CHRISTIAN SERVICE UNIVERSITY COLLEGE, KUMASI

ACCOUNT RECEIVABLE MANAGEMENT AND ITS IMPACT ON THE

PROFITABILITY OF LISTED MANUFACTURING FIRMS IN GHANA

BY

ERIC DAMETI

AUGUST, 2019

CHRISTIAN SERVICE UNIVERSITY COLLEGE, KUMASI

DEPARTMENT OF ACCOUNTING AND FINANCE

ACCOUNT RECEIVABLE MANAGEMENT AND ITS IMPACT ON THE

PROFITABILITY OF LISTED MANUFACTURING FIRMS IN GHANA

BY

ERIC DAMETI

(14015381)

Dissertation submitted to the Department of Accounting and Finance,

Christian Service University College, in partial fulfilment of the

requirements for the requirement of the award of Master of Science Degree

in Accounting and Finance

AUGUST, 2019

DECLARATION

Candidates Declaration

I hereby declare that this dissertation is the results of my own original research and that no part of it has been presented for another degree in this university or elsewhere.

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

NAME: **ERIC DAMETI**

Supervisor's Declaration

I hereby declare that the preparation and presentation of the dissertation were supervised in accordance with the guidelines on supervision of dissertation laid down by the Christian Service University College.

Supervisor's Signature………………………..Date…………………….

NAME**: DR. MAHAWIYA SULEMANA**

ABSTRACT

Account receivable management is very crucial in receivable management in most firms, which include PZ Cussons, Nestle Ghana ltd. Fan Milk, Unilever, Guinness Ghana, Starwin, Pioneer Kitchen Ware, Cocoa Processing Company (CPC) since credit delivery constitutes the core function that stimulates economic activities to promote wealth and improve standard of living. However, the inability to recover substantially the receivable granted over a period of time has the tendency of creating liquidity crises and solvency problem that lead to an indicted firm's failure. These listed companies have been vulnerable to high debt recovery. It is for this reason that the current research has conducted the receivable management in the above listed companies to identify the inherent weaknesses in the credit delivery practices which contribute to recovery difficulties and to recommended measure to minimize high incidences of high receivable in the books of the companies. The researcher used secondary data as a guide to obtain the needed data for this works sample of staff selected from the companies published reports. Data obtained were analysed, using descriptive analysis. The research reveal among other issues, that there is laxity in monitoring, supervising and controlling credit facilities.

ACKNOWLEDGEMENT

I wish to express my profound gratitude and appreciation to my supervisor, Dr. Mahawiya Sulemana for his fatherly love, guidance, and suggestions towards the completion of this project work.

Special thanks go to my mother for her love and advice. I also wish to express my heartfelt appreciation to my brothers, sisters and all my family members for their spiritual and material support. I also thank Mr. Ernest Adiwokor for his assistance.

DEDICATION

This work is dedicated to God almighty for making this work a success

TABLE OF CONTENTS

LISTS OF TABLES

LISTS OF FIGURES

LIST OF ACRONYMS

DSO	-	Days Sales Outstanding
ART	-	Account Receivable Turnover Ratio
DDD	-	Average Days' Delinquent
GSE	-	Ghana Stock Exchange
CEI	-	Collection Effectiveness Index
GPM	-	Gross Profit Margin
NPM	-	Net Profitability Margin
OER	-	Operating Expenses Ratio
ROI	-	Return on Investment
ROE	-	Return on Equity
NAT	-	Net Assets Turnover
MS	-	Market Share
DEBTR	-	Debt Ratio
SG	-	Sales Growth
CR	-	Current Assets
ROA	-	Return on Assets
EPS	-	Earnings per Share
DPS	-	Dividend per Share
DPR	-	Dividend Pay-Out Ratio
DY	-	Dividend Yield
EY	-	Earning Yield
E/P-Price	-	Earnings Ratio

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Receivable management is an important fact of financial management. This is because excessive level of current assets and low level of current asset may lead to negative effects on a firm's profitability and difficulties in mediating smooth operation (Duru, Ekwe &Okpe, 2014). Berry and Jarvis (2006) asserted that firms setting up a policy for determining the optimal amount of account receivable have to take into account the trade-off between the securing of sales and profit and the amount of opportunity cost and administrative costs of the increasing accounts receivable; the level of risk the firm is prepared to take when extending credit to the customer because the customer could default when payment is due and the investment in debt collection management.

Gill et al. (2011) assets that the main objective of account receivable is to reach an optimal balance between cash flow management components. Cash flow management is the process of planning and controlling cash flow, both into and out of a business; that is, cash flow within the business and cash balance held by a business at a point in time. Effective account receivable management enables a firm to improve on its profitability by reducing the transaction cost of raising funds in case of liquidity crises (Ahmet, 2012). Efficient firms maintain an optimal level of cash flow that maximizes their value.

The study of account receivable management on profitability is very important due to the fact that most firms have liquidated as a result of poor management of account receivables. The account receivable forms part of working capital used in

running day to day activities of businesses and so if not managed properly, if can a make firm unable to meet its daily obligations. Account receivables management directly contributes to a company's profit because it reduces bad debt. The company also has a better cash flow and higher available liquidity for use in investment or acquisitions.

1.2 Problem Statement

Improper trade credit management is one of the factors affecting the profitability of many companies. This is due to the fact that there is high competition among the industries, and for any company to stay in business, it has to offer part of its product on credit which also goes a long way to benefit the company only if it's collected when it falls due.

Despite the efforts most of the companies are making to achieve a sound receivable management, some also continue to record huge debt balances and bad debt written-off, which have affected the profitability of companies in Ghana. Most firms in Ghana are in financial crisis when it comes to the management of finances in the firm to reduce the liquidity level of funds in the business, the liquidity of the funds have been a major problem causing regulatory institutions to close up most viable businesses that can be maximization of shareholders' wealth. This causes a great problem on the enactments of the organisational concept, specifically as a going-concern.

It is on this note that the researcher sees it necessary to study the receivable management and its impact on profitability problems that companies face as a result of doing business on credit. Lyani's (2007) study examined the relationship

2

between account receivable management practices and organisation growth and revealed that efficient account receivable management practices, when adopted by small and medium enterprises, (SMEs) lead to growth. However, the focus is on SMEs in Kakamega country, Kenya. This study therefore sought to establish the impact of account receivable management on the profitability of selected manufacturing companies in Ghana.

1.3 General Objective

The general objective of this study was to determine account receivable management and its impact on firms' profitability of listed manufacturing firms in Ghana. However, the specific objectives are:

1.4 Specific Objectives of the Study

1. To examine the impact of account receivables ratio on profitability
2. To determine the effect of current ratio on profitability
3. To establish the impact of net asset turnover on profitability

1.5 Research Questions

1. What influence does account receivable ratio have on firm profitable?
2. Does current ratio have any effect on profitability?
3. What influence does net asset turnover have on profitability?

1.6 Statement of Hypothesis

The following hypotheses shall be proved in order to address the objective

1. H0: Account receivable does not have a significant influence on firm profitability.

   H1 Account receivable has a significant influence on firm profitability

2. H0: Current ratio does not have a significant effect on firm profitability

   HI: Current ratio has a significant effect on firm profitability

3. H0: Net asset turnover does not have a significant impact on firm profitability

   H1: Net asset turnover has a significant impact on firm profitability.

1.7 Scope of the Study

The study was conducted with the help of data obtained from audited financial statements. However, the researcher believes that the eight selected manufacturing firms from the audited annual report offers comprehensive information about the financial performance of the companies. The audited financial statement in firms' annual reports of eight years from 2010-2017 and audited financial records are obtained from companies' annual reports. However, the study was limited eight (8) firms because their information was all inclusive.

1.8 Significance of the Study

Practitioners: This research will therefore be of vast advantage to the management of organisations, investors and other business organisations using and developing credit policies. Therefore, this research can contribute in this following ways. It will serve as a guide to Credit control managers who will benefit in formulating their policies when negotiating with customers. It would

serve as a guide to existing investors and the potential investors to make right decisions as regards their investment and performance of the companies in which they are stakeholders.

Theoretical: It would also serve as a point of reference for future researchers to carry out further studies in the same area or related area by serving as a theoretical base for the research to be carried out. Furthermore, it will eliminate flaws in the existing credit practice that prevent effective control of trade credit, and give recommendation on the best practices to employ for the effective management the firms' receivables.

Academics: it will help academics to know the truth and acquire new knowledge which will enhance social development. it will also help to ensure that lecturers are actually engaged in what they are teaching.

1.9 Limitations of the study

The study is restricted to only manufacturing companies. The research solely depends on publish audited financial data, so it is subjected to all limitations that are inherent in the condensed published financial statement. Another limitation of this study is that the performance of the companies is measured in financial terms and non-financial measurement is not included. The period of the study is eight (8) years only. The ratio analyses deal with quantitative aspect. It totally overlooks the qualitative aspect.

1.10 Organisation of the Study

The study is organized into five chapters. Chapter one takes a look at the introduction of the topic, which takes into account the background of the study, the problem statement of the research work, the objective of the study, the justification behind conducting this study, among others. Chapter two reviews relevant theoretical and empirical literature. Chapter three focuses on the research methodology that is used in analysing the various data collected. Chapter four is devoted to summarizing the results of the study, recommendations for policy adoption and conclusions drawn from the study.

1.11 Chapter Summary

Many companies in Ghana have been experiencing bankruptcy, and some are at the verge of collapsing due to huge mount up of account receivable recorded in their books, which has influence on the profitability of companies negatively by denying shareholders of their dividends. Past studies have shown that improper management of receivable that have led to the collapse of firms. This study seeks to determine the impact of receivable management on the profitability of listed firms in Ghana.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter will highlight the theoretical framework where theories relating to the study will be discussed. This will bring forward literature available on account receivables management. This chapter also reviews empirical literature where past studies by various scholars locally and internationally on trade receivable will be discussed. The conceptual framework and the research gap which the study seeks to bridge is also presented.

2.2 Definition of Account Receivable

Account receivable management refers to the set of policies, procedures, and practices employed by a company with respect to managing sales offered on credit. It encompasses the evaluation of client credit worthiness and risk, establishing sales terms and credit policies, and designing an appropriate receivable collection process.

2.3 Theoretical Review

A theory is a coherent group of tested general propositions of events that include clarifications of how things associate with each other. It can thus be used to predict a certain class of phenomena. A theory can be built through a process of reviewing previous findings of similar studies, simple logical deduction, and/or knowledge of application theoretical areas at hand (Zikmund, Babin & Griffin, 2011). They are systematic groupings of interdependent concepts and principles

that give a framework to, or tie together, a significant area of knowledge as scattered data are not information, unless the observer has knowledge of the theory that will explain relationships (Olum, 2004). According to Tormo (2006), Aguilar (2001), and Trochim (2006), a theoretical framework guides research, determining what variables to measure, and what statistical relationships to look for in the context of the problems under study.

2.3.1 Risk and Return Theory

For any investment in finance to be considered, an analysis of both risk associated and returns expected must be determined. There are normally two types of risk behaviours associated with trade receivables management; they are conservative (risk averse) trade receivables management policy, and aggressive (risk seekers) trade receivable management policy. While more aggressive trade receivable policies are associated with higher returns, and risk, risk is underestimated while gains are overestimated. On the other hand, conservative trade receivables behaviour offers both lower risk returns where risks are overestimated while gains are underestimated Gardner et al. (1986). Risk handling is the main component to consider in making financial decisions. This includes how risks can be measured and how the required return associated with a given risk level is determined (Modigliani & Poguel, 1974).

2.3.2 Information Theory

According to Derban, Binner and Mullineux (2005), borrowers should be screened, especially by banking institutions in the form of credit assessment. Collection of reliable information from prospective borrowers becomes critical in accomplishing effective screening, as indicated by systematic information theory.

8

Both quantitative and qualitative methods can be used in assessing the borrowers although one major challenge countered by using qualitative prototypes is that they are subjective in nature.

However, according to Derban, Binner and Mullineux (2005), borrowers' attributes assessed through qualitative models can be designed as numbers with the sum of the values compared to a threshold. This technique minimizes processing cost, and reduces subjective judgements and possible biases. According to brown bridge (1998, pp, 173-89), quantitative models make it possible to numerically establish which factors are, improving the pricing of default risk, screening out bad loan applicants, and calculating any reserve needed to meet expected future loan losses.

2.3.3 Transaction Costs Theory

A theory on transaction cost was first developed by Schwartz (1974). This theory conjectures that suppliers may have an advantage over traditional leaders in checking the real financial situation or the credit worthiness of their clients. Suppliers also have a better ability to monitor and force repayment of the credit. All these superiorities may give suppliers a cost advantage when compared with financial institutions. Three sources of cost advantage were classified by Peterson and Rajan (2014) as follows: information acquisition, controlling the buyer and slaving value from existing assets. The sources of cost advantage can be explained by the fact that sellers can get information about buyers faster and at lower cost because it is obtained in the normal course of business. That is, the frequency and the amount of the buyers' orders give suppliers an ideas of the

client's situation; the buyers' rejection of discounts for early payment may serve to alert the supplier of a weakening in the credit-worthiness of the buyer; and sellers usually visit customers more often than financial institutions do.

2.3.4 Financial Motive Theory

According to financial motives, firms benefiting from easy access to credit market are able to use this borrowing capability and act as financial intermediaries in favour of firms that suffer from limited access to credit (Emery, 1984; Schwartz, 1974). Suppliers may be involved in credit activity as they hold a comparative advantage over traditional lenders in the resolution of information asymmetries. The suppliers may have an advantage over traditional lenders in investigating the credit worthiness of their clients, as well as a better ability to monitor and force repayment of the credit. This may give them a cost advantage over financial institutions in offering credit to a buyer for an early exposition of the financing advantage theory of trade credit (Schwartz, 1974).

There are at least three sources of cost advantage. The supplier may visit the buyer's premises more often than financial institutions would. The size and timing of the buyer's order also gives an idea of the condition of the buyer's business. The buyer's ability to take advantage of early payment discount may serve as a tripwire to alert supplier of deterioration in the buyer's creditworthiness. While financial institutions may also collect similar information, the supplier may be able to get it faster and at a lower cost because it is obtained in the normal course of business (Smith, 1987). The theory only applies if we accept the assumption that the financial market is perfect and that some buyers have an unsatisfied demand for banks and other institutions of

finance. Differences in size of firm, market structure or type of industry, the amount of liquid assets, which firms may accumulate, imperfects in the capital markets, and a variety of other institutional phenomena are for the failure of the financial market to operate efficiently.

2.3.5 Commercial Motives Theory

According to the commercial motive, trade credit improves product marketability (Nadiri, 1969) by making it easier for firms to sell. Trade credit can be used as a form of price discrimination by firms, according to weather delays in payment are allowed or not (Brennan, Maksimovic & Zechner, 1988; Mian & Smith, 1992). In this respect, Smith (1987) pointed that suppliers can transmit information about the quality of their products by agreeing on credit terms that allow their customers a period of evaluation. Lee & Stowe (1993) argued that trade credit is the best way of guaranteeing products.

Long, Malitz & 1993, found that smaller and younger firms grant more credit that firms with more consolidated reputation in the market. Firms used trade credit to signal the quality of their products. More recently, Pike, Cheng, Cravens (2005) demonstrated that in the US, UK and Australia, trade credit can be used to reduce information asymmetries between buyers and sellers. Payment on delivery is an extremely inefficient practice for most firms, particularly when deliveries are frequent. Many firms operate just-in-time stock policies, particularly for larger firms, where the buyer has to make separate payment transactions for each delivery rather deal with the whole month's delivery in a single payment transaction.

2.3.6 Operational motive theory

The operational motive (Emery, 1987) stresses the role of trade credit in smoothing demand and reducing cash uncertainty in the payment (Ferris, 1981). In the absence of trade credit, firms would have to pay their purchase on delivery. This makes it possible to reduce uncertainty about the level of cash that needs to be held to settle payments (Ferris, 1981) and provides more flexible in the conduct of operations, since the capability to respond to fluctuations is provided elsewhere (Emery, 1984, 1987).

This was supported by Long, Maltiz & Ravid (1993), who found out that firms with variable demands granted a longer trade credit period than firms with stable demands. The existence of sales growth in a firm is also a factor that positively affects the demand for finance in general, and for trade credit in particular. Consequently, it should be expected that firms with greater increase in sales will use more trade credit in order to finance their new investment in current assets.

2.3.7 Price Discrimination Theory

Brennan, et al. (1988) argue that if the product market is non-competitive and there exists an adverse selection problem in credit markets this makes price discrimination through credit potential profitability. An empirical implication that arises from the price discrimination argument is that more profit firms are more likely to grant trade credit. Peterson & Rajan (1997) found support for the price discrimination theory in a study that showed that firms with higher profit margins have more interest in raising their sales. This is due to the fact that the marginal earning they obtain are high, allowing them to incur additional costs to generate

new sales. Price discrimination occurs when a firm sells two identical units of good or offers the same homogenous service at different prices, either to two different customers or to the same customer (Miravet, 2005).

Price discrimination being illegal in many countries, firms may choose to discriminate between buyers using trade credit. Some firms may choose to make early payment to take advantage of discount while others may have an incentive to pay towards the end of the credit period (Vaidya, 2011). Wilner (2000) advanced a theory of trade credit that is similar in spirit to the price discrimination theory; however, it is based on the idea that a customer can exploit its bargaining advantage with the supplier to obtain concession when in financial distress.

2.6 Empirical Literature Review

According to Kothari (2004), empirical literature review entails the review of studies made earlier which are similar to the one proposed in a view to acquire knowledge as to what data and other materials are available for operational purposes which will enable the researcher to specify his own research problem in a meaningful context.

2.6.1 Definition of account receivable management

Account receivable is the granting of goods and services to customers which may be an individual, or an organisation where payment is made of a later date. According Tweneboah Senzu & Ndebugri (2017), trade credit could be defined and explained in so many contextual ways, depending on when and where as well as what it is being used for. For instance, it could mean cash credit obtained for trading or a business from a bank or elsewhere in the form of a loan. It could also

be used to represent credit sales which is the extended terms or payment space obtained by a firm to pay for the goods and services acquired from another company, but the paper in-depth studies will revolve around the latter explanation.

2.6.2 Account Receivable Management

The significance of practising good account receivable management cannot be overemphasized. According to Pandey (2010), account receivable management is a very important aspect of corporate finance since it directly affects the liquidity and profitability of the company. The key principles of account receivable; management that a firm should adhere to are ageing of account receivable, evaluating the potential customers' ability to pay criteria such as integrity of the account, financial soundness, collateral to be pledged and current economic conditions; establishment of credit terms and limits; collection of trade credit; assessment of default risk and responsibility; as well as the financing of account receivable until it has been paid by the purchaser (Schaum, 2011).

Account receivable is an interim debt arising through credit sales and recorded as account receivable by the seller and account payable by the buyer (Brigham & Eugine, 2012). According to Sundgren and Schneeweis (2010), optimum account receivable in a business is one that maximises the value of a firm when the increment rate of return (marginal rate of return) of an investment is equal to the incremental cost of funds (marginal cost of capital) used to finance the investment. As an account firm liberalizes its credit policy, its investments in debtors become risky because of increase in slow paying and default of debtors.

Account receivable constitute a substantial portion of current asserts of several companies' balance sheets, highlighting the importance of the management and financing of this type of asset since it plays an important role in a firm's performance, risk and value (Smith, 2010). However, a firm is therefore ensuring to maintain an equilibrium between liquidity and profitability while conducting its day-to-day operations. Liquidity is a precondition to ensure that a firm is able to meet its short-term obligations, and its continued flow can be guaranteed from a profitability enterprise.

According to Michael (2007), good credit management is an essential component and a fundamental part of Moden commercial strategy. According to Dina A. (2007), good credit management is crucial to business cash flow and ensures business operation. Receivable management is the process of ensuring that customers are able to pay for the products delivered or services rendered to them. Myers and Brealey (2003) describe credit management as methods and strategies adopted by firms to ensure that they maintain on optimal level of credit and its effective management. Credit management is one of the crucial activities in any effective company and cannot be downplayed by any economic enterprise engaged in credit, irrespective of its business nature. Many businesses engaged in account receivable in order to protect their existing customers and potential customers.

Credit management starts with sales and does not stop until the full and final payment has been received. It is as important as part of the deal as closing the sale. In fact, a sale is technically not a sale until the money has been collected. It follows that principles of goods lending shall be concerned with ensuring, as far

as possible, that borrower will be able to make schedule payments with interest in full and within the required time period;' otherwise, the profit from an interest earned is reduced or even wiped out by the bad debt when the customer eventually defaults. Account receivable management is concerned primarily with managing debtors and financing debts. The objective of credit management can be stated as safeguarding the company's investment in debtors and optimizing operational cash flows policies, collection payment and limiting the risk of non-payments.

Profitability can be sustained and improved by increasing the market share position, where an organisation's objective is to be the leader in the market which should be characterized by the potential of increasing shareholder value in the process. On the other hand, Mctaggart, Konte and Mankins (2014) reveal that the favourable financial return in various forms amount to an organisation value which depends on two factors; that is the market share positioning and having the competitive advantage over its rivals to gain higher return along with economic scale.

The average numbers of days' account receivable is used as a measure of account receivables policy. It represents the average number of days that the company uses to collect payments from its customers. This metric is received by dividing the sum of the operating and ending balance of account receivable with two and dividing this with the net sales and then multiplying the outcome with the average number of days in a year. Similar to inventory, a low number of days is desirable to keep the cash conversion cycle short (Lantz, 2008).

2.4.3 Current Assets and Profitability

Current assets management is considered to be the primary goal of working capital management (Jain, Singh, & Yadav, 2013). Current asset management refers to all the actions and decision of the management which affect the size and effectiveness of current asset. Current asset management requires special attention in present days when cost of capital is rising and funds are scarce. It has been generally established that the profitability of a firm largely depends upon the manner of its current asset management. If a firm is inefficient in managing current asset, it will not only reduce profitability but may also lead to financial crises. Both inadequate and excessive current assets can have detrimental results for a firm. The excessive current asset can result in profitability (Chowdhary & Amin, 2007).

Another important contribution with reference to current asset management was by Deloof (2003), who emphasized that most firms have a large amount of cash invested in current asset. It can, therefore, be expected that the way current asset was managed, had a significant impact on the profitability of firms. He investigated the relationship between current asset management and corporate profitability for a balance panel set of 1,009 Belgian firms over the 1991-1996 period. According to him, a longer cash conversion cycle leads to a larger investment in current asset and a longer cash conversion cycle might increase profitability because it leads to higher sales. However, corporate profitability might also decrease with the cash conversion cycle, if the costs of higher investment in current asset rose faster than the benefits of holding more inventories and/or granting more trade credit to customers.

The impact of Overall current asset policies on the profitability of pharmaceutical firms listed at Dhaka stock exchange was investigated by Chowdhary and Amin (2007). Primary and secondary data were used for the period 2000 to 2004 to analyse the current asset management policies. The results indicated that for the overall performance of the pharmaceutical industry, current asset management plays a vital role and there exists a positive relationship between current asset management and the performance of firms. On the other hand, the questionnaire data used for the study high lights that firms in this industry have been efficient in managing their cash, account receivables and account payables. Further, the industry maintained a large volume of inventories, but maintaining large inventories did not reflect inefficient management for this industry. With reference to small and medium size Spanish firms, the impact of current asset on profitability was empirically tested by Gracia-Teruel and Martinez-Solano (2007).

They used panel data methodology and collected the data for 8872 small and medium sized firms covering the period 1996 to 2002. The robust test was also used for any possible presence of indigeneity problem. The result suggested that current asset management was very important in case of small and medium sized firms, and managers can create value for the shareholders by reducing the inventories level and receivable outstanding days. Further, short cash conversion cycle is also associated with improving in profitability. However, their result did not confirm the impact of account payable days on profitability because this relation lost its significance when controlled for indigeneity problem. The role of current asset management policies on firm performance and the importance of a

trade-off between liquidity and profitability were investigated by Vishnani and Bhupesh (2007). They provided two basic reasons behind the trade-off between profitability and liquidity. On one hand, if a firm wanted to take a higher risk for higher profits, it reduced the level of its current asset. On other hand, if firm wanted to improve liquidity, it increased the amount of current asset which puts a negative impact on the profitability of firm.

Another study on the relationship between efficiency in current asset management and profitability was analysed in another study by Sen and Oruc (2009). Using quarterly data for 49 production listed firms during 1993 to 2007 on Istanbul stock exchange, they explained the relationship between different indicators of current asset management efficiency and return by two models. The result of their study indicates a significant negative relationship between return on total asset and different asset measures such as account receivable.

2.4.4 Net Asset Turnover and Profitability

Asset turnover refers to measurement that indicates the efficiency which the firms use their assets to generate sales (Gitman 2015). Asset turnover ratio measurement of the relative efficiency of a firm uses its total assets to obtain sales (Horne and Wachowicz, 1992) and, according to Weston and Copeland (1992), asset turnover ratio is calculated of efficiency of management of investment in each of the individual asset items. A higher level ratio number means that company can manage assets to generate avenue so higher profit can be earned by the company. Based on the description above, the hypothesis can be formulated as follows:H2 total turnover affects profitability.

2.4.5 Account Receivable Management Measurement Key Performance Indicators

Monitoring your account receivable management performance is the first step in improving the ways you manage it. After all, "if you don't know where you are going, you will end up somewhere else." (Laurence J. Peter, 2007). Below are some of the important metric you should consider when measuring account receivable performance.

- Days Sales Outstanding (DSO)

- Account Receivable Turnover Ratio (ART)

- Average Days Delinquent (ADD)

- Collection Effectiveness Index (CEI)

2.4.6 Benefit of Account Receivable Management

According to Lindsey O'Brien (2017)
Improve your cash position

➢ Increase control over cash and working capital

Understanding your cash position and improving account receivable performance is key to managing working capital effectively. You get the insights you need to make strategic investment decisions such as capital equipment purchase, new employees' hires, facility expansion, and other investments to grow your business. Further, you will have more cash on hand by improving your invoice collection process.

➢ Increase account receivable management efficiency

How much time do you waste trying to figure out who to call, when, and why, and how long does it take you to get the information you need to resolve issues so you can get paid? The answer –a lot more time than you think. According to pay stream advisors, companies that use account receivable management software to get organisation and to automate mundane tasks can:

- Reduce time spent prioritising and preparing for calls from 15% to 6%.

- Reduce time spent managing disputes from 40% to 13%

- Increase the time they spend soliciting customers for payment from 20% to 62%

2.4.7 Firm's Profitability

Profitability is the ability to make profit from all the business activities of an organisation. It measures management efficiency in the use of organisation resources in adding value to the business. Profitability may be regarded as a relative term measurable in terms of profit and its relation with other elements that can directly influence the profit. Corporate profitability is a measure of the amount by which company revenue exceeds its relevant expenses. It is an evaluation of management's ability to create earning from revenue-generation bases within an organisation. Thus, management is interested in measuring the operating performance in terms of profitability. Hence, a low profit margin would suggest ineffective management and investors would be hesitant to invest in the firm. Profitability is the ability to make returns from all the business activities of an organisation, company, firms, or an enterprise and the concern of every firm

lies with its profitability. Profitability shows how efficiently the management can make profit by using all the resources available in the market (Nwaechina, 2013).

Profitability is also considered as the rate of return on investment and a widely used financial measure of performance; hence, if there will be an unjustifiable overinvestment in current assets then this would negatively affect the rate of return on investment. The primary goal of credit management is to control current financial resources of a firm in such a way that a balance is reached between profitability of the firm and risk association with that profitability (Ifurueze, 2013). The greater the risk associated with a business, the more profitability is adjusted and vice-versa. Profitability is determined by the capital structure, size, growth, market discipline, risk and reputation of a firm.

Corporate profitability is measured using ratio analysis, profitability in relation to sales includes ratios such as Gross Profit Margin (GPM), Net Profitability Margin (NPM), Operating Expenses Ratio (OER), and so on. However, profitability in relation to investment, which to a greater extent justifies the efficiency and performance of a firm, includes ratios such as return on investment (ROI), return on equity (ROE), earnings per share (EPS), dividend per share (DPS), dividend pay-out ratio (DPR), dividend yield (DY) and earning yield (EY), price-earnings ratio (P/E), market value to book value ratio (MV/BV), and Tobin's Q (T-Q). Profitability and management efficiency are usually taken to be positively associated such that poor current profitability may threaten current management efficiency and poor management efficiency may threaten profitability. It is related to the goal of shareholders' wealth maximization, and investment in current assets is made only if an acceptance return is obtained. Therefore, the

management of investment in current assets is an aspect of corporate finance and it has the capability of influencing how profitable a firm is.

2.4.8 Credit Collection Procedure

A credit collection policy is a procedure used by a company to collect overdue or delinquent account receivables (Megginson and Scott, 2008). A credit collection policy Manuel is the procedure used to collect past due accounts, including the toughness or laxity used in the process. At one extreme, the firm might write a series of polite letter after a fairly long delay; at the other extreme, delinquent account may be turned over to a collection agency relatively (Brigham et al., 2012).

Business today cannot afford excessive write-offs or large number of delinquent accounts. Lack of operating cash was the primary cause of death 'for many U.S' dot-coms' in the early 2000s. Poor cash flow management continues to result in the collapse of business enterprise, large and small worldwide. One of the most common cash-traps is uncollected sales, i.e. account receivables (Richard, 2008).

A company can improve its cash flow by reducing its day's sales outstanding (DSO) which is attained by training customers to pay on time. This requires constant attention and follow ups. Firms should be somewhat firm, but excessive pressure can cause customers whose businesses are profitable to take their businesses elsewhere. Thus, a balance must be struck between the cost and benefit of different collection policies (Brigham et al., 2009)

For many overdue or delinquent accounts, a reminder form, telephone call or visit may facilitate customer payment. At the minimum, the company should generally

suspend further sales until the delinquent account is brought current. Should these actions fail to generate customer payment, it may be necessary to negotiate with the customer for past-due amounts (Megginson and Scott, 2008).

A firm should have invoice printed and mailed as quickly as possible and look for ways to improve invoice accuracy without delaying the present date. The sooner you can get the accurate invoice to the customer; the sooner payment will be made. Offer financial inducements to customers who agree to pay your invoice electronically; with customers, who have a history of paying late, begin collection efforts before the due date. Call to enquire whether they have the invoice and if everything is in order, resolve any problem quickly at this point and if a customer indicates it he has a problem with part of the invoice, authorized partial payments.

When a firm identifies a customer whose account is overdue, it may be the following sequence of steps: the firm mails a delinquency letter notifying the customer of the past due account. Frequent follow up of delinquent account greatly increase chance of collecting them. People will often have prioritized payment based on how much of a hassle they are expected to receive. The firm may send a polite friendly reminder to those customers who are just a few days late with their payment. Letters with a more serious tone may follow as the receivables remain outstanding for longer periods (Ken et al., 2005)

The firm calls the delinquent customer to discuss payment. The firm may agree to extend payment period if the customer has reasonable excuse. The firm may also send a representative to meet with the delinquent customer. Again, the firm may

decide to grant a credit extension to customer with a reasonable excuse for the delinquency (Ken et al., 2005).

Penalising delinquent accounts can be an effective way to ensure timely payments. This can be done by levying interest on overdue balance (Richard, 2008). Where goods were sold with a lien attached, collateral was pledged against the account or additional corporate or personal guarantee were given, the company should have utilized these options for obtaining payment (Megginson and Scott, 2008).

2.5 Trade receivables management and profitability

Trade receivable are one of the major constituents of the working capital of a firm and are basically represented in the financial statements as a current asset. It is thus, a firm's investment. The main aim of trade receivable management is to maximize shareholders value by striking a balance between liquidity, risk and profitability Hrishikes (2002). The primary aim of trade receivable management should not only concentrate on sales growth but should also concentrate on maximization of returns Wood (1953).

Due to a change in the dynamics in the market environment most firms employed new tactics and strategies to attract   new customers, with the main strategy including selling products and services on credit. Their aim main is to offload securities in the market with the hope that this will translate into a successful sales transaction. In doing so retain loyal customers and thus increase their market share. The purpose of offering credit by a firm is to maximize profit (Damilola, 2005).

However, this is not always the case. Such goods may not be paid in good time or they may not be paid at all. Trade receivable management is not as straightforward to manage as in inventories since it's an intangible asset and cannot be easily analysed (Brockington ,1987). Relaxing trade credit terms will result to an increase in credit sales but may also result in existing debtors not paying on time due to relaxed credit terms. The new sales attracted may not also be willing to pay on time. This can result in reduced cash flow due to delay in payments forcing the firm to seek external financing. The firm will incur finance costs in form on interest. There will also be an increase in debt collection costs in terms of extra resources employed to follow up the unpaid debt. These extra costs will negatively affect the profitability of the firm. On the other hand, if a firm increases its credit sales reasonably, it will directly result in increased operational costs since customers will make bulk payments for their purchases. The sales increase will result in increased profitability. Increase of sales will result in minimal inventories and, thus, saving on storage costs. This will also result in a favourable relationship with customers which will result in increased sales and sustained market share. From the arguments above, it's clear that trade receivables directly relate with profitability.

2.6 Credit management

An efficient credit management system reduces the amount of capital tied up with debtors and minimizes bad debts (Finlay, 2009). Peter (2005) conceived that there is a positive correlation between credit management and profitability.

According to Dina (2007), good credit management is vital to business cash flow and ensures business operations.

Good credit management involves optimizing cash flow to ensure stability and provide maximum potential for growth. Credit arises when a firm sells its products or services on credit and does not receive cash immediately. It is an essential marketing tool, acting as a bridge for the movement of goods through production and distribution stages to customers. A firm grants trade credit to protect its sales from the competition and to attract potential customers to buy its products on favourable terms. Trade credit creates receivable or book debts which the firms is are expected to collect in the near future.

The book debts or receivables arising out of credit have three characteristics: firstly, this involves an element of risk, which should be carefully analysed. Cash sales are totally riskless, but note that credit sales as the cash payment is yet to be received.

Secondly, it is based on economic value. To the buyer, the economic value in goods and services passes immediately at the time of sales, while the seller expects an equivalent value to be received later on.

Thirdly, it implies futurity. The cash payment for goods and services received by the buyer will be made in a future period. The customers from whom receivable or books debts have to be collected in the future are called trade debtors or simply as debtors and represent the firm's claims or assets (Ramamoorth, 2014, p.183). Philip (2010) cited four basic things a business must strive for effective credit management: know who your customer is before you start trading with them.

Agree on payment terms before supplying; invoice promptly after you have sent the goods; and do not be afraid to go for payment when it is due.

The importance of practising good credit management cannot be over emphasized. According to Michael (2007), good credit management is an essential component and a fundamental part of the modern commercial strategy. Michael (1997) consented that extending credit to customers is an aid to selling, and all staff should be involved. Michael blended sensible control of credit management and customer satisfaction with profitability. According to Steve (1997) of Association of Credit Professionals (ACP), good credit management is all about customer satisfaction and profit. Steve (2007) agreed with Michael's assertion. Michael contended that satisfied customers are more likely to pay promptly than buyers who feel they are not getting a good deal. Indeed, if revenue is the energy that powers a company, credit management is the engine that keeps it flowing. The credit management engine acts as a powerhouse, driving revenue and motivation to every part of the company. As the credit management engine becomes more refined and efficient, so does the company become more productive and profitability.

Good credit management should be a proactive task, starting even before the sales begin. Effective credit management will protect and prosper the business with regard to profitability; however, the opposite is true if effective credit management is practised. Credit indeed impacts all areas of life, and efficient credit management minimizes delinquency and bad debt losses.

2.7 Debtor's Ratio /Account Receivables

The goal of account receivables management is to maximize shareholders' wealth. Receivables are large investments in firms' assets, which are, like capital budgeting projects, measured in terms of their net present values (Emery et al., 2004). Receivables stimulate sales because they allow customers to assess product quality before paying; but on the other hand, debtors involve funds, which have an opportunity cost. The three characteristics of receivables the element of risk, economic value and futurity explain the basis and the need for efficient management of receivables. According to Berry and Jarvis (2006), a firm setting up a policy for determining the optimal amount of account receivables has to take into account the following: trade-off between the securing of sales and profits and the amount of opportunity cost and administrative costs of the increasing account receivables.

Account receivables measure the unpaid claims a firm has over its customers at a given time; this usually comes in the form of operating line of credit and it is mainly due within a relatively short time period (up to one year). The volume of account receivable indicates a firm's supply of credit while account payables show its demand of trade credit. The study of account receivable and account payable during the period of financial crises is important, particularly when the global economy is going through a credit shock. During global financial crisis, characteristic by high liquidity risk faced by banks, trade credits may increase, operating as a substitution for credits, or decrease acting as their complement. Bastos and Pindado (2012), for example, suggest that credit constraints during a financial crisis cause firms holding high levels of accounts receivable to postpone

payments to supplies, which act in the same manner with their suppliers. This give rise to a trade credit contagion in the supply chain characterized by a cascading effect. The current financial crisis provides economists a unique opportunity to study the role of alternative financial sources during periods of breakdown of institutional financing.

2.8 Determinant Factors of Profitability in Manufacturing Firms

The factors that determine profitability of manufacturing firms other than trade receivable management are as follows:

2.8.1 Size of the Firm

Various researchers have studied the association between a firm's size and its profitability and their main conclusion has been that there exists a positive association between the firm's size and the firm's profitability of a firm. Serrasqueiro & Nunes (2008) studied several firms of various sizes in Portugal for the period 1999-2003.They conclude that there was a positive significant association between profitability and the sizes of a firm. Velnampy & Nimalathasan (2010) investigate the relationship between the size of a firm and its profitability between the commercial bank of Ceylon and banks of Ceylon in Sri Lanka between the years 1997-2006. He concluded that there was a positive relationship between size and profitability in the commercial banks of Ceylon Ltd.

2.8.2 Inflation

According to Perry (1992), the effect of inflation on profitability depends on whether inflation is anticipated or unanticipated. In the case of anticipated

inflation, firms are able to timely adjust the prices of goods at a level which would ensure higher revenue and take adequate cost management measures, ensuring that operating costs do not exceed revenue, resulting in creasing profit. On the contrary, in conditions of unanticipated inflation, the firms do not adjust price properly, facing a lower increase in revenues in comparison to costs and ultimately a decrease in profitability. However, inflation could affect demand and supply for a firm's goods, by decreasing the value of revenues and the purchasing power of customers with fixed income. According to Cooper (1983), aside the effect of inflation on a firm's profitability through costs and revenue, and a shift in demand, inflation impacts a firm's performance by affecting the costs of borrowing (through increased interest rate) and taxes, as well. Demir (2009) confirm the negative effect of inflation uncertainty on publicly traded firms in turkey, as did Pattitoni et al. (2014) for European firms.

2.8.3 Growth Rate

The growth of a firm has a significant influence on its profitability MacMillan and Day (1987) concluded that a higher profitability could be as a result of rapid growth. Based on evidence, new firms become more profitably when they enter market quickly and on a large scale. This was due to the fact that firms that grow have benefits associated with economics of scale which results in reduced cost and, thus, higher profitability. Keith (1998) conducted a study on thirty-eight small firms involved in manufacturing in the Tayside region in Scotland for the relationship between the company characteristics, and growth in which he

reached the conclusion that industry group, size, age and location of a firm have a limited significance in explaining profitability.

2.8.4 Capital Structure

Modigliani & Miller (1958) introduced the capital structure theory trying to explain the impact of capital structure on profitability in which they took into consideration aspects such as taxation, bankruptcy cost and agency costs as factors in determining the optional capital structure that will maximize profitability. The agency theory of Jensen & Mecking (1976) and the trade-off theory of Bradey et al. (1984) suggest a positive relationship between profitability and leverage, which is use the of debt in the capital structure. Myers & Majluf's (1984) pecking order theory proposes a negative association between the amount of debt (leverage) in its capital structure and profitability of a company. Lalith (1999) studied the used of leverage on several firms in Sri Lanka and comes to the conclusion that there existed a negative relationship between profitability and leverage. It can therefore be concluded that the combination of equity and debt that a firm uses to finance its operation has a significant effect on its profitability. Although debt is a cheaper source of financing due to the tax debt shield, if used in excess, it can result in other costs such as increase risk of bankruptcy and a higher finance cost.

2.8.5 Market Share

Studies carried out on market share and profitability have generally come to the conclusion that there is a significant and positive association between the two variables. Fenny and Rodgers (1989) reviewed empirical evidence and concluded

that market share has a significant effect on profitability. Schmalense (1989) studied a sample of firms in the USA across a cross section of industries. He concluded that market share is strongly correlated with the profitability of a firm although it did not apply for some manufacturing firms in specific industries.

2.9 Summary of Literature Review

The literature shows that account receivables are key to drive a firm's profitability in business. There is a lot of concentration on the relationship between management of account receivables and the profitability of business organisation and customer's services. Most of the studies done, have reviewed a handful of information of trade credit and its impact on business performance in terms of profitability. This study had an expanded review of account receivables and their direct and indirect impact on profitability of PZ Cussons Ghana limited.

2.10 Conceptual Framework

Conceptual framework is a structure which the researcher believes can best explain the natural progression of the phenomenon to be studied (Camp, 2001). The conceptual framework presents an integrated way of looking at a problem under study (Liehr & Smith, 1999). A conceptual framework can be described as a presentation model which conceptualises or represents the relationship between variables diagrammatically. The main aim of the conceptual framework is to assist the reader to quickly visualize the proposed relationship at a glance. Figure 1 shows the relationship between independent variables and the dependent variable of the study.

Figure 1 below represents a conceptual framework of the relationship between the profitability of firms and trade receivables measures.
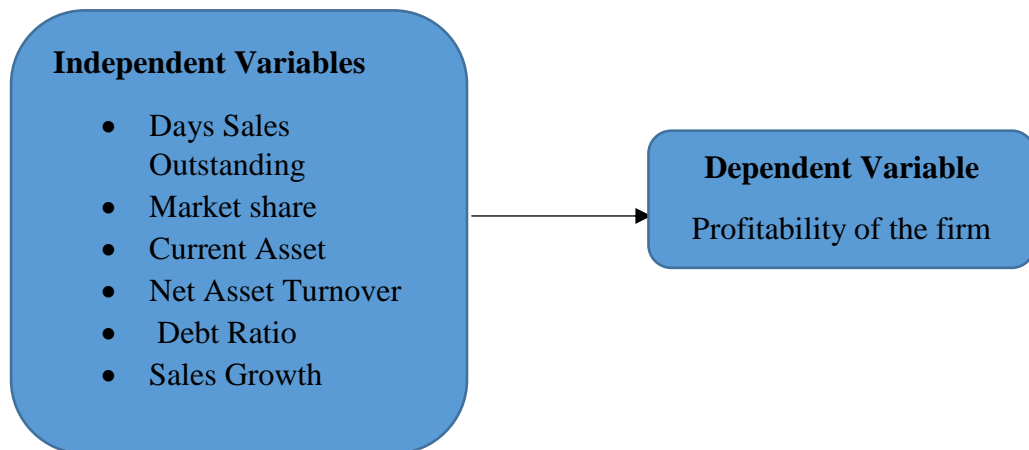
Figure 1: Conceptual Framework

(Source: Author)

Independent variable

Days Sales Outstanding (DSO) is also known as the average collection period (ACP), which represents the average number of days that receivables remain outstanding before they are collected, can be used by companies for trend analysis to compare the day's sales outstanding over time. It can also be used to compare the firm's set target or it can be used in comparison with the industry's average. It may also be used by the company for trend analysis to compare the collection period over time. Secondly, it may be used to compare with the set

target by the company and lastly it may be used in comparison with the industry average

Market share (MS) indicates how a firm performs relative to its competitors' higher market share and implies that a firm realizes higher sales than its competitors because it successfully increases its customer base.

The current ratio (CR) measures the adequacy of current asset to meet the liabilities as they fall due. It compares all of a company's current assets to its current liabilities. It also sometimes referred to as "working capital" ratio and help investors understand more about a company's ability to cover its short-term debts with current assets.

Net Asset Turnovers (NAT) It measures management efficiency in generating revenue from the net assets at its disposal. It compares the cedis amount of sales or revenue to its total assets. When the company's net asset turnover is lower it illustrates that a company is not using the assets efficiently.

Debtors' ratio (DBTR) is a financial ratio that measures the extent of a company's leverage. Lower debt ratio usually implies a more stable business with a potential of longevity because a company with lower ratio also has a lower overall debt. Debt ratio of 5 is often considered to be less risky.

Sales growth (SG) is the parameter which is used to measure the performance of the sales team to increase the revenue over a pre-determined period of time. Sales ratio is an essential parameter for growth.

Dependent Variables

Table 1: Profitability of the firm will be measured using the return on assets formula

VARIABLES	DEFINITIONS	MEASUREMENT	ABBREVIATION/CODE
Profitability	Is the ability of a company to use its resources to generate revenue in excess of its expenses. In other words, this is a company's capability of generating profits from its operation.	$\dfrac{\textbf{\underline{Net Profit}}}{\text{Total Asset}}$	ROA
Days sales outstanding	Is the average number of days that receivables remain outstanding before they are collected.	$\dfrac{\underline{\text{Debtors}}}{\text{Sales}}$	DSO
Market Share	Is the percentage of a market accounted for by a specific firm or entity	$\dfrac{\underline{\text{Current assets/Number of Share}}}{\text{Non-Current Assets}}$	MS
Current Ratio	The current ratio measures the adequacy of current asset to meet the liabilities as they fall due.	$\dfrac{\underline{\text{Current Asset}}}{\text{Current Liabilities}}$	CR

Net asset turnover	It measures management efficiency in generating revenue from the net assets at its disposal.	$\dfrac{\text{Sales}}{\text{Total Assets}}$	**NAT**
Debtors Ratio	Debtors ratio is an accounting measure used to measure how effective a company is in extending credit as well as collecting debt.	$DEBTR = \dfrac{\text{Total Debtors}}{\text{Total Assets}}$	**DEBTR**
Sales Growth	Sales growth is the percentage growth in the net sales of business from one fiscal period to another	$\dfrac{Sales_2 - Sales_1}{Sales_1}$	SG

2.11 Summary of theoretical and literature review

From the above review of the relevant theories and literature, it can be concluded that research on Account receivables has not been comprehensively exhausted. Most studies have generally focused on account receivable management with only a minimal focused on the impact of account receivable on profitability. The reviewed literature has not clearly pointed out the relationship between trade receivable and its impact on the profitability of manufacturing companies in Ghana, some indicating a positive relationship and others indicating negative relationship at all. This study seeks to fill the gaps in literature by studying the impact of account receivables on the profitability of manufacturing firms listed in the Ghana Stock Exchange (GSE).

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter sets out various stages and phases that were followed in completing the study. It involves a blueprint for the collection, measurement and analysis of data. This section is an overall scheme, plan or structure conceived to aid the research in answering the raised data gathered. Therefore, in this section, the researcher identifies the procedures and the techniques that were used in the collection, processing analysis of data. Specifically, the following subsections are included; research design, data collection instruments, data collection procedures and finally, data analysis.

3.2 Research Design

The research design used for the study was descriptive study. This seeks to gather data so that a description of what is going on can be made to find out whether there is any relationship between two variables. Descriptive study could be used to collect data through interview, observation or library research. The descriptive study was chosen because it enables easy description of the problem under study.

Saunders (2011) indicates that descriptive research design helps establish a causal relationship between variables by laying emphasis on studying a situation or a problem. The major purpose of a descriptive research is to provide information on the characteristics of a population or phenomenon. Descriptive research design was chosen because it would enable the researcher to generalise the findings to a

large population and it is more precise and accurate since it involves description of events in a carefully planned way.

The techniques were appropriate as they involved a carful in-depth study and analysis on the impact of account receivable management on firms' profitability of listed manufacturing firms in Ghana

3.3 Target Population

The population in this study are all companies listed on the Ghana Stock Exchange for the period 2010-2017. The sample is determined by the purpose sampling method criteria: manufacturing firms which are listed on the Ghana Stock exchange that publish financial reports and audit their financial statements for 2010-2017 Research periods of Companies.

Companies that have met the criteria to be sampled in this study are fourteen (14) they are: PZ Cussons, Nestle Ghana Ltd, Benso Oil palm Plantation, Hords, Meridian-Marshalls Holdings, Samba Fords, Same Woode, PBC, Fan Milk, Unilever, Mechanical Lloyd Company, Guinness Ghana, Starwin, Pioneer kitchen Ware, Cocoa Processing Company (CPC) and the specified companies are provided in the table below:

Table 2: Target Population

No	Names of companies
1	PZ Cussons
2	Nestle Ghana ltd
3	Fan Milk
4	Unilever Ghana Limited
5	Guinness Ghana
6	Starwin, Pioneer Kitchen Ware
7	Cocoa Processing Company

The independent variable in this study are days' sales outstanding or account receivable (DSO), current asset (CR), Net Asset Turnover (NAT), inflation and interest rate. The dependent variable in this study is firm's profitability (ROA). Operational definitions of the variables in this study are presented in table 1

Burns & Grove (2003) state that population includes all elements that meet certain criteria for inclusion in a study. The target population consists of all members of a real or hypothetical set of people, events or objects from which a researcher wishes to generalise the results of their research while accessible population consists of all the individuals who realistically could be included in the sample (Borg & Gall, 2007).

3.4 Sample Size

This research focuses on the entire selected listed manufacturing firms on the Ghana stock exchange. These companies are; PZ Cussons Ghana, Nestle Ghana, Guinness Ghana, Fan Milk Limited, Starwin, Pioneer Kitchenware, Cocoa

Processing Company and lastly unilever Ghana. The study covered the said listed manufacturing firms over a period of 8 years between 2010-2017. A research was carried out; however, merely complete data which was available and needed was obtained from only eight of the fourteen quoted manufacturing firms in the Ghana Stock Exchange.

3.5 Data Collection instrument

In this study, the researcher employed secondary data. This information was useful for generating additional statistics for the study from already documented information or to be had reports. Williams (2011), in addition, provides an explanation for the secondary statistics as a useful quantitative approach for comparing historic on contemporary personal or public information, reviews, authority's files and evaluation. This sources of data are the secondary data was obtained from the published annual financial reports and account of companies from the internet data collected from already audited annual reports from the year 2010-2017 of eight manufacturing firms listed in the Ghana stock exchange (GSE).

3.6 Data Collection Procedure

Creswell and Clark (2007) observe that data collection is the process of gathering and measuring information on targeted variables in an established systematic fashion, which then enables one to answer relevant question and evaluation outcomes. The study used secondary data which was obtained from the internet website of the various companies or firms**.**

3.7 Data Analysis

According to Kothari (2004), data analysis is the process of inspecting, electing, cleansing, transforming, and modelling data with the goal of discovering useful information, suggesting conclusions, and supporting decision making. The researcher relied on quantitative panel data to reach the findings of the study. The data that was collect through the financial report of selected listed firms on the Ghana stock exchange was tabulated. Descriptive Ordinary Least Square (OLS) was used and includes means and standard deviation. Furthermore, descriptions with tables were made.

3.8 Analytical Model

Before the processing of the responses, the complete financial report was edited for completeness and consistency. The finding was presented, using tables and multiples regression models. Tables were used to summarize responses for further analysis and facilities comparisons. For this particular study, the researcher was interested in finding out the impact of account receivable management on the profitability of listed manufacturing firms in Ghana. The model used in the study is presented in the form below;

Equation

$$Y_{it} = X_0 + X_1DSO_{it} + X_2MS_{it} + X_3CR_{it} + X_4NAT_{it} + X_5DEBTR_{it} + X_6SG_{it} + E_{it}$$

Where

ROA_{it} = Return on asset of firm i at time t

Where: Y= Firms profitability

Y_{it} = Dependant variable

DSO_{it} = Days Sales Outstanding

MS_{it} = Market Share

CR_{it} = Current Ratio

NAT_{it} = Net Assets Turnover

$DEBTR_{it}$ = Debtors Ratio

SG_{it} = Sales Growth

B_1 = Coefficient of Determinant

B_0 = Constant

t: time period 2010, 2011, 2012…,2017

E_{it} = Is the error term

CHAPTER FOUR

RESULTS AND DISCUSSIONS

4.1 Introduction

This chapter presents the analysis and presentation of the findings obtained from the secondary data collected on the impact of account receivable management on the profitability of listed manufacturing firms. The companies involved in this study are: PZ Cussons, Nestle Ghana Ltd. Fan Milk, Unilever, Guinness Ghana, Starwin, Pioneer Kitchen Ware, Cocoa Processing Company (CPC). Descriptive statistics were used to discuss the findings of the study. The study used eight companies which is satisfactory to make a conclusion for the study.

Data Presentation

Table 4.1: Raw data for PZ Cussons Ghana limited

Year	Return on asset %	Days sales outstanding	Market share	Current asset	Net asset turnover	Debt Ratio	Sales Growth
2010	18.96	0.19 days	21.779	2.02	2.04 times	0.24	22.76
2011	23.43	0.26 days	26.894	1.89	2.00 times	0.30	20.75
2012	3.02	0.27 days	14.504	1.64	2.57 times	0.36	24.38
2013	26.38	0.32 days	18.143	1.90	2.34 times	0.42	16.30
2014	-2.69	0.38 days	16.997	1.53	2.82 times	0.47	11.91
2015	-3.56	0.41 days	-270.847	1.28	3.33 times	0.51	11.01
2016	31.26	0.28 days	7.749	1.04	2.89 times	0.30	-0.56
2017	-25.82	0.32 days	7.135	1.08	2.26 times	0.27	-22.36

Sources: Authors Computation from Annual Accounts of Firm (2010-2017)

This company did make profit in almost all the years except 2015 and 2016, which means in these years, they have more to receive than to pay.   Therefore, for every cedi in total assets, PZ Cussons limited was able to generate 2.0 in sale except 2015 that the company for every cedi in total assets, it was able to generate 3.328. The company days' sales outstanding is lower, which simply means the company is doing well since it takes lesser days in the collection of the receivables

Table 4.2: Raw Data for Fan Milk Ghana Limited

Year	Return on asset %	Days sales outstanding	Market share	Current asset	Net asset turnover	Debt Ratio	Sales Growth
2010	35.89	0.029 days	5.210	2.68	1.93 times	0.04	25.83
2011	29.26	0.020 days	6.240	2.52	1.68 times	0.02	5.30
2012	33.87	0.028 days	6.168	1.43	2.25 times	0.04	34.71
2013	33.87	0.034 days	7.643	1.97	1.71 times	0.04	-5.59
2014	15.95	0.032 days	8.102	1.71	2.04 times	0.04	27.72
2015	27.91	0.023 days	12.028	1.75	2.48 times	0.03	77.70
2016	33.57	0.029 days	17.438	1.41	2.12 times	0.04	22.50
2017	21.16	0.062 days	22.168	1.71	1.92 times	0.09	15.41

Sources: Authors of The Computation from Annual Account of the Firm's (2010-2017)

Return on asset shows that the company was able to earn a return on its investment in assets but their profit was not progressive; they made their highest profit in 2010. Net asset turnover of the company in 2012, 2014, 2015 and 2016 was able to meet industry standard and its performance was lower than that of PZ Cussons Limited. Days sales outstanding indicates that they have lower days of colleting their money from customers except in 2017 that it took them 62 days for the collection, which is beyond the industry standard.

Table 4.3 Raw data of Nestle Ghana limited

Years	Return on assets %	Days sales outstanding	Market share	Current asset	Net asset turnover	Debt Ratio	Sales Growth
2010	34.77	0.11 days	146.934	1.29	1.35 times	0.10	0.09
2011	10.93	0.16 days	180.398	0.95	1.07 times	1.10	-23.76
20-12	10.64	0.15 days	194.609	0.88	1.03 times	0.10	7.26
2013	10.85	0.13 days	199.189	0.91	1.05 times	0.10	2.71
2014	8.17	0.15 days	223.242	1.03	0.91 times	0.10	-0.59
2015	10.01	0.14 days	18.539	0.88	0.98 times	0.09	-3.08
2016	9.98	0.14 days	25.431	0.85	0.95 times	0.09	0.77
2017	7.62	0.13 days	24.537	0.83	0.67 times	0.09	0.13

Sources: Authors Computation from Annual Accounts of Firm (2010-2017)

The return on asset of PZ Cussons limited is better than this company. In simple terms, this company's return on asset is lower than that of PZ Cussons limited. Current asset is lower and net asset turnover was low in 2014, 2015, 2016 and 2017. The company was not able to turnover its asset once. Their debt collection days are lower. Their current asset is better from 2010 2013 and fell from 0.1 above from 2014-2017 lower which means they're not efficient in Turing their asset efficiently.

Table 4.4: Raw Data for Guinness Ghana

Year	Return on asset %	Days sales outstanding	Market share	Current asset	Net asset turnover	Debt Ratio	Sales Growth
2010	11.629	0.03 days	1.720	0.416	1.09 times	0.03	-55.63
2011	10.128	0.02 days	1.741	0.325	1.19 times	0.02	41.54
2012	16.641	0.03 days	1.444	0.984	1.19 times	0.03	-37.98
2013	10.458	0.03 days	1.588	0.559	1.08 times	0.03	53.20
2014	1.351	0.10 days	1.461	1.220	0.79 times	0.07	-17.08
2015	0.956	0.06 days	0.989	0.811	0.91 times	0.05	71.34
2016	12.438	0.03 days	0.968	1.203	1.07 times	0.03	-27.49
2017	386.843	0.09 days	0.957	1.064	0.81 times	0.70	2.75

Sources: Authors Computation from Annual Accounts of Firm (2010-2017)

Return on asset over the nine years was fluctuating respectively and 2017 recorded positive results in terms of profit. Their collections were also very good as compared to other companies above. Their current asset was not lower, which was not favourable as in 2014, 2016 and 2017. They were able to improve their current asset ratio which was also lower than the industry standard. It simply means the company cannot cover their current liability. Net asset turnover too was lower.

Table 4.5 Raw Data for Unilever Ghana

Years	Return on assets %	Days sales outstanding	Market share	Current asset	Net asset turnover	Debt Ratio	Sales Growth
2010	17.37	0.14 days	4.39	1.61	1.29 time	0.18	7.85
2011	27.95	0.14 days	5.485	1.41	1.52time	0.21	32.85
2012	7.89	0.72 days	4.616	1.45	0.42 times	0.35	-67.67
2013	10.73	0.09 days	132.912	0.81	1.68 times	0.14	315.75
2014	2.17	0.09 days	160.67	0.71	1.83 times	0.15	26.91
2015	16.39	0.10 days	53.29	0.93	1.69 times	0.16	26.38
2016	14.21	0.11 days	63.682	0.94	1.31 times	0.14	-4.32
2017	14.34	0.16 days	100.498	1.06	1.23 times	0.20	16.01

Sources: Author 's Computation from Annual Accounts of Firm (2010-2017)

The return on asset ratio of this company is good. Receivable ratio is low, which is good. The company's current ratio was low and dropped to zero from 2013 - 2016. The net asset turnover was good but got bad in 2012.

Table 4.6 Raw Data for Starwin Production

Years	Return on assets %	Days sales outstanding	Market share	Current asset	Net asset turnover	Debt Ratio	Sales Growth
2010	14.10	0.18 days	0.941	1.47	5.44 times	0.17	21.91
2011	24.81	0.29 days	1.181	1.54	1.79 times	0.33	12.87
2012	13.82	0.23 days	1.282	1.56	1.86 times	0.25	13.25
2013	20.61	0.22 days	1.528	1.73	2.14 times	0.28	38.87
2014	5.79	0.25 days	1.089	3.81	0.84 times	0.16	4.02
2015	0.85	0.15 days	1.071	3.63	0.71 times	0.08	-17.05
2016	8.25	0.19 days	1.481	0.04	0.82 times	0.07	59.19
2017	12.08	0.02 days	1.631	0.33	0.72 times	0.01	-3.05

Sources: Author's Computation from Annual Accounts of Firm 2010-2017

The return on asset in 2015 was not good. Their receivable collection days were good. In 2016, their current asset was very low. Their net asset turnover dropped from 2014-2017 respectively.

Table 4.7 Raw Data for Pioneers Kitchen

Years	Return on assets %	Days sales outstanding	Market share	Current asset	Net asset turnover	Debt Ratio	Sales Growth
2010	-30.62	0 days	0.435	0.25	4.57 times	0.00	-20.51
2011	-23.47	0 days	-0.144	2.93	2.19 times	0.00	27.89
2012	-24.81	0 days	-0.945	0.32	-1.48 times	0.00	-44.95
2013	-21.95	0 days	-2.245	0.20	-0.93 times	0.00	49.67
2014	-59.56	0.01 days	-3.972	0.05	-0.35 times	0.01	-33.01
2015	-1.24	0.09 days	33.882	0.06	0.02 times	0.01	-41.44
2016	-0.45	0.03 days	31.814	0.13	0.04 times	0.01	-17.90
2017	-0.47	0.10 days	30.722	0.07	0.01 times	0.01	-75.07

Sources: Author 's Computation from Annual Accounts of Firm 2010-2017

This company did not make profit in all the years. Their days for collecting their receivables from customers were lower and favourable for the company. They made the highest current asset only in 2011. From 2012 -2017, their net asset turnover was not better.

Table 4.8 Raw Data for Cocoa Processing Company Ghana

Years	Return on assets %	Days sales outstanding	Market share	Current asset	Net asset turnover	Debt Ratio	Sales Growth
2010	-6.84	0.11 days	0.105	0.80	1.20 times	0.07	84.72
2011	-3.06	0.20 days	0.718	0.48	1.36 times	0.08	-28.54
2012	-5.22	0.19 days	0.019	0.04	1.65 times	0.07	-8.26
2013	-54.84	0.31 days	1.083	0.41	0.76 times	0.11	9.14
2014	-8.44	0.18 days	0.473	0.25	0.58 times	0.05	-39.51
2015	-5.68	0.31 days	2.188	1.73	0.19 times	0.04	-40.37
2016	-2.73	0.52 days	1.899	1.62	0.15 times	0.03	-67.24
2017	-3.30	0.47 days	1.465	1.45	0.15 times	0.02	-19.07

Sources: Author 's Computation from Annual Accounts of Firm (2010-2017)

This company did not make profit in all the years; they had more to receive than to pay. Their collection is good, except 2016 when they used fifty-two days in collecting the receivables. Current asset was lower which means from 2010 - 2014, they could not cover their liabilities even once. The higher sales growth was in 2010 and recoded negative growth from 2011-2017.

4.2 Descriptive statistics

This section presents the descriptive statistics of the data collected for the study.

Table 4.9 Descriptive statistics of the companies

	N	Min	Max	Mean	Std. Dev
Days Sales Outstanding	72	0.00	0.72	0.159	0.14521
Market share	72	-270.847	223.242	28.144	68.860
Current ratio	72	0.04	3.81	1.161	0.775
Net asset turnover	72	-1.48	5.44	1.350	1.069
Sales growth rate	72	-75.08	950.44	20.440	121.594
Debtors ratio	72	0.00	1.10	0.148	0.182
Return on asset	72	-59.00	386.00	11.843	47.947

Source: GSE (2019)

DSO: Days Sales Outstanding

MS: Market Share

CR: Current Ratio

NAT: Net Asset Turnover

DEBTR: Debt Ratio

SG: Sales Growth

4.3 Correlation analysis

Correlation analysis was done to measure the degree of relationship between the account receivables management on firm's profitability account receivables (in days) market share, current ratio, net asset turnover, debtor's ratio, sales growth rate (in percentage) to check whether they influence firm's profitability of the

various companies listed on the stock market; PZ Cussons, Nestle Ghana Ltd.

Fan Milk, Unilever, Guinness Ghana, Starwin, Pioneer Kitchen Ware, Cocoa

Processing Company (CPC).

DSO: Days Sales Outstanding

MS: Market Share

CR: Current Ratio

NAT: Net Asset Turnover

DEBTR: Debt Ratio

SG: Sales Growth

Table 4.10 Correlation between variables

	DSO	MKS	CR	NAT	DBTR	SG	ROA
Days Sales Outstanding	1						
Market share	-0.107	1					
Current asset	0.175	-0.105	1				
Net asset turnover	0.001	-0.157	0.288^*	1			
Debtors ratio	0.422^{**}	0.082	0.158	0.247^*	1		
Sales growth rate	-0.170	0.007	0.096	0.108	-0.061	1	
Return On Assets	-0.070	0.025	0.115	0.050	0.392^{**}	-0.013	1

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Source: GSE (2019)

The result in table 4.10 shows the correlation analysis among the firm's profitability variables. The results show that days sales outstanding has a positive and significant correlation with Debtors ratio with a positive value of 0.422, significant at 1%. Return on Assets has a positive and significant relationship with Debtors ratio, with correlation value of 0.392, significant at 1%. This conforms the findings of Duru & Ubesie (2016) who found out that debtors ratio has a positive and significant relationship with profitability of firms in Nigeria. Current ratio has a positive and strong correlation with Net asset turnover ratio with value of 0.288, significant at 5%. Furthermore, Net asset turnover ratio has a positive and significant correlation with debtor's ratio with a value of 0.247.

4.4 Regression analysis

The multiple regression between debtors' ratio, current ratio, net asset turnover, market share, sales growth, accounts receivable as independent variables and return on asset as dependent variables reveal an R value of 0.494 and R-squared value of 0.244. This means that all the independent variables explain about 24.4% of the dependent variable. Table 4.11 presents this result.

Table 4.11 Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.494[a]	0.244	0.175	43.559

a. Predictors: (Constant), DSO,MKS CR, NAT, DEBTR, SG

Source: GSE (2019)

Table 4.12 reveals that the variables in the model have a significant relationship (F - 3.504, p-value – 0.005).

Table 4.12 ANOVAa

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	39892.323	6	6648.720	3.504	0.005[b]
Residual	123330.995	65	1897.400		
Total	163223.318	71			

a. Dependent Variable: **ROA**

b. Predictors: (Constant), DSO, MKS,CR, NAT, DEBTR,SG

Source: GSE (2019)

Table 4.13 shows the multiple regression between the independent variables and ROA, the dependent variable

Table 4.13 Multiple Regression Model

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	**Std. Error**	**Beta**		
(Constant)	8.624	12.043		0.716	0.477
DSO	-110.497	41.167	-0.335	-2.684	0.009
MS	-0.044	0.078	-0.063	-0.562	0.576
CR	7.399	7.130	0.120	1.038	0.303
NAT	-5.648	5.342	-0.126	-1.057	0.294
SG	-0.013	0.044	-0.033	-0.302	0.764
DBTR	144.396	33.206	0.548	4.349	0.000

a. Dependent Variable: ROA

Source: GSE (2019)

Definitions of variables

DSO: Days Sales Outstanding

MS: Market Share

CR: Current Ratio

NAT: Net Asset Turnover

DEBTR: Debt Ratio

SG: Sales Growth

The results reveal that Days Sales Outstanding (DSO) has a negative but statistically significant relationship with return on asset (β= -110.497, p-value = .009). Furthermore, debt ratio also had a positive and statistically significant relationship with return on asset (β=144.396, p-value = .000). The other independent variables were not statistically significant with Return on Asset.

4.5 Analysis of results

The results reveal that Accounts receivable has a negative but statistically significant relationship with return on asset (β= -110.497, p-value = .009). Ikechukwu & Nwakaego (2015) found out from their study that a positive relationship existed between accounts receivable and profitability, which was statistically significant. This meant that when receivable increases the profitability of the firm accounts increases. However, this study reveals a negative relationship between profitability and accounts receivable which is in synchrony with theory; that is to say that when your accounts receivable increases, it negatively affects your profitability as a firm. Furthermore, debt ratio also had a positive and statistically significant relationship with return on asset

(β=144.396, p-value = .000). Ikechukwu & Nwakaego (2015) also conducted similar study and they rather found an insignificant and negative relationship between debt ratio and firm profitability.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

The chapter discusses the summary and conclusion of the research findings in relation to the objective as stated in chapter one. It also discusses the recommendations of the study, its limitation as well as the suggested areas of further research. The researcher intended to determine the impact of account receivables on profitability of listed manufacturing firms in Ghana.

5.2 Summary of Findings

The results from the study reveal several factors about management of account receivable. With regard to account receivable, the study reveals that it had a positive and significant relation with profitability and in fact account receivable should be increased. The study reveals among the eight company under study that debt ratio was positive and highly significant.

5.3 Conclusion

The purpose of this study is to examine the impact of account receivable management on the profitability of companies in Ghana. The researcher finds out that account receivable has a negative and significant impact on profitability while debt ratio has a positive and significant impact on profitability. However, market share, net asset turnover, and sale growth rate have had negative and non-significant impact on profitability while current ratio had a negative and non-significant impact on the companies.

5.4 Recommendations

Account receivable and debt ratio was all found to have a positive effect on profitability of PZ Cussons, Nestle Ghana Ltd. Fan Milk, Unilever, Guinness Ghana, Starwin, Pioneer Kitchen Ware, Cocoa Processing company (CPC).

Therefore, the study recommended that the various listed companies under study should increase their account receivables and debt ratio so as to improve profitability. Effective management of account receivables will help to increase their cash flow/ liquidity and reduce their low cash flow.

There is also a need for the selected firms to enhance their debt collection period. This will help to decrease the amount of debt they write-off as a bad debt. In other words, it will decrease default level of the customers and as well as increase the liquidity level. This will help to improve their financial performance.

5.5 Recommendation for further study

The study sought to determine the impact of account receivable management on the profitability of listed manufacturing firms in Ghana. Further research should also be done on the relationship between account receivable management and liquidity.

Secondary data was used for this study. The researcher would suggest that future research should consider using primary data to confirm or refute the results of the study. This would help establish the study in the literature.

References

ACCA, (2009), Financial *Management, BPP Learning Media*

Berry and Jarvis (2006) *Profit Contribution Accounting and Marketing Interface Industrial Marketing Management* 6, (2)125-128

Bingham, f, Houston, J.F, and Eugene, f. (2009). *Fundamentals of financial management*, 6th Edition New Jersey: Concise

Borg, D. & Gall, R. (2007) Educational Research: *An Introduction*. Boston: Pearson Education.

Brockington, R. B. (1987*). Financial Management. Channels Islands*: 4th Edition Guernsey Press Co. Ltd.

Burns, N., & Grove, K. (2003*) Understanding Nursing Research* (3rd Ed.). Philadelphia: W. B./Saunders Company.

Camp,W. G (2001). Formulating and Evaluating Theatrical Framework for Career and Technical Education Research. *Journal of Vocational Educational Research,* 26(1), 27-39

Damilola, D. (2005). 1st Edition *Corporate Finance Issues Investigations, Innovations and Applications*: Lagos: High Rise Publication

Demirgus-Kunt A, Maksimovic V (2011), Law Finance and Firm Growth, *The Journal of Finance* 53, 2107-2137

Emery E (2004). A Pure Financial Explanation for Trade Credit, *Journal of Financial and Quantitative Analysi*s.22, 209-225.

Ifurueze M. S. K (2013). The Impact of Effective Management On Credit Sales On Profitability and Liquidity of Food and Beverage Industry in Nigeria, *Global Journal of Management and Business Research USA* 13(2).

Hrishikes, B. (2002). *Working Capital Management: Strategies and Techniques*; New Delhi Prentice Hall.

Jensen, M. C., & Meckling, W. H. (1976). Theory of the Firm: Managerial Behavior, *Journal of Financial Economics,* 305-360.

Joy, O. M. (1978). *Introduction To Financial Management* (Madras: Institute For Financial Management And Research) New Delhi:Anmol Publication(P) Ltd.

Kakuru Julius (2000). *Financial Decision and The Business* (1st edition). The business publishing group Kampala.

Kakuru Julius (2001). *Financial Decisions and Business* (2nd edition). The Business Publishing group Kampala.

Keith, G. (1998). Determinants of Growth and Profitability in Small Entrepreneurial Firms. *International Journal of Entrepreneurial Behaviour & Research* 4(1), 18-27.

Lalith, P. S. (1999). The Capital Structure of Sri Lankan Companies. *Sri Lankan Journal of Management*, vol. 4, nos.1&2, 18-30.

Lavrakas, P. (2008). *Encyclopaedia of Survey Research Methods* (Vol. 1&2) L.A, United States of America: Sage Publications.

MacMillan, C., & Day., D. L. (1987). MacMillan, I. C. and D. L. Day. 'Corporate Venture into Industrial Markets: Dynamics of Aggressive entry'. *Journal of Business venture,* 2(1), winter, 29-39.

Megginson, L. and Scott, B (2008) *Introduction to Corporate Finance*. London: South western publishers

Liehr. & Smith M. J. (1999). *Middle Range Theory: Spinning Research and Practice to Create Knowledge for The New Millennium*. Advance in Nursing Science, 21(4):81-91

Michael Bradley, G. A (1984). On the Existence of an Optimal Capital Structure: Theory and Evidence. *The Journal of Finance*, 857-878.

Neuman, W. l., (2000). *Social research methods: qualitative and quantitative*.

Newing, H. (2011). *Conducting Research in Conservation: Social Science Methods and Practice.* New York, United States of America: Routledge

Periassamay, P. (2009). *Financial Management* 2nd Edition. New York: Mcgraw-Hill Publication.

Periassamy, P. (2009) *Financial Management*, 2nd edition. New Delhi: McGraw-Hill publications.

Philip K. (2010) *four basic things business must strive for effective credit management*

Rajan Raghurun and Luigi Zingales (1995) *What Do You Know About Capital Structure?*

Richard, C. (2008). *Keys to Effecti ve Credit Management.* hhtp://www.credit-cash-advisor.com [Accessed 18th May 2017]

Serrasqueiro, Z., & Nunes, P. M. (2008) Determinants of Capital Structure: Comparison of Empirical Evidence from the Use of Different Estimators. Serrasqueiro and Nunes, *International Journal of Applied Economics*, 5(1), 14-29.

Velnampy T & Nimalathasan, B. (2010). Firm Size on Profitability: A Comparative Study of Bank of Ceylon and Commercial Bank of Ceylon Ltd in Srilanka. *Global Journal of Management and Business Research*, 96-100.

COMPUTATIONS OF THE CATEGORIES OF THE RATIOS

PROFITABILITY RATIO COMPUTATION

RETURN ON ASSETS (ROA)

ROA =Net profit before interest and tax x 100

Capital employed

NB: Capital employed = Total asset less current liabilities

NB: All the figures are in GH¢'000

PZ CUSSONS								
YEAR	2010	2011	2012	2013	2014	2015	2016	2017
Net Profit Before Interest And Tax	5107467	7748747	965066	10797474	-1022273	-1272023	12793260	10505242
Capital Employed	26932682	33069734	31987669	40923536	37986567	35741869	40923332	40692251
ROA	18.96%	23.43%	3.02%	26.38%	-2.69%	-3.56%	31.26%	-25.82%

FAN MILK

Net Profit Before Interest And Tax	24552	23221	32704	32704	19769	59779	82255	63503
Capital Employed	53866	-60791	65345	65345	87071	127185	182028	231923
ROA	35.89946	29.26439	33.87155	33.87155	15.95394	27.90621	33.5647	21.15998

NESTLE

Net Profit Before Interest And Tax	38820	12471	13388	13068	10905	12408	13163	10156
Capital Employed	81495	77859	87280	87525	100555	90671	94384	133210
ROA	34.77217151	10.93074826	10.63577937	10.8500357	8.17159985	10.00709723	9.979454288	7.624052248

GUINNESS

Net Profit Before Interest And Tax	21986	20681	40620	31163	5667	4594	65789	20700
Capital Employed	189046	204188	244099	297991	419379	480654	528926	535100

ROA	11.62997366	10.12841107	16.64078919	10.45769839	1.351286906	0.955781082	12.43822387	386.8435806

UNILIVER GHANA

Net Profit Before Interest and Tax	23905	44208	14687	20615	4868	50382	53768	67204
Capital Employed	139624	158187	186246	192123	224758	307250	378391	468631
ROA	17.36979015	27.94667071	7.885806944	10.73010519	2.165885085	16.39772172	14.20964029	14.34049391

STARWIN PRODUCTION

Net Profit Before Interest and Tax	561005	925663	614845	1075381	617599	89814	1332814	2224542
Capital Employed	692025	2375612	2586134	3121998	8274055	8082715	11243445	12419187
ROA	14.99111497	24.81193958	13.81822276	20.69996133	5.787091654	0.846300936	8.250580268	12.08373028

PIONEER KITCHEN WARE								
Net Profit Before Interest and Tax	-521785	-371532	-514858	-396068	-691091	-437405	162052	-168169
Capital Employed	376627	1006775	-818137	-1944438	-3440401	29348260	28734641	26611484
ROA	-30.62404297	-23.47207727	-24.80571527	-21.94539085	-59.55966127	-1.23460679	-0.447736728	-0.470839671
CPC								
Net Profit Before Interest and Tax	-9120867	-4306189	6975296	88463133	12111647	-7682532	-3434485	-4068464
Capital Employed	69977551	44230645	33353576	79599814	63143864	113495361	46309165 38423824	38423824
ROA	-6.84249923	-3.058409492	-5.219056504	-54.84069466	-8.434699915	-5.682393479	-2.726236465	-3.301874232

Computation of Days Sales Outstanding

DSO=debtors/sales

PZ CUSSONS								
Year	2010	2011	2012	2013	2014	2015	2016	2017
Debtors	10132763	17155818	22464907	30673173	40770200	52550771	32853238	29457627
sales	54806798	66184295	82322463	95742084	107150197	128311090	118279459	91832590
DSO	0.184881	0.259213	0.272889	0.320373	0.380496	0.409558	0.277759	0.320775
FAN MILK								
DEBTORS	2971	2215	4080	4724	5823	7175	11064	27688
SALES	103775	109280	147212	138969	177492	315409	386402	445963
DSO	0.028629246	0.020269034	0.027715132	0.033993193	0.032807112	0.022748241	0.028633392	0.062085868

NESTLE GHANA

Debtors	12083	13340	13048	12206	13459	12252	12411	12036
Sales	109722	83642	89721	92158	91612	88785	89469	89590
DSO	0.110123767	0.159489252	0.145428606	0.132446451	0.146913068	0.137996283	0.138718439	0.134345351

GUINNESSS

DEBTORS	6103	5636	9051	11109	33182	24391	17404	41252
SALES	206499	244293	292318	321017	330645	437348	566308	436132
DSO	0.029554623	0.023070657	0.030962856	0.034605644	0.100355366	0.055770233	0.030732393	0.094586043

UNILEVER GHANA

DEBTORS	25638	34616	56290	28390	35390	50347	54695	93937
SALES	181153	240670	77787	323407	410450	518731	496306	575765
DSO	0.141526776	0.143831803	0.723642768	0.087784123	0.086222439	0.097058013	0.110204189	0.163151633

STARWIN PRODUCTION

DEBTORS	670493	1235799	1128802	1496909	1754542	864667	1285720	188043
SALES	3761572	4245918	4808858	6678090	6946716	5762183	6946716	8892697
DSO	0.178248084	0.291055786	0.234733901	0.224152265	0.252571431	0.150058927	0.185083139	0.021145778

PIONEER KITCHENS

DEBTORS	0	0	0	0	6330	56504	48504	36290
SALES	1720985	2201037	1211481	1813306	1214818	711295	1404843	350141
DSO	0	0	0	0	0.005210657	0.079438208	0.034526278	0.103643961

CPC

DEBTORS	9638919	12074763	10481139	18845980	6661563	6661938	3721343	2690922
SALES	84127817	60110020	55141498	60186136	36402206	21703513	7109121	5753083
DSO	0.114574695	0.200877707	0.190077154	0.313128259	0.182998882	0.306952059	0.523460355	0.467735647

COMPUTATION OF CURRENTS ASSETS

CR=CURRENT ASSTES/CURRENTA LIABILITY

PZ CUSSONS

YEARS	2010	2011	2012	2013	2014	2015	2016	2017
CURRENT ASSETS	30304843	45037338	49802013	60862344	72227293	85585018	69329661	70653664
CURRENT LAIBILITY	14985395	23876010	30290697	31983181	47274379	67016820	66606212	65510129
CR	2.022292	1.886301	1.644136	1.902948	1.527832	1.277068	1.040889	1.078515

FAN MILK

CURRENT ASSET	38861	35578	44649	38943	62841	152229	89095	116571
CURRENT LIABILITY	14525	14140	31208	19812	36842	87029	63036	68186
CR	2.67545611	2.51612447	1.430690849	1.965626893	1.705689159	1.749175562	1.413398693	1.709603144

NESTLE								
CURRENT ASSET	38997	33324	34020	30066	33961	29434	32042	31884
CURRENT LIABILITY	30146	35232	38597	32917	32895	33321	37517	38189
CR	1.293604458	0.945844687	0.881415654	0.913388219	1.032406141	0.883346838	0.854066157	0.834900102
GUINNESS								
CURRENT ASSET	38112	42150	79155	68937	124671	141865	152725	160386
CURRENT LIABILITY	91606	129667	80409	123193	102149	175025	126902	150737
CR	0.416042617 0	.325063432	0.984404731	0.559585366	1.220481845	0.810541351	1.203487731	1.064012154

UNILIVER GHANA							
CURRENT ASSETS	92803	114351	133425	121446	147061	219504	275936	354876
CURRENT LIABILITY	57725	80946	92112	150794	183888	235364	292295	335026
CR	1.607674318	1.412682529	1.448508338	0.805376872	0.799731358	0.932615013	0.94403257	1.059249133
STARWIN PRODUCTION							
CURRENT ASSETS	2168353	2080721	2899214	3586427	9139794	9183301	220697	1995367
CURRENT LIABILITY	1476328	1355104	1863389	2073089	2397955	2529822	4910740	5990211
CR	1.46874746	1.535469602	1.55588232	1.729991814	3.811495212	3.630018634	0.044941699	0.333104627
PIONEERS KITCHENS							
CURRENT ASSETS	327324	915467	915467	752874	216617	343504	1135414	658650

CURRENT LIABILITY	1327214	312885	2893699	3749227	4600735	6080429	8636694	9105345
CR	0.246624885	2.925889704	0.316365662	0.200807793	0.047083129	0.056493382	0.131463961	0.072336633
CPC								
CURRENT ASSETS	50675514	45901112	4226634	33298917	20312384	135198874	129187779	122997456
CURRENT LIABILITY	63319753	96567669	100296941	81709472	80449235	78155932	79669819	84792983
CR	0.800311303	0.475325877	0.042141205	0.407528236	1.729860684	0.252486975	1.621539758	1.450561729

COMPUTATION OF NET ASSET TURNOVER

NAT=SALES/ CAPITAL EMPLOYED

N=Capital Employed=Total Asset-Current Liability

PZ CUSSONS								
YEAR	2010	2011	2012	2013	2014	2015	2016	2017
SALES	54806798	66184295	82322463	95742084	107150197	128311090	118279459	91832590
Capital employed	26932682	33069734	31987669	40923536	37986567	35741869	40923332	40692251
NAT	2.035031	2.001356	2.573569	2.339536	2.820739	3.327974	2.89027	2.256703
FAN MILK								
SALES	103775	109280	147212	138969	177492	315409	386402	445963
CAPITAL EMPLOYED	53866	65209	65345	81435	87071	127185	182028	231923
NAT	1.926539932	1.675842292	2.252842605	1.706502118	2.038474349	2.479922947	2.122761333	1.922892512
NESTLE								
Sales	109722	83642	89721	92158	91612	88785	89469	89590

Capital employed	81495	77859	87280	87525	100555	90671	94384	133210
NAT	1.346364808	1.074275293	1.027967461	1.052933448	0.911063597	0.979199524	0.947925496	0.672547106

GUINNESS

SALES	206499	244293	292318	321017	330645	437348	566308	436132
CAPITAL EMPLOYED	189046	204188	244099	297991	419379	480654	528926	535100
NAT	1.092321446	1.19641213	1.197538704	1.07727079	0.788415729	0.909901925	1.070675293	0.815047655

UNILIVER GHANA

SALES	1811537	240670	77787	323407	410450	518731	496306	575765
CAPITAL EMPLOYED	139624	158187	186246	192123	224758	307250	378391	468631
NAT	1.297434538	1.521427172	0.417657292	1.683333073	1.826186387	1.688302685	1.311622105	1.22861057

STARWIN PRODUCTION

SALES	3761572	4245918	4808858	6678090	6946716	5762183	6946716	8892697
CAPITAL	692025	2375612	2586134	3121998	8274055	8082715	11243445	12419187

EMPLOYED								
NAT	5.435601315	1.78729439	1.859477506	2.139043651	0.839578175	0.712901915	0.815840874	0.71604502
PIONEER KITCHENS								
SALES	1720985	2201037	1211481	1813306	1214818	711295	1404843	350141
CAPITAL EMPLOYED	376627	1006775	-818137	-1944438	-3440401	29348260	28734641	26611484
NAT	4.569467935	2.186225323	-1.480780114	-0.932560462	-0.353103606	0.02423636	0.048890223	0.013157515
CPC								
SALES	84127817	60110020	55141498	60186136	36402206	21703513	7109121	5753083
CAPITAL EMPLOYED	69977551	44230645	33353576	79599814	63143864	113495361	46309165	38423824
NAT	84.72812948	-28.54917417	-8.265713437	0.756109003	0.576496332	0.191228195	0.153514342	0.149726977

COMPUTATION OF SALES GROWTH

SG= (SALES2-SALES1)/SALES1*100

N=SALES2= CURRENT YEAR

    SALES1=PAST YEAR

PZ CUSSONS								
YEAR	2010	2011	2012	2013	2014	2015	2016	2017
SALES 2	54806798	66184295	82322463	95742084	107150197	118948017	118279459	91832590
SALES1	44643160	54806798	66184295	82322463	95742084	107150197	118948017	118279459
SG	22.76639	20.75928	24.38368	16.30129	11.91546	11.01054	-0.56206	-22.3596
FAN MILK								
SALES2	103775	109280	147212	138969	177492	315409	386402	445963
SALES1	82471	103775	109280	147212	138969	177492	315409	386402
SG	25.83211068	5.304745844	34.71083455	-5.599407657	27.72057077	77.70322043	22.50823534	15.41425769
NESTLE GHANA								
SALES2	109722	83642	89721	92158	91612	88785	89469	89590
SALES1	109618	109722	83642	89721	92158	91612	88785	89469
SG	0.094874929	-	7.267879773	2.716197992	-0.592460774	-3.085840283	0.770400405	0.135242374

		23.76916206						
GUINNESS								
SALES2	91606	129667	80409	123193	102149	175025	126902	130403
SALES1	206499	91606	129667	80409	123193	102149	175025	126902
SG	-55.63852609	41.54858852	-37.98807715	53.20797423	-17.08213941	71.34284232	-27.4949293	2.758821768
UNILIVER GHANA								
SALES2	181153	240670	77787	323407	410450	518731	496306	575765
SALES1	167952	181153	240670	77787	323407	410450	518731	496306
SG	7.859983805	32.85454837	-67.67897952	315.7597028	26.91438342	26.38104519	-4.323049904	16.01008249
STARWIN PRODUCTION								
SALES2	3761572	4245918	4808858	6678090	6946716	5762183	9172862	8892697
SALE1	3085508	3761572	4245918	4808858	6678090	6946716	5762183	9172862
SG	21.91094627	12.87615922	13.25838134	38.87060088	4.022497451	-17.05169752	59.1907442	-3.054281205
PIONEER KITCHENS								
SLES2	1720985	2201037	1211481	1813306	1214818	711295	1404843	350141
SALES1	2165058	1720985	2201037	1211481	1813306	1214818	1711295	1404843

SG	-20.51090548	27.8940258	-44.95862632	49.67680054	-33.00535045	-41.44843096	-17.90760798	-75.0761473
CPC								
SALES2	84127817	60110020	55141498	60186136	36402206	21703513	7109121	5753083
SALES1	45541422	84127817	60110020	55141498	60186136	36402206	21703513	7109121
SG	0.072311432	0.085759287	0.078421986	9.148532744	-39.51729016	-40.37857761	-67.24437652	-19.07462259

COMPUTATION OF DEBT RATIO

(DEBTR)=DEBTORS RATIO

TOTALDEBTORS/TOTAL ASSETS

PZ CUSSONS								
YEAR	2010	2011	2012	2013	2014	2015	2016	2017
TOTAL DEBTORS	10132763	17155818	22464907	30673173	40770200	52550771	32853238	29457627
TOTAL ASSETS	41917077	56945744	62278366	72906717	85260946	102758689	107529544	106203380
DEBTR	0.241734	0.301266	0.360718	0.420718	0.478181	0.5114	0.305528	0.27737
FAN MILK								
TOTAL DEBTORS	2971	2215	4080	4724	5823	7175	11064	27688
TOTAL ASSETS	68391	79349	96553	101247	123913	214214	245064	300109
DEBTR	0.043441388	0.027914656	0.042256584	0.046658173	0.046992648	0.033494543	0.04514739	0.092259812
NESTLE GHANA								
TOTAL DEBTORS	12083	13340	13048	12206	13459	12252	12411	12036
TOTAL SSEATS	111641	12083	125877	120442	133450	123992	131901	133210
DEBTR	0.108230847	1.104030456	0.103656744	0.101343385	0.100854253	0.098812827	0.094093297	0.090353577

GUINNES								
TOTAL DEBTORS	6103	5636	9051	11109	33182	24391	17404	374714
TOTAL ASSETS	189046	204188	244099	297991	419378	480654	528926	535100
DEBTR	0.032283148	0.027602014	0.037079218	0.037279649	0.079121938	0.050745443	0.032904414	0.700269109
UNILIVER GHANA								
TOTAL DEBTORS	25638	34616	65290	28751	35390	50347	54695	93937
TOTAL ASSETS	139624	158187	186246	192123	224758	307250	378391	468631
DEBTR	0.183621727	0.218829613	0.350557864	0.149648923	0.157458244	0.163863303	0.14454625	0.200449821
STARWIN PRODUCTION								
TOTAL DEBTORS	670493	1235799	1128802	1496909	1754542	864667	1285720	188043
TOTAL ASSETS	3742250	3730716	4449523	5195087	10672010	10612537	16154185	18409398
DEBTS	0.179168415	0.331249819	0.253690564	0.288139352	0.164405955	0.081475994	0.079590521	0.010214511
PIONEER KITCHENS								
TOTAL DEBTORS	0	0	0	0	6330	56504	48504	36290
TOTAL ASSETS	1703841	1582868	2075562	1804789	1160334	35428689	36193591	35716829
DEBTR	0	0	0	0	0.005455326	0.001594866	0.001340127	0.001016048

CPC							
TOTAL DEBTORS	9638919	12074763	10481139	18845980	6661563	6661938	3721343	2690922
TOTAL ASSETS	133297304	140798314	133650517	161309286	143593099	135198874	125978984	123216807
DEBTR	0.072311432	0.085759287	0.078421986	0.11683134	0.046391944	0.0492751	0.029539395	0.02183892

COMPUTATION OF MARKET SHARE

MS=(CURRENT ASSET-NON CURRENT ASSET)

NB: DIVIDED BY NUMBER OF SHARES

PZ CUSSONS								
YEAR	2010	2011	2012	2013	2014	2015	2016	2017
CURRENT ASSET	41917077	56945744	62278366	72906717	85260946	102758689	107529544	106203380
NON CURRENT ASSET	16653587	25748863	30950675	33717860	48548375	687788866	90792029	90792029
NUMBER OF SHARES	1160	1160	2160	2160	2160	2160	2160	2160
MS	21.77887	26.89386	14.50356	18.14299	16.99656	-270.847	7.74885	7.134885
FAN MILK								
CURRENT ASSET	68391	79349	96553	101247	123913	214214	245064	300109
NON CURRENT ASSETS	16293	16945	34872	24816	42892	939367	70685	78433
NUMBER OF SHARES	10	10	10	10	10	10	10	10
MS	5.2098	6.2404	6.1681	7.6431	8.1021	12.0278	17.4379	22.1676
NESTLE GHANA								
CURRENT ASSETS	110916	111641	125877	120442	133450	65920	131901	78612

NON CURRENT ASSETS	57285	49043	63213	56303	61566	60006	123992	70981
NUMBER OF SHARES	365	347	322	322	322	319	311	311
MS	146.9342466	180.3976945	194.6086957	199.189441	223.242236	18.53918495	25.43086817	24.53697749

GUINNESS

CURRENT ASSETS	189046	204188	244099	297991	419378	480654	528926	535100
NON CURRENT ASSETS	143883	158492	105142	145189	278759	385472	264669	274041
NUMBER OF SHARES	26252	26252	26252	26252	26252	26252	272879	272879
MS	1.720364163	1.740667378	1.443679092	1.587520259	1.460946266	0.988883348	0.956684098	0.956684098

UNILIVER GHANA

CURRENT ASSETS	81899	83320	94135	192123	224758	307250	378391	468631
NON CURRENT ASSETS	76631	76738	88596	32629	31954	243302	301973	348034
NUMBER OF ASHARES	1200	1200	1200	1200	1200	1200	1200	1200
MS	4.39	5.485	4.615833333	132.9116667	160.67	53.29	63.68166667	100.4975

STARWIN PRODUCTION

CURRENT ASSETS	3742250	3730716	4449523	5195087	10672010	10612537	16154185	18409398

NON CURRENT ASSETS	1877967	1389206	1909063	2166630	2458094	2529822	4970879	6100301
NUMBEG OF SHARES	1982028	1982028	1982028	1982028	1982028	7549127	7549127	7549127
MS	0.940593675	1.181370798	1.281747786	1.527958737	1.088061706	1.07068208	1.481403876	1.630532511

PIONEER KITCHENS

CURRENT ASSETS	1703841	1582868	2075562	1804789	1160334	35428689	36193591	35716829
NON CURRENT ASSETS	1327214	1707878	2893699	3749227	4600735	6080429	8636694	9105345
MS	0.434803239	-0.144319852	-0.944511724	-2.24478845	-3.971827555	33.88158176	31.81351326	30.72206566
NUMBER OF SHARES	866201	866201	866201	866201	866201	866201	866201	866201

CPC

CURRENT ASSET	133297304	140798314	133650517	161309286	143593099	135198874	129187779	122997456
NON CURRENT ASSETS	132039899	132197044	133152842	133064907	131272377	78155932	79669819	84792983
NUMBER OF ASHARES	11984510	11984510	26071630	26071630	26071630	26071630	26071630	26071630
MS	0.104919183	0.71769893	0.019088757	1.083337674	0.472571987	2.187931556	1.89930434	1.465365725