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Impact of Working Capital Management on Firms Performance

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ABSTRACT

Working capital management is one of the most important financial decisions in the company. Optimal working capital management will increase company's value. The main goal of this study is to evaluate the relationship between working capital management and company's performance. In order to measure company's performance, return on equity (ROE), rate of return on assets (ROA) and ratio of market value to book value of the company (P/B) have been used. Analyses were done using 56 companies active in Tehran stock exchange during 2003-2007. Results of the study showed that there is a positive and significant relation between working capital management and return on equity, between working capital management and rate of return on assets, between working capital management and ratio of market value to book value of the company.

KEYWORDS: working capital management, return on equity, rate of return on assets, ratio of market value to book value of the company.

1. INTRODUCTION

Company financing relates to three kinds of decisions: decision about capital structure, decision about capital budgeting and decisions about working capital management. Working capital management is the most important decision because it affects profitability and liquidity of the company. Working capital management is optimal combination of working capital items i.e. current assets and liabilities in a way that increases shareholders' wealth (Sarniloglu and Demirgunes, 2008). Working capital relates to current assets and liabilities. Due to several reasons, working capital management has been recognized by financial managers as a very important concept. Companies with inadequate current assets may face source shortage and have some problems in their operations (Afza and Nazir, 2009). Working capital management is considered as a crucial field in financial management. This field includes making decisions about amount and composition of current assets and how to finance them. The main goal of working capital management is to keep an optimal balance among components of working capital. Success of commercial department depends on ability of financial managers in managing efficiently account receivable, account payable and inventories (Raheman and Nasr, 2007). Efficient working capital management includes planning and controlling current assets and liabilities in a way that it eliminates risk of inability to meet short term commitments on one hand and avoids extensive investment on such assets on the other hand (Lazaridis and Tryfondis, 2006). From standpoint of working capital management, high levels of current assets may decrease risk of liquidity related to cash opportunity cost that can invest in long term assets. High levels of current assets may affect negatively profitability of the company whereas low level of current assets may result in decreased liquidity and problems in operations (Afza and Nazir, 2009). High amounts of working capital enable a company to meet timely its short term commitments. It results in increased capacity of the company to take loans and decreased risk of unpaid liabilities (thus decreasing capital costs and increasing company value). Consequently it can be said that efficiency of working capital management is not only effective on short term financial performance of the company (profitability) but also on its long term performance (maximizing company value). The research question is whether or not working capital management can affect important variables of accounting as company profit. In this regard, in order to measure company's performance, ratios of ROE, ROA and P/B have been used. The amount and direction of this effect is determined using correlation test and significance of obtained coefficients will be tested. In this direction, at first, research background is represented including empirical background of the research and results of different researchers. Then, research method, type of research, research variables, statistical population, the sample and its selection, analytical methods have been introduced. Research hypotheses and findings will be presented. At the end, research conclusion and some recommendations are offered.

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2- RESEARCH BACKGROUND

Karaduman et al (2010) studied the relation between working capital management and profitability of the company. The aim of this study is to provide empirical evidence for presence of the relation between efficiency of working capital management and model profitability from companies listed in Istanbul stock exchange during 2005-2009. They used rate of return on assets as a standard of measuring profitability and applied cash conversion cycle as a standard of measuring working capital management. Their findings showed that decreased cash conversion cycle affects positively rate of return on assets. By choosing a company listed in capital market of India during 2000-2009, Rajesh and Reddy (2011) studied the effect of working capital management on profitability. Results showed that components of working capital management are effective on performance of companies. In 2010, Dong and Sue studied the relation between working capital management and profitability in Vietnam during 2006-2008. Results showed that there is a strong negative relation between profitability and cash conversion cycle meaning that when cash conversion cycle is increased, profitability of the company will be reduced. Therefore managers can increase established value for shareholders by controlling optimally cash conversion cycle and keeping its components in an optimal level. Gill et al studied the relation between working capital management and profitability in 2010 in the United States. To do so, they studied 88 active companies in New York stock exchange. They concluded that there is a significant relation between gross operational profit and profitability of companies. Masowa (2010) studied 30 active companies in Nairobi stock exchange during 1993-2008. Results showed that there is a significant relation between different indices of working capital management and profitability of companies. Afza and Nazir studied the relation between policies of working capital and profitability using 204 active companies in Karachi stock exchange from 1998 to 2005. Results showed that there is a negative relation between company profitability and investment on working capital and funding policies. Sarniloglu and Demirgunes studied the effect of working capital management on profitability of the companies in Turkey in 2008. They analyzed companies listed in Istanbul stock exchange during 1998-2007. They used multi-regressive model. Results showed that account receivables, cashes and financial leverage have affected negatively company’s profitability whereas growth of the firm (measured by change of company’s sale from one year to another) had a positive effect on company’s profitability. Sing and Pnadi attempted to study components of working capital and evaluated effect of working capital management on company’s profitability in 2008. This study was done on companies listed in years 1990-2007. They concluded that current ratio; instantaneous ratio, ratio of working account receivables and ratio of working capital to total assets have had a considerable effect. Raheman and Nasr evaluated effect of working capital management on company’s profitability. 94 companies listed in Karachi stock exchange (Pakistan) have been used in this study in 1999-2004. Results showed that there is a significant relation between working capital management and company’s profitability. Annuar et al (2007) studied the relation between working capital management and company’s performance. In this study, measuring standard of working capital management has been cash conversion cycle. They analyzed companies listed in Malaysian stock exchange from 1996 to 2006 using data panel. Results showed that there is a significant relation between cash conversion cycle and company’s profitability. Lazaridis (2004) studied the relation between working capital management and profitability. He chose 131 active companies in Macedonian stock exchange. This study is aimed to find the relation between profitability, cash conversion cycle and its components. In order to measure company’s profitability, gross operational profit has been used in this study. Results showed that there is a significant relation between profitability and cash conversion cycle. In addition, managers can increase their profitability by controlling correctly cash conversion cycle and supporting different components of working capital in an optimum level (account receivable, account payable and cashes). Nobanee and Alhajjar (2004) studied the relation between working capital management and profitability. Analyses were done based on 2123 active non-financial institutes in Tokyo stock exchange from 1999-2004. Results showed that managers can increase their profitability by decreasing cash conversion cycle, debt collection period and period of inventory turns. This also can be done using delay in short term solvency. Deloof (2003) studied the relation between cash conversion cycle and profitability by separating cash conversion cycle into its components (account receivables, account payables and cashes). Results showed that increase in all periods affected negatively profitability.

3- RESEARCH HYPOTHESES

Three main hypotheses have been formulated in order to answer the main research question. They were tested in all companies involved in statistical population. These hypotheses were classified as follows:

Hypothesis 1: there is a significant relation between working capital management and return on equity (ROE) of the company

Hypothesis 2: there is a significant relation between working capital management and rate of return on asset (ROA) of the company

Hypothesis 3: there is a significant relation between working capital management and ratio of market value to book value of the company (P/B)

Research methodology and Method of data collection

Statistical population and choosing companies

Statistical population of the present study is all companies listed in Tehran stock exchange. Some companies were chosen from the statistical population to determine the sample under study with following conditions:

1- Their fiscal year is on February 20

2- They had to be present in stock from 2002 to 2007

3- Companies with no change in their fiscal year from 2002 to 2007

4- Information needed from companies is available

By abovementioned limitations and based on random sampling, 56 companies were chosen as sample under study. Since this research has been done in a field form with real data of the company, different sources have been used including CDs of stock exchange organizations, tact processor software from Website of Stock Exchange Company and organization in order to provide information of companies listed in Tehran stock exchange that relates to financial statements of the company. SPSS software tool has been used to process data.

4- Data analysis

The method of present study is correlative. Correlation studies are those in which it is attempted to determine the relation between different variables using correlation coefficient. In these studies, determination coefficient (square of correlation coefficient) is a standard that illustrates the relation between independent and dependent variables. Value of this coefficient determines that how many changes in dependent variable can be explained by independent variable. Descriptive statistic has been used to analyze data including central and scatter indices.

Research variables

In this study, working capital management is an independent variable. Net working capital can be divided into working capital requirements (WCR) and net liquidity balance (NLB). WCR is used to evaluate working capital management and NLB indicates increase and allocation of capital.

NLB: (cash and cash equivalents + short term investments) **-** (short term liabilities + commercial account payables + annual liabilities)

NLB has been used in this study.

Independent variable is company's performance. Criteria used for measuring performance are:

- Return on equity (ROE): this ratio is obtained by division of net profit by total equity of the company

- Rate of return on asset (ROA): net profit is divided by total equity of the company

- Ratio of market value to book value of the company: value of shares at the end of year is divided by its book value

5- Research findings

Research hypotheses have been tested using correlation test. Results has been in form of descriptive statistic and results obtained by testing hypotheses have been shown in following tables

5-1 Descriptive statistic

Table 1 includes descriptive statistic of testing variables

Table 1: descriptive statistic of research data

Variables	Number of observations	minimum	maximum	mean	Standard deviation
NLB	282	- 329607	6161115	- 2049	85593
ROE	263	- 0.68	1.91	0.3325	0.3274
ROA	263	- 0.16	0.55	0.1005	0.09839
P/B	263	- 0.50	33.01	2.5362	3.5984

5-2 results of testing hypotheses

In this section, results obtained by correlation test are represented

Table 2: correlation test of hypothesis 1

variable	Correlation coefficient	Determination coefficient	Modified determination coefficient
Ratio of return on equity	0.179	0.032	0.028

As seen in above table, correlation coefficient between working capital management and return on equity is 0.179 (r = 0.179). Therefore, it can be said that there is a significant relation between working capital management and ratio of return on equity. Considering modified determination coefficient, it can be claimed that 0.028 of change in company's performance is explained by working capital management.

Table 3: correlation test of hypothesis 2

variable	Correlation coefficient	Determination coefficient	Modified determination coefficient
Rate of return on asset	0.146	0.032	0.028

Above table shows that correlation coefficient between working capital management and rate of return on assets is 0.146 (r = 0.146). In other words, research hypothesis is accepted and null hypothesis is rejected. As a result, it can be claimed that there is a significant relation between working capital management and rate of return on assets. Considering modified determination coefficient, it can be claimed that 0.018 of change in company's performance is explained by working capital management.

Table 4: correlation test of hypothesis 3

variable	Correlation coefficient	Determination coefficient	Modified determination coefficient
Ratio of market value to book value	0.320	0.102	0.099

Correlation coefficient between working capital management and ratio of market value to book value is 0.320 showing the relation between these two variables. Therefore, it can be said that there is a significant relation between working capital management and ratio of market value to book value. Regarding modified determination coefficient, it can be claimed that 0.099 of change in company's performance is explained by working capital management.

6- CONCLUSION

Working capital management is one of the most important decisions in financial management. Ability of a company to act in long term depends on how financial managers can manage optimally working capital of the company. Company manager can obtain an optimal working capital management by balancing between profitability and liquidity. This study is aimed to evaluate the effect of working capital management on company's performance. Generally, results obtained from study showed presence of the relation between working capital management and company's performance. Therefore, it can be said that choosing the best procedure for working capital management, determining working capital optimally in companies and managing properly current liabilities and assets can improve company's performance. It is suggested that company managers use proper strategies to manage current liabilities and assets. Managers can have appropriate policies and methods to control account receivables and debt collection, decrease duration of debt collection, increase company's cash and to improve working capital of the company. They also can keep a suitable level of cash I the company using on time management of inventory and cost effective orders so that the company does not face with liquidity crisis in one hand and prevents stationary chases on the other hand. In addition, company's profitability can be improved using longer durations of account receivables in order to manage current liabilities. Generally, managers can improve working capital of the company and increase company profitability using these strategies.

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