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ABSTRACT

The aim of the research is to explore working capital management and profitability of companies listed on the Tehran Stock Exchange. The study sample consisted of companies listed on the Tehran Stock Exchange from 2010 to 2014, for which a number of 100 companies were chosen as sample based on a systematic deletion method and simple random sampling. In order to define and summarize data collected, descriptive and inferential statistics were used. In this research, Eviews 8 software program was used for analysis of research data. The results of the study indicated that a significant relationship existed between working capital management and company profitability, and that a significant relationship existed between accounts receivable management and company profitability, and a significant relationship between accounts payable and company profitability.

KEYWORDS
working capital management, profitability, inventory management, management of accounts receivable

INTRODUCTION

In a challenging economic environment that international organizations find new ways to grow and improve financial performance and reduce risk. Search, working capital is an important resource for improving financial performance, however, working capital management, seeking to establish the delicate balance between maintaining liquidity to support daily operations and maximize short-term investment opportunities.

The increasing importance of working capital management has become the subject of financial management expertise as a series of studies shows that most money managers spend time daily internal operations as simply as working capital management are the expression of And any decision taken in this sector from business unit managers, business unit will have a considerable influence on operational efficiency that will change the value of the company and ultimately shareholder wealth. Phil Beck, referring to both conservatives stock price decline Amazon in 2000, efficient working capital management is considered key to healthy cash flow. They also believe companies that have poor working capital management strategies Bhmrvrzm loses its competitive advantage and flexibility.

THEORETICAL FOUNDATION AND RESEARCH HYPOTHESES

Efficient management of working capital is very important to company profitability. Thus company management is advised to make available resources sufficiently in order to manage working capital. The main goal of the study is to establish a statistical relationship between profitability measured by return on assets and working capital elements such as cash conversion cycle (CCC), average collection period (ACP), average payment period (APP) and inventory turnover days (IT).

Growth, size, and leverage were identified as control variables. The sample size consisted of 4 companies listed in Iran Securities Exchange (GSE) from a five trading company population registered in the fiscal years 2006-2010. The results indicated a fairly negative and significant relationship between cash conversion cycle, average collection period and average payment period, which suggests that reduction of durations for receiving cash and increase of cash payment and reduction of cash conversion cycle would result in profit increase.

Moreover, inventory turnover days showed a positive relationship to profitability, plus other control variables. Thus the study recommends that trading companies manage their working capital more effectively in order to keep it in a balanced situation.

Given that Iranian listed companies were investigated in this research, capital market in the economic environment of
Iran, on the one hand, experiences the primary stages of growth, and bank financing is on the other hand not so conventional, because many of known and listed companies in Tehran Stock Exchange are state-owned and their main source of financing is the budget determined by government. Such a situation is not so conventional in many countries in the world. Therefore, in this research we examine the effect of the management of working capital components namely collection period, inventory retention period, current debt payment period, and generally cash conversion cycle on profitability of companies listed on Tehran Stock Exchange during 2009-2014. The research hypotheses are as follows:

Main hypothesis:
1. A significant relationship exists between working capital management and profitability of companies.

Sub-hypotheses:
1. A significant relationship exists between accounts receivable and profitability of companies.
2. A significant relationship exists between management of accounts payable and profitability of companies.

**RESEARCH BACKGROUND**

Cabralo et al (2013) explored the effect of working capital management, firm performance, financial restrictions of 258 UK non-financial corporation’s during 2001-2007 using data panel method, arriving at the conclusion that there is an inverted U-shaped relation between working capital management and firm performance, and optimal level of working capital for companies with financial limitation is lower (Cabralo et al, 2013).

Akoto et al (2013) explored the relation between working capital management and profitability of listed manufacturing companies during 2005-2009 in Ghana. The results of their study indicated that a significant negative relation exists between collection period of accounts receivable and profitability, while cash conversion cycle, size, current asset ratio and profitability are positively and significantly related (Akoto et al, 2013).

**Domestic research background:**

Moradi and Najjar (2014) explored the relation between working capital surplus and excess return on stock, which are value creation indicators for shareholders. In doing so, the effect of additional investment on cash holding and the effect of net investment on operating working capital were separately investigated. The study sample consisted of 66 companies listed on the Tehran Stock Exchange during 2004-2011. In order to analyze data and test hypotheses, multiple linear regression model based on estimated generalized least squares. The results of the study indicated that a negative and significant relation existed between additional investment in net operating working capital and excess return on stock. The findings also suggested that in leverage companies cash holding increases shareholders’ wealth compared to additional investment in net operating working capital (Moradi & Najjar, 2013).

Shakeri et al (2013) studied the effect of working capital management on operating cash flows and cash assets of listed companies on stock exchange during 2005-2011 on Tehran Stock Exchange. The results indicated that working capital management makes no difference to cash assets and operating cash flows of the companies (Shakeri et al, 2013).

**RESEARCH METHOD**

The research is an applied by classification and goal and a descriptive and correlational research by classification and method. In this research, using historical information of companies, relation between variables was addressed using linear regression model and synthetic data. The study sample consisted of companies listed on the Tehran Stock Exchange during a five-year period (from 2009 to 2014).

The study sample should meet the following conditions;
1. they should be admitted before March 2009 (given the period of the study)
2. they should be active on the stock exchange during the fiscal period 2009-2014 (given the period of the study)
3. necessary financial information particularly notes attached to financial statements should be available in order to extract necessary data
4. they should not be part of banks and financial institutions (investment companies, financial intermediaries, holding companies, banks and leasing firms), because their manner of financial information is different.

**Operational definition of variables:**

In this research, net operating profit was used as dependent variable. The reason for using the variable in preference to earnings before deduction of interest, tax, or other earnings is that in this research net operating profit represent the success or failure of company’s operations and has relation to other operating variable (cash conversion cycle).

Independent variables in this study are average collection period, average debt payment duration, and cash conversion cycle.

Cash conversion cycle = inventory turnover period + collection period – debt payment period

Average collection period = 365. Average accounts payable / sales
Average debt payment period= 365. Average account payable/ cost of goods sold

Firm size:

A variety of criteria were used to measure firm. In this research, natural logarithm of book value of total assets was used to measure firm size. The use of natural logarithm would stop probability coefficients of the variables from being affected by larger scales in the model (Meshki, 2011).

Liquidity:

In order to calculate the variable, the result of dividing current assets by current liabilities after deducting inventories and prepayments is used.
The main central index is mean which reflects the balance point and center of distribution gravity and a good index for representing data centrality. For example, the average value of profitability variable is equal to 15.39, suggesting that most data center around this point. Median is another central indicator that represents the situation of population.

**F-Limer test:**

The results of estimating the first sub-hypothesis of the main hypothesis is as follows:

\[ NOPt = \beta_0 + \beta_1 (ACPit) + \beta_2 (Sizeit) + \beta_3 (LIQit) + \epsilon it \]

Given that P-value obtained from F-Limer test for the research hypotheses is smaller than 5 percent, panel data will be used to estimate the models.

**Hausman test:**

As seen in the results of the table, P-value is less than 5 percent, so H0 is rejected and fixed effect model is confirmed. This suggests a relation between estimated regression error and independent variables. Given the results of Hausman test, the most suitable method for estimating parameters is fixed effect model.

**TESTING RESEARCH HYPOTHESES**

As the results of table (4-7) suggest, estimated P-value is less than 5 percent for the independent variable. Therefore, all the variables and the dependent variable (NOP) are significantly related. The coefficient of the variable working capital management is negative, which suggests a negative and significant relation between working capital management and profitability.

**Testing the first sub-hypothesis:**

A significant relation exists between management of accounts receivable and firm profitability.
As the results of the table suggest, estimated P-value is less than 5% for the independent variable, so all the variables and the dependent variable (NOP) are significantly related. The coefficient of the variable management of accounts receivable is negative, which suggests a negative and significant relation between management of accounts receivable and profitability.

**Testing the second sub-hypothesis:**

<table>
<thead>
<tr>
<th>Model 4</th>
<th>NOPit = β0 + β1 (ITIDit) + β2 (Size it) + β3 (LIQt it) + e it</th>
</tr>
</thead>
<tbody>
<tr>
<td>P-value</td>
<td>t statistic</td>
</tr>
<tr>
<td>0.0000</td>
<td>-4.578877</td>
</tr>
<tr>
<td>0.1462</td>
<td>1.456188</td>
</tr>
<tr>
<td>0.0000</td>
<td>8.305313</td>
</tr>
<tr>
<td>0.0000</td>
<td>5.253095</td>
</tr>
<tr>
<td>Adjusted coefficient of determination</td>
<td>0.560885</td>
</tr>
<tr>
<td>F Statistic</td>
<td>8.448184</td>
</tr>
</tbody>
</table>

Source: research findings

Management of accounts payable and firm profitability are significantly related.

As the results of the table suggests, estimated P-value is less than 5% for the independent variable, so the variable and the dependent variable (NOP) are significantly related. The coefficient of the variable inventory management is negative, which suggests a negative and significant relation between accounts payable and profitability.

As a result, it can be asserted that a significant relation exists between management of accounts payable and firm profitability, in that firm profitability reduces as management of accounts payable increases.

Furthermore, coefficient of explaining the model is roughly 0.63; this suggests that 63% of dependent variable variation can be explained by the foregoing independent variables, and since Durbin-Watson statistic of the model approaches 2 (2.24), it can be said that there is no first-order autocorrelation in this model.

- companies are recommended to set up a committee to investigate the subject and make relevant decisions on working capital in order to observe optimal level of working capital
- users of financial information are recommended to pay attention to the amount of working capital as a determining factor in the improvement of profitability.
- accounting standard setters and policy makers of stock exchange should encourage companies to provide more information on working capital separately in notes attached as complementary information.
- investors are recommended to pay attention to the amount of corporate working capital before taking any decision on in what company they make investment

**Conclusion**

Investment in working capital for the company's good liquidity position, which must be maintained liquidity well managed and optimized. Despite incomplete markets due to information asymmetry and cost of liquidity is limited access to cash management needs to adopt specific policies to manage cash resources and access to financing. Fuzzer (1998) showed that the financing and investment decisions are not independent of each other. Fuzzer (1998) leaves sometimes believe investment subsidiary of financial purchases, such as access to foreign capital markets or the cost of financing.

**Suggestions for future research:**

- Do the present research by using neural network model
- Do the research in a non-linear fashion and its comparison with linear studies
- Investigate the role of working capital management in keeping private unit’s activities
- Investigate the reason for insufficient attention to management of working capital

**References**


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