WORKING CAPITAL MANAGEMENT IN CZECH SMES: INTRODUCTION

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Abstract

In this introductory study we investigate the relationship of corporate profitability and working capital management. We intend to use a sample of Czech SMEs for the period of five years to verify existing relationship between profitability and components of working capital. The major components of working capital are inventories and receivables on the asset side and payables on the liabilities side. We want to clarify the impact of short term capital management on profitability of the companies. It is well known that the higher the liquidity of the company the lower the profitability, because the capital is invested in less productive assets – e.g. cash. However, there may be some special impact of different features of working capital in the Czech sample. To verify this hypothesis we decided to use a sample of SMEs because SMEs are much less regulated by accounting standards and they are also less subject to performance management procedures than big (or international) companies. Thus we expect that the effect of working capital management will be more visible on this sample.

Key words: cash conversion cycle, profitability, SMEs, working capital management

JEL Code: M20, M40, G32

Introduction and Motivation

Working capital management has been a focus on of many studies especially in the segment of SMEs, because these companies typically do not reach the long term capital resources for the reasons of credibility and through capital markets checks (SEC regulations etc). Therefore the small and medium sized companies use predominantly short term capital resources mainly suppliers credit, because it is believed to be cheaper and more accessible. In previous studies on the Czech market this tendency was verified e. g. Polak, Kotora, 2000; Polak, Kocurek, 2007; Jindrichovska, Körner, 2008; Jindrichovska, 2013; Jindrichovska, Ugurlu, Kubickova, 2013.

Another relevant source of SMEs funding is retained capital, however this is subject to the fact that companies manage to create capital surplus in previous years. In this study we expect that the results of our research will elucidate the major characteristics of working capital management in the Czech Republic. The findings will be relevant because majority of Czech SME companies uses short term debt for their overall funding. We expect to find out what is the statistical significance between profitability, measured through gross operating profit, and the cash conversion cycle. In previous studies on this problem which we analyse herebow it has been found hat managers can create profits for their companies by handling correctly the cash conversion cycle and keeping each different component (accounts receivables, accounts payables, inventory) to on optimum level.

These decisions and relevant management actions taken by an enterprise management represent efficient handling of current assets. Positive working capital mostly characterizes efficient Working Capital Management. The purpose of working capital is to balance costs and maintain the optimum level of cash, raw materials and finished goods.

1 Previous literature

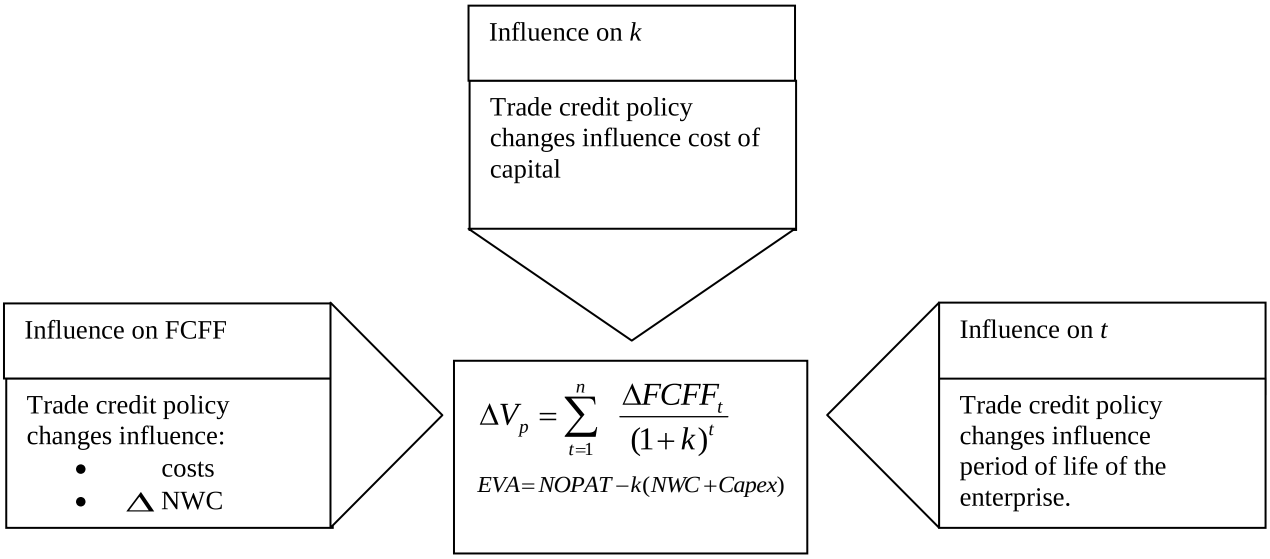
1.1 General background

The main financial goal of each enterprise is increase of the volume of sales and profit earnings. To attain this goal, working capital management is a part of the financial management of an enterprise having an impact upon the liquidity and profitability of the enterprise (Shin, Soenen, 1998; Deloof, 2003; Dong and Su, 2010). The liquidity and profitability of the enterprise are competing goals. Smith (1980) pointed out that it was important to reach a compromise between profitability and maintaining high liquidity - working capital management.

Making decisions on ensuring liquidity, profitability indexes must be evaluated simultaneously. Van Horne and Wachowicz (2004) [1] concluded that excessively big amount of current assets may have a negative impact upon profitability of an enterprise, but excessively small amount lowers liquidity. The optimum level of current assets ensures efficient activity.

[1] Van-Horne, J.C. and Wachowicz, J.M. (2004). Fundamentals of Financial Management (12th Edition). New York: Prentice Hall Publishers.

Fig. 1: Liquid assets and their influence on value of the corporation[2]



where FCFF = free cash flows to firm; △NWC = net working capital growth; k = cost of the capital financing the corporation; and t = the forecasted lifetime of the corporation and time to generate single FCFF.

1.2 Empirical studies on small and medium sized companies

Working capital management is particularly important for small and medium-sized companies. Most of these companies' assets are in the form of current assets and also, current liabilities are one of their main sources of external finance.

In this context Martínez-Solano, García-Teruel (2006) provided empirical evidence about the effects of working capital management on firms´ profitability of a sample of Spanish SMEs. They collected a panel consisting of 8,872 SMEs during the period 1996-2002. The authors find that managers can create value by reducing their firm's number of day’s accounts receivable and inventories. Also shortening the cash conversion cycle improves the firm's profitability.

Also the previous articles focused on the effect of working capital management on large firms e.g. Shin and Soenen, 1998. Furthermore, Deloof (2003) confirmed the important role of working capital management in value generation. In small and medium-sized firms the author has shown significant negative relation between SME's profitability and the number of day’s accounts receivable and days of inventory. The author claimed that they

[2] Michalski, G. M. (2008) Liquidity or Profitability: Financial Effectivness of Investments in Working Capital. *International Financial System*, P. Cervinek, ed., Brno. pp. 131. Available at SSRN: http://ssrn.com/abstract=1299586

cannot confirm that the number of day's accounts payable affects an SME's return on assets, as this relation loses significance when it is controlled for possible endogeneity problem.

Lazaridis and Tryfonidis (2006) investigated the relationship of corporate profitability and working capital management using a sample of 131 companies listed in the Athens Stock Exchange (ASE) for the period of 2001-2004. The results of their research showed that there is statistical significance between profitability, measured through gross operating profit, and the cash conversion cycle. The negative relationship between accounts receivables and firms' profitability suggests that less profitable firms will pursue a decrease of their accounts receivables in an attempt to reduce their cash gap in the cash conversion cycle. Likewise the negative relationship between number of days in inventory and corporate profitability suggests that in the case of a sudden drop in sales accompanied with a mismanagement of inventory will lead to tying up excess capital at the expense of profitable operations.

Michalski (2008) presented the discussion on relations between firm's net-working investment policy and firms´ value. The author stresses, that liquidity management requires that a sufficient balance of cash and other working capital assets - receivables and inventories – should be ensured. If the level of liquid assets is not adequate, it enhances the company's operating risk – loss of liquidity. Maintenance of working capital assets generates costs, thus affecting the company's profitability. The problem of this paper is how liquidity can be combined with profitability. If the level of liquid assets is too low, then a company may encounter problems with timely repayment of its liabilities, while discouraging clients by an excessively restrictive approach to recovery of receivables or shortages in the offered range of goods. Therefore, the level of liquid assets cannot be too low. Further studies dealing with the issue of working capital management are summarized in table 1.

Tab. 1: Summary of recent literature on working capital management in Europe

Author(s) (year)	**Country**	**Research question**
García-Teruel, Martínez-Solano, (2006)	Spain	Working capital and profitability
Lazaridis, I., Tryfonidis, (2006)	Italy	Relationship between working capital management and profitability of listed companies
Polak, Kocurek (2007)	Czech Republic	Cash and Working Capital Management in the Czech Republic
Michalski (2008)	Poland	Relations between firm's net working investment policy and firms value (liquidity & profitability)

Grabowska (2010)	Poland	Working Capital and Cash Flow in Management of Limited Liability Companies
Arbidane, Ignatjeva (2012)	Lithuania	Relations between Working Capital Management and Profitability
Archavli, Siriopoulos, Arvanitis (2012)	Greece	Determinants of Working Capital Management
Enqvist, Graham, Nikkinen (2013)	Finland	Impact of Working Capital Management on firm Profitability in different business cycles

Source: review of recent relevant studies and research papers

As a result of study of previous literature it can be concluded that working capital management has an impact upon profitability of each enterprise. Studies conducted in different time periods and related to companies of different countries and branches of industry point out similar interrelations.

2 Building suitable regression model - dependent and independent variables

2.1 Independent variables

As mentioned earlier in the introduction the cash conversion cycle is used as a measure firm's profitability. This measure is described by the following equation:

Cash Conversion Cycle = No of Days A/R + No of Days Inventory - No of Days A/P (1)

The main components of cash conversion cycle are given below:

No of Days A/R = Accounts Receivables/Sales*365 (2)

No of Days Inventory = Inventory/Cost of Goods Sold*365 (3)

No of Days A/P = Accounts Payables/Cost of Goods Sold*365 (4)

Another variable chosen for the model specification is that of company size measured usually through the natural logarithm of sales. Shares and participation to other firm are considered as fixed financial assets. This variable I which we use which is related to financial assets is the following:

Fixed Financial Assets Ratio = Fixed Financial Assets/Total Assets (5)

This variable is used since for many listed companies financial assets comprise a significant part of their total assets. This variable will be used later on in order to obtain an indication how the relationship and participation of one firm to others affects its profitability. Another variable used in order to perform regression analysis later on, includes financial debt measured through the following equation:

Financial Debt Ratio = (Short Term Loans + Long Term Loans)/Total Assets (6)

This is used in order to establish relation between the external financing of the firm and its total assets.

2.2 Dependent variables

Following the studies of the previous literature we suggest to use gross profit that should be regressed against fixed financial assets, financial debt, the natural logarithm of sales, cash conversion cycle.

Finally the dependent variable used is that of gross operating profit. In order to obtain this variable we subtract cost of goods sold from total sales and divide the result with total assets minus financial assets.

Gross Operating Profit = (Sales - COGS)/(Total Assets - Financial Assets (7)

The reason for using this variable instead of earnings before interest tax depreciation amortization (EBITDA) or profits before or after taxes is because we want to associate operating 'success' or 'failure' with an operating ratio and relate this variable with other operating variables (i.e cash conversion cycle). Moreover we want to exclude the participation of any financial activity from operational activity that might affect overall profitability, thus financial assets are subtracted from total assets.

2.3 Data collection

Collection of data of Czech companies should be realized using the database Albertina, which was created to monitor the regime of payables in Czech enterprises. Albertina contains information on payment morale of Czech firms and it is possible to organize the output according to company size, segments of operation and regions. Therefore this database is the most suitable for pour purposes.

3 Implications

Working capital management represents financial decisions that directly affect type and volume of current assets and structure of their financing. In pours study we want to verify with suitable data whether similar relation exists on the Czech market. For this purpose we have performed brief overview of similar relevant studies in Europe.

Maintaining the appropriate level of working capital requires not only on-going monitoring of the currently held current assets and liabilities but also those that are anticipated in the short future. So, it is necessary to plan future cash inflows and outflows to ascertain company´s liquidity. This information is combined with information on delays in recovery of receivables. Also tax due dates, interest due dates, and other factors are taken into account. This can have impact on firms performing in other word economies due to globalization and increased ease and speed of communication. But there are also other problems – namely quality management and impact of cultural differences on day to day performance of industrial companies, which his currently not subject of our study.

Conclusion and suggestion for further development of the study

In this introductory paper we provided the summary of relevant prior literature and outlined testable model to discover the relation of working capital management in the SME segment in the Czech Republic to firm's profitability. Effective management of financial processes can release considerable working capital, accelerate processes, increase efficiency and reduce costs.

As one could see from the overview of previous studies this topic is imminent and has been research in many economies of the world. Impact on SMEs is huge because small companies typically operate in short term business and their payment morale is also important for the smooth performance of national economy as a whole. Nonetheless, short term assets and short term liabilities represent typically a dominant part company's balance sheets. One must not overlook impact on firm's liquidity and on cost of capital, which co-determine the performance of industrial segments. When preparing the data to test the model we want to separate the influence of each component of working capital on liquidity and profitability. It would be also worthwhile to look into industrial structure to gain overall picture of country business performance. We hope that this study will contribute o the knowledge of short term capital management in the region of CEE.

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