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DETERMINANTS OF WORKING CAPITAL MANAGEMENT

THEORETICAL REVIEW

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Abstract

Working capital management is determined endogenously by firm –specific variables such as size, age, profitability, market share (power), sales growth, operating risk and operating cash flow. On the other hand, it is determined exogenously by macroeconomic factors such as GDP, interest rate and tax rate. The ultimate goal of working capital management is to achieve an optimal level of liquidity and profitability contingent upon availability of cash, inventory and other current assets. Optimal level of working capital maximizes the firm's value, hence a trade-off between liquidity and profitability. A manager who invests heavily on working capital decreases the firm's profitability and imposes opportunity cost of funds. In the light of the foregoing, the paper attempts a discourse on the determinants of working capital management. To achieve this onerous task, we identify and analyze opinions, comments, suggestions and conclusions of various researchers and scholars alike in this critical area of corporate financial management.

Keywords: Determinants, Working Capital Management, Current Assets, Liquidity, Profitability

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INTRODUCTION

Business firms are expected to meet current and future financial obligations to all stakeholders in the business and corporate sector at large. The corporate sector remains the engine room of growth and development of all economies (Atseye, Edim and Eke 2014). In the view of Abor (2008), it is imperative for firms in developing countries to be able to finance their activities and grow overtime if they are ever to play an increasing and predominant role of providing employment as well as income in terms of profits, dividends and wages to households. It is against this backdrop that Atseye et al (2014) enumerated the functions of capital as absorption of costs and losses; multiplication of fixed assets and enhancement of growth through mergers and acquisitions.

Working capital management (WCM) according to Smith (1987) is important and affects both liquidity and profitability of the firm. It involves planning and controlling current assets and current liabilities in a manner that eliminates the risk of inability to meet due short term obligations on the one hand and avoid excessive investment in these assets on the other hand (Eljelly, 2004). Lamberson (1995) argued that working capital management has become one of the most important issues in organizations, where many financial managers find it difficult to identify the important drivers of working capital and the optimum level of working capital. As a result, companies can minimize risk and improve their overall performance if they can understand the role and determinants of working capital. The relationship between current assets and current liability items is called working capital of the organization. The main goal of working capital management according to Mansoori and Muhammad (2012) is to ensure that companies have sufficient cash flow to continue normal business operations in such a way that minimize risk of inability to pay short-term liabilities. Working capital is required to meet fast-maturing financial obligations. Ability of a firm to meet its short-term financial obligations is a measure of its liquidity. Mansoori and Muhammad cautioned managers to avoid unnecessary investment in working capital since it imposes opportunity cost on firms and reduces the profitability margin.

Nimalathasan (2010), affirmed that the goal of work capital management is to ensure that the firm is able to continue its operations and that it has sufficient cash flow to satisfy both maturing short-term debts and upcoming operational expenses. Mongrut, Fuenzalida, Cubillas and Cubillas (2008) pointed out that firms face a number of important decisions in their current operations and one of these important decisions concerns the efficient management of liquidity. This decision is critical, as it is the reason for which many firms go bankrupt. They argued further that analysis on working capital management is critical as this practice in compasses a

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number of policies relative to the management of liquidity. Working capital management provides the firms with information on the liquidity needed to operate efficiently.

Appropriate evaluation of the working capital and identification of its basic elements can help managers decide over the companies' operations more efficiently and effectively, and able them to manage working capital effectively in a way that balance liquidity and profitability. (Mansoori and Muhammad, 2012).Determining the important factors affecting working capital management would affect level of investment in current assets as well as the appropriate sources to financing them. One of the distinguishing features of the fund employed as working capital is that it constantly changes its form to drive the "business wheel". It is also known as "circulating capital" which means current assets of a company, which are changed in the ordinary course of business from one form to another, as for example, from cash to inventories, inventories to receivables, and receivables to cash.

CONCEPTUAL DEFINITIONS

Working Capital refers to money utilized by business firms in their daily activities or operations. Working capital is the available capital for conducting day-to-day operations of an organization represented by its net current assets (Adeniji, 2008). In the same vein, Akinsulire (2008), described working capital as the items that are required for the day-to-day production of goods to be sold by a company. Therefore, it is the excesses of current assets over current liabilities.

Working Capital is a very important item of the balance sheet. Mathematically, it is given by working capital = Current Assets less confident liabilities. From this equation is called net current assets. It is the cash a business requires for day-to-day operations, or, more specifically, for financing the conversion of raw materials into finished goods, which the company sells for payment. In short, it is that portion of total funding needed for daily operations.
Pandey (2000), distinguished between gross working capital and net working capital.

Gross Working Capital refers to the firm's investment in current assets. Current assets can be converted into cash within an accounting year (or operating cycle) and include cash, short-term securities, debtors (accounts receivables of book debts), bills receivable and stock (inventory)

Net Working Capital refers to the difference between current assets and current liabilities. Current liabilities are those claims of outsiders which are expected to mature for payment within an accounting year and include creditors (accounts payable), bills payable, and outstanding expenses (Pandey, 2000). Net working capital can be negative or positive. Net working capital

is positive when currents assets exceed current liabilities. It is negative when current liabilities exceed current assets.

Working Capital Management This is a managerial accounting strategy which focuses on maintaining efficient levels of both components OF working capital - current assets and current liabilities (Adeoran, Josaiah, Boson Fakunled and Imuzeze, 2012). Decisions relating to working capital and short-term financing are referred to as working capital management (Nimalathason, 2010)**.** It is the regulation, adjustment and control of the balance of current assets and current liabilities of a firm such that maturing obligations are met, and the fixed assets are properly serviced. It is the determination of optimum level of working capital to keep monitoring and controlling the level of individual components to ensure that the optimum level is not exceeded, and provision of funds to finance current assets.

Operating circle refers to the number of days it takes a company to convert its inventory to cash i.e. the number of days it takes the company to produce from raw materials, to sell what is produced, and to collect monies due from the purchase.

Trade credit policy is an arrangement or terms involving amount by a company to its supplier of raw materials received but not yet paid for. It is a form of short-term financing granted to customers when the suppliers demand payment to be made in an agreed future date.

Cash conversion cycle refers to a period of time between the outlay of cash on raw materials and the inflow of cash from sale of finished goods, and represents the number of days of operation for which financing is needed.

Bankruptcy describes a situation where liabilities exceed assets, leading to a legal process of formally folding up a firm or declaring an individual legally unable to pay his debt.

Overtrading also called undercapitalization occurs when a company is trying to support too large a volume of trade from too small a working capital base. It is the result of the supply of funds failing to meet the demands for funds within a company and it emphasizes the need for adequate working capital investment.

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IMPORTANCE OF WORKING CAPITAL MANAGEMENT

Empirical and theoretical evidence, point to the fact that working capital management is crucial to the survival of any business concern. Padachi (2006), emphasised that the management of working capital is important to the financial health of businesses of all sizes. This importance is hinged on many reasons. First, the amounts invested in working capital are often high in proportion to total assets employed and so it is vital that these amounts are used in an efficient way. Second, the management of working capital directly affects the liquidity and the profitability of the corporate firm and consequently it's net worth (Smith, 1980). Working Capital therefore aims at maintaining a balance between liquidity and profitability while conducting the day-to-day operations of a business concern.

Every firm has to make arrangements for adequate funds to meet the daily expenditure aside investment in fixed assets. The internal resources of a business organization are often insufficient for meeting all its needs. Also it is not always possible for the owners, promoters or the entrepreneurs to mobilize finance from their personal resources. Resources therefore have to be financed through borrowing, keeping in view the short, medium and/or long term requirements of trade or industry for funds.

The effects of working capital management on corporate performance have been a focus of substantial amount of empirical research for many years (Shin and Soenen, 1998; Deloof, 2003; Lazaridis and Tryfonidis, 2006; Filbeck and Krueger, 2005). These studies have concentrated on large firms operating within well developed money and capital markets of developed economies. Findings from these studies become difficult to generalize for relatively small sized firms in developing countries that operate within a rather rudimentary financial markets, where firms mostly rely heavily on owner financing, trade credit and short term bank loans to finance their needed investment in working capital (Chittenden, et. al; 1998, Saccurato, 1994).Firms provide an impetus to the economic progress of developing countries and its impetus is gaining wide spread recognition. Storey (1994) noted that small firms, however they are defined, constitute the bulk enterprise in all the economies of the world. However, given their reliance on short term funds, it has been recognized that efficient management of working capital is crucial for the survival and growth of small firms.

Working capital management is critical for all firms, but mostly for small firms. A firm may not have much investment in fixed assets, but it has to invest in current assets. There is a direct relationship between a firm's growth and its working capital needs. As sales grow, the firm needs to invest more in inventories and debtors' continuous growth in sales may also require additional investment in fixed assets (Padachi 2006).Working Capital Management is an integral part of overall financial management. It includes a number of aspects that makes it an

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important topic for study. Working Capital Management refers to the financing, investment, and control of net current assets within the policy guidelines. Working capital may be regarded as the lifeblood of the business and its effective provision can do much to ensure the success of the business, while its inefficient management can lead to the downfall of the enterprise. It is therefore, important that the investment is carefully controlled.

Sushil (1991) in his study of Working Capital Management has suggested that the firm should maintain a sound working capital position. It should have adequate working capital to run its business operations. Both excessive as well as inadequate working capital position are dangerous from a firm's point of view. The former means idle funds which earn no profits for the firm, while the latter not only impairs firm's profitability, but also results in production interruptions and inefficiencies. Management of working capital therefore, is essential to ensure that the amount of working capital available is neither too large nor too small.

Lakadawala (1991), has observed that the function of finance is a specialized one. Most firms try to see that the position of the finance manager is managed by an experienced or professional person. In the same vein, Garg (1997) has indicated that estimating working capital involves forecasting requirements in subsequent months and regular updating as and when substantial change in the working capital requirements is expected according to past experience and/or because of new developments. Proper management would improve generation of funds from internal operation. While financing working capital from internal generation, depreciation should only be used for expansion and modernization of plant to meet the objectives of growth.

Constant management is required to maintain appropriate levels in the working capital accounts. Its importance is seen from the following factors. Investment in current assets represents a substantial portion of total investments. In some cases it has been on an average three quarter of the total assets. For trading concerns, they even account for about 83 percent of the total investments (Agrawal, 1983). Investments in current assets and the level of current liabilities have to be geared quickly to changes in sales. To be sure, fixed assets investments and long term financing are also responsive to variations in sales. However, this relationship is not as close and direct as it is in the case of working capital component (Prasanna, 1984). It has also been found that the largest portion of a financial manager's time is utilized in the management of working capital.

Characteristically, current assets represent more than half the total assets of a business firm. Since they represent such a large investment, this investment tends to be relatively volatile, and hence worthy of the financial manager's careful attention. Working Capital Management is particularly important for small firms. Although such firms can minimize their investments in fixed assets by renting or leasing plant and equipment, they cannot avoid

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investment in cash receivables and inventories. Working capital management has acquired important position and great significance in the recent past. It is reflected by the fact that the financial manager spends a great deal of time in managing current assets and current liabilities. Arranging for short-term financing, negotiating favourable terms of credit, controlling the movement of cash, administering accounts receivable and monitoring the investments in inventories consume a great deal of time.

THEORETICAL BACKGROUND (FRAMEWORK) TO THE DETERMINANTS OF WORKING CAPITAL MANAGEMENT

The subject matter of working capital management is the attainment of optimal level of cash or liquidity which represents a trade-off between current assets and current liabilities. Nimalathasa (2010) observed that most firms have a chunk of their cash invested in working capital, as well as substantial amounts of short-term payables as a course of financing. Therefore business firms possess an optimal level of working capital which maximizes their market value. On the other hand, large inventory and a generous trade credit policy may lead to higher sales. Larger inventory reduces the risk of a stock-out. Trade credit may stimulate sales because it allows customers to assess product quality before paying. See for instance, Malitz and Ravid, (1993). Deloof and Jeger, (1996) AND Deloof (2003).

The management of working capital involves managing inventories, accounts receivable and payable, and cash. Implementing an effective working capital system is an excellent way for many companies to improve their earnings (Nimalathasam, 2010). The table below shows the empirical relationship between effective working capital management and its determinants

Table 1: Proxy Variables Definitions and Predicted Relationships

Proxy Variables	Definitions	Predicted Sign
AR	Accounts Receivables divided by sales and multiplied by 365 days	+/-
AP	Accounts payable divided by cost of goods sold and multiplied by 365 days	+/-
INV	Inventory divided by cost of goods sold and multiplied by 365 days	+/-
CCC	No. of days AR plus Inventory minus AP	+/-
Lns	Natural Logarithm of firm sales, lagged one year period	+/-
FD	Short-term loans divided by Total Assets	+/-
FFA	Fixed financial Assets divided by total Assets	+/-

AR = Accounts Receivable, AP = Accounts Payable, INV = Inventory, CCC = Cash Conversion Cycle

Lns = Firm Size, FD = Financial debt ratio, FFA = Fixed Financial Assets ratio

Source: Amerjit et al (2010)

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DETERMINANTS OF WORKING CAPITAL MANAGEMENT

Factors influencing effective working capital management are legion. They include: nature of business, scale of operation production cycle, business cycle, seasonality and production policy, credit policy, growth and expansion, rise in price level, operating efficiency, availability of raw materials, depreciation policy, taxation, dividend policy and retention policy.

Empirical literature has provided varied evidence over the years. Mangrut etal (2008) observed that existing literature on working capital seems to have lost popularly, after the glorious period of the sixties and the seventies when most of the models of working capital management were developed. Most of the models have direct effect on the value of firms, though they were not integrated in that manner. The authors observed a gap between the old and the contemporary models of working capital management.

Cost of capital, access to external finance and capacity to generate internal sources are some critical endogenous and exogenous factors. Mansoori and Muhammad (2012), while analyzing the determinants of WCM among Singapore firms using random and fixed effects, identified firm size, operating cash flow, capital expenditure and gross domestic products as negatively correlated with WCM. However, they found that firms with more profitability have longer cash conversion cycle. Additionally, they found a non-significant relationship between CCC and debt ratio. Chiou and Cheng (2006) attempted to determine the critical factors affecting WCM in Taiwan's firms. The study captured micro-economic variables and firm-specific variables. They found that debt ratio, operation cash flows to total assets are negatively correlated with working capital management, while firms' age and return on assets (ROA) and WCM positively correlated. Additionally, their finding indicated that during the economic slump firms have more WCM requirements. Zariyawari et al (2010) investigated determinants of WCM in Malaysian firms using pooled OLS regression. They reported that firm size, debt ratio, and sales growth negatively correlated with CCC. In addition, their finding revealed that firms with more debt have less working capital since the cost of external financing is higher for those firms.

Hill, Kelly and Highfield (2010) identified operating cash flow as positively related with working capital requirement among US companies. They found negative relationship between financial distress and market to book value. They found no evidence for relationship between gross margin profits, Market share, and working capital requirement. Gill (2011), focused on the Canadian companies to determined WCM. Applying panel data analysis, OLS regression and correlation co-efficient, results showed that WCM positively correlated to the operating cycle, return on assets (ROA). Moreover, working capital Requirement correlated to form size

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WORKING CAPITAL MANAGEMENT AND PROFITABILITY OF FIRMS

Theoretical basis of working capital management holds that there should be a trade-off between liquidity and profitability of firms. Strong correlation between working capital management and profitability exists in many empirical studies. Shin and Soenen (1998), investigated the relationship between cash conversion cycle (CCC) as a proxy for working capital management and the profitability of the firm for a sample of companies listed in the United States Stock Exchange during the period spanning from 1975-1994. The found a significant negative relationship between the value of the company and the CCC of the same companies. So the study by Shin and Soenen (1998) also focused on determining the factors that affect working capital management. They found that management of working capital is correlated in a positive way to firm size. In addition, they established that industry concentration does not significantly affect working capital management and that a greater compensation paid the CEO of the firm eventually improves the working capital management. These results demonstrated the importance impact of working capital management on profitability.

Deloof (2003) revealed a significant negative relationship between gross profits and the average period of receivables. Arcos and Benavides (2006) attempted an estimate of entrepreneurial efficiency of a set of companies in the non- financial sector Columbia for the period 2001-2004. The results are corroborative of similar studies conducted abroad which show inverse relationship between profitability when measured against the level of sales.

Lazavridis and Tryfonidis (2006) conducted a statistical analysis of 131 firms in Athens for the period 2001-2004 and concluded that manager may create benefits for the companies if they manage an adequate level of CCC and maintain each one of its components at an optimal level. They detected a negative relationship between the company's working and its profitability.

CONCLUSION

This paper provides thorough review of the many issues in the area of effective working capital management and its implication on variables such as firm size, liquidity, accounts receivable, bills payable, profitability, etc. At a certain level of working capital, the value of firms is maximized. Therefore, working capital management is determined by a combination of endogenous and exogenous factors. Efficient management of working capital poses a problem of reconciling the conflicting demands of liquidity and profitability. This is an onerous task for the financial managers. Successful financial managers must strike a balance between investments in current assets and discharging of current obligations. Considering the importance of working capital to firms, we recommend that a statement of working capital management should become a requisite for publication of annual reports and statement of accounts of quoted firms in

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developing countries like Nigeria. Additionally, it should become a requirement for negotiation of soft loans from lending institutions. Governments in developing countries should give financial assistance to local firms especially during economic depression which is often characterized by low level of savings, income and demand for economic goods and services. This would enable such firms to overcome some teething problems as well as working capital inadequacies. Firms should seriously and professionally consider issues of conversion cycle by reducing the period between sale of goods and receipt of cash from sales by accelerating the collection. They should also reduce the period between converting the raw materials into finished goods as to sell them. On the other hand, firms should shorten the period between purchases of goods to pay for their purchases. This will enhance profitability. Finally, firms should avoid over investment in current assets with its attendant inventory costs, lost returns and excess cash holdings and receivables. On the other hand, under investment in current assets will lead to stock out, illiquidity and bad debt costs.

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