in the process of implementation. It expects to have a number of exits and consolidations. On geographical diversification Centum has invested more than US$ 16 Million in Uganda over the last 18 months and are actively prospecting for opportunities in other parts of Africa. It has also focused management of assets which it has completed the reorganization of the company into three segments − Private Equity, Quoted Private Equity and Real Estate & Infrastructure. Centum has consistently delivered market beating returns and between 2006 and September 2010 its share price return outperformed the NSE index by more than 40% annually.

On scaling up assets under management Centum had KSh 11.8 Billion assets under management as at 30 September 2010. This was largely funded by organic growth, reinvestment of internally generated funds and debt. Centum will focus on sectors with the following broad characteristics: Large and growing domestic and regional market that is targeted principally to households and private businesses, basic goods and services whose demand will increase as purchasing power increases, products and services with limited scope for import substitution, sustainable competitive advantage, with relatively high barriers to entry and not replicable by pure addition of capital, sectors with pricing power that will allow price increases with inflation, and elative industry certainty with a stable regulatory environment. Centum is among the winners of the Champions of Governance (COG) Award 2012 which was held on Friday, November 9, 2012 at the Panari Hotel, Nairobi.

1.2 Research Problem

According to Campbell, (2002), Portfolio management is a highly deficient area globally and locally. By owning several assets, certain types of risk (in particular specific risk) can be reduced. The assets in the portfolio could include stocks, bonds, options, warrants, gold certificates, real estate, futures contracts, production facilities, or any other item that is expected to retain its value. Ideally, everybody should have a long term and short term financial plan guiding their financial decision. Holding a portfolio is part of an investment and risk-limiting strategy called diversification. Portfolio management involves deciding what assets to include in the portfolio, given the goals of the portfolio owner and changing economic conditions. Selection involves deciding what assets to purchase, how many to purchase, when to purchase them, and what assets to divest. Some investors are more risk averse than others. Mutual funds have developed particular techniques to optimize their

portfolio holdings. These decisions always involve some sort of performance measurement, most typically expected return on the portfolio, and the risk associated with this return (i.e. the standard deviation of the return). Typically the expected returns from portfolios, comprised of different asset bundles are compared. The unique goals and circumstances of the investor must also be considered.

Kamau (2010) argued that when economic conditions become more challenging, organizations have fewer resources to deploy on new business or change projects and programs, reducing the number of such initiatives they can undertake. However, at such times, the projects and programmes they do invest in are often more critical, since they may be essential to deliver efficiency savings, sustain revenue or improve aspects of performance on which the survival of the organization can depend. The current turbulent economic conditions appear to have caused increasing adoption of project portfolio management by organizations. PPM can be defined as: managing a diverse range of projects and programmes to achieve the maximum organizational value within resource and funding constraints, where 'value' does not imply only financial value and includes delivering benefits which are relevant to the organization's chosen strategy.

Jasmin (2010) argued that investing is the principal business activity for most institutions. Investment portfolio is typically the largest asset and the predominate source of revenue. As such, it is one of the greatest sources of risk to an organizations safety and soundness. Effective management of the investment portfolio and the credit function is fundamental to a organizations safety and soundness. Investment portfolio management is the process by which risks that are inherent in the management process are managed and controlled. Because review of the portfolio management process is so important, it is a primary supervisory activity. Assessing portfolio management involves evaluating the steps management takes to identify and control risk throughout the investment process. The assessment focuses on what management does to identify issues before they become problems. The study will seek to find answer to the following question: what is the relationship between portfolio management strategies and financial performance of Centum investments?

1.3 Objectives of the Study

1) To establish portfolio management strategies used by Centum Investments.
2) To determine the effects of portfolio management strategies on financial performance of Centum investments.

1.4 Value of the Study

To policy makers the study will give a glimpse of how portfolio management can be harnessed by policy makers to achieve both the millennium development goals and also vision 2030 which is a critical blue print for the economic growth and development in Kenya.

To the management, this study will enable them to identify the key factors to consider in the use of portfolio management information in achieving optimum profitability.

To individual investors, this study will guide them in the wise utilization of Investment advice and minimization of risk.

The study will benefit management consultants who endeavor to advice investors and Governments on the effective application of portfolio management in sound decision making.

To the theory this study will avail critical information in formulation of policies and regulations in alignment with both monetary and fiscal policies.

To the academicians, this study will be useful in enriching the body of knowledge and would also help them in carrying out further and related studies.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This section summarizes the literature that is already in existence regarding portfolio management, performance and challenges. Relevant theories and empirical evidence is reviewed in this chapter. Grant (1998) argues that during the twentieth century, especially during the first three decades after the World War II, portfolio management was the most prominent source of corporate growth.

2.2 Theoretical Review

Basically portfolio management involves, a proper investment decision making of what to buy & sell, Proper money management in terms of investment in a basket of assets so as to satisfy the asset preferences of investors, reduce the risk and increase returns. Rubinstein (2006) argues that the other ancillary aspects are as per needs of investors, namely: regular income or stable return, appreciation of capital, Marketability and liquidity, Safety of investment and Minimizing of tax liability. Portfolio Management is a process encompassing many activities of investment in assets and securities. It is a dynamics and flexible concept and involves regular and systematic analysis, judgment and actions. For instance Portfolio Management deals with selection of securities from the number of opportunities available with different expected returns and carrying different levels of risk and the selection of securities is made with a view to provide the investors the maximum yield for a given level of risk or ensure minimum risk for a level of return (Campbell, 2002). Several theories have been compounded to show the effects of portfolio management on financial performance thus:

2.2.1 Risk Aversion Theory

Risk aversion is an investor's general desire to avoid participation in "risky" behavior or, in this case, risky investments (Fischer, 1972). Investors typically wish to maximize their return with the least amount of risk possible. When faced with two investment opportunities with similar returns, good investor will always choose the investment with the least risk as there is no benefit to choosing a higher level of risk unless there is also an increased level of return.

Insurance is a great example of investors' risk aversion. Given the potential for a car accident, an investor would rather pay for insurance and minimize the risk of a huge outlay in the event of an accident.

2.2.2 Markowitz Portfolio Theory

Markowitz (1953) developed the portfolio model. This model includes not only expected return, but also includes the level of risk for a particular return. Markowitz assumed the following about an individual's investment behavior: Given the same level of expected return, an investor will choose the investment with the lowest amount of risk. Investors measure risk in terms of an investment's variance or standard deviation. For each investment, the investor can quantify the investment's expected return and the probability of those returns over a specified time horizon. Investors seek to maximize their utility. Investors make decision based on an investment's risk and return, therefore, an investor's utility curve is based on risk and return.

Markowitz' work on an individual's investment behavior is important not only when looking at individual investment, but also in the context of a portfolio. The risk of a portfolio takes into account each investment's risk and return as well as the investment's correlation with the other investments in the portfolio. Risk of a portfolio is affected by the risk of each investment in the portfolio relative to its return, as well as each investment's correlation with the other investments in the portfolio. A portfolio is considered efficient if it gives the investor a higher expected return with the same or lower level of risk as compared to another investment (Fama,1992). The efficient frontiers simply a plot of those efficient portfolios, as illustrated below. While an efficient frontier illustrates each of the efficient portfolios relative to risk and return levels, each of the efficient portfolios may not be appropriate for every investor. Recall that when creating an investment policy, return and risk were the key objectives. An investor's risk profile is illustrated with indifference curves. The optimal portfolio, then, is the point on the efficient frontier that is tangential to the investor's highest indifference curve. See our article: A Guide to Portfolio Construction, for some essential steps when taking a systematic approach to constructing a portfolio.

2.2.3 Two Mutual Fund Theorem

One key result of the above analysis is the two mutual fund theorem. This theorem states that any portfolio on the efficient frontier can be generated by holding a combination of any two given portfolios on the frontier; the latter two given portfolios are the "mutual funds" in the theorem's name. So in the absence of a risk-free asset, an investor can achieve any desired efficient portfolio even if all that is accessible is a pair of efficient mutual funds (Campbell, 2002). If the location of the desired portfolio on the frontier is between the locations of the two mutual funds, both mutual funds will be held in positive quantities. If the desired portfolio is outside the range spanned by the two mutual funds, then one of the mutual funds must be sold short (held in negative quantity) while the size of the investment in the other mutual fund must be greater than the amount available for investment (the excess being funded by the borrowing from the other fund).

2.2.4 Modern Portfolio Theory

Is a theory of finance which attempts to maximize portfolio expected return for a given amount of portfolio risk, or equivalently minimize risk for a given level of expected return, by carefully choosing the proportions of various assets. Although MPT is widely used in practice in the financial industry and several of its creators won a Nobel memorial prize for the theory, in recent years the basic assumptions of MPT have been widely challenged by fields such as behavioral economics.

MPT is a mathematical formulation of the concept of diversification in investing, with the aim of selecting a collection of investment assets that has collectively lower risk than any individual asset. That this is possible can be seen intuitively because different types of assets often change in value in opposite ways (Merton, 1973). For example, to the extent prices in the stock market move differently from prices in the bond market, a collection of both types of assets can in theory face lower overall risk than either individually. But diversification lowers risk even if assets' returns are not negatively correlated—indeed, even if they are positively correlated. More technically, MPT models an asset's return as a normally distributed function (or more generally as an elliptically distributed random variable), defines risk as the standard deviation of return, and models a portfolio as a weighted combination of assets, so that the return of a portfolio is the weighted combination of the assets' returns. By combining different assets whose returns are not perfectly positively correlated, MPT seeks

to reduce the total variance of the portfolio return. MPT also assumes that investors are rational and markets are efficient.

2.2.5 Theory of Active Portfolio Management

Also called active investing refers to a portfolio management strategy where the manager makes specific investments with the goal of outperforming an investment benchmark index. Investors or mutual funds that do not aspire to create a return in excess of a benchmark index will often invest in an index fund that replicates as closely as possible the investment weighting and returns of that index; this is called passive management (Fama,1992). Active management is the opposite of passive management, because in passive management the manager does *not* seek to outperform the benchmark index. Ideally, the active manager exploits market inefficiencies by purchasing securities (stocks etc.) that are undervalued or by short selling securities that are overvalued. Either of these methods may be used alone or in combination. Depending on the goals of the specific investment portfolio, hedge fund or mutual fund, active management may also serve to create less volatility (or risk) than the benchmark index.

The reduction of risk may be instead of, or in addition to, the goal of creating an investment return greater than the benchmark. Active portfolio managers may use a variety of factors and strategies to construct their portfolio(s). These include quantitative measures such as price/earnings ratio P/E ratios and PEG ratios, sector investments that attempt to anticipate long-term macroeconomic trends (such as a focus on energy or housing stocks), and purchasing stocks of companies that are temporarily out-of-favor or selling at a discount to their intrinsic value. Some actively managed funds also pursue strategies such as merger arbitrage, short positions, option writing, and asset allocation.

Construction of a portfolio based upon the investor's objectives, constrains, preferences for risk and return and liability (Merton, 1973). Evaluation of the portfolio is done by continuous overview of the market conditions, company's performance and investor's circumstances, (Campbell, 2002). Portfolio management process according to Merton (1973) entails a six stage process, that is: Determine optimal investment mix followed by creating a customized investment policy statement, and then Selecting an investments, after which Monitoring of progress is necessary. These processes are explained as follows: Merton (1973) explains and Identifies goals and objectives as the stage under which several questions like: When will an

investor need the money from his/her investments? How much does the investor have in terms of saving? Among other questions that may be of relevance. This is necessary as it will assist in properly identification and determination of optimal investment mix (Merton, 1973) argues that it involves asset allocations which eventually create an optimal mix. This step represents one of the most important decisions in a portfolio construction, as asset allocation has been found to be the major determinant of long-term portfolio performance (Campbell, 2002). The third stage which is creating a customized investment policy statement, which is necessary after the optimal investment mix, is determined.

This help to formalize the goals and objectives in order to utilize them as a benchmark to monitor progress and future updates (Campbell, 2002). After all the above is done, selection of investment is done so as to customize portfolio with a view of matching the optimal investment mix. For this to succeed there is need for monitoring the progress so that the mix of asset classes stays in line with investor's unique needs, the portfolio will be monitored and rebalanced back to the optimal investment mix (Fama,1992). Risk and return is a key element in evaluating a portfolio. Risk refers to the probability that the return and therefore the value of an asset or security may have alternative outcomes (William, 1964). Return-yield or return differs from the nature of instruments, maturity period and the creditor or debtor nature of the instrument and a host of other factors. The efficiency of the profitability position or operating activities can be identified by studying the following factors. Gross profit margin ratio: Dividend policy is determined in the general body meeting of the company, for equity shares at the end of the year. The dividend payout ratio is determined as per the dividend paid. Dividend policies are divided into two types (Tobin, 1958):-Stable dividend policy, unstable dividend policy. Capital structure of a company that necessitates portfolio management.

Portfolios or combinations of securities are thought of as helping to spread risk over many securities may specify only broadly or nebulously. Auto stocks are, for examples, recognized as risk interrelated with fire stocks, utility stocks display defensive price movement relative to the market and cyclical stocks like steel, and so on. This is not to say that traditional portfolio analysis is unsuccessful. It is to say that much of it might be more objectively specified in explicit terms. They are: Determining the objectives of the portfolio and Selection of securities to be included in the portfolio. Normally this is carried out in four to six steps (Fischer, 1972). Before formulating the objectives, the constraints of the investor should be analyzed within the given frame work of constraints, objectives are formulated.

Then based on the objectives securities are selected. After that risk and return of the securities should be studied. The investor has to assess the major risk categories that he or she is trying to minimize. Compromise of risk and non-risk factors has to be carried out. Finally relative portfolio weights are assigned to securities like bonds, stocks and debentures and the diversification is carried out.

2.3 Portfolio Management Strategies

Portfolio Management Strategies refer to the approaches that are applied for the efficient portfolio management in order to generate the highest possible returns at lowest possible risks. There are two basic approaches for portfolio management including Active Portfolio Management Strategy and Passive Portfolio Management Strategy Mehring(2005).

2.3.1 Active Portfolio Management Strategy

The Active portfolio management relies on the fact that particular style of analysis or management can generate returns that can beat the market. It involves higher than average costs and it stresses on taking advantage of market inefficiencies. It is implemented by the advices of analysts and managers who analyze and evaluate market for the presence of inefficiencies. The active management approach of the portfolio management involves the following styles of the stock selection. Top-down Approach: In this approach, managers observe the market as a whole and decide about the industries and sectors that are expected to perform well in the ongoing economic cycle. After the decision is made on the sectors, the specific stocks are selected on the basis of companies that are expected to perform well in that particular sector. Bottom-up: In this approach, the market conditions and expected trends are ignored and the evaluations of the companies are based on the strength of their product pipeline, financial statements, or any other criteria. It stresses the fact that strong companies perform well irrespective of the prevailing market or economic conditions.

2.3.2 Passive Portfolio Management Strategy

Passive asset management relies on the fact that markets are efficient and it is not possible to beat the market returns regularly over time and best returns are obtained from the low cost investments kept for the long term. The passive management approach of the portfolio management involves the following styles of the stock selection. Efficient market theory: This theory relies on the fact that the information that affects the markets is immediately available and processed by all investors. Thus, such information is always considered in

evaluation of the market prices. The portfolio managers who follows this theory, firmly believes that market averages cannot be beaten consistently.

Indexing: According to this theory, the index funds are used for taking the advantages of efficient market theory and for creating a portfolio that impersonate a specific index. The index funds can offer benefits over the actively managed funds because they have lower than average expense ratios and transaction costs. Apart from Active and Passive Portfolio Management Strategies, there are three more kinds of portfolios including Patient Portfolio, Aggressive Portfolio and Conservative Portfolio. Patient Portfolio: This type of portfolio involves making investments in well-known stocks. The investors buy and hold stocks for longer periods. In this portfolio, the majority of the stocks represent companies that have classic growth and those expected to generate higher earnings on a regular basis irrespective of financial conditions. Aggressive Portfolio: This type of portfolio involves making investments in "expensive stocks" that provide good returns and big rewards along with carrying big risks. This portfolio is a collection of stocks of companies of different sizes that are rapidly growing and expected to generate rapid annual earnings growth over the next few years. Conservative Portfolio: This type of portfolio involves the collection of stocks after carefully observing the market returns, earnings growth and consistent dividend history.

2.4 Portfolio Management Approaches

Commonly there are two approaches in the construction of the portfolio of securities viz., Traditional approach and Markowitz efficient frontier approach, (Markowitz,1959). In the traditional approach, investor's needs in terms of income and capital appreciation are evaluated and then appropriate securities are selected to meet the needs of investors. The common practice in the traditional approach is to evaluate the entire financial plan of the individuals. In the modern approach, portfolios are constructed to maximize the expected return for a given level of risk. It view portfolio construction in terms of the expected return and the risk associated with obtaining the expected return. According to Mehrling (2005) to construct an efficient portfolio, we have to conceptualize various combinations of investments in a basket and designate them as portfolio one to 'N'. Then the expected returns from these portfolios are to be worked out and then portfolios are to be estimated by measuring the standard deviation of different portfolio returns. To reduce the risk, investors have to diversify into a number of securities whose risk – return profiles vary Brouwer (2009). A single asset or a portfolio of assets is considered to be "efficient" if no other asset

offers higher expected return with the same risk or lower risk with the same expected return. A portfolio is said to be efficient when it is expected to yield the highest returns for the level of risk accepted or, alternatively, the smallest portfolio risk or a specified level of expected return. The Main features of efficient set of port folio are determined by a set of efficient portfolios from a universe of 'n' securities and an efficient set of portfolio is the subset of 'n' security universe. The investor selects the particular efficient that provides him with most suitable combination of risk and return. As of now the under noted techniques of portfolio management are in vogue in our country. Equity portfolio: Equity portfolio is influenced by internal and external factors. Internal factors affect inner working of the company.

The company's growth plans are analyzed with respect to balance sheet and profit & loss accounts of the company. External factors are changes in government policies, trade cycles, political stability etc, (Bogle, 2007), Equity analysis: Under this method future value of shares of a company is determined. It can be done by ratios of earnings per shares and price earnings ratio. One can estimate the trend of earnings by analyzing EPS which reflects the trend of earnings, quality of earnings, dividend policy and quality of management. Further price earnings ratio indicates the confidence of market about company's future. Certain assumptions were made in the traditional approach for portfolio selection, which are discussed below: Investors prefer large to smaller returns from securities and take more risk. Ability to achieve higher returns depends upon investor's judgment of risk. Spreading money among many securities can reduce risk, (Brouwer, 2009). An investor can select the best portfolio to meet his requirements from the efficient frontier, by following the theory propounded by Markowitz. Selection process is based on the satisfaction level that can be achieved from various investment avenues.

A useful measure of risk should take into account both the probability of various possible bad outcomes and their associated magnitudes. Instead of measuring the probability of a number of different possible outcomes and ideal measure of risk would estimate the extent to which the actual outcome is likely to diverge from the expected outcome. Two measures are used for this purpose: Average absolute deviation and Standard deviation. In order to estimate the total risk of a portfolio of assets, several estimations are needed:- (Mossin, 1966) The predicted return on the portfolio is simply a weighted average of the predicted returns on the securities, using the proportionate values as weights. The risk of the portfolio depends not only on the risk of its securities considered in isolation, but also on the extent to which they

are affected similarly by underlying events. The deviation of each securities return from its expected value is determined by the product of the two obtained.

2.5 Empirical Review

Field of portfolio management and evaluation has widely been studied by scholars, some of the empirical studies to this regard are highlighted in subsequent paragraphs.

Jeroz (2007) in his study of investment companies recommended that portfolios should be reviewed and adjusted from time to time with the market conditions. He pointed out that evaluation of portfolio is to be done in terms of targets set for risk and return. The changes in portfolio are to be effected to meet the changing conditions. According to his studies Portfolio Construction refers to the allocation of surplus funds in hand among a variety of financial assets open for investment. He mostly concerned himself with the principles governing such allocation. The modern view of investment is oriented towards the assembly of proper combinations held together will give beneficial result if they are grouped in a manner to secure higher return after taking into consideration the risk element. The modern theory is the view that by diversification, risk can be reduced. The investor can make diversification either by having a large number of shares of companies in different regions, in different industries or those producing different types of product lines. There are many different ways to measure financial performance, but all measures should be taken in aggregation. Line items such as revenue from operations, operating income or cash flow from operations can be used, as well as total unit sales. Furthermore, the analyst or investor may wish to look deeper into financial statements and seek out margin growth rates or any declining debt.

Morgan (2008) believed that investors can enhance the performance of their pure-stock portfolios by incorporating different options strategies. Among them, the most popular strategies are covered-call writing and protective-put buying. In theory, there is no clear evidence on whether a specific option strategy is superior. According to Morgan the efficient market theory, an increase in returns should be accompanied by an increase in risk. Adding options to stock portfolios may also create problems of performance measurement homogeneity. Hedging is a financial transaction in which one asset is held to offset the risk of holding another asset. Typically, a hedge is used to offset price risk due to changes of

financial market conditions. In this way, the development of financial derivative instruments (options, futures, forward and swap) make hedgers simple to use it to reduce risk. However, many portfolio managers use these derivative instruments to speculate instead of hedging and, in turn, increase risk.

Miriti (2008) on his study of Precision of Investor Information and Financial Disclosure investigated a situation in which the precision of an inside investor's private signal increases with the size of his shareholding. Intuitively, an insider with a more informative signal regarding the prospects of a project may be expected to involve himself in larger information-motivated transactions and enjoy greater profits. We suggest that such an advantage, nevertheless, may be alleviated or even eliminated when the financial statements accompanied by disclosure of either his shareholdings or the distribution of block shareholdings reveal the extent to which the insider is informed. The market may optimize its reaction when the order flows accordingly.

Omondi (2009) on his study of Liquidity risk and portfolio management in centum investments investigated the impact of a liquidity shock induced by investor's behavior on portfolio management during financial crises in a system lacking deposit insurance. It is found that investors reacted to the liquidity shock sensitively through an increase in their cash holdings not by liquidating bank loans but by selling securities in the financial market. Moreover, institutions exposed to local financial contagion adjusted the liquidity of their portfolio mainly by actively selling and buying their securities in the financial market. Finally, there is no evidence to conclude that the existence of the lender of last resort mitigated the liquidity constraints in investor's portfolio adjustments.

Muthamia (2010) on his study of challenges faced by centum investments argued that when economic conditions become more challenging, organizations have fewer resources to deploy on new business or change projects and programmes, reducing the number of such initiatives they can undertake. However, at such times, the projects and programmes they do invest in are often more critical, since they may be essential to deliver efficiency savings, sustain revenue or improve aspects of performance on which the survival of the organization can depend. The current turbulent economic conditions appear to have caused increasing adoption of project portfolio management by organizations. project portfolio management can be defined as: managing a diverse range of projects and programmes to achieve the maximum

organizational value within resource and funding constraints, where 'value' does not imply only financial value and includes delivering benefits which are relevant to the organization's chosen strategic move with time.

Tanui (2010) argued that Lending is the principal business activity for most investors is portfolio risk management which is typically the largest asset and the predominate source of revenue. As such, it is one of the greatest sources of risk to a investors safety and soundness. Whether due to lax credit standards, poor portfolio risk management, or weakness in the economy, loan portfolio problems have historically been the major cause of failure or success.

Effective management of portfolio and the credit function is fundamental to an investor's safety and soundness. Portfolio management is the process by which risks that are inherent in the credit process are managed and controlled. Because review of the portfolio management process is so important, it is a primary supervisory activity. Assessing portfolio management involves evaluating the steps investor's management takes to identify and control risk throughout the process. The assessment focuses on what management does to identify issues before they become problems. This paper, written for the benefit of both examiners and investors discusses the elements of an effective portfolio management process. It emphasizes that the identification and management of risk among groups may be at least as important as the risk inherent in individual.

Wafula (2010) in his study of centum investments investigated whether momentum trading strategies are profitable as determinants of financial performance relative to the the Kenyan stock market, and examines the sources of such profitability. Momentum portfolios are significantly profitable in the intermediate term in Kenya, but the profits become insignificant after risk adjustment by the Chordia and Shivakumar (2001) model. The stock-specific return strategy and factor-related return strategy are analyzed to examine which portion of the total return causes stocks to enter extreme portfolios. The Chordia and Shivakumar factor-related return strategy obtains profits with a magnitude that is close to that which is attained by the total return momentum strategy. Additional evidence further supports the view that the Chordia and Shivakumar model captures momentum profits.

Effective portfolio management begins with oversight of the risk in individual investors. Prudent risk selection is vital to maintaining favorable investment quality. Therefore, the historical emphasis on controlling the quality of individual investment approvals and managing the performance continues to be essential. But better technology and information systems have opened the door to better management methods. A portfolio manager can now obtain early indications of increasing risk by taking a more comprehensive view of the portfolio.

2.6 Summary of Literature Review

It is always easier to determine the causes of the occurrences with the benefit of hindsight. Since researchers recognized the existence of asset mispricing that surpassed available economic theories' ability to explain them, the study of anomalies began. But when they are actually taking place, it is not easy to identify them, let alone incorporate them into pricing models. This is the benefit market speculators get for their efforts in identifying anomalies. When an anomaly gets detected, and enough arbitrageurs have made money, as the self-fulfilling prophecy foretells us, the trend disappears. Capital asset pricing model is based on a number of assumptions that are far from the reality. For example it is very difficult to find a risk free security. A short term highly liquid government security is considered as a risk free security. It is unlikely that the government will default, but inflation causes uncertainty about the real rate of return. The assumption of the equality of the lending and borrowing rates is also not correct. In practice these rates differ. The model assumes that either asset returns are normally distributed jointly random variables, or that active and potential shareholders employ a quadratic form of utility. The model assumes that the variance of returns is an adequate measurement of risk. This would be implied by the assumption that returns are normally distributed, or indeed are distributed in any two-parameter way, but for general return distributions other risk measures will reflect the active and potential shareholders' preferences more adequately. The model assumes that all active and potential shareholders have access to the same information and agree about the risk and expected return of all assets.

Indeed risk in financial investments is not variance in itself; rather it is the probability of losing: it is asymmetric in nature.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter presents the research design and methodology that will be used to carry out the research. It presents the research design, the population, sample size and sampling procedure, data collection, data analysis, validity and reliability.

3.2 Research Design

This study adopted a survey research method to show the relationship between portfolio management and performance practices. Babbie, (2002), defined survey method as one which involves asking participants questions on how they feel, what their views are, and what they had experienced. Survey method was useful when a researcher wants to collect data on phenomena that can't be observed directly. Its was advantagious is that, it allowed the collection of large amounts of data from a sizeable population in a highly effective, easily and in an economical way, often using questionnaires.

3.3 Target Population

This was a case study of Centum Investment. Centum chosen because of its geographical coverage, large customer base, profitability levels and easy access to information

3.4 Data Collection

The study used secondary data. Secondary data refers to the information obtained from articles, financial statements, books, newspapers, internet and magazines. Thus secondary data was collected from the financial statements of Centum and books to collect information on annual earnings of the Centum.

3.5 Data Analysis

For collected data to be understood by the common man easily, it had to be analyzed. The researcher used quantitative and qualitative techniques in analyzing the data. After receiving data, it was edited, classified, coded and tabulated to analyze quantitative data using statistical package for social science (SPSS version 17). Tables and charts were used for further representation for easy understanding and analysis. Collected data was thoroughly examined and checked for completeness and comprehensibility. The data was then be

summarized, coded and tabulated. Inferential statistics was used to establish relationship between risk management practices and the financial performance of financial institutions, which was measured by their profitability in terms of return on assets. The inferential statistics was to establish a causal effect relating independence variables to the dependent variable. While risk management practice was quantified from liekert questions, correlation analysis was used to establish the relationship between credit risk management practices and the financial performance of financial institutions.

3.5.1 Analytical Model

In this study, the elements of financial performance as measured by ROE used included; Leverage strategies, Yield spread strategies, Interest rates expectation strategies, Individual security selection strategies and Yield curve strategies. Since the study focuses on one dependent variable and more than one independent variables, a linear regression analysis was be used. The model offered the value R^2 which was used to indicate how well the model performed. The independent variable was evaluated in terms of its predictive power of financial performance versus portfolio management strategies. With regression analysis, the researcher was able to measure the degree of correlation that existed between the independent variables (Leverage strategies, Yield spread strategies, Interest rates expectation strategies, Individual security selection strategies and Yield curve strategies) and the dependant variable (financial performance as measured by ROE). The coefficients of determination were generated for this purpose to measure the strength of the relationship that existed between the variables.

A regression model was applied to determine and establish the relationship between portfolio management strategies and performance at Centum. β_0 is the variable that contributed some effect to dependent variable without any influence caused by independent variables. Centum applies portfolio management strategies; the study established the effect of the strategies on the company's financial performance. The linear regression model used in the study was as follows:

$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + E$ Where :-

Y = Financial performance as measured by ROE (Dependant variable)

$\beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4$ = These are the explained Variables of the Model.

α =constant. It defined the level of performance without inclusion of predictor variables

E = Unexplained Variation i.e. error term, it represented all the factors that affect the dependent variable but are not included in the model either because they are not known or difficult to measure.

$X_1 =$ Leverage strategies

$X_2 =$ Yield spread strategies

$X_3 =$ Interest rates expectation strategies

$X_4 =$ Individual security selection strategies

$X_5 =$ Yield curve strategies

$\beta_0 =$ Constant. It defined the level of financial performance without inclusion of predictor variables. These variables were measured in terms of financial performance.

$\beta_1, \beta_2, \beta_3, \beta_4, \beta_5, =$ Regression Co-efficient. Defined the amount by which Y is changed for every unit change of predictor variables. The significance of each of the co-efficient was tested at 95 percent level of confidence to explain the variable that explains most of the problem.

CHAPTER FOUR

DATA ANALYSIS AND FINDINGS

4.1 Introduction

This chapter presents the quantitative analysis of the secondary data collected from Centum. It gives the interpretations of findings from the analysis of the secondary data.

4.2 Regression Analysis

A regression model was applied to determine and establish the relationship between portfolio management strategies and performance at Centum. β_0 is the variable that will contribute some effect to dependent variable without any influence caused by independent variables. Centum applies portfolio management strategies. The study will establish the effect of the strategies on the company's financial performance.

4.3: Findings

Analysis in table 4.1 shows that the coefficient of determination (the percentage variation in the dependent variable (Financial performance as measured by ROE) being explained by the changes in the independent variables) R^2 equals 0.843, that is, Leverage strategies, Yield spread strategies, Interest rates expectation strategies, Individual security selection strategies and Yield curve strategies leaving only 15.7 percent unexplained. The P- value of 0.001(Less than 0.05) implies that the model of Financial performance as measured by ROE is significant at the 5 percent level of significance.

Table 4.1: Model Summary

Model Summary

Model	R	R^2	Adjusted R^2	Std. Error of the Estimate
1	.896[a]	.843	.974	2.04756

Table 4.2 ANOVA[b]

Model	Sum of Squares	Df	Mean Square	F	Sig.

1	Regression	93.144	4	23.286	79.730	.000[a]
	Residual	53.739	56	.292		
	Total	146.884	60			

a. Predictors: (Constant), Leverage strategies, Yield spread strategies, Interest rates expectation strategies, Individual security selection strategies and Yield curve strategies

b. Dependent Variable: Financial performance as measured by ROE

Source: Research Findings.

ANOVA findings (P- value of 0.001) in table 4.1 show that there is correlation between the predictor's variables (Leverage strategies, Yield spread strategies, Interest rates expectation strategies, Individual security selection strategies and Yield curve strategies). An F ratio is calculated which represents the variance between the groups, divided by the variance within the groups. A large F ratio indicates that there is more variability between the groups (caused by the independent variable) than there is within each group, referred to as the error term.

Table 4.3: Coefficients of Regression Equation

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	.240	.258		.930	.354
	Leverage strategies	.294	.077	.297	3.798	.000
	Yield spread strategies	.230	.070	.188	3.290	.001
	Interest rates expectation strategies	.013	.062	.013	.215	.001
	Individual security selection strategies	.421	.077	.406	5.445	.000
	Yield curve strategies	.325	.056	.397	4.672	.0067

a. Dependent Variable: Financial performance as measured by ROE

Significance level: $p < 0.001$; N =95

Overall model: F = 79.730; $p < 0.001$; R² = 0. 843; Adjusted R² = 0.798

Source: Research Findings.

The established multiple linear regression equation becomes:

$$Y = 0.240 + 0.294X_1 + 0.230X_2 + 0.013X_3 + 0.421X_4 + 0.325X_5$$

4.4 Coefficient Correlations

Table 4.4: Coefficient Correlations

Correlations	Leverage strategies	Yield spread strategies	Interest rates expectation strategies	Individual security selection strategies	Yield curve strategies
Leverage strategies	0.995**	0.753**	0.776**	-0.695**	0.462**
Yield spread strategies	0.753**	0.885*	0.363**	-0.639**	0.678**
Interest rates expectation strategies	0.776**	0.363**	0.795**	0.267*	0.869**
Individual security selection strategies	0.695**	0.639**	0.267**	0.675**	0.349**
Yield curve strategies	0.642**	0.783**	0.599**	0.493**	0.498**

** Significance at $p < 0.001$ level (2 tailed)

  *Significance at $p < 0.05$ level (2 tailed)

Source: Research Findings

 Dependent Variable: Financial performance

The correlation analysis produced shows that Individual security selection strategies were not positively correlated to the Leverage strategies and Yield spread strategies with -0695 and -0.639 respectively. Individual security selection and Yield curve strategies were positively correlated as shown with 0.349 at 0.001 significance level. The findings also indicate a positive correlation between the Yield curve strategies and Yield spread strategies as shown by 0.783 at 0.001 significance level.

4.5 Interpretations of Findings

The results of regression model produced a constant (0.240), meaning that if Leverage strategies, Yield spread strategies, Interest rates expectation strategies, Individual security selection strategies and Yield curve strategies were all zero, then Financial performance as measured by ROE would be at the rate of 24%. X_1 which represented Leverage strategies was 0.294, indicating that one unit change in the level of Leverage strategies results in 29.4 % units increase in financial performance as measured by ROE. X_2 which represented Yield spread strategies had a value of 0.230; this indicated that one unit change in Yield spread strategies results to 23% unit increase in financial performance as measured by ROE. X_3 which represented Interest rates expectation in the model produced a value 0.013, shows that a unit change in Interest rates expectation strategies results in 13% unit increase in financial performance as measured by ROE. X_4 which represented Individual security selection produced a value of 0.421; this indicated that a unit changes in Individual security selection strategies results in 42.1% units increase in financial performance as measured by ROE. $X_5 = 0.325$, shows that a unit changes in Yield curve strategies results in 0.325 units increase in Financial performance as measured by ROE.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter provides a discussion of the findings reported in chapter four, the conclusions of the study are drawn and recommendations made. The chapter further presents the suggestions for future research.

5.2 Summary

The aim of this study was to establish portfolio management strategies used by Centum Investments and to determine the effects of portfolio management strategies on financial performance of Centum investments.The findings of the study revealed a strong correlation between the predictor's variables (Leverage strategies, Yield spread strategies, Interest rates expectation strategies, Individual security selection strategies and Yield curve strategies). An F ratio is calculated which represents the variance between the groups, divided by the variance within the groups. The results indicated that there is more variability between the groups (caused by the independent variable) than there is within each group, referred to as the error term.

The findings also showed that that Individual security selection strategy were not positively correlated to the Leverage strategies and Yield spread strategies with -0695 and -0.639 respectively. Individual security selection and Yield curve strategies were positively correlated as shown with 0.349 at 0.001 significance level. The findings also indicate a positive correlation between the Yield curve strategies and Yield spread strategies as shown by 0.783 at 0.001 significance level.

5.3 Conclusions

Based on the findings it can be concluded that:

Clear investment objectives are needed for the portfolio construction as well as for investment monitoring Strategic measures must be in line with objectives of each investment. They should be quantified. Financial performance measures for directly measuring the objective of financial performance are almost extensively unsuitable for the case of CVC. Only sales growth can be judged as a relevant measure in this context. Therefore liquidity

measures or financial forecasts, evaluated as IRR or NPV, should be taken as an important extension.

Most relevant practices for corporate venture capital portfolio management were found in the areas of portfolio construction, investment monitoring and exit management. Portfolio construction can get described as a strategic alignment between the corporation and the corporate venture capital unit resulting in objectives for the venturing activities and the portfolio construction respectively. As these objectives are specific for the corporation, a tailored construction and monitoring of the portfolio is required. The approaches for strategic monitoring come back to quantifications of desired results or a systematic tracking of strategically relevant milestones. Also the usage of financial measures is highly restricted in this field. Relevant financial aspects can basically be seen in the areas of sales, liquidity and forecasts of expected return. The challenges of investment monitoring discussed in literature were also reflected in the reality of DSM Venturing. The improvement of such investment monitoring was therefore followed during the improvement process.

5.4 Policy Recommendation

An effective risk management system requires a large variety and volume of relevant data. Data must have high integrity and be integrated with respect to historical returns, current positions, and the analytics being undertaken. Many large banks manage globally diversified portfolios that require multi-currency accounting and reporting systems. The systems must keep track of each day's transactions and provide a valuation of each account based on current market prices around the world, computed in one base currency, or reference currency. The base currency is the currency in which the client chooses to have the portfolio valued. Every item, including stocks, bonds, and cash, must be included in the accounting and reporting system.

Division managers, portfolio managers, and client service officers should use a management information system that generates portfolio information reports either in hard copy or on-line. Most computer-based portfolio management systems allow the user to perform asset allocation modeling, investment simulation, compliance monitoring, re-balancing, trading interface, benchmarking, client statement preparation and presentation, real-time valuation, and investment risk analysis.

Portfolio managers should be required to periodically verify that investment performance reports are accurate and that investment policy compliance statements are updated whenever a material change occurs. This process should be accompanied by random or other internal reviews of investment activity and portfolio holdings to verify compliance with investment policy.

Exception policies should also include what corrective actions should be taken and by what date, who will monitor the corrective actions, and who is authorized to make exceptions to the exception policy. A typical escalation procedure requires progressively more senior staff to be notified of unresolved exceptions or exceptions that are increasing.

Independent personnel should oversee the exception reporting and follow-up process. If that is not possible or practicable, adequate checks and balances should be established. Management must ensure that all personnel are subject to consistent requirements on performance reporting, exception reporting, and escalation procedure requirements.

5.5 Limitations of the Study

The study used secondary data from Centum Investments' records and NSE and therefore as a concern when working with secondary data, a similar study with the same data set may yield different or conflicting results.

Another limitation of this study is that the data obtained from the NSE for the research may have contained some errors and therefore the study might not have produced accurate results. Finally, a study on a wider scale in the investment companies aimed at the investigation of the effects of portfolio management strategies on financial performance may provide different results.

5.6 Areas for Future Research

The combination of marginal effects on performance overall, and on average, with significant differences within the sample, and over different time periods suggests a need for further research into the causes of the different performance of these funds, and how that relates to their ethical investment approach.

Relevant questions would include whether the strategy of particular funds has changed significantly at particular points in their life, and developing an understanding of why that

was, and whether it helped or not, and if one can understand why some investment approaches have combined well with particular ethical policies one could also move towards an understanding of how sustainable that advantage might be expected to be, or what factors would help or hinder its continued success.

Clearly if there are general lessons to be learnt about what investment approaches work best with ethical investment then there is the possibility of improving financial performance within an ethical framework (or some ethical frameworks) over time. If such approaches can be identified, then this will make ethical investment in general potentially more attractive to more investors over time.

REFERENCES

Aluenberger, David (1997). *Investment Science*. Oxford University Press.

Arnoud (2010). Project portfolio management: balancing risk and performance in turbulent times. *Chartered Institute of Management Accountants (CIMA)* pp. 10–11.

Arnold, Glen (2005). *Corporate financial management* (3. ed. ed.). Harlow [u.a.]: Financial Times/Prentice Hall. pp. 354.

Black, Fischer., Michael C. Jensen, and Myron Scholes (1972). *The Capital Asset Pricing Model: Some Empirical Tests*, pp. 79–121 in M. Jensen ed., Studies in the Theory of Capital Markets. New York: Praeger Publishers.

Campbell, J & Vicera, M "Strategic Asset Allocation: Portfolio Choice for Long Term Investors". Clarendon Lectures in Economics, 2002.

Cowles, Alfred; H. Jones (1937). "Some A Posteriori Probabilities in Stock Market Action". *Econometrica* 5 (3): 280–294.

De Brouwer, Ph. (2009). "Maslowian Portfolio Theory: An alternative formulation of the Behavioural Portfolio Theory". *Journal of Asset Management* **9** (6): 359–365.

Fama, Eugene F.; French, Kenneth R. (1993). "Common Risk Factors in the Returns on Stocks and Bonds". *Journal of Financial Economics* **33** (1): 3–56.

French, Craig W. (2003). *The Treynor Capital Asset Pricing Model*, Journal of Investment Management, Vol. 1, No. 2, pp. 60–72.

Lintner, John (1965). *The valuation of risk assets and the selection of risky investments in stock portfolios and capital budgets*, Review of Economics and Statistics, 47 (1), 13-37.

Mark T. Hebner, *Index Funds: The 12-Step Program for Active Investors*, IFA Publishing, 2007.

Markowitz, H.M. (1959). *Portfolio Selection: Efficient Diversification of Investments*. New York: John Wiley & Sons. (reprinted by Yale University Press, 1970,; 2nd ed. Basil Blackwell, 1991)

Markowitz, Harry M. (1999). *The early history of portfolio theory: 1600-1960*, Financial Analysts Journal, Vol. 55, No. 4

Mehrling, Perry (2005). Fischer Black and the Revolutionary Idea of Finance. Hoboken: John Wiley & Sons, Inc.

Merton, R.C. (1973). "An Intertemporal Capital Asset Pricing Model". *Econometrica* 41 (5): 867–887.

Mossin, Jan. (1966). *Equilibrium in a Capital Asset Market*, Econometrica, Vol. 34, No. 4, pp. 768–783.

Ross, Stephen A. (1977). *The Capital Asset Pricing Model (CAPM), Short-sale Restrictions and Related Issues*, Journal of Finance, 32 (177)

Rubinstein, Mark (2006). A History of the Theory of Investments. Hoboken: John Wiley & Sons, Inc.

Sharpe, William F. (1964). *Capital asset prices: A theory of market equilibrium under conditions of risk*, Journal of Finance, 19 (3), 425-442

Shefrin, H.; Statman, M. (2000). "Behavioral Portfolio Theory". *Journal of Financial and Quantitative Analysis* **35** (2): 127–151..

Tobin, James (1958). *Liquidity preference as behavior towards risk*, The Review of Economic Studies, 25

Treynor, Jack L. (1962). *Toward a Theory of Market Value of Risky Assets*. Unpublished manuscript. A final version was published in 1999, in Asset Pricing and Portfolio

UNIVERSITY OF NAIROBI

SCHOOL OF BUSINESS

MBA PROGRAMME

Telephone: 020-2059162
Telegrams: "Varsity", Nairobi
Telex: 22095 Varsity

P.O. Box 30197
Nairobi, Kenya

DATE. 13/08/2013

TO WHOM IT MAY CONCERN

The bearer of this letter . BEN JACKSON MICHENI CHARLES

Registration No. D61/60125/2011

is a bona fide continuing student in the Master of Business Administration (MBA) degree program in this University.

He/she is required to submit as part of his/her coursework assessment a research project report on a management problem. We would like the students to do their projects on real problems affecting firms in Kenya. We would, therefore, appreciate your assistance to enable him/her collect data in your organization.

The results of the report will be used solely for academic purposes and a copy of the same will be availed to the interviewed organizations on request.

Thank you.

PATRICK NYABUTO
MBA ADMINISTRATOR
SCHOOL OF BUSINESS

UNIVERSITY OF NAIROBI
SCHOOL OF BUSINESS
1 3 AUG 2013
MBA OFFICE
P.O. Box 30197 – 00100, NAIROBI

CENTUM

Consolidated Statement of Cash flows
For year ended 31 March 2013

Kshs. Million	Mar'13	Mar'12
Opening cash and cash equivalents	322	(981)
Internally Generated Funds	1,525	5,764
Cash from investing activities	(3,493)	(4,460)
Cash from financing activities	3,148	(1)
Closing cash and cash equivalents	1,502	322

Consolidated Statement of Changes in Equity
for year ended 31 March 2013

Kshs. Million	Mar'13	Mar'12
Share Capital	333	333
Share Premium	590	590
Revaluation Reserve	2,828	1,736
Retained Earnings	9,892	7,382
Total	13,643	10,041

Consolidated and Company Statement of Comprehensive Income
For the year ended 31 March 2013

Kshs. Million	Group Mar'13	Group Mar'12	Company Mar'13	Company Mar'12
Investment Income	3,906	1,272	1,914	764
Operating and Administrative costs	(520)	(269)	(442)	(227)
Finance Costs	(401)	(229)	(401)	(50)
Share of Associate Profits	263	594	.	.
Profit Before Tax	3,248	1,368	1,071	487
Profit After Tax	2,509	1,189	1,034	446
Other Comprehensive Income	1,092	(708)	1,417	687
Total Comprehensive Income	3,601	481	2,451	1,133
Earnings Per Share	3.77	1.79		

Consolidated and Company Statement of Financial Position
As at March 31, 2012

Kshs. Million	Group Mar'13	Group Mar'12	Company Mar'13	Company Mar'12
Portfolio value	16,996	11,181	19,307	14,694
Other assets	1,965	387	2,100	1,027
Total Assets	18,961	11,568	21,407	15,721
Borrowings	4,149	1,000	4,149	1,000
Other Liabilities	1,170	527	1,121	1,036
Capital and Reserves	13,643	10,041	16,137	13,685
Total Capital and Liabilities	18,961	11,568	21,407	15,721
NAV per share (Kshs.)			24.23	20.57

Kshs.Mn	2009	2010	2011	2012	2013
Book value	5,859	9,157	12,552	13,685	16,137
Market Cap	4,656	7,089	11,827	9,782	13,242

Centum Performance against the NSE

Year	Centum NAV Return	NSE 20 Return	Centum Outperformance
2010	56%	43%	13%
2011	37%	-4%	41%
2012	9%	-13%	22%
2013	18%	44%	-26%
Geometric Average	29%	14%	15%
Cumulative Growth	174%	56%	118%

Growth in Shareholder Wealth

Share price / NAV
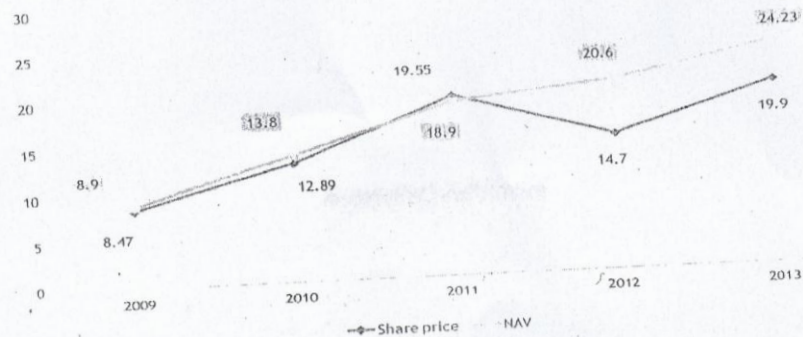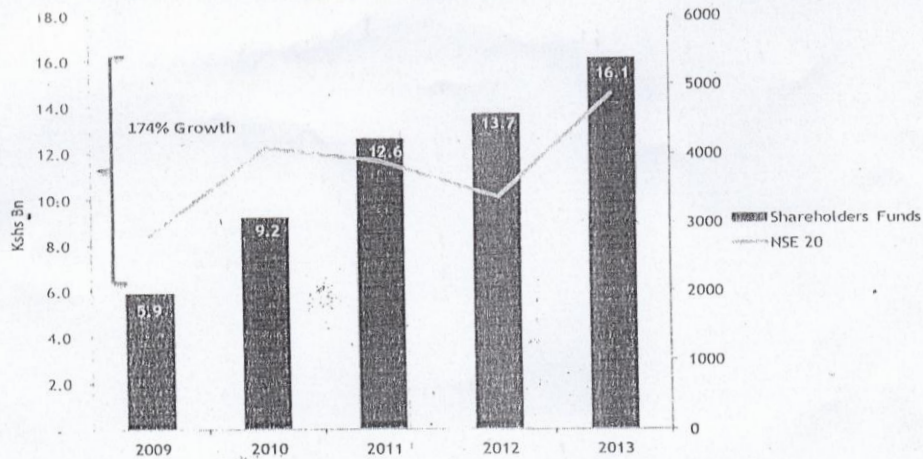
List of Investment Companies in Kenya

- ABC Bank, commercial bank
- Barclays Bank of Kenya, commercial bank
- BRITAM-british-american investments company (kenya) limited
- Centum Investment Company, investments,
- Chase Bank,
- CFC Stanbic Bank, banking, investments,
- Commercial Bank of Africa, commercial bank
- Consolidated Bank of Kenya, commercial bank
- Cooperative Bank of Kenya, commercial bank,
- Credit Bank, commercial bank
- Development Bank of Kenya, commercial bank
- Diamond Trust Bank Group, banking group,
- Dubai Bank Kenya, commercial bank, affiliated with Dubai Banking Group
- Equity Bank Group, cross listed at the Uganda Securities Exchange
- Jubilee Insurance, cross listed at the Uganda Securities Exchange
- Kenya Commercial Bank Group, banking & investments, cross listed on the Uganda Securities Exchange, the Dar es Salaam Stock Exchange and the Rwanda Over The Counter Exchange
- Old mutual, unit trusts, savings, life insurance & asset management solutions
- Standard Chartered Bank, commercial bank
- Waumini Investments, Africa's Premier