

Analysis of Effects of Working Capital Management on Profitability of Manufacturing Companies: A Case Study of Listed Manufacturing Companies on Nairobi Security Exchange

Article Review by Jones Stamalevi
MBA in Financial Management, Texila American University
Email:- stamalevi@yahoo.com

Abstract

The purpose of this paper is to analyze the effect of working capital management on profitability of manufacturing companies for a sample of Nine firms listed on Nairobi Securities Exchange.

Design/methodology/approach – The paper includes a conceptual as well as empirical analysis, in which data from a sample of listed firms for the period from 2006 to 2010 are analyzed to examine the effect of working capital management on profitability of manufacturing firms. The author used OLS regression techniques to test assumptions and several different models were also run.

Findings – The study reveals that effective working capital management has great impact on profitability. He suggested that managers should focus on managing working capital components to achieve profitability of their companies

Originality/value – The paper's originality and value lies in suggesting that financial managers should pay more attention to working capital management of manufacturing firms and other companies in general to optimize the value of the share holders and maintain a favorable trade-off between liquidity and profitability

Keywords: *Working Capital Management; Profitability; Average Collection Period; Average Payment Period; Cash Conversion Cycle, Inventory turnover in Days*

Introduction

Some background about this issue is useful. Working capital management is a very important component of corporate finance and it ensures a company to have sufficient cash flow in order to meet its short-term debt obligations and operating expenses. It deals with the management of current assets and current liabilities and directly affects the liquidity and profitability of the company (Deloof, 2003; Eljelly, 2004; Rahemanand Nasri, 2007; Appuhami, 2008; Christopher and Kamalavalli, 2009; Dashand Ravipati, 2009). Working capital management is essential for the long-term success of a business. No business can survive if it cannot meet its day-to-day obligations.

A business must therefore have clear policies for the management of each component of working capital. This research aimed at providing an analysis on the effects of working capital management on profitability of listed manufacturing firms trading on the Nairobi Securities Exchange. The study reveals that effective working capital management has great impact on profitability.

Body

Working Capital Management is a very sensitive area in the field of financial management (Joshi, 1994). It involves the decision on the amount and composition of current assets and the financing of these assets. Steven Kirwa Kimeli discussed the effects of working capital management on profitability of listed manufacturing firms trading on the Nairobi Securities

Exchange. An optimal working capital management is expected to contribute positively to the creation of firm's value (Howorth & Weshead, 2003; Deloof, 2003; Afza & Nazir, 2007).

Steven Kirwa Kimeli pointed out that Working Capital Management has its effect on liquidity as well as on profitability of the firm. The study analyzed the relationship between different variables of working capital management including the Average collection period, Inventory turnover in days, Average payment period, Cash conversion cycle and Current ratio and the gross operating profit. Debt ratio, size of the firm and financial assets to total assets ratio were used as control variables.

While the author acknowledges prior scholars studies (for example, Lazaridis and Tryfonidis, 2006; Demirgunes and Samiloglu, 2008 and Mathuva, 2010), their studies were done in developed countries other than Kenya. Steven Kirwa Kimeli focused his research on companies in developing country actively trading on the NSE where limited research has been conducted. This study will help managers and bridges the gap by examining the effect of working capital Management on profitability of companies actively trading on the NSE and that of developed countries.

Hypotheses

The author explicitly stated the hypotheses. Some of his expectations were that there is no statistically significant relationship between average collection period, inventory turnover in days, payment period, cash conversion cycle and the profitability of listed manufacturing firms.

Data Source and Method of Collection

The author used secondary data from document analysis of consolidated financial reports of year ending 2006 to 2010 of the 6 companies actively trading on the NSE. In consistent with Lazaridis and Tryfonidis (2006) and Mathuva (2010) who collected financial data of firms listed on respective stock exchanges, the author could have exclusively collected data only from NSE for credibility of the data and resist collecting data through document analysis to avoid biased results from data being collected. Furthermore, firms listed on the stock exchange present true operational results in comparison with unlisted companies (Lazaridis and Tryfonidis, 2006).

Variables

Steven Kirwa Kimeli used 4 models to analyze the relationship between the variables. The independent variables measured whether there was relation between Average collection period and profitability, another test model measured the relation between Average payment period and profitability. Furthermore the third hypothesis test model measured the relation between Inventory turnover in days (ITID) and profitability and the fourth hypothesis test model measured the relation between Cash Conversion Cycle and profitability. Three control variables were used in order to make its effect on profitability neutral which includes company liquidity, company size and Financial Assets.

The selected variables assisted the author in the analysis of the required results. However, inclusion of other variables like capital structure and market conditions could have made his results different from prior studies which did not include such variables in their studies on the effect on profitability. (for example, Lazaridis and Tryfonidis, 2006; Demirgunes and Samiloglu, 2008 and Mathuva, 2010), their studies are primarily on companies working capital components in geographic jurisdictions and they have not done much on relationship between company profitability and capital structure or market conditions.

As stated by Firer et al (2008), three core areas of corporate finance are capital budgeting, which encapsulates the process of planning and managing a firm's long-term investments; capital structure, which outlines the specific mixture of long-term debt and equity maintained by a firm and lastly working capital management, which deals with management of a firm's short-term

assets and liabilities. Therefore, inclusion and analysis of effect of capital structure on profitability would be a plus.

Method of Analysis

The author analyzed the relationship between different variables of working capital management including the Average collection period, Inventory turnover in days, Average payment period, Cash conversion cycle and Current ratio and the gross operating profit. While Debt ratio, size of the firm (measured in terms of natural logarithm of sales) and financial assets to total assets ratio were used as control variables.

He used OLS regression techniques to test his assumptions. Several different models were run. The tables were well organized. The dependent variable was clearly stated in all tables. As control variables, Liquidity (CR); Company Size (Natural logarithm of sales (LOS) and Financial Assets/Total Assets ratio (FATA) were used while the Debt Ratio (DR) was used to proxy for leverage.

Though the author did not mention the base of his research, this research is built upon theories and frameworks of Lazaridis and Tryfonidis (2006). Several prior research findings by different scholars were also acknowledged and quoted in the article to support certain aspects of the article.

Findings

The author offers substantial, detailed evidence by using a variety of statistical methods to support his argument which has assisted him to demonstrate a number of interesting findings. The results are valid and reliable. He established that an increase in the number of days that companies collect and settle bills affect negatively company's profitability. The findings confirm Hyder, Niaz, Falahuddin & Ghulam (2007); and Raheman and Nasr (2007) who reported that profitability was inversely related to receivable collection period, but contradicted Ghosh and Maji (2003) who found a positive relationship between collection period and EBIT, indicating that credit facility increases sales of firms which ultimately increases profitability.

Some of the past studies used similar methods and/or subjects, but different results and implications were obtained. For example, in his research, Mathuva (2010) finds that there exists a highly significant positive relationship between the period taken to convert inventories into sales and profitability, this finding is contrary to that of Deloof (2003) whose study findings conclude that there is a negative relationship between day's sales in inventory and profitability.

However, the results on page 33 of Steven Kirwa Kimeli article revealed that Inventory turnover in days (ITID) had an insignificant effect on gross operating profit and his findings were consistent with those of Roumiantsev and Netessine (2005b), but contradicted the findings of Chenetal. (2005, 2007) who reported that firms with abnormally high inventories have abnormally poor long-term returns.

The author further established that an increase in average payment period led to an increase in gross operating profit. These findings agreed with Lazaridis and Tryfonidis (2005) and Ramachandran and Janakirama (2006) who also found that there was positive relationship between payment period and profitability, meaning that profitable firms delay their payments. However, the findings contrasted those of Falope and Ajilore (2009) found a significant negative relationship between net operating profit and the average payment period.

Furthermore, the study also established that profitability is negatively affected by increasing cash conversion cycle. The findings concurred with those of Ejelly (2004), who reported that cash conversion cycle is a better measure of liquidity than current ratio and liquidity has a negative relation with profitability. The findings also agreed with those of Ramachandran and Janakirama (2006); Nobanee (2009); Chaterjee (2010); Nobanee et al. (2010); Akgun and Meltem (2010) and

Rezazade and Heidarian (2010) all of whom had earlier reported a negative relationship between CCC's components with profitability.

The author also observed that the economic order quantity model can be used to determine an optimum order size and directs attention to the cost of holding and ordering and ordering stock. However, there is growing trend for companies to minimize the use of stock.

Reviewer/Author Arguments

The article has shown that the author included adequate background information by citing several prior research works of other scholars. The data is well presented, analyzed with sufficient supporting arguments in comparison to similar cases of different scholars.

Although all of the articles cited in the article offer well-supported arguments, they also have weaknesses. At times some of them appear to lack solid solutions to the problem, tend to conflict each other on their findings – for example, the author findings contrasted those of Falope and Ajilore(2009) which makes it very hard for the average reader to understand the solution to the problem. A reader can easily get frustrated when trying to decipher the author's meaning due to overly referenced scholars.

The author has offered a number of impressive recommendations to managers of the manufacturing companies in Kenya on page 35 of his article based on his research findings and also suggested future areas for further studies. A lack of solid solutions appears to exist in Steven Kirwa Kimeli's article. The author, in particular, fails to offer a solid solution as to how to incorporate more variables like capital structure and economic condition or other variables to bring new knowledge on the existing body of knowledge which other researchers have never talked. The author has acknowledged this in his suggestion for further research on page 35 of his article to include such variables.

The significance of this study is that most of similar studies were mainly carried in developed countries which have different capital structure and economic conditions as opposed to developing countries like Kenya. While we a proud his valid findings, no significant differences existed with the findings of other scholars and his article. Similar studies were carried before to find the effect of working capital on profit. The same results were obtained.

Finally, the impressive analysis of the data has addressed all the four hypotheses with proposed solution inform of advice to the financial managers on the way they can make decisions in regards to managing components of working capital to achieve profitability. However, the author in his article has failed to address the effect of rapidly increase on turnover (overtrading) without having sufficient capital backing and its effect on profitability in his stock turn over analysis.

Denzil Watson and Antony Head, (2007) page 74 observed that overtrading can be caused by a rapid increase in turnover, perhaps as a result of a successful marketing campaign where provision for the necessary associated investment in fixed and current assets was not made. Overtrading is risky because short-term finance can be withdrawn relatively quickly if creditors lose confidence in the business or if there is a general tighten in the economy. The problem with overtrading is not that the company is unprofitable it is that the company has simply run out of cash. This could have been explained by using liquidity ratios which can assist the financial managers to make right decisions. Denzil Watson and Antony Head, (2007) page 87 noted that corrective measures for overtrading include introducing new capital, improving working capital management and reducing business activity.

Future Research

The author has suggested similar study to be done on the same topic with different companies over an extended sample period of financial years including a study on the impact of external factors on working capital management in manufacturing companies. He further suggested

similar study with an extended scope to cover other components of working capital management including cash and marketable securities.

Conclusion

In this paper, four models were developed to make an empirical research on the effect of working capital management on profitability of manufacturing companies. According to results of the regression analysis the author has concluded that there are significant relations between working capital management and firm profitability.

The results show that collection period of account receivables and cash conversion cycle is negatively related with firm's profitability and this means by shortening collection period and cash conversion cycle firms can increase their profitability. The author concludes that there is a relationship between the various components of working capital indicating that effective working capital management has great impact on profitability. I suggest that Future studies should also investigate the effect of capital structure and economic conditions on profitability of companies.

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