

FACTORS EFFECTING OF LIQUIDITY LEVEL IN ACCEPTED COMPANIES OF TEHRAN STOCK EXCHANGE

Ruhollah Nasiri

Azad Qazvin University. Iran
E-mail: r.nasiri2013@yahoo.com

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Abstract

Financial institutions preserve a significant percentage of their assets in cash. Actually, the issue has drawn the attention of researchers regarding the factors affecting the preservation of these assets. The present study investigates the impact of companies' financial structure on the liquidity of companies listed in Tehran stock exchange; in other words, it is attempted to assess whether the companies' size, market value, fixed assets structure, sales, financial leverage, dividend and firm's life affect the amount of liquidity in companies listed in Tehran stock exchange.

For this purpose, the data of financial statements related to the end of audited courses of companies listed in Tehran stock exchange for the period of 2007-2013 have been assessed using the multivariate linear regression model. The results of this study show that the companies' size, market value, fixed assets structure, sales, and life positively affect the amount of liquidity in companies listed in stock exchange. According to the restrictions imposed on the basis of conducted surveys, 52 companies were selected from the active companies accepted in the Tehran Stock Exchange that continuously attended there. Order to data collection in the field of theoretical foundations and research literature on the topic has been used for library resources, articles, the required books and also from the global network of information. Financial data extracted from the audited financial statements contained in the Website of management of research, development and Islamic studies at stock exchange organization and Tadbirpardaz the Rahavard-e Nonin software and documents in the Library of the Tehran Stock Exchange. The collected data was calculated using Excel software and analyzed using SPSS software.

The evidence showed that the structure of fixed assets, sales rate and financial leverage has a positive impact on the cash of companies listed on the stock exchange.

Keywords: liquidity, effective factors, the maintenance of cash holdings, the multivariate linear regression.

1. Introduction

Cash balances are the most important properties of companies. How to use the funds are the most important decision in conflict between shareholders and managers. Managers decide in period of economic growth that cash will distribute between shareholders, cash will spend for internal expenses, cash will use to external education or cash will store? The decision of profit driven managers about use or store of Cash reserves is unclear. Managers should compare their current expenses with Maintenance

of cash reserves. Profit driven managers should measure the possibility of increasing cost-benefit of high cash holdings [1].

The companies that have the lack of internal recourses can increase their cash stock with sales of properties, creating of new debts or take stock publication, and with Non-payment of cash dividends resources. So, the companies that have more deals costs will keep more Cash assets. On the other hand, precautionary is the use of Business opportunities and avoid bankruptcy. The companies keep their cash assets for confrontation of unforeseen events and use to their cash assets for investment financing [2].

This current study wants to research the company's structure in liquidity level of accepted companies in Tehran s important papers exchange.

2. Background Research

2.1 Internal Research

Lorgany and imeny s study is done for collecting witness in relationship between working capital management and maintenance of accepted company's cash in Tehran s stock exchange. They used to multiple linear regressions for test of relationship between working capital management and the cash holdings. They used to 16 variables in this study. 3 hypotheses edited for this study. The statistical sample includes of 45 companies in 6- years period. The results of this study show that there are the meaningful relationship between Inventory and accounts receivable collection days and the days become cash holdings and this relationship is linear meaningful relation. The results show that Future growth opportunities, cash flow, of accounts receivable and accounts payable to total assets ratio have relation with the maintenance. There is not any relation with company size variable, the probability of financial distress, financial leverage, debts to banks, cash assets, of inventory to the cash holdings [3].

The effect of Transparency of information that calculated with accounting transparency in Cash holdings over the 1383 to 1389 years is studied in ghaemi and alavay s research. Disclosure of companies' information is the important factor in decreasing of information asymmetry between managers and owners. Information asymmetry causes to Increasing the risk premium. Companies keep more cash. The results of this study show that there is a meaningful and negative relation with information asymmetry and Cash holdings. On the other words, the companies that have more information asymmetry keep less cash [4].

The study of relation of Quality of benefit and cash holdings in Tehran stock exchange is the main goal of foroughi research. Quality of benefit is the main and effective factors in the cash holdings in companies. Some results of last researches show that the increase of Quality of accounting information causes to decrease of the

cash holdings. The used control variables in this study are growth opportunities, size of companies, the maturity structure of debt, relation with financial Institution, company leverage, other cash assets, Cash flow generation capacity, percent dividend, investment in fixed assets net fixed assets of the first period and Number of years the company has continued its operations.

Ten years company s information is studied. They used to multiple regression by the use of combined data for test of hypotheses. The results showed that there is meaningful and negative relation with Quality of benefit and the amount of cash held in Tehran Stock Exchange. Totally, the results showed that 85 % of changes in the cash holdings of listed companies in Tehran Stock Exchange represents by used variable changes in study [5].

The effect of 10 factors in cash assets maintenance by companies will study with financial statement data in 1379 to 1384 year in aghaee s research [1].

The study witness show that accounts receivable, net working capital, inventories and short time debts are negative factors in cash holding maintenance. On the other hand , growth opportunities, dividend ,fluctuations in cash flow and net profit are positive factors in cash holding maintenance but there is not enough witness for negative effect of long time debts and size of companies.

2.2. Foreign research

Harford search that how the difficulties of representative have effect on American companies' tendency for cash maintenance. They used to multiple standards of corporate governance for measurement problems related to representation. These standards are concentration of ownership, reward board, the board and protection of shareholder right index [6]. Loty found that there is saving between American companies of cash balance [7].

The study of gang is checking the of Maintenance of cash in French, German, Japanese, English and American companies by data of 4069 companies in 1996-2000 year. This study is focused on relation between lever and cash maintenance. The results of this study shows that the effect of lever on cash maintenance is depends on concentration of ownership [8].

Han and kio showed that the companies with financial limits increase cash maintenance in response of increased flows [9].

Arkan studied the sample of English companies' in 1984 to 1999 and he concluded that cash maintenance by companies has negative relation with Assets Cash equivalents and other current assets. The results represent that companies can uses to current assets as successor for cash assets. Companies keep more cash assets for pay dividends and showed that the property management company has important relation

the company's cash and growth opportunities, cash flows, liquid assets, financial leverage and bank debt are important factors in determination of the amount of cash [2].

3. Research Methodology

The recent project is practical the goal and is descriptive the type.

3.1 Research community

The study population of total accepted companies in Tehran stock exchange from 2007 to 2013 includes 7 years and have these conditions;

End of financial year due to the increase comparability is 29 esfand of year.

Their record date of stock exchange is 2007 year.

They should be active in stock exchange during the financial period.

They shouldn't change the activity or financial year during said years.

52 companies from accepted companies in Tehran stock exchange that has the continuous presence was selected and was sampled according to limited population.

3.2 Hypothesis

- The size has positive effect on the much of global liquidity of accepted companies in stock exchange
- The market value has positive effect on the much of global liquidity of accepted companies in stock exchange
- The structure of fixed assets has positive effect on the much of global liquidity of accepted companies in stock exchange.
- The amounts of sales has positive effect on the amount of liquidity of accepted companies in stock exchange
- Companies' life has positive effect on the amount of liquidity of accepted companies in stock exchange.

3.3 Data Analysis

The collected data has calculated by excel and analyzed by SPS software. This study used of multiple regressions for coefficients and testing hypotheses. This type of regression was used for studying of the relationship between independent and dependents variables. The correlation matrix was used to analyze the data.

T test and the calculated probability by SPS software was used to testing the significance of the regression coefficients. Hypothesis testing was expressed as follows:

H: no significant relationship between the dependent and independent variables

H1: significant relationship between the dependent and independent variables

In the event that P value was larger than the level error comment (5%), the coefficient obtained is not significant and we cannot reject H. if p value was smaller than the level of error, the coefficient obtained is significant and we can reject H.

F testing and calculated p value by SPS software was used for testing of regression Equation. All of coefficients of independents variable in the equation should be zero in multiple regression equation. Decision rule with multiple regressions is as follows:

H0: Total coefficients of the regression models are zero.

H1: At least one of the coefficients of the regression model IS NOT ZERO.

If the level of insurance of 95 % of calculated F from fisher distribution table was larger, suppose of zero will rejected .calculated p value probability was used.

Table derived coefficients of SPS software include two not standardized and standardized coefficients. Scale variables in not standardized are not the same [5]. On the other hand, we use to standardized coefficients for comparing the effect of independent variables on dependents variables.

This study use to these coefficients in comparing of each effect on variables:

- The dependent variable of amount of liquidity: ratio of cash and short time investment on whole of company assets [2]
- Independents variable market value is the ratio of market value to book value of assets
- Independents variables of company size: assets logarithm was used to the calculating of company size
- The independent variable of fixed assets is Ratio of fixed assets to total assets
- The independent variable size is same as company sale logarithm
- Independent variables life is the years that the company continues to its operations.

Multiple regressions are used for Test hypotheses:

3.4. The multiple regressions are used to Test hypotheses:

Cash is the amount of Liquidity, size is size of company, MT is Market value, asset is fixed assets of the company, sale is amount of sale, time is life of company, e is Error rate.

4. Findings

Data analyses are done by central indexes like average, middle and Index of Distribution at this part. Average shows the average data. The middle shows that 50% of data is less than the middle number of society and 50 % of data is more than the middle number of society. Close to the mean and median shows the Symmetry data.

Standard deviation shows the Dispersion. Descriptive statistics of independent variables and the dependent variable is show in this table.

Table 1. Descriptive statistics variables

Name of variable	liquidity	size	Value of market	Fixed assets	sale	Life of companies
Number	364	364	364	364	364	364
Mean	.4086	1.35	5.9194	.2524	5.1684	6.3984
Standard deviation	.43930	8.3354	.33962	.15223	.48367	3.62925
Skewness	2.730	1.168	.686	.800	-.909	.326
Elongation	9.031	.774	.436	.348	1.646	-.732
minimum	.01	2.18E5	5.12	.01	3.79	1.00
Maximum	2.73	3.81	6.84	.81	6.37	15.00

Data analyses are done by central indexes like average, mean and Middle deviation diffusion index. Average shows the average of data. Middle shows that 50 % of data is less than the middle number of society and 50% of data is more than the middle number of society. Close to the mean and median shows the Symmetry data. Descriptive statistics of independent variables and the dependent variable and control is showed in this table.

4.2. The significance of the regression test

We should test significance of total model. This does by ANOVA table. The fisher is the Statistic of this test. This statistic should not be less than calculated fisher statistic by table. We can use to sig statistic. This statistic should be less than $\alpha = 5\%$.

We can conclude by follow table that if sig was less than 5 %, the significance of regression model will be acceptable for all theories.

We should notice that we can show the relation between two variables by Distribution Charts. Independent variable draws in front of dependent variable. We use to these charts because of two reasons:

- Detection of Outliers in the data
- To study of the best way to representing of relation between data

These charts are representing. Distribution charts show that the linear relation is suitable for this study.

Significant test of the coefficients

Significant test of the coefficients determines the significance of coefficients. t statistic is related statistic for determining of significance coefficients and we can use to sig column. So, calculated coefficients in beta column were determined for dependent variable.

If a and b was the stable values and Slope of the regression line, Testing hypotheses will write as follows:

Table 2. Results of Coefficients significant test

Name of variable	Beta	T statistics	Significant
Size of company	.066	1.077	.282
Market value	.029	.322	.748
Fixed assets structure	.396	5.220	.000
Amount of sale	-.726	-10.518	.000
Life of companies	.049	1.219	.224

4.3. Test assumptions regression model

Its assumptions will used for use of regression model. Camera, Watson, line testing and study normal errors and kolmogorof – esmironf errors are done.

4.4. Watson - Camera test

Errors independent of each other is one of assumptions in regression. Independent theories rejected, use of regression will not be possible. We can use Watson – camera test.

Statistics of this test are calculated with SPS software. since these statistics are during 1/5 to 2/5, the errors are independent of each other by this table and we can use to regression model for theories test.

4.5. Test linear

It shows that one linear independent variable is independent of each variable. If linear was up in regression equation, it means that there is high correlation between independent variables and the model may not have high Credibility. On the other hand, since it seems good model, but it doesn't have meaningful independent variables and theses variables will effect to each other. The results are showed in this table. We can conclude there is not linear correlation between independent variables.

Table 3. Results of Test linear

Name of variable	Tolerance	Swelling of tolerance	eigenvalues	Status Indicator
Size of company	770.	1.298	341.	3.978
Market value	581.	1.720	204.	5.142
Fixed assets structure	639.	1.566	162.	9.310
Amount of sale	810.	1.234	0.093	10.134
Life of company	635.	1.574	074.	11.805

4.6. Study of errors normality

One the assumption test is that errors will be zero. If assumption don't realized, we cannot use of regression. This test is offered for regression model in following shape. We can find that errors have normal distribution for model.

Test of colomgrof – esmirnof normality

Colomgrof – esmirnof test is one type of nonparametric test. Calculation of this test is possible by SPS software. If the statistics are more than 5%, zero assumption will accepted by 95%. Statistical hypothesis will write as follows:

H0 = distribution is normal

H1= distribution is not normal

A significant level of Statistics K-S is 220% from this table. Since the amount of this statistic is more than 5%, variable error will normal and we can use to regression model.

4.7. Test hypotheses

Hypotheses are edited as follows

- Size has positive effect on accepted companies liquidity in stock exchange

- Value market has positive effect on accepted companies liquidity in stock exchange
- The structure of fixed assets has positive effect on accepted companies liquidity in stock exchange
- Amount of sale has positive effect on effect on accepted companies liquidity in stock exchange
- Companies life has positive effect on effect on accepted companies liquidity in stock exchange

Data of this study are calculated by SPS software and analyzed by sps 16 software. Multiple regressions are used for calculating in this study.

Multiple regressions are used for Test hypotheses:

Cash is amount of liquidity, *size* is size of company, *MV* is value of company, *asset* is Fixed assets of the company, *sale* is amount of sale, *time* is company's life, *e* is error coefficients.

This Hypothesis can be written as follows

H0 = there is not meaningful relation between variables

H1= there is meaningful relation between variables

If p- value was larger than 5%, coefficient will not be meaningful and we cannot reject H0. IF P- Value was lesser, coefficients will be meaningful and we can reject H0.

Table 4. Results of regression tests

Results of test	Camera-Watson	Meaningful level	F statistics	justified	Meaningful level	T statistics	Calculated coefficients
Hypothesis	139/2	000/0	209/62	541/0	000/0	651/5	286/2
					282/0	077/1	0034/0
					748/0	322/0	037/0
					000/0	220/5	142/1
					000/0	518/10-	660/0-
					224/0	219/1	006/0

4.8. Regression analysis is as follows:

A significant level of independent variables is larger than level error. So there is not meaningful relation. So the first Hypothesis is rejected. Watson camera statistic represents the lack of correlation in regression model.

Significant level variable market value is larger than the level error. There so there is meaningful relation. So, second Hypothesis is rejected.

A significant level of fixed assets is less than the level error. So there is meaningful relation. So, third Hypothesis will confirm.

Significant level sales are less than the level error. There so there is meaningful relation. So forth Hypothesis will confirm and negative coefficient will represent negative relation between amount of sale and amount of company liquidity.

Significant level of company life is larger than the level error. So there is meaningful relation fifth Hypothesis will reject. The summery of hypothesis are showed in this table:

Table 5. Summary of Hypotheses

Hypothesis	Independent variable	Dependent variable	Meaningful level	Camera-Watson	Result of test
Hypothesis 1	Size	Liquidity	282/0	139/2	Reject of Hypothesis
Hypothesis 2	Market value	Liquidity	748/0		Reject of Hypothesis
Hypothesis 3	Fixed assets	Liquidity	000/0		Hypothesis confirmation
Hypothesis 4	Sale	Liquidity	000/0		Hypothesis confirmation
Hypothesis 5	Life of company	Liquidity	224/0		Reject of Hypothesis
Hypothesis 6	Dividend	Liquidity	202/0		Reject of Hypothesis

5. Conclusion

Cash assets are the most important of company's properties.

On the other hand, companies are looking for the best level of liquidity. On the other hand they should not lose the opportunities by Keeping of extra cash. And this is the company liquidity.

Managers try for amount of liquidity at the end of period. What factors are affecting the liquidity level? Many different factors will describe the way of determining of liquidity level. Data of study are collected from Archives of trading on the Stock Exchange services and rahavard software. This study is searching of effecting factors in liquidity in accepted companies in Tehran stock exchange.

5.1. Results

Since meaningful level is larger than level errors, so size factor is effective on amount of liquidity in accepted companies in Tehran stock exchange. On the other word, the effect of company size has not any effect on cash holding. Large and smaller companies keep their cash in Tehran stock exchange.

The recent study results are not same as Han and Kio study results. We can tell that zero hypotheses cannot be rejected. So, market value cannot effect on level liquidity of accepted companies in Tehran stock exchange.

It seems that rejection of said hypothesis is because of companies and non real reason not to stock market return for stocks, spite high inflation in Iran and market inefficiency Tehran stock exchange. And this is means that the market value of stocks has not any effect on liquidity.

The results of this study are disagreeing with jabarzadeh and bayazidi's study results.

According to reject the null hypothesis, there is meaningful relation between the structure of fixed assets and companies liquidity. Study findings show that effect of fixed assets structure is meaningful in amount of cash maintenance. This represents that larger companies and with other alternative financial assets will keep more cash in return of other Tehran stock exchange companies.

The recent study results with jabarzadeh and bayazidi study results and markoosi are the same.

The witness shows that there is meaningful relation between the amount of sale and cash balance maintenance by companies. This case is compatible with motivated transaction costs for keeping of cash assets. Companies don't pay attention to market value and amount of sale as cash succession. The results about cash assets with companies emphasized to motivated transactions and the precautionary motive. Motivated transactions are because of use costly of other properties in business deals. We can say that the companies that face to lack of internal resources can keep more funds of cash assets by sales of assets, by creating new debt or issuing new shares and nonpayment of dividend.

On the other hand, the precautionary motive is use of business opportunities and avoidance of bankruptcy. So the companies keep cash assets for facing of maintenance events. Recent study results are same as almedia and gany study results.

The structure of fixed assets and accepted companies life of stock exchange has important effect on cash assets by companies. This case is compatible with the precautionary motive of companies. It means that the companies keep their cash assets for funds needed to use of investment opportunities.

Totally, performance and evaluation of companies is always consideration of shareholders, investors, financial creditors like banks and financial institutions and managers. Performance evaluation is determined financially in two liquidity and profitability index. Profitability is the mark risk absence of firm and power of liquidity in idiom. Although both of them are important, but liquidity is more important than it. The

companies that have low profitability can serve time more to economic. The indexes that evaluate the liquidity of companies are consideration of especial analysts. This causes those analysts with analyses of traditional indexes Disadvantages can represent new indexes.

Main emphasis in liquidity measurement is that if current assets were greater than current debts, liquidity condition of companies is more desirable. On the other word, current assets and current debts highlight the cash needs of company.

Totally, it seems that strategy of managers is the kind of conservative. The companies that have this strategy will in low efficiency and risk of liquidity. On the other hand, if optimized models were used, every change in sale will cause to changing in level of liquidity. If we use to conservative strategy and current assets were more, the companies of more study will suffer of more costs. Therefore, profitability will decrease and this shows Low Performance Management in current resources. The result of this hypothesis is match to the most of projects.

Practical suggestions

The results show that market value and amount of sale has negative effect on cash assets maintenance by companies. This is not compatible with the motivation of transaction costs for cash assets maintenance. Market value and amount of sale is Convertible to cash and companies don't look at market value and amount of sale as cash succession. Size, the structure of fixed assets and life of companies in stock exchanges has positive effect on cash assets maintenance by companies. This is compatible with precautionary motive of companies for cash assets maintenance. Companies use to cash assets maintenance for funds needed in investment opportunities.

Following suggestions are representing according to study suggestions and theoretical:

Managers pay attention to said factors for cash assets maintenance and Access to liquidity target.

Planners pay attention to said factors as the factors that have more effect on cash assets maintenance by companies that can be represented the accepted companies demand amount in stock exchanges for cash assets.

5.2. The suggestions for next studies

The suggestions for completion of current study are as follows:

- We can consider to the other factors like the liquidity degree of short time stock exchange for completion and increase sufficiency;

- We can compare this model to other models like the models based on phase decision theory;
- Use of statistical methods like factor analyses for evaluation creditors selection;
- Sue of expert opinion for better reflection;
- Use of planning methods for optimization of investors objectives;
- Checking of effective factors on cash assets maintenance;
- Checking of effective factors on cash assets maintenance for financial; constraints variables, Agency costs, capital expenditure, expenses of Research and Development.

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