The Relation between Cash Holdings and Trade Credit, Consideration of Financial Deepening

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ABSTRACT
Access to financial markets and how the market's way of financing is, is one of the most important factors that specifies how access company to cash and level of it. Countries where the financial sector depth is less, it does not allocate resources efficiently between the needs and sometimes in these countries are faced with the problem of unavailability of appropriate financial instruments thus in which case they shall not gather enough resources. This study examines the relationship between trade credit payable and receivable with cash holding in view of the financial depth. The population of the study includes all Tehran Stock Exchange member firms after certain conditions are imposed. Sampling was undertaken and finally, during the period 2006 to 2013, 127 companies were selected. The methodology of research is descriptive. Evaluate the research hypotheses through regression analysis with the use of synthetic data has been carried out. Also we use a number of control variables. These variables consist of Size, Liquid, Leverage, Debt, M/B, Cash flow. The results show no relationship between trade credit payable and receivable with cash holding in view of the financial depth. Also test the hypotheses in a single regression model did not change the results.

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Introduction
At the time of boom of a company, as the stock of cash increases, the managers decide whether to distribute this cash to the stock holders or to be spent in foreign consumption or to be used for foreign education or to be still kept. The fact that what choices will the benefit —seeker managers make between consumption and keeping is something vague. The theory of non-symmetric information, the theory representative, the theory of equilibrium, the theory of financial hierarchy and the theory of free cash flow are among the relevant theories with the level of keeping cash in the companies. According to non-symmetric information theory, the decrease in non-symmetric information (for example through increasing the quality of financial report) can decrease the amount of cash kept by the companies. According to representative theory, the paradoxes which cause diagnosing the prices can be used in justifying the behavior of maintaining the cash by the management.

According to the equilibrium theory, the companies appoint the amount of their logical cash with creating equilibrium (balance) between the profits and the maintenance costs. According to the financial hierarchy, the manager tends to accumulate the cash to be able to finance in the company and not to return to out of the company. According to free cash flow, the managers are motivated to accumulate the cash to increase the sources which are under their control, and to be able to have judgment and recognition in investment decision making.

This research seeks to examine the effect of trade credit (paid accounts) and trade credit (received accounts) on the maintenance of cash, considering the financial deepening index.

Stating the problem
Managers try to decrease the financial expenses through cash holding. Therefore, they always try to hold a large amount of cash so that not to depend on outward sources. On the other hand holding extra and stagnant cash has a low proficiency and causes negative economical outcomes for the company. Expanding the financial markets in each country can decrease the expense result from cash deficiency, because the managers can use different financial sources sufficiently, if necessary. Therefore the main question which this research seeks to answer is the fact that whether there is a relationship between cash and received and paid trade credit of the company based on the depth of the financial market.

The importance of the research
The trade credit has an important role in the balance sheet of the companies. According to the recent researches, the companies use the trade credit as a succession for short-term financial providence (vow and colleagues, 2011). Financial providence needs some expenses for the company that depending on the financial depth of the market, these expenses can be different. The question we encounter is the fact that, considering the financial depth of the market whether the trade credit affects on the cash holding level?

Because the received accounts has a large part the balance sheet, so appointing this relationship can provide suitable information for financial information users.

The concept of cash
The cash is the most mobile and the intermediary for dealing which is used in purchasing and the intermediary for dealing which is used in purchasing the products and services and settling the promises. The cash has such a kind of popularity as an intermediary for dealing that there is no restriction in using it in trade dealing. The cash includes note, change, private cheques, visual deposits, traveler cheques, bank orders, fund and the majority of deposit accounts. The foreign currencies can be included to cash category when they can be changed easily.
The review of the literature:

Tehran and Hesarzadeh (2009) examined the effect of free cash flow and the limitation of financial supply on high investment and low investment. The results showed that the relationship between free cash flow and high investment is meaningful statistically. There is no meaningful relationship between financial supply and low investment in the accepted companies in Tehran securities stock market.

Fakhari and Taghavi examined the effect of promised products on the remaining cash of companies. The results showed that the quality of promised products has a negative and meaningful relationship with the remaining cash. It means that the quality of the promised products as an important factor on the balance inquiry is relevant and significant.

Azkan (2004) concluded that cash holdings by companies have a negative relationship with the belongings of pseudo cash of the companies. Their results show that the companies use the current belongings as a successor for the available cash. Also, for avoiding lack of cash for paying the promised interests, companies have more cash.

Folly, Hartzel and Titman (2006) examined the fact that why companies have such an extra cash. The result of their research showed that multi-national companies of America tend to evade from tax expenditures resulted from returned income and keep a large amount of cash.

Harford, Mansi and Maxvel (2008), analyzed the relations between leadership factors and keeping cash in the U.S. the results show that the companies with weak leadership structures have less cash supply and companies with low salary of stock holding and beyond cash have lower profitability.

Vew and Colleagues (2011) examined the role of financial deepening on the relationship between trade credits and keeping cash. They mentioned that the companies located in areas with high financial deepening, keep less cash for paying accounts and replace more amounts of received accounts with cash.

Hypotheses:

1) Considering the financial deepening index, there is a relationship between the given trade credit (received accounts) and cash holdings.
2) Considering the financial deepening index, there is a relationship between the trade credit (paid account) and keeping cash.

The subjects and sampling method:

The subjects include all the companies accepted in the securities stock market of Tehran. Because of the expansion of the subjects the situations below are put for selecting the subjects.

1) Their stock must be traded from the beginning of 2006 up to the end of 2012.
2) The stoppage in the stock dealing should be at most 6 month.
3) The company must not be among those investing, servicing or intermediary companies, because their action is different from other industries.
4) The financial year of the company must finish at the end of March and the company must not have financial periodic change which causes the increase or maintenance of comparing ability of financial information.

Paying attention to the mentioned conditions leads to the selection of 127 companies for the research and the period of the research is limited to the years of 2006 to 2012.

Method:

This research is practical and descriptive and correlative on the basis of content. It is a case study on the basis of its type of gathering the information. It is periodic – correlative on the basis of its test. The multi-regression is being used for analyzing the data and testing the hypothesis.

The research variables

Dependent variable:

Cash holdings

In this research the keeping of the cash is the result of the amount of final cash minus the beginning cash which is extracted from the balance sheet.

Independent variable:

Trade received accounts (Crdt_Rec)

It includes all short term requests of the trade unit for selling goods and delivering services. These accounts are represented in the balanced sheet as the pure recycled value.

Trade Paying accounts (Crdt_Pay)

It introduces the promises of the trade unit resulted from buying material and product which is expected to be settled one extractable from the current debt parts of the balance sheet.

Financial deepening

In this research the index of financial deepening is the connection of all liquidity to gross domestic production, that its date is extractable from the central bank.

Control variables

Liquid: The pure connection of flowing investment (investment minus cash and equivalents to cash) to the whole belongings.

Size: The result of the logarithm of all properties.

Leverage: The financial lever which is reached by dividing the whole debts over the whole properties.

Debt: The connection of long term debts to all debts.

M/B: The connection of the value of market belongings to the office value of belonging.

Cash flow: The connection of operational cash flow to the whole properties of the company.

The research finding:

For more analysis between the research variables, three independent control and dependent variables of the research are tested simultaneously in the form of regression model.

\[ \Delta \text{Cash}_{it} = \alpha_0 + \alpha_1 \Delta \text{Crdt}_{it} \cdot \text{Pov}_{it} + \alpha_2 \Delta \text{Crdt}_{it} \cdot \text{Rec}_{it} + \alpha_3 \Delta \text{Crdt}_{it} \cdot \text{Pay}_{it} \cdot \text{Deepening}_{it} + \alpha_4 \Delta \text{Crdt}_{it} \cdot \text{Rev}_{it} \cdot \text{Deepening}_{it} + \alpha_5 \text{Liquid}_{it} + \alpha_6 \text{Size}_{it} + \alpha_7 \text{Leverage}_{it} + \alpha_8 \text{Debt}_{it} + \alpha_9 \text{M/}B_{it} + \alpha_{10} \text{CashFlow}_{it} + \epsilon_{it} \]

<table>
<thead>
<tr>
<th>Variable</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>D.CASH</td>
<td>889.356</td>
<td>3.01</td>
<td>1.066</td>
<td>0.22558</td>
</tr>
<tr>
<td>D.Crdt.Pay</td>
<td>889.458</td>
<td>61</td>
<td>0.129</td>
<td>1.9194</td>
</tr>
<tr>
<td>D.Crdt.Rec</td>
<td>889.387</td>
<td>68</td>
<td>0.007</td>
<td>1.59444</td>
</tr>
<tr>
<td>Liquid</td>
<td>889.199</td>
<td>.81</td>
<td>0.427</td>
<td>2.5896</td>
</tr>
<tr>
<td>Size</td>
<td>889.264</td>
<td>2.52</td>
<td>0.032</td>
<td>98564</td>
</tr>
<tr>
<td>Leverage</td>
<td>889.04</td>
<td>2.73</td>
<td>0.647</td>
<td>7.2397</td>
</tr>
<tr>
<td>Debt</td>
<td>889.77</td>
<td>2.09</td>
<td>0.028</td>
<td>2.7983</td>
</tr>
<tr>
<td>M/B</td>
<td>889.103</td>
<td>2.18</td>
<td>1.87286</td>
<td>3.0827</td>
</tr>
<tr>
<td>Cash Flow</td>
<td>889.519</td>
<td>44.11</td>
<td>6.228</td>
<td>3.53993</td>
</tr>
<tr>
<td>Deepening</td>
<td>889.52</td>
<td>64</td>
<td>5.834</td>
<td>0.4694</td>
</tr>
</tbody>
</table>

The statistical statement for the first hypothesis is as follows:

\( H_0: \) there is no relationship between received accounts (given trade credit) and cash holding based on the financial deepening index.

\( H_1: \) there is relationship between received accounts (given trade credit) and cash holding based on the financial deepening index.

The statistical statement for the second hypothesis is as follows:

\( H_0: \) there is no relationship between received trade market and cash holding based on the financial deepening index.

\( H_1: \) there is relationship between received trade market and cash holding based on the financial deepening index.
Table: Results of statistical analysis and modeling assumptions

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficients</th>
<th>T</th>
<th>P-Value</th>
<th>Multi collinearity statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>-.774</td>
<td>-1.739</td>
<td>.082</td>
<td>Tolerances .082</td>
</tr>
<tr>
<td>∆Crdt_Pay</td>
<td>-.623</td>
<td>-1.464</td>
<td>.144</td>
<td>VIF 5.693, T 3.757, P 0.439</td>
</tr>
<tr>
<td>∆Crdt_Rec</td>
<td>.948</td>
<td>1.840</td>
<td>.166</td>
<td>VIF 5.740, T 3.757, P 0.439</td>
</tr>
<tr>
<td>∆Crdt_Pay.Deepening</td>
<td>.439</td>
<td>.887</td>
<td>.375</td>
<td>VIF 6.176, T 3.757, P 0.439</td>
</tr>
<tr>
<td>∆Crdt_Rec.Deepening</td>
<td>-.753</td>
<td>-1.260</td>
<td>.208</td>
<td>VIF 6.238, T 3.757, P 0.439</td>
</tr>
<tr>
<td>Liquid</td>
<td>-.302</td>
<td>-1.232</td>
<td>.218</td>
<td>VIF 3.427, T 3.757, P 0.439</td>
</tr>
<tr>
<td>Size</td>
<td>.054</td>
<td>1.490</td>
<td>.137</td>
<td>VIF 1.083, T 3.757, P 0.439</td>
</tr>
<tr>
<td>Leverage</td>
<td>-.209</td>
<td>-1.097</td>
<td>.273</td>
<td>VIF 2.314, T 3.757, P 0.439</td>
</tr>
<tr>
<td>Debt</td>
<td>-.313</td>
<td>-1.547</td>
<td>.122</td>
<td>VIF 2.731, T 3.757, P 0.439</td>
</tr>
<tr>
<td>M/B</td>
<td>-.007</td>
<td>-1.266</td>
<td>.206</td>
<td>VIF 2.553, T 3.757, P 0.439</td>
</tr>
<tr>
<td>Cash Flow</td>
<td>.021</td>
<td>2.169</td>
<td>.030</td>
<td>VIF 2.145, T 3.757, P 0.439</td>
</tr>
<tr>
<td>Deepening</td>
<td>1.580</td>
<td>2.102</td>
<td>.036</td>
<td>VIF 1.580, T 3.757, P 0.439</td>
</tr>
<tr>
<td>(R)</td>
<td>.145</td>
<td>F</td>
<td></td>
<td>(R)</td>
</tr>
<tr>
<td>(R²)</td>
<td>.094</td>
<td>(D-W)</td>
<td>.021</td>
<td>(R²)</td>
</tr>
</tbody>
</table>

Conclusion

The possible amount of F statistic equals 0/019 which is less than 0/05. As a result the zero statistic hypotheses are completely rejected based on the incompetency of the model (H: all correlations of the regression model equals zero). There fore, the competency of the model for testing is appointed.

According to the results gained from the table above, it is observed that independent variables ∆Crdt_Pay. Deepening and ∆Crdt_Rec.Deepening. Deepening are among the variables deleted from the model. This indicates the in the comprehensive model, there is no meaningful relationship between the two independent variable with the dependent variable of the research (maintenance of the cash)

Table: The result of hypothesizes test

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Test result</th>
<th>The final result</th>
</tr>
</thead>
<tbody>
<tr>
<td>First hypothesis</td>
<td>Rejected</td>
<td>Considering the financial deepening index, there is no relationship between the given trade credit and cash holdings</td>
</tr>
<tr>
<td>Second hypothesis</td>
<td>Rejected</td>
<td>Considering the financial deepening index, there is relationship between the received trade credit and cash holdings</td>
</tr>
</tbody>
</table>

The limitation of the research:

Lots of economical and political and social factors and also effective factors in the company except selected control variables are effective on the findings of the research that its control was so difficult.

The research society examines just the accepted companies in the securities stock market and because of not having a quick and easy access to the information of the other companies, it quits examining them. For this reason, at the time of generalizing to other non-stock market companies, we must act carefully.

Suggestions for future researches:

1) It is suggested to examine the effect of financial deepening index on other financial variables.
2) Based on the weak point of data stations about the general financial issues of the country, if the data related to the deepening of the provinces of the country are measurable, it is suggested that the companies must consider the financial deepening of the province and examine the issue of the research.

Resources:

- Khalatbari, F., “Concepts of money, banking and international shavadis”, Publications, 82
- Noravesh, E., Karimi, GH, Moradi, M. "A comprehensive overview of the financial brshavas", Nashr
- Tehrani, R., Hasarzadeh, R. (1993)” Cash Tasyrjryan Zadymhvdvdyt ensuring Brbysh financial investment and less capital investment” Accounting Researches 1(3) 50-67