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Liquidity and Financial Performance: Empirical Evidences of the Companies Listed on Tehran Stock Exchange (TSE)

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ABSTRACT

Assets liquidity besides improving financial flexibility of company via facilitation of optimization of company structure can reduce capital expenditure of company. The present study attempts to use the data of 112 companies listed on TSE during 2011-2015. The pooled data model and multiple variety regression evaluate the relationship between assets liquidity and financial performance. The results show that there is a direct and significant relationship between assets liquidity and financial performance of companies listed on TSE.

Keywords: Assets liquidity, Financial performance, Profitability.

1. INTRODUCTION

The discussion about the effective factors on financial performance and profitability has received much attention by different researches in different fields as economics, management, accounting and financial. Most of the studies are based on traditional paradigm of Bain structure, conduct, and performance (1959) emphasizing on the industry features as scale economies, concentration and entry conditions (Goddard et. al., 2005). Based on this paradigm, the company performance depends upon its leadership as dependent upon structural factors (Pattitoni et. al., 2014). In strategic management literature, the important factors of company performance are associated with the specific internal resources. Based on resources-based view, the most important resources of performance are those existing in the company (e.g. total assets, capital, organizational processes, data, knowledge, etc.) and it is probable that the mentioned resources don't lead to the competitive advantages of company (Wernerfelt, 1984). Also, it helps the implementation of strategies improving effectiveness and operational efficiency of company (Daft, 1983; Barney, 1991). Various studies have evaluated the effective factors on performance and profitability of companies as economic, financial,

accounting and managerial factors (Demirgüneş, 2016) and the identification of the effect of liquidity on profitability and its performance have not received attention by the researchers.

In financial literature, there are two types of liquidity as assets liquidity in this study and stock liquidity. An asset is liquidated if it is converted to cash rapidly or with low cost. In other words, the asset liquidation is defined as liquidity power of an asset. This definition is also true about real assets (estates) and for financial assets. The assets with high liquidity have active market and they can be traded easily and they can be converted to cash based on common price. Based on the explanations, the present study evaluates the effect of assets liquidity on performance of manufacturing companies. Theoretical review of literature. Based on the existing theoretical and empirical evidences, the assets liquidity increases the financial flexibility of the company and via the facilitation of structure revision processes can reduce the capital costs (Maksimovic and Phillips, 1998; Schlingemann et. al., 2002) with high value for the companies with economic crisis (Lang et. al., 1995; Weiss and Wruck, 1998; Almeida et. al., 2009). According to Raheman and Nasr (2007), one of the final goals of each company is profit maximizing in the long-term but keeping the liquidity is an important goal. Achieving profit at the price of losing liquidity can create serious problems for a company. Thus, a balance should be established between two goals and one goal should not be achieved at the price of another goal, as both of them are important. If a company doesn't consider profitability, it can not sustain for a long time and if it is not concerned about liquidity, it can encounter bankruptcy problems or debts insolvency. Various studies have shown that cash flow policies as accounts received from customers, inventory holding and paid cash to providers has extensive relationship with the performance improvement of company (Richards and Laughlin, 1980; Stewart, 1995; Moss and Stine, 1993; Farris and Hutchison, 2003 and Ebben and Johnson, 2011). Shleifer and Vishny (1992) state that assets liquidity affects the distress expected costs because less liquid assets sell at higher discounts, relative to their fair values, which then increases the expected costs of asset liquidation in the event of financial distress. To avoid costly liquidation associated with illiquid assets, managers reduce leverage ex ante to lower the probability of default and reduce expected distress costs. In another study, First, Morellec (2001) argues that the effect of liquidity on leverage depends on whether restrictions are placed on asset disposition. He explained that assets liquidity increased borrowing capacity when bonds contracts restricted the assets delegation. Sibilkove (2007) in a study on the relationship between assets liquidity and capital structure evaluated the effect of assets liquidity on capital structure and found that there was a direct relationship between assets liquidity and capital structure. Lipson and Mortal (2009) in a study as liquidity and capital structure found that the increase of assets liquidity reduced the funding costs. Gopalan et. al., (2009) in another study evaluated the relationship between assets liquidity and liquidity of financial claims on these assets and associated the financial decisions of the company to its share liquidity. Their model showed that when high liquidity of assets reduces uncertainty based on valuation of existing assets, future investment and uncertainty were increased. Also, it was shown that for the companies with low probability of re-investment of liquidated assets, the companies with low growth opportunities and distressed companies are encountered with restrictions and assets liquidity improves the liquidity of stocks. Their model showed that there was a considerable and positive relationship between assets liquidity and liquidity of stocks and this relationship is increased regarding the companies with low growth opportunities with distressed conditions. In addition, Gopalan et. al., (2010) considered valuation uncertainty and investment uncertainty in the model. Their model showed that the relationship between assets liquidity and stock liquidity was vague due to two competitive theories. Their empirical study showed that there was a positive relationship

between assets liquidity and stock liquidity for business units of US. In the second hypothesis of study, by market value to book value ratio and capital expenditures to identify the business units, it was found that there was a positive relationship between assets liquidity and stock liquidity for business units with higher growth opportunities. To test the third hypothesis, it was found that this relationship was positive for smaller business units. Carverhill (2011) evaluated the liquidity and capital structure and found that liquidated assets holding policy helps the development of growth opportunities, protection of company in distress conditions and assets substitution. Kroes and Manikas (2014) evaluated cash flow management and financial performance of American companies. The results showed that cash conversion cycle had no association with financial performance of companies but operating cash flow had significant relationship with Q-tobin index. Demirgüneş (2016) evaluated the effect of liquidity on financial performance using Turkey retailer industry and found that there was a direct relationship among them.

2. STUDY HYPOTHESES

Based on the explanations in theoretical basics and review of literature, a main hypothesis and two sub-hypotheses are raised as:

There is a direct and significant relationship between assets liquidity and company performance.

- *First sub-hypothesis:* There is a direct and significant relationship between assets liquidity and assets return of company.
- *Second sub-hypothesis:* There is a significant and direct relationship between assets liquidity and return on equity of company.

3. STUDY METHODOLOGY

As the results of study can be applied in decisions of managers, investors, analysts, activists of capital market, stock market and auditors, it is an applied study in terms of purpose. Also, in terms of inference method regarding the study hypotheses, it is a descriptive-correlation study. To detect the relationship between the study variables, regression and correlation techniques are used and it is deductive reasoning. As we make conclusion via the existing data test, this study is a positive theory.

3.1. The Study Variables and Models

To test the study hypotheses, the following models are used (Demirgüneş (2016)):

First sub-hypothesis

$$ROA_{i,t} = \beta_0 + \beta_1 CUR_{i,t} + \beta_2 GROW_{i,t} + \varepsilon_{i,t}$$

Second sub-hypothesis

$$ROE_{i,t} = \beta_0 + \beta_1 CUR_{i,t} + \beta_2 GROW_{i,t} + \varepsilon_{i,t}$$

where,

Dependent variable:

$ROA_{i,t}$ = Return on asset of company *i* in year *t* as the ratio of net profit to total assets.

$ROE_{i,t}$ = Return on equity of company *i* in year *t* as equal to the net profit to equity

Independent variable:

$CUR_{i,t}$ = Liquidity of assets of company *i* in year *t* to compute it, current ratio (current assets to current debts) is used.

Control variable:

$GROW_{i,t}$ = Growth of company *i* in year *t* as the percent of changes in sale income.

3.2. Study Population and Statistical Sample

The study population is companies listed on TSE during 2011-2015. The applied sample is selected via systematic elimination method. The sample is consisting of all existing companies meeting the following criteria:

1. There is no change in fiscal period in the study.
2. It is not one of the active companies in financial activities as investment, banks, insurance and financial institutes.
3. The required data of study variables exist during 2011-2015.
4. Their fiscal period leads to 12-29 of each year to use the data as panel beside each other. The mentioned process leads to the selection of 112 companies.

4. STUDY RESULTS

4.1. Descriptive Statistics

In this section, the mean, median (central measures), standard deviation, maximum and minimum (dispersion criteria) are calculated and shown in Table 1.

Table 1
The descriptive indices of studied variables

Study variables	*Mean*	*Median*	*Max*	*Min*	*SD*
Return on assets	0.097	0.088	0.631	–0.45	0.14
Return on equity	0.291	0.263	3.205	–1.479	0.39
Assets liquidity	1.36	1.228	6.197	0.148	0.691
Company growth	0.207	0.163	2.742	–0.677	0.438

Mean is the main and most important central measure and shows the equilibrium of distribution and median is a point at which a sample is divided into two equal parts. As shown in the above Table, the mean of ROA is 0.097 and its median is 0.088. Generally, dispersion criteria are those comparing the dispersion of observations around the mean. One of the most important criteria of dispersion is standard deviation. Based on the above Table, this criterion for ROA is 0.14. The maximum variable of ROA is 0.631 and the minimum value is –0.45. The features of other variables are shown in the above Table.

4.2. Inferential Statistics

The result of first sub-hypothesis test of the present study by fixed effects model is shown in Table 2.

Table 2
The results of first sub-hypothesis test

Variable	*Coefficients*	*Standard error*	*T statistics*	*Significance level*
Constant	–0.042	0.008	–4.805	0.000
Assets liquidity	0.094	0.006	14.724	0.000
Growth	0.054	0.004	10.955	0.000
F statistics		42.996	Adjusted coefficient of determination	0.615
Significance level of F statistics		0.000	Durbin-Watson	1.96

Based on the results of Table 2, *t* statistics of assets liquidity is bigger than +1.965 and its significance level is smaller than 0.05. There is a direct and significant relationship between assets liquidity and return on assets of companies listed on TSE. The first sub-hypothesis of the present study as there is a direct and significant relationship between assets liquidity and return on assets of company is supported. The Durbin-Watson statistics of the model is 1.96 ranging 1.5-2.5. The significance level of F statistics is 0.000 as lower than 0.05 and it shows the significance of model. Another important point in Table 2 is the adjusted coefficient of determination of the model. The adjusted coefficient of determination is 61% and it shows that about 61% of the changes of dependent variable and control variables are explained and this value is considerable. It is worth to mention that using EGLS and white diagonal correction leads to the elimination of variance non-homogeneity effects.

The result of second sub-hypothesis test by fixed effects model is shown in Table 3.

Table 3
The results of second sub-hypothesis test

Variable	*Coefficients*	*Standard error*	*T statistics*	*Significance level*
Constant	0.176	0.015	11.122	0.000
Assets liquidity	0.069	0.011	5.936	0.000
Growth	0.096	0.009	9.997	0.000
F statistics		46.847	Adjusted coefficient of determination	0.622
Significance level of F statistics		0.000	Durbin-Watson	1.888

Based on the results of Table 3, t statistics of assets liquidity is bigger than +1.965 and its significance level is smaller than 0.05. There is a direct and significant relationship between assets liquidity and return on equity of companies listed on TSE. The second sub-hypothesis of the present study as there is a direct and significant relationship between assets liquidity and return on equity of company is supported. The Durbin-Watson statistics of the model is 1.888 ranging 1.5-2.5. The significance level of F statistics is 0.000 as lower than 0.05 and it shows the significance of model. Another important point in Table 3 is the adjusted coefficient of determination of the model. The adjusted coefficient of determination is 62% and it shows that about 62% of the changes of dependent variable and control variables are explained and this value is considerable. It is worth to mention that using EGLS and white diagonal correction leads to the elimination of variance non-homogeneity effects. Based on the results, after the support of first and second sub-hypotheses, the main hypothesis of this study as there is a direct and significant relationship between assets liquidity and company performance is supported.

5. CONCLUSION

An asset is called liquidated if it is converted to cash flow gradually. This definition includes real assets and financial assets. The first concept of liquidity is the liquidity of real assets by which a company is called liquidated if there is high ratio of cash assets as cash flow in the balance sheet. The present study attempts to use the data of companies listed on TSE and evaluate the relationship between assets liquidity and profitability. The results show that there is a direct and significant relationship between assets liquidity and profitability. Thus, it is worth to mention that based on theoretical and empirical evidences, the assets liquidity increases the financial flexibility of company and via the facilitation of structure renovation processes, the capital cost is reduced namely for the companies encountered with economic crisis it has high value. This result is consistent with the study of Demirgüneş (2016). It is worth to mention that Demirgüneş (2016) evaluated the effect of liquidity on financial performance and found that there was a direct relationship between them. Based on the results of present study, it is recommended to the investors in capital market to consider that the increase of current ratio is with the increase of profitability (e.g. return on assets and return on equity) and this leads to the increase of return of investment in stock. In addition, it is proposed to the managers of companies listed on TSE to consider that by increasing current assets ratio to current debts, the company profitability is increased. In this study, to calculate assets liquidity, current assets to current debts ratio is used and it is used in future studies of other criteria as cash flow to total assets and compare the results. In addition, the regression relationship of this study is estimated for all member industries as a whole. It is proposed that in future studies, this relationship is estimated separately for different industries.

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