THE INCREMENTAL INFORMATION CONTENT OF RECEIVABLES IN PREDICTING EARNINGS OF LARGE MANUFACTURING FIRMS IN KENYA

BY:

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DECLARATION

I hereby declare that this research project is my original work, and has not been presented to any other university or institution of higher learning for academic purposes.

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

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DEDICATION

I dedicate this project to my best friend Andrew Nyabera for his patience, love and support. Thank you so much my friend.

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ABSTRACT

Accounts receivables being a component of the working capital of a firm requires proper and effective management to ensure smooth running and survival of firms. The study explores how well information on receivables can be used to predict earnings of large manufacturing firms in Kenya. It hypothesizes that firms should better predict their earnings if they manage well the information on receivables.

The objective of the study was to examine the incremental information content of receivables in predicting earnings of large manufacturing firms in Kenya. Both qualitative and quantitative methods were used to fulfil the main purpose of the study. A regression model was used to carry out the empirical analysis. In the model, Earnings were computed using profit before tax, while the receivables by the total amounts owing to the firm by the debtors. The study used secondary data that was collected from the company's published annual reports as filed in the Capital Markets Authority library and company's journals for a period of 10 years.

The findings and analysis reveal that information contained in receivables have an effect on the earnings of large manufacturing firms in Kenya. The study used a simple linear regression model to establish the association between receivables and earnings. The model equated earnings as a function of receivables. The results obtained from the regression model show that there is an inverse relationship between information content of receivables and earnings of large manufacturing firms in Kenya. Large manufacturing firms in Kenya should therefore prudently manage the information contained in receivables to be able to better predict their earnings for planning purposes.

In view of these findings, the researcher recommends that large manufacturing firms should have stringent credit policies laid down and proper customer screening done to evaluate the customer's credit worthiness. This will go a long way in maximizing the earnings to the firm and by extension the shareholders wealth.

ABBREVIATIONS

AR	Accounts Receivable
CMA	Capital Markets Authority
CRB	Credit Reference Bureau
EMH	Efficient Market Hypothesis
FASB	Financial Accounting Standards Board
GDP	Gross Domestic Product
IFC	International Finance Corporation
ISIC	International Standard Industrial Classification
KAM	Kenya Association of Manufacturers
KCC	Kenya Co-operative Creameries
KEBS	Kenya Bureau of Standards
NEMA	National Environment Management Authority
NGO	Non- Governmental Organisation
NSE	Nairobi Stock Exchange
PBT	Profit Before Tax
PWC	Price Waterhouse Coopers

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CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

Manufacturing is a broad branch of industry that deals with the transformation of raw materials into finished goods for sale. This study concentrates on large manufacturing companies, which according to the Kenya Statistical Abstract (2004) are those firms with more than fifty employees. Kenya adopted the four digits United Nations International Standard Industrial Classification (ISIC) of all economic activities in 1972.

Developing countries like Kenya are establishing more industries in the private sector of the economy with a view to produce and supply the needed goods, create employment, generate revenues for the state and raise the living standard of the people. According to Al-Attar, Hussain, and Zuo (2008) it is essential that corporate sector is very effectively and efficiently managed in order to attain both the national and corporate objectives. With the corporate enterprise money management assumes critical importance that is why corporate financial management and financial prediction has become a subject of considerable importance.

Financial information concerning an enterprise is provided by accounting statements. Even though the emphasis in this study is the receivables' prediction of firms' earnings, financial statements may be constructed for governments (for example, the city council), non-profit organizations (for instance, the NGOs), profit organizations (for example, Safaricom), and individuals. In all cases these statements show the financial condition of the entity, its assets and how they were financed. This information can then be used to aid financial decision-making (Mian, and Clifford, 1972).

Basically, there are four different types of financial statements. The different types of financial statements indicate the different activities occurring in a particular business house. These financial statements are the ; balancesheet or statement of financial position, statement of income, statement of retained earnings and statement of cash flow.

Working capital is the name given to the 'short term' area of the balance sheet (Kerr, 1997). It is used to finance the short-term day to day requirements of a firm.Working capital management is thus the managerial decision on the selection of optimal levels of inventory, cash, trade receivables, and payables with a view to achieving profitability and strengthening the liquidity of a firm (Meme 2009).Working capital includes six balance sheet items ; cash, marketable securities, inventory, accounts payables, and accruals. According to Kerr, most companies concentrate their managerial effort on controlling profit. They try to increase sales revenues, reduce their production costs and control their overheads.However, too few companies worry much about managing the working capital part of their business. Managing the working capital part of the business can make the difference between business survival and business failure.

Many profitable companies fail each year because their management team fails to manage their working capital well. They may be profitable but unable to pay their bills and meet their obligations when they fall due. There have been many large companies that have become insolvent because of financial mismanagement. It is shocking that some of these companies come from well developed economies. These include Enron, Delphi and WorldCom in the United States, Pamalat in Italy, HIH and OneTel, and NAB in Australia.

According to Arnold, Clubb, Manson and Wearing, (1991) accounts receivables, which is part of the working capital of a firm are created on both sides of the productive system. One side is where the firm may make advance payments to the suppliers of inventories (raw materials) to ensure timely supply, especially when the suppliers hold monopolistic position in the market place, or when the materials are in short supply. The other side which is more common is where a firm sells its outputs on credit. These are popularly termed as sundry debtors by the English to distinguish it from other forms of account receivables. They are liquid assets usually being converted into cash within a period of 30 to 60 days. They are classified as current assets, appearing in the balance sheet immediately after cash and marketable securities. According to Mian and Clifford (1992), account receivables constitutes about 20 per cent of the total assets of manufacturing firm in the United States despite it being an advanced economy. In India, according to Arnold et al (1991), it

constitutes about 26 per cent. Pike and Cheng' (2001) in their study, found out that it constitutes 19 per cent for large companies and over 30 per cent in small and medium size companies in the United Kingdom.

1.1.1 Manufacturing firms in Kenya

Kenya has a large manufacturing sector serving both the local market and exports to the East African region and other destinations. It has a membership of about 698 firms distributed across 12 key industrial sectors. The rising levels of poverty coupled with the general slowdown of the economy has continued to inhibit growth in demand for locally manufactured goods, shifting demand in favour of relatively cheaper imported goods (PWC 2006).

In Kenya, the manufacturing industry is under the Kenya Association of Manufacturers (KAM). It is the premier organization for the manufacturing value-add industry that also serves as the voice of the industry and other related sectors in the country. KAM was established in 1959 as a private sector body, mandated with the task of promoting competitive local manufacturing in liberalized markets, by encouraging formulation, enactment, and administration of sound policies to improve the business environment and consequently reduce the cost of doing business. It also lobbies for government support on policy matters, provides relevant business information to members, as well as promotes trade fairs and exhibitions inorder to identify new markets and advertise company's products. (KAM resource center 2007-2011)

The Kenya Association of Manufacturers falls under the Ministry of Trade and industry, in compliance with KEBS and NEMA policies and standards. Its members are classified into 12 key sectors that are distinguished by the type of raw material they use or the products that they manufacture.

Although Kenya is the most industrially developed country in East Africa, the manufacturing industry still counts for approximately 14% of the Gross Domestic Product (GDP) due to

shortage in hydro-electric power, high energy costs, lack of skilled man-power, poor infrastructure and dumping of cheap exports from other highly industrialized foreign countries. The service industry, specifically Tourism and the Agricultural sectors respectively have taken a higher percentage of the GDP. As at 2010, the agricultural sector was the second largest contributor of Kenya's GDP with approximately 24% and 50% of revenue from export of horticultural produce while the service sector mainly dominated by tourism accounted for 63%. (Economic survey 2010)

Great improvement has been noted over the years in the manufacturing industry with companies like East African Breweries Limited (EABL), British American Tobacco (BAT), Toyota (K) ltd and Crown Berger among others reporting increasing profit margins by the day. EABL and Crown Berger have posted an improvement in after tax profits of 24% and 18% percent respectively between 2009-2010. Also, improvement has been noted in terms of the number of manufacturing companies that have recently come up leading to increased competition thus production of quality products.

The government ban on cigarette smoking in public places almost crippled business for BAT but customer loyalty triumphed and is now making good returns despite the ban. KCC also had financial difficulties but with change in the management structure, it is now on its way to full recovery. A look at Eveready (K) Ltd that experienced financial difficulty caused by cheap counterfeit products, led to loss of market share, fall of share value and major downsizing of employee numbers. Though still struggling, diversification into other product lines seems to be the only option to keep afloat.

Counterfeiting has also been a major threat to the manufacturing industry in Kenya. Manufacturers face unfair competition from cheap counterfeits and consumers are exposed to hazardous products (Chao 2010). According to KAM, local manufacturers lose more than 50 billion in sales due to counterfeits and the government loses atleast 6 billion in potential taxes. These firms now look at the future with optimism after the enactment of the Anti-Counterfeit Act 2008, which has now been passed into law. This will act as ammunition to keep the menace in check.

In the past decade, we have seen a few manufacturing firms collapse, like Pan Paper that was based in Webuye due to financial mismanagement. It is thus evident that the manufacturing sector is affected by low capital injection, poor infrastructure, dumping of cheap sub-standard goods and limited access to finance (Chao 2010). If these issues are addressed, the manufacturing sector would flourish and increase its contribution to the country's GDP significantly.

1.2 Statement of the Problem

Prediction of firm's future earnings is a fundamental issue in accounting and finance given that the value of firm's securities depends upon its ability to generate cash flows. For this reason, Financial Accounting Standards Board (FASB) (1978; paras 37-9) states in Statement of Financial Accounting Concepts No. 1 that the primary objective of financial reporting is to provide information that help investors, creditors, and other users in assessing the amount and timing of future cash flows which determines the future earnings of a company. FASB further asserts that information about firm's earnings and its components measured by accrual accounting generally provides a better indication of firm's future cash flows than does information about current cash flows (FASB, 1978; paras 44).

Various studies have earlier been undertaken with one fundamental question occupying much of the researchers' attention as whether current cash flows have superior ability over current earnings when predicting the large manufacturing firm's future earnings (Jones, 2003; Brown et al., 1999; Ely and Waymire, 1999). However, the empirical evidence to date on the superiority of current cash flows in predicting future earnings remains inconclusive. A vast literature examines the FASB's assertion of the superiority of cash flows in predicting earnings without considering efficient market hypothesis and its effect in predicting a company's earnings (Ryan and Zarowin, 2003; Francis 1999; Lev and Zarowin, 1999; Collins et al., 1997). Much of this literature addressed earnings using stock prices (returns) and disregarded accounts receivable which is very essential to an organization.

Studies on working Capital that have been earlier undertaken have also concentrated on Management of inventories, and Management of cash as aspects of working capital

management but none has fully explored Management of Receivables which is also a crucial aspect of working capital.

Efficient market hypothesis assumes that markets are informationally efficient meaning that stock prices fully reflect the available information. It is characterized by three forms; the weak form, the semi-strong form, and the strong form. These three forms have unique effects on the accounts receivable which affect the earnings of a company (Kim and Kross 2005). The weak form is characterized by minimal information and ommission of pertinent information concerning the receivables as it is based on past stock prices thus cannot predict returns accurately. The semi-strong form reflects all publicly available information e.g. published statements but lacks insider information concerning receivables. The strong form however reflects all information both public and private making it informationally efficient giving a better prediction of returns.

Given the gap posed by the above empirical studies, the study poses the research question: How does the amount of information contained in receivables help predict earnings of large manufacturing firms in Kenya? The study hypothesizes that large manufacturing companies in Kenya should better predict earnings by managing well the information content of receivables.

1.3 Objective of the Study

The objective of this study is to examine the incremental information content of receivables in predicting earnings of large manufacturing firms in Kenya.

1.4 Importance of the Study

The study would be of importance specifically to the Kenyan manufacturing sector. The findings would equip the top level managers, such as the managing directors, and general managers with skills of analysis of the information content of receivables in predicting earnings. It would sensitize the need to learn corporate finance in order to make informed credit decisions and ensure smooth running of the manufacturing firms enabling them to predict the amount and timing of future cashflows.

It would also be of interest to both small and large firms trading in credit terms as an important strategic or competitive tool that plays a role in capturing new business, building supplier-customer relationships, in signaling product quality, and in price competition and discrimination. It would help them implement credit policies spelling out the customer credit worthiness, credit limit, credit period, collection policies and procedures and ways to mitigate risk of non-payment.

Efficient working capital management is a vital component for success and survival, in terms of profitability and liquidity. Accounts receivables being a component of working capital would require managers to find effective ways of managing it. This study would help in understanding the accounts receivables management techniques and would be an eye opener to those manufacturing companies that may not have implemented and maintained appropriate credit policies.

In addition to contributing to the body of knowledge, the research would help upcoming researchers and scholars to pursue more and come up with a more definite technique of predicting earnings of a firm. This study is building a foundation in an important area of study that would spill the benefits to all stakeholders.

CHAPTER TWO
LITERATURE REVIEW

2.1 Introduction

This chapter deals with various concepts with regard to the information content of receivables in predicting earnings of large manufacturing firms in Kenya. Section 2.2 introduces the chapter by discussing into details the nature of efficient market hypothesis and stating its three forms while Section 2.3 discusses the empirical evidence on the efficiency of Nairobi Stock Exchange. Under section 2.4, the research shows how accounts receivables help in predicting earnings of large manufacturing firms in Kenya. Finally, section 2.5 gives the summary conclusion of the literature review.

2.2 Efficient Market Hypothesis

The efficient markets hypothesis (EMH), is the proposition that current stock prices of a certain firm fully reflect available information about the value of the firm, and there is no any other means of earning excess profits, (more than the market is earning), by using this information. It can be inextricably related to the random walk theory put forward by Bachelier in 1900 to refer to successive price changes which are independent of each other. In other words, tomorrow's price changes cannot be predicted by using today's price change.

This is concerned with one of the most essential and thrilling issues in finance; why prices change in security markets and how those changes take place as far as the information about the firm's operation is concerned. It has very significant implications for investors, suppliers, creditors, debtors as well as for financial managers. In 1965, Eugene Fama who was the first scholar to use the term "efficient market" proclaimed in his financial study that in an efficient market, on the average, competition will cause the full effects of new information on intrinsic values to be reflected "instantaneously" in actual prices.

The efficient markets hypothesis suggests that profiting from predicting price movements is very intricate and unlikely. The key engine behind price changes is the arrival of new information. According to Dickson and Muragu (1994), a market is said to be "efficient" if prices adjust quickly and, on average, without predisposition, to the new information arrived in the market. As a result, the current prices of securities reflect all available information of a particular firm at any given point in time. Consequently, there is no reason to believe that prices are too high or too low. Security prices adjust before an investor has time to trade on and profit from any new piece of information.

The key reason for the existence of an efficient market is the intense competition among investors, suppliers, creditors, and debtors to profit from any new information (Kiio 2006). The ability to identify over- and underpriced stocks is very valuable to investors (it would allow investors to buy some stocks for less than their "true" value and sell others for more than they were worth). Consequently, many people spend a significant amount of time and resources in an effort to detect "mispriced" stocks. Naturally, as more and more analysts compete against each other in their effort to take advantage of over- and under-valued securities, the likelihood of being able to find and exploit such mis-priced securities becomes smaller and smaller. In equilibrium, only a relatively small number of analysts will be able to profit from the detection of mis-priced securities, mostly by chance. For the vast majority of investors, the information analysis payoff would likely not outweigh the transaction costs (Fama 1965).

According to Amihud, Mendelson and Lauterbach (1997), the efficient markets hypothesis predicts that market prices should incorporate all available information at any point in time. There are, however, different kinds of information that influence security values. Consequently, financial researchers distinguish among three versions of the Efficient Markets Hypothesis, depending on what is meant by the term "all available information".

2.2.1 Weak Form Efficiency

The weak form of the efficient markets hypothesis asserts that the current prices fully incorporate firm's information contained in the past history of prices only (Dickson and

Muragu, 1994). That is, nobody can detect mispriced securities and "beat" the market by analyzing past prices. The weak form of the hypothesis got its name for a reason, security prices are arguably the most public as well as the most easily available pieces of information. Thus, one should not be able to profit from using something that "everybody else knows". This form of market efficiency does not affect in any way the earnings of manufacturing companies because all stakeholders have enough information about the operations of the industry (Fama 1965). The public have evidence on, for instance, how the company finances its operations, how long its debtor days are as prescribed in its credit terms and how its credit policies are. Financial analysts attempting to generate profits by studying exactly what this hypothesis asserts is of no value, past stock price series and trading volume data (Kihumba 1992). This technique is called technical analysis.

The early studies on testing of the weak form efficiency started on the developed market, and generally agree with the support of weak-form efficiency of the market considering a low degree of serial correlation and transaction cost (Working, 1934; Kendall, 1943, 1953; Cootner, 1962; Osborne, 1962; Fama, 1965). All of the studies support the proposition that price changes are random and past changes were not useful in forecasting future price changes particularly after transaction costs were taken into account. However, there are some studies which found the predictability of share price changes (for example, Fama and French, 1988; Poterba and Summers, 1988) in developed markets but they did not reach to a conclusion about profitable trading rules. Poterba and Summers (1988) suggest that noise trading, by investors whose demand for shares is determined by factors other than their expected returns provides a plausible explanation for the transitory component in stock prices.They suggest constructing and testing theories of noise trading as well as theories of changing risk factors, to account for the characteristics of stock returns auto-correlogram they found.

Fama and French (1988) conclude that auto-correlation may reflect market inefficiency or time-varying equilibrium expected returns generated by rational investor behaviour and neither view suggests, however, the patterns of auto-correlation should be stable for a long sample period. Hudson, Dempsey and Keasey (1994) found that the technical trading rules

have predictive power but not sufficient to enable excess return in U.K market. Similarly, Nicolas, (1997) also conclude that past returns have predictive power in Australian market but the degree of predictability of return is not so high. Overall, the empirical studies on developed market show no profitability from using past records of price series to support the weak-form efficiency of the efficient market hypothesis in general.

2.2.2 Semi-strong Form Efficiency

The semi-strong form of market efficiency hypothesis (Aworolo, 1971) suggests that the current prices fully incorporate all publicly available information. Public information includes not only past prices, but also data reported in a company's financial statements (annual reports, income statements, filings for the Security and Exchange Commission, etc.), earnings and dividend announcements, announced merger plans, the financial situation of company's competitors, expectations regarding macroeconomic factors (such as inflation, unemployment), etc. In fact, the public information does not even have to be of a strictly financial nature. For example, for the analysis of manufacturing companies, the relevant public information may include the current (published) state of research in quality control system.

If by increasing the information set to include publicly available information (such as information on money supply, exchange rate, interest rates, announcement of dividends, annual earnings, stock splits, etc.) it is not possible for a market participant to make abnormal profits, then the market is said to be semi-strong efficient. That means it is impossible to make consistently superior returns just by reading newspapers (Kihumba 1992).

Daily data on returns are a major boost for the accuracy of semi-strong tests. When the announcement of an event can be dated to a certain day, daily data allow precise measurement of the speed of the stock-price response which is the central issue for market efficiency. Another powerful advantage of daily data is that they can eliminate the joint-hypothesis problem, that market efficiency must be tested jointly with an asset pricing model (Kiptoo 2006).

2.2.3 Strong Form Efficiency

If by increasing the information set to include private information, (Fama 1965) it is not possible for a market participant to make abnormal profits, then the market is said to be strong efficient. Under the strong form, the consideration is whether some investors (e.g., managers of mutual funds) have monopolistic access to any information relevant to the information of stock prices.

The strong form of market efficiency tells us that insider information is hard to find because in pursuing it we are in competition with many active intelligent investors. The best we can do in this case is to assume that securities are fairly priced. A precondition for this strong version is that information and trading costs, the costs of getting prices to reflect information, are always zero (Grossman and Stiglitz, 1980). Since there are surely positive information and trading costs, the extreme version of the market efficiency hypothesis is very unlikely to hold (Kiptoo 2006).

In reality, prices reflect the information of informed individuals (arbitrageurs) but only partially, so that those who expended resources to obtain information do receive compensation. According to Kiptoo (2006) the only way informed traders can earn a return on their activity of information gathering, is if they can use their information to take positions in the market which are better than the position of uninformed traders. Under these circumstances prices will not reflect all the information.

2.3 Empirical Evidence on the Efficiency of Nairobi Stock Exchange

The past decade has witnessed impressive growth in both the size and relative importance of Kenyan emerging equity market (Nairobi Stock Exchange). The process of liberalization within the country, high economic growth and trends towards financial markets globalization provided the setting in which the market could advance (Onyango 2004). In addition, western investors and equity fund managers are attracted to this market by the potentially high rate of returns offered and the desire to peruse international diversification. As this market

developed, considerable attention has been given to the question of whether they function in an efficient manner (Kiptoo 2006).

An efficient market is a market in which prices provide accurate signals for resource allocation: that is, a market in which firms can make production-investment decisions, and investors can choose among the securities that represent ownership of firm's activities under the assumption that security prices at any time "fully reflect" all available information (Mbugua, 2004). When this condition is satisfied, investors cannot earn an unusual profit by exploiting available information (Fama, 1970).

The survey and examination of information content in annual reports and accounts of eighteen blue chip manufacturing companies quoted on Nairobi Stock Exchange between 1990 to 1994 was conducted by Ondigo (1995). It was found out that the annual reports and accounts of the sample companies do not have information content which was statistically significant. The study so far did not present evidence that could judge the market hypothesis form of Nairobi Stock Exchange. According to Dickinson and Muragu (1994), there exists evidence of market efficiency on the Nairobi Stock Exchange. In their view, the Nairobi Stock Exchange is a small market that possesses empirical results consistent with weak-form efficiency.

According to Onyango (2004), the Nairobi Stock Exchange is one of the developing exchange markets. He argues that tests of efficiency have been developed for testing markets which are characterized by high level of liquidity, sophisticated investors with access to high quality and reliable information and few institutional impediments. In emerging markets like Nairobi Stock Exchange, unlike mature ones, market structures, market participants and the availability of information as well as its quality change rapidly through time (Onyango 2004). Nairobi Stock Exchange, being an emerging market is typically characterized by low liquidity, thin trading, possibly less well-informed investors with access to unreliable information and considerable volatility (Kiptoo 2006).

The Nairobi Stock Exchange (NSE) is an example of an emerging stock market that has been characterized by humble beginnings yet has grown considerably over time (Kiio, 2006). It

stands out as an average stock market with great potential for growth, one that is making considerable effort to be a more significant driver of economy in Kenya and the East African Region. In 1994 the NSE was rated by the International Finance Corporation (IFC) as the best performing emerging market in the world with a return of 179% in dollar terms. In the two years (2003 - 2005) it experienced robust activity and high returns on investment. It accounts for over 90% of market activity in the East African region and is a reference point in terms of setting standards for the other markets in the region. As an emerging capital market, it has faced challenges to its development and growth such as economic depression and political uncertainty, among others.

NSE is rated as an efficient market because of some of its activities like facilitating the mobilization of capital for development and provides savers in Kenya with an alternative saving tool (Kibuthu 2005). Funds that would otherwise have been consumed or deposited in bank accounts are re-directed to promote growth in various sectors of the economy as people invest in securities. Economic growth is promoted through improved efficiency in mobilization of saving as capital is allocated to investments that bring the most value to the economy. Long-term savings are, therefore, mobilized for financing long term ventures through competitive pricing mechanisms (The World Bank 2003).

NSE provides enterprises with a non-bank source of financing through the sale of shares to the public. It provides not only the substitution but also diversification of risk to entrepreneurs as they raise capital through equity. The government and local authorities use the NSE as an alternative source of funds to increasing taxes in order to finance development projects. Through the issue of bonds to the public, funds are raised for different types of projects. (Anyumba 2010)

The NSE encourages the broader ownership of firms. The opportunity accords the general public to have ownership rights over listed enterprises, helps to reduce large income inequalities through the sharing of profits made by these enterprises, thereby facilitating the redistribution of wealth. The Exchange facilitates improved corporate governance. Public companies tend to have better management records than private companies because of the

improvement of management standards and efficiency to meet the demands of shareholders and the NSE under its corporate governance rules (NSE Handbook 2000).

Investors are accorded the opportunity to buy the number of securities that are affordable to them, thereby facilitating the small investor's source of extra income. This is in contrast to other means of investments that require large capital outlays that are not within the reach of small investors be they individuals or institutions (Kiio 2006).

The activity in the market serves as a 'barometer' for the performance of the economy. The movement of shares is an indicator of the general trend in the economy because share prices tend to rise or be stable when the economy and the relevant companies are stable and growing.

According to Kihumba (1992), even though the NSE can perform the above listed functions, it has not attained the semi-strong or strong form of market efficiency. The market is more characterized with weak form market efficiency than any other form of efficiency. The Nairobi Stock Exchange does not provide the public with perfect information (Onyango 2004), hence it is characterized as weak form market efficient.

2.4 Predicting Earnings Using Receivables

Long-term investment and financing decisions give rise to future cashflows which, when discounted by an appropriate cost of capital, determine the market value of a company (Kibuthu ,2005). However, such long-term decisions will only result in the expected benefits for a company if attention is also paid to short-term decisions regarding current assets and liabilities (Mian & Clifford ,1972) .Current assets and liabilities, that is, assets and liabilities with maturities of less than one year, need to be carefully managed.

Net working capital is the term given to the difference between current assets and current liabilities: Current assets may include inventories of raw materials, work-in-progress and finished goods, trade (accounts) receivables, short-term investments and cash, while current

liabilities may include trade (accounts) payables, overdrafts and short-term loans. (Nyawira 2010)

Accounts receivable (AR) are open accounts owed to the firm by trade customers. They are part of the firm's working capital and constitute 14 percent of 2005 US industrial firms' total assets, making them one of the largest asset groups on industrial firms' balance sheet (Cunat 2007). AR serves as a tool for firms to extend credit to their business partners and are often instrumental in facilitating sale of goods (Finger 1994). They enable the firm to make sales and get payment at a later date instead of stock lying idle.

Trade receivables represent credit given by firms to their business partners. These accounts are effectively short and long term financing that is extended not by financial intermediaries or the market, but by suppliers to their customers. Calomiris et al. (1995) found that during downturns, firms in strong financial conditions act as financial intermediaries to other firms and extend credit. When market liquidity is low, trade credit is an important tool to keep firms afloat, thus making receivables more important when credit is scarce. Giannetti et al (2007) studied firms receiving trade credit. One of their main findings is that trade credit given by suppliers seems to convey favorable information to other potential lenders to the firm.

Peterson and Rajan (1997) focused on small firms and found evidence that suppliers lend to smaller firms because they have a comparative advantage in getting information about them. Both of these findings suggest that the information content of a firm's receivables is endogenous to the decision of the firm to extend the credit and adds to the information in the market on these firms.

2.4.1 Credit Customer Screening

Credit analysis refers to the process of deciding whether or not to extend credit to a particular customer. It involves gathering relevant information on the prospective credit customer and determining their creditworthiness. Hutson and Butterworth (1968) warn that before granting

credit, one must be satisfied that payments will be expected in full and on time. They argue that accurate and up to date information on the prospective credit customer is of fundamental importance. Some of the methods to be used include; trade references, which they claim are the cheapest, quickest and most common source of information. Others are bank references, credit bureau reports, balance sheet or published information, and the sales representative reports.

According to Ross, Westerfied, and Jordan (2001) information on customers can be obtained from various sources. A firm can ask a customer to supply financial statements such as balance sheets and income statements. According to Bhattacharya (2001), a number of financial ratios are calculated from a customers financial statements. Then a credit scoring system is developed from the results obtained. The sources of credit information from history with the firm and credit bureau reports. According to Meigs, and Meigs, (1993), there are national credit-rating agencies that can give a credit report on a customer.

A proper credit policy should also be followed in doing the customer screening. The policy should spell out the 5C's of credit rating which include ; Character, Capacity, Capital, Collateral and Conditions.

Manufacturing companies use all these sources to obtain credible information about their customers before giving credit hence their accounts receivables contain relevant information about their customers to help in future prediction of earnings. According to Dun and Bradstreet International Consultant (Shanghai) Company Limited (2002) Annual Survey report on Chinese enterprises, fifty eight per cent of the enterprises make use of credit application forms, with fifty four per cent from manufacturing sector and thirty four per cent from the trading sectors. The survey results also revealed that forty per cent of companies obtain relevant data by enlisting the professional services of credit research organizations. This survey on credit and accounts receivable management was China's fifth yearly research report and was conducted from February to April 2002 by means of questionnaire. Some of the Chinese enterprises polled were Dun and Bradstreet's existing clients, but the majority were randomly chosen firms from different industries. Around fifty per cent of responding

companies were located in Shanghai and Beijing, with others mainly from eastern, southern and central China. Dun and Bradstreet concluded that manufacturing companies' accounts receivables contain credible information from customers that can be used in earnings prediction.

Accounts receivables carry information about credit period which is very essential in predicting earnings. Pike and Cheng' (2001) carried out a research in United Kingdom manufacturing companies credit terms. It was found that most of the manufacturing companies in UK have a credit term of 30 days. A few of those companies give a credit term of 45 and more days. It was found that the companies with lower debtor days incur costs in monitoring credit, have rapid dispatch of invoices and statements, and greater use of direct debits, credit insurance and interest charges on late payment. Credit terms were inversely related to earnings in that the lower the debtor days, the higher the earning and vise versa. Longer debtor days led to bad and doubtful debts. This forced the company to make huge provisions for bad debts which affected adversely the earnings, (Pike and Cheng' 2001).

2.4.2 Information Characteristics and its Effects on Earnings

The information characteristics associated with accounts receivable differ from other firm's assets. While the information on manufacturing firms' other assets are related to the firm's performance, the information on the firms' Accounts Receivable and their value depends on other firms' performance, i.e. the customers. Furthermore, Accounts Receivable share many attributes of financial assets, including their separability and relative liquidity. These attributes of Accounts Receivable, as well as the diversification effect of multiple customers comprising the receivable account on the balance sheet, make this asset different and potentially lower in its information asymmetry than the rest of the firm's assets.

Metzler (1960) was possibly the first to point out that large firms use trade credit instead of direct price reductions to push sales in periods when monetary conditions were tight. Further, he argued that firms would accumulate liquid balances in periods of loose monetary policy and utilize these to extend trade credit in periods when monetary conditions were tight. These

macroeconomic implications of trade credit have been recently further investigated by Guariglia and Mateut (2006) and Mateut, Bougheas and Mizen (2006) who conclude that in the UK, trade credit increases in periods when monetary policy is tight and bank lending falls. This has played a great deal in increasing the earnings of manufacturing firms in different countries.

Burkart and Ellingson (2004) argue that monitoring advantage arises because of an intrinsic difference between inputs and cash. Inputs cannot be as easily, if at all be diverted as cash. It is the fear of diversion of funds that induces banks to restrict lending. Trade credit becomes a means to overcome a moral hazard problem created by this possibility. The fact that the firm has received trade credit signals that the firm has bought inputs that cannot be diverted and this opens up the possibility that returns from investing would be higher than the returns from diverting funds. Thus if a bank observes that a firm is receiving trade credit it may be willing to lend. Consequently, firms whose investments are constrained by their access to external funds, trade credit and bank credit may be compliments. Firms whose investments are not constrained by availability of external funds the fact that a firm has/or has not received trade credit is of no consequence, and, bank credit and trade credit may be substitutes. Even though firms can use accounts receivable as collateral there would always be a ceiling on the amount a bank would lend through this channel. Burkart and Ellingsen argue that "...firms that are credit constrained but highly profitable abstain from investing in receivables, leaving the extension of trade credit to firms either have better access to funds or are constrained and relatively unprofitable."

Brennan, Maksimovic and Zechner (1988) argue that if the product market is non-competitive and there exists an adverse selection problem in credit markets then this makes price discrimination through trade credit potentially profitable. Imperfections in the product market allow sellers to use trade credit to discriminate between buyers who have different reservation prices. When he cannot observe the credit characteristics of firms to whom the supplier (who has market power in the product market) is attempting to sell, trade credit makes it possible to provide incentives for manufacturing firms to self-select. "Good firms" might find it profitable to buy on a cash basis or repay as soon as possible (given the high

cost of trade credit) while risky firms may find it advantageous of buy on credit because other source of funds may be even more costly for this firm. An empirical implication that arises from the price discrimination arguments is that firms that are more profitable are more likely to grant more trade credit.

Schwartz (1974) first pointed out the possibility that sellers (manufacturers) who have easier access to the capital market may have an incentive to offer trade credit to their buyers (who may not have access to capital markets on the same terms). The supplier's greater ability to raise funds is used to pass credit to their customers. If banks are the main source of credit then this suggests that firms offering trade credit would borrow from banks and pass this on as accounts receivable (on their books of accounts) to the buyers.

Biais and Gollier (1997) have pointed out that in a situation where banks are forced to ration credit (which arises due to adverse selection), trade credit can transmit a seller's private information to banks. If the seller (manufacturing firm) is willing to offer trade credit to a buyer this tells the banks that the manufacturing firm has private information regarding this buyer that makes it credit worthy. This would lead to a reduction of credit rationing. In addition, Jain (2001) has argued that suppliers may have a monitoring advantage over banks because in the course of their transactions with the firm they have access to information that banks may not.

A manufacturing firm that has created accounts receivable is assuring it customers with high quality products that are produced in a sophisticated technology. Cunat (2007) argues that firms offering trade credit may have an advantage over banks in enforcing debt repayment in a situation where it is difficult for the buyer to find alternative suppliers and it is costly for the seller to find alternative customers. This condition would be met if the product in question has some technological specificity. This advantage arises because suppliers can threaten buyers with stoppage of supplies of the intermediate goods, which in turn would hit production. Suppliers (manufacturing companies) would be in a position to help buyers overcome temporary liquidity shocks by offering trade credit. Lee and Stowe (1993) point out that trade credit when offered represents an implicit product guarantee of the products

quality. The buyer is able to verify the quality of the product before making a payment. In the presence of information asymmetry, large discounts (inducements to make quick payments) would convey information on quality. Firms, whose products are of a lower quality, other things being equal, would offer large discounts.

Heavy accounts receivables convey the information that the particular manufacturing firms are cost sensitive and they would not hold inventories but to sell them on credits to their customers. From a transactions cost perspective, a manufacturing firm can reduce inventory carrying costs if the buyer's costs of holding inventories are lower. Emery (1987) argues that trade credit arises as a financial response to variable demand. Consider a situation where a firm experiences a sudden dip in demand. Either the firm has two choices, to accumulate costly inventories (which may or may not be sold in later periods) or to offer trade credit to its customers who may be finance constrained. There clearly exists a trade-off between holding inventories and offering trade credit. For trade credit to be a mutually beneficial arrangement the firm offering trade credit must have an advantage in bearing the financial cost (of the dip in demand) but must be at a disadvantage in terms of the operational cost for holding higher finished goods inventories.

The firm that accepts trade credit gains from the fact that implicitly, it receives a lower price (if the payment is made within the stipulated period) and the seller gains because of lower inventory costs. Bougheas, Mateut and Mizen (2009) incorporate this basic idea in a formal two period model which incorporates the trade-off between inventories and trade credit under conditions of stochastic demand. Using this model they derive empirically testable propositions with respect to accounts payable and accounts receivable and their relationship with changes in costs of inventories, profitability, risk profile, liquidity position of firms and bank loans. They show that: firms with higher stock of inventories would have lower accounts receivables and accounts payables, profitability will be positively related to both accounts payable and accounts receivable.

The relationship of accounts receivable and accounts payable with riskiness of a firm and its liquidity position is indeterminate. Accounts receivables would be positively related to bank

loans, this is, they are compliments and accounts payable can either be positively or negatively related to bank loans.

2.5 Summary

Companies can only survive if they can easily predict their future. Predicting the earnings of companies tells a lot on the performance of the company hence it magnifies the public image of the company. The chapter has discussed the importance of the efficiency of the market hypothesis and shown how NSE has struggled to attain efficiency. The chapter has also shown how receivables are important in predicting earnings of companies.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

The chapter explores the alternative methods and procedures the researcher used in exploring the study to find solutions to the research question raised in chapter one. Section 3.2, discusses the research design, while sections 3.3 and 3.4 tackle the population to be studied, the sample chosen and the sampling techniques to be applied. Section 3.5 deals with the data collection methods and finally data analysis under section 3.6.

3.2 Research Design

The research design applicable in this study is a Quasi-experimental research. According to MacLehose, Reeves, Harvey, Sheldon, Russell and Black (2000), a quasi-experiment is an empirical study that utilizes time series analysis, used to estimate the causal impact of an intervention on its target population. The dependent variable is observed over time for any changes that may take place.

Quasi-experimental research designs have many similarities with the traditional experimental design or randomized controlled trial, but they specifically lack the element of random assignment to treatment or control. Instead, quasi-experimental designs typically allow the researcher to control the assignment to the treatment condition, but using some criterion other than random assignment. In this study, the independent variable (receivables) is being compared among different companies over a given period of time to experiment and see the general trend of the variable and come up with statistical conclusion on its effect on the earnings of firms. A generalization can then be made about the rest of the population based on the results generated.

The study used secondary data that was obtained from financial statements of large manufacturing companies as filed in the Capital Markets Authority library.

3.3 Population

Mugenda and Mugenda (1999), describe target population as the focus the researcher wants to generalize the result of the study. The population thus consisted of all 698 manufacturing companies as obtained from Kenya Association of Manufacturers (KAM).

3.4 Sampling design

3.4.1 Sampling Frame

According to Cooper and Schindler (2003), a sampling frame is a list of elements from which the sample is actually drawn and closely related to the population. The sampling frame was obtained from the list of large manufacturing firms in Nairobi as stated by KAM. This ensured that the sampling frame was current, complete and relevant for the attainment of the study objectives.

3.4.2 Sampling Techniques

Sampling gives statistical increased efficiency on a sample, provides data for analyzing the various sub-population and enable different methods and procedures to be used. In this study, a random sample of 30 large manufacturing firms was taken from the population. The chosen sampling method ensured that the respondents gave precise information to respond to the specific research objectives thereby enhancing the credibility and reliability of the findings of this study (Cooper and Schindler, 2003).

3.4.3 Sampling Size

The sample size is a smaller set of the larger population. In most cases, researchers work with a sample of subjects rather than the full population in situations where the population is large. The sample must be carefully selected to be representative of the population. For this study, the sample size is 30 large manufacturing firms as obtained from KAM.

3.5 Research Model

3.5.1 The Conceptual Model

$r=f(R)$ ---------- (1)

r = Earnings

R = Receivables

The equation indicates that earnings are a function of the receivables. There exists an inverse relationship between receivables and earnings, where earnings will be measured using the profits before tax and receivables by the total amounts owing to the firm by debtors.

3.5.2 The Analytical Model

The research will use a regression equation following this model:

$r= \alpha_0 + \alpha_1 R + e_t$ ----------2

Where;

r= Earnings

α_0 and α_1 are regression coefficients

e_t = Error term

R = Receivables

This model is similar to the one of Dun and Bradstreet (1999), which concluded that manufacturing companies' accounts receivables contain credible information that can be used in earnings prediction.

3.6 Data Collection Methods

According to this study, the researcher will use secondary data. The source of secondary data will be from review of companies' profiles, financial reports, and journals, past research findings, books, magazines and internet among others.

3.7 Data Analysis

Data analysis is the important part in any research because it is where the truth unfolds itself. At this point, the researcher engages in a process of trying to make data to have some meaning and be able to be understood by the interested parties.

In examining the strength of the relationship between the information content of receivables and earnings of large manufacturing firms, a regression and correlation analysis will be done. The analyzed data will be interpreted, and presented in tabular and graphical forms. Descriptive statistics will be analysed using Statistical Package for Social Sciences (SPSS) version 17.

CHAPTER FOUR

DATA ANALYSIS PRESENTATION AND INTERPRETATION

4.1 Introduction

This chapter presents the analysis of the data that was collected in the field and findings of the study. Section 4.2 gives the summary statistics while section 4.3 presents the prediction of earnings using receivables by use of correlation analysis, regression analysis and test of normality. Section 4.4 discusses the results of the study and finally a summary is given in section 4.5.

4.2 Summary statistics

Table 4.2.1 Descriptive Statistics

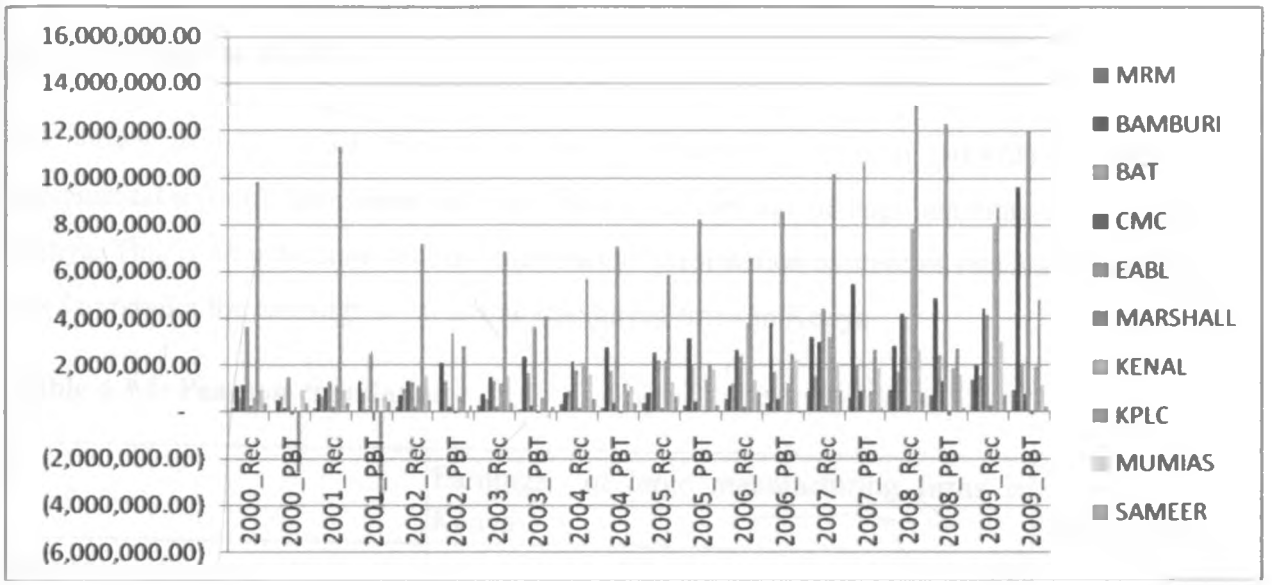
	Mean	Std. Deviation
Earnings	1,707,003.28	256,065.64
Receivables	2,231,201.95	643,049.20

Source: Author's Computations

The average value of earnings was 1,707,003.28 with a standard deviation of kshs 256,065.64 while the average value of receivables was 2,231,201.95 standard deviation kshs 643,049.20. There exist a very high variation amongst the large manufacturing firm's performance in terms of receivables and earnings as indicated by the high values of the standard deviations.

A summary of receivables and profits of some of the manufacturing firms under study is as follows ;

Figure 4.2.2 Receivables and Profits from year 2000- 2009



Source: Author's computations

The graphical representation above shows the amount of receivables and profits before tax of some of the manufacturing companies under review from years 2000 to 2009 as stated above. In the year 2000, MRM, Bamburi, BAT, CMC, Marshall, Kenol, Mumias, Sameer among others have account receivables amounts less than two billion. EABL, KPLC among others have account receivables amount more than two billion in the year 2000. The same firms in the year 2000 have profit before tax amount that is totally different. No firm had profit before tax amounting to two billion and above. Marshalls and KPLC made a loss before tax in millions. The amount of receivables and profit before tax grew steadily from year 2000 through 2009. In year 2009, accounts receivable for most companies were above two billion Kenya shillings apart from Marshalls and Sameer. In year 2009, Marshalls made a loss of one hundred and seventeen million Kenya shillings while others made profits.

It is clearly evident from the graph that in the years when the Receivables are high, the profit before tax is low, showing an inverse relationship between the two variables.

4.3 Prediction of earnings using receivables

4.3.1 Correlation analysis

As shown in table 4.3.1 there is a strong negative correlation (-0.873) between the incremental information content of receivables and earnings of large manufacturing firms in Kenya. This is an indication that the incremental information content of receivables could be used to predict the earnings of large manufacturing firms in Kenya.

Table 4.3.1: Pearson correlation

	Earnings of large manufacturing firms in Kenya	Receivables
Earnings of large manufacturing firms in Kenya	1.000	-.873
Receivables	-.873	1.000

Source: Author's Computations

Analysis in table 4.3.1 shows that the coefficient of determination (the percentage variation in the dependent variable being explained by the changes in the independent variables) R^2 equals 0.843, that is, receivables explain 84.3 percent of Earnings of large manufacturing firms in Kenya leaving only 15.7 percent unexplained. The P- value of 0.002< 0.05, implies that the model of Earnings of large manufacturing firms in Kenya is significant at the 5 percent level of significance

Table 4.3.2: Model Summary

R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
				R Square Change	F Change	df1	df2	Sig. F Change
-.918	.843	.841	2629471.185	.843	5.013	1	98	.002

Source: Author's Computations

The probability value (p-value) of a statistical hypothesis test is the probability of getting a value of the test statistic as extreme as or more extreme than that observed by chance alone, if the null hypothesis H_0 is true. The p-value is compared with the actual significance level of the test and, if it is smaller, the result is significant. The smaller it is, the more convincing is the rejection of the null hypothesis. This computations show that there is correlation between the predictors variable (receivable) and response variable (Earnings of large manufacturing firms in Kenya) since P- value of 0.002 is less than 0.05.

4.3.2 Regression Analysis

The established multiple linear regression equation becomes:

Earnings of large manufacturing firms in Kenya = 319,779.30- $0.874X_1$

Where

Constant = 319,779.30, shows that if receivables was rated as zero, Earnings of large manufacturing firms in Kenya rating would be 319,779.30

α_1 = -0.874, shows that one unit change in receivables results in 0.874 units decrease in Earnings of large manufacturing firms in Kenya other factors held constant.

Table 4.3.3: Coefficients of regression equation

	Unstandardized Coefficients		t	Sig.
	B	Std. Error		
α_0	319,779.30	44,835.22	7.132	.000
α_1	-.874	.215	-4.065	.002

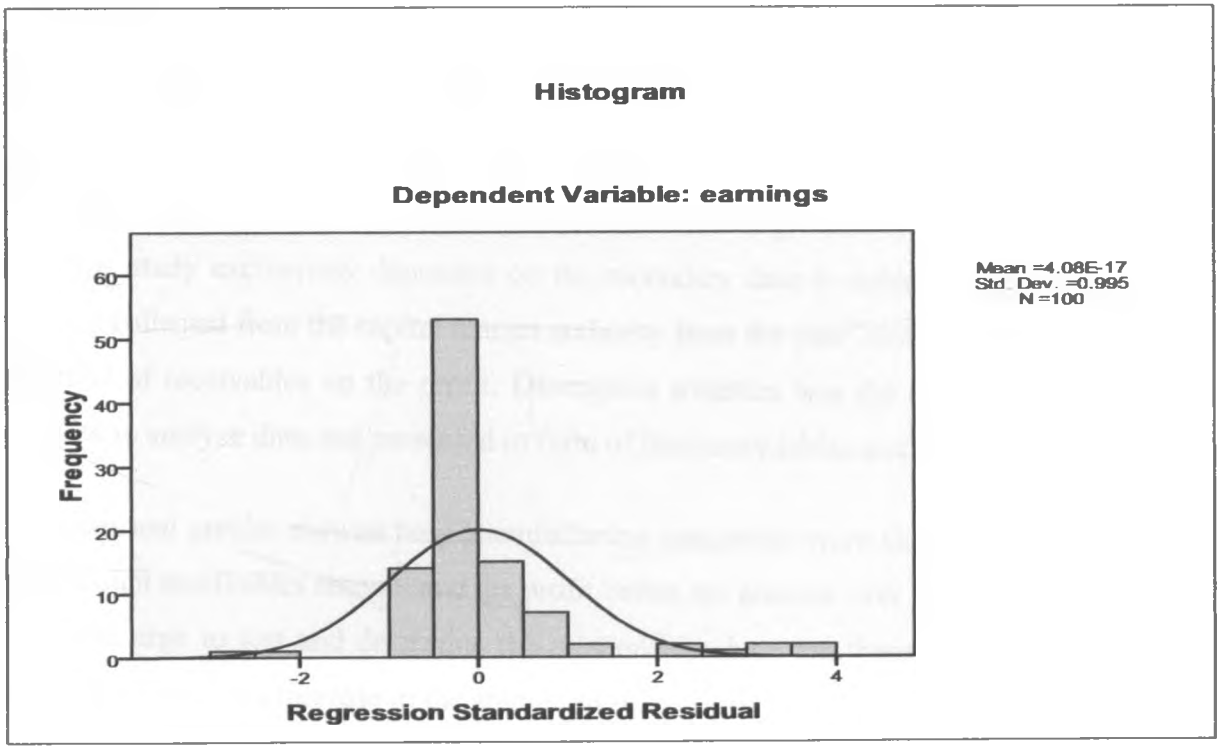
Source: Author's computations

4.3.3 Test of Multi-collinearity and Normality

In order to recommend the regression equations for forecasting it is necessary to test for the second order conditions. This includes the test of multicollinearity and normality. Multicollinearity tests on whether there is a correlation between the predictor variables used. In the analysis, only one predictor variable (receivables) was used and as such the test for does not violate the concept of multicollinearity.

Normality uses histogram or plot of residuals. It is assumed that the distribution from the histogram will take the shape of a normal curve and the plot of the residuals will form 45 degrees diagonal line for the normality test. The histogram/frequency polygon depicts a normal distribution as shown in Figure 4.3.4, thus the model can be recommended for forecasting.

Figure 4.3.4 : Normality plot



Source: Author's Computations

4.4 Discussion of results

In trying to ascertain the effect of receivables on profit before tax/earnings, the output in the analysis showed that the model was accurate. The finding showed that there is an inverse relationship between receivables and profit tax in manufacturing companies.

With a P value of 0.002, which is less than 0.05, the findings show that there is a correlation between the predictor variable (receivable) and the response variable (earnings). The coefficient of confidence or determination is the R square and is useful in the analysis of data. The higher the R square, the higher the confidence level. For this study, the confidence level is 84.3 per cent which is a good predictor.

The analysis asserts that as the independent variable changes, it causes a negative change on the dependent variable. It is thus clear that there is an inverse relationship between receivables and earnings of large manufacturing firms.

4.5 Summary

The aim of carrying out this study was to determine the effect of account receivables on profitability or earnings of large manufacturing firms in Kenya. Most manufacturing companies value the work they do according to how much profit they can make in financial year. The study exclusively depended on the secondary data to achieve the objective. The data was collected from the capital market authority from the year 2000 to 2009 to determine the effect of receivables on the profit. Descriptive statistics was the statistical method that was used to analyze data and presented in form of frequency tables and graphs.

The tables and graphs showed how manufacturing companies were able to increase steadily their account receivables amount and the profit before tax amount over the year 2000 through 2009. The urge to test and determine the relationships between these variables arises as a result of simultaneous increase in the amount of receivables and profit before tax amount.

The regression statistical analysis was used to determine the effect between the variables (Receivables and PBT). In determining the effect of receivables on profit before tax/earnings, the output in the analysis showed that the model was accurate. The finding showed that there is an inverse relationship between receivables and profit tax in manufacturing companies.

Companies should therefore strive to have proper management of their accounts receivables to be able to better predict their earnings.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter gives a summary of the study that has been undertaken as captured in section 5.2, conclusions that have been arrived at in Section 5.3 and limitations of the study in Section 5.4. The recommendations for further research and policy implications are captured in Section 5.5 and 5.6 respectively.

5.2 Summary

The objective of the study was to examine the incremental information content of receivables in predicting earnings of large manufacturing firms in Kenya. The study used secondary data that was obtained from annual financial reports of large manufacturing firms, journals, and company websites.

To achieve the objective, information content of receivables and earnings of large manufacturing firms were computed from all the sampled data. Total amounts owing to the firm by debtors were used as an indicator of receivables while profit before tax was used as the measure of earnings. A regression analysis was done and it established a negative relationship existed between the dependent variable, which is the earnings and the independent variable (receivables).

The study results reveal that there is an inverse relationship between information content of receivables and earnings of large manufacturing firms in Kenya. When receivables are high, the earnings of firms reduce and there also is consequent higher risk of default leading to increased bad and doubtful debts. On the other hand, when receivables are low, it means that the firm has recovered most of its debt accruing from credit sales leading to increased returns for the firm.

The analysis asserts that as the independent variable changes, it causes a negative change on the dependent variable. Therefore, as the large manufacturing firms engage in more trade credit to boost their sales volumes, the ripple effect will be reduced earnings hence lower profitability.

Large manufacturing firms should therefore have to prudently manage their receivables to achieve higher returns. This can be achieved by establishing stringent credit policies and relying on a credible credit reference bureau for customer screening.

5.3 Conclusions

One major finding of the study is that there is a strong negative relationship between the receivables and Earnings of large manufacturing firms in Kenya. This is demonstrated in the part of the analysis where the proportion of coefficient of correlation (R) and coefficient of determination (R^2) is high.

Management of receivables is therefore very important for a firm as it is a component of its working capital. For a company to operate effectively and efficiently, receivables must be tightly monitored and controlled to reduce the risk of a firm having to bear the burden of bad and doubtful debts and ensuring payment is made in good time. It is also helps a firm to be able to predict the amount and timing of future cash flows for planning purposes.

The usage of the model developed in this study to forecast Earnings of large manufacturing firms in Kenya is therefore recommended and as such the objective of the study is fully achieved.

5.4 Limitations of the study

Local researchers on the subject of receivables and earnings of manufacturing firms in Kenya were few and little literature was available. The literature on the international arena was also limited and concentrated on the more developed economies like the US, UK and China whose circumstances may differ from the situation in Kenya.

The results of this study may also not necessarily be representative of the entire population, as only a small sample of 30 publicly owned firms was used. Some manufacturing firms which are privately owned and not listed at the stock market declined to divulge financial data which they considered as private information. This made collection of data from such firms very difficult and almost impossible.

Based on the fact that the study purely used secondary data for its analysis which was obtained from the firms annual financial reports and journals, caution had to be taken on the limitations of such data. Its accuracy may not be guaranteed, as the data may have been manipulated by the management of those firms to present a 'rosy' view of the firms financial position, what is refered to as 'window dressing '. We however tried to source our data from audited financial reports.

5.5 Recommendations for further study

The study sought to establish the incremental information content of receivables in predicting earnings of large manufacturing firms in Kenya. Further research can be carried out to establish the relationship between inventories and earnings or other variables perceived to affect earnings.

The study applied only one independent variable in determining the results. Further studies can be carried out using more independent variables to the regression model. The use of more independent variables may better capture the strength of the relationship between the two variables.

A sample of 30 large manufacturing firms was used to carry out the study. As at August 2011, 698 manufacturing firms were registered with the Kenya Association of Manufacturers thus a larger sample size can be further used to evaluate if there is a substantial change in the findings.

5.6 Policy implications

The research findings have shown that there is an inverse relationship between information content of receivables and earnings of large manufacturing firms. Therefore, policy makers should come up with proper credit policies that enhance earnings through prudent management of the information contained in receivables. These policies should be reviewed periodically to ensure that they are competitive and in check with reality in the market.

Based on the findings, the following are recommendations to policy makers and stakeholders ;

The Kenya Association of Manufacturers (KAM) being the umbrella body for manufacturing firms in Kenya is tasked with the responsibility of ensuring that manufacturing firms engaged in trade credit have proper credit policies in place to avert the risk of collapse as a result of excessive bad and doubtful debts which will have a negative effect on the industry in general.

To enhance earnings of large manufacturing firms engaged in credit sales, proper customer screening should be done. Relevant information on the prospective credit customer should be gathered and analysed to determine their credit worthiness. Trade references from other traders and existing customers can be used to vet a customer's credit worthiness or the more formal Credit Reference Bureaus (CRB) also used by banks.

Organisational and legal policies should also be clearly spelt out. The organisational policies regulate the trade credit activities that a manufacturing firm undertakes and spells out the debtor days, penalty charged for delayed payment and credit limits. Being a form of contract between a firm and the debtor, the legal aspect comes in. The legal policies are aimed at creating binding legal relationships between the parties to the contract, thus ability to take the necessary measures in the event that one of the parties to the contract fails to fulfil their obligation as stipulated in the contract.

Shareholders are mainly interested in investing in firms which are perceived as performing well through reporting of profits and payment of dividends. Several manufacturing firms are listed in the NSE and to ensure their shareholder attractiveness, they need to maximize their earnings. Therefore, the credit managers of these firms should ensure that the credit policies are adhered to, to minimize provisions for bad and doubtful debts which reduce the Profit Before Tax.

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Appendix 1: List of Variables

Company Name	MRM	BAMBURI	BAT
2000_Rec	179,198.00	1,127,000.00	620,584.00
2000_PBT	45,601.00	487,000.00	682,970.00
2001_Rec	193,891.00	755,000.00	689,804.00
2001_PBT	51,891.00	1,340,000.00	851,343.00
2002_Rec	253,113.00	748,000.00	1,017,926.00
2002_PBT	82,136.00	2,083,000.00	1,310,423.00
2003_Rec	296,447.00	756,000.00	572,482.00
2003_PBT	131,197.00	2,356,000.00	1,677,595.00
2004_Rec	323,469.00	856,000.00	891,531.00
2004_PBT	172,368.00	2,786,000.00	1,750,602.00
2005_Rec	373,323.00	853,000.00	819,525.00
2005_PBT	295,920.00	3,147,000.00	2,008,971.00
2006_Rec	543,564.00	1,137,000.00	1,195,666.00
2006_PBT	387,868.00	3,838,000.00	1,746,526.00
2007_Rec	867,534.00	3,201,000.00	1,544,316.00
2007_PBT	620,640.00	5,443,000.00	2,049,596.00
2008_Rec	951,947.00	2,814,000.00	1,734,732.00
2008_PBT	705,450.00	4,889,000.00	2,416,913.00
2009_Rec	1,378,602.00	1,999,000.00	1,526,456.00
2009_PBT	948,714.00	9,596,000.00	2,108,964.00

Company Name	CMC	EABL	MARSHALL
2000_Rec	1,168,678.00	3,626,624.00	297,115.00
2000_PBT	183,904.00	1,506,962.00	(104,028.00)
2001_Rec	1,037,901.00	1,343,586.00	238,219.00
2001_PBT	139,806.00	2,499,117.00	(356,066.00)
2002_Rec	1,319,426.00	1,284,209.00	220,979.00
2002_PBT	241,150.00	3,400,411.00	29,194.00
2003_Rec	1,525,249.00	1,350,484.00	206,912.00
2003_PBT	276,281.00	3,640,784.00	22,045.00
2004_Rec	2,160,554.00	1,766,262.00	177,889.00
2004_PBT	381,875.00	7,041,897.00	22,256.00
2005_Rec	2,524,427.00	2,193,590.00	190,719.00
2005_PBT	461,680.00	8,223,371.00	61,850.00
2006_Rec	2,638,695.00	2,356,436.00	243,778.00
2006_PBT	559,036.00	8,577,049.00	53,485.00
2007_Rec	2,970,635.00	4,427,318.00	308,692.00
2007_PBT	879,236.00	10,635,771.00	42,321.00
2008_Rec	4,196,968.00	4,112,469.00	284,314.00
2008_PBT	1,328,849.00	12,316,332.00	(169,688.00)
2009_Rec	4,441,237.00	4,160,834.00	263,685.00
2009_PBT	807,283.00	11,989,258.00	(117,479.00)

Company Name	KENOL	KPLC	MUMIAS
2000_Rec	615,708.00	9,812,372.00	933,501.00
2000_PBT	250,991.00	(2,574,269.00)	934,268.00
2001_Rec	1,119,386.00	11,317,952.00	930,811.00
2001_PBT	595,097.00	(4,105,915.00)	685,221.00
2002_Rec	1,124,501.00	7,164,182.00	1,569,728.00
2002_PBT	679,174.00	2,849,116.00	(244,858.00)
2003_Rec	1,225,668.00	6,842,438.00	1,576,453.00
2003_PBT	629,653.00	4,112,193.00	(244,858.00)
2004_Rec	2,125,345.00	5,714,268.00	1,582,928.00
2004_PBT	1,200,537.00	873,684.00	1,138,550.00
2005_Rec	2,228,759.00	5,863,524.00	1,266,099.00
2005_PBT	1,373,761.00	1,979,276.00	1,843,381.00
2006_Rec	3,834,377.00	6,550,021.00	1,414,825.00
2006_PBT	1,226,274.00	2,497,983.00	2,219,889.00
2007_Rec	3,197,700.00	10,154,155.00	2,114,403.00
2007_PBT	876,390.00	2,648,691.00	1,909,894.00
2008_Rec	7,846,153.00	13,159,424.00	2,630,991.00
2008_PBT	1,879,811.00	2,738,309.00	1,589,204.00
2009_Rec	8,064,874.00	8,716,239.00	2,967,456.00
2009_PBT	1,933,456.00	4,782,433.00	1,193,161.00

Company Name	SAMEER
2000_Rec	392,671.00
2000_PBT	396,412.00
2001_Rec	387,892.00
2001_PBT	448,879.00
2002_Rec	482,712.00
2002_PBT	310,834.00
2003_Rec	389,263.00
2003_PBT	255,709.00
2004_Rec	585,097.00
2004_PBT	400,473.00
2005_Rec	651,119.00
2005_PBT	294,253.00
2006_Rec	839,549.00
2006_PBT	(14,865.00)
2007_Rec	894,272.00
2007_PBT	166,520.00
2008_Rec	857,772.00
2008_PBT	165,522.00
2009_Rec	717,613.00
2009_PBT	221,464.00