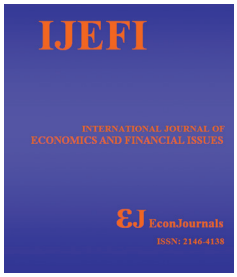

International Journal of Economics and Financial Issues

ISSN: 2146-4138

available at http: www.econjournals.com

International Journal of Economics and Financial Issues, 2017, 7(5), 147-154.

A Survey of Assets Growth Models in Prediction of the Rank of Liquidity

Mohammad Delkhosh[1]*, Esmat Zade Abdollah[2]

[1]Department of Accounting, Bardaskan Branch, Islamic Azad University, Bardaskan, Iran, [2]Department of Accounting, Bardaskan Branch, Islamic Azad University, Bardaskan, Iran. *Email: mohammad.delkhosh@chmail.ir

ABSTRACT

The present study aims to evaluate the relationship between asset growth in prediction of the rank of liquidity of the stock of companies listed on Tehran Stock Exchange (TSE). Due to various criteria of assets growth, in this study, Cooper et al. (2008), Lyandres et al. (2008) and Zhang et al. (2008) models are used. To do this, four hypotheses are formulated for this issue and the data of 122 TSE companies during 2009-2014 are analyzed. The statistical methodology is correlation and for data analysis, regression is applied. The results of study show that the 1-year asset growth criteria of Cooper et al. (2008) 2-year growth variable of Cooper et al. (2008) and investment growth variable of Lyandres cannot be good predictors for stock liquidity rank. The variable of Zhang et al. (2008) cannot be a good predictor for stock liquidity rank. Zhang growth variable is a good predictor for the rank of liquidity and it is based on capital expenses in Iranian companies.

Keywords: Asset Growth, Capital Expenses, Rank of Liquidity
JEL Classifications: G1, G3

1. INTRODUCTION

To achieve return for investment and increase of profitability and competition in economic markets, the companies invest in their assets and spend the cash flow of operation to purchase the assets or its sale to increase liquidity. The investment in assets or their sale is information signals to the investors regarding the purchase and sale of stock in the companies and these signals are manifested in liquidity rank. The investors as one of the main principles of financial markets follow a criterion to evaluate the performance of different companies. One of the most important indices in the prior studies is accounting profit. Accounting profit is a criterion taken by the approach of income-cost but in recent years with asset-debt approach, the researches have concentrated on this direction. Despite the researches in Iran, this study is based on profit and loss items and we focus on balance sheet items. The asset growth is one of the balance sheet indices (Mashayekhi et al., 2013). The asset growth index is interpreted as good and bad News. Good news as the capital expenditure has positive and considerable correlation with investment opportunities. In addition, higher capital expenditure indicates that capital market providing financial resources for investments have high trust to the company and management. The bad news is as the managers are motivated to increase the benefits in the companies. Under these conditions, the investors can perceive this issue and negative future return is created. The investment in these projects causes that the investors are deceived due to information asymmetry and they are aware in the future years and the return is adjusted. Thus, it is expected that there is a negative relationship between future return and assets growth (Mashayekhi et al., 2013). Thus, it is probable that there is a negative and significant relationship between future return of stock and assets growth (Mashayekhi et al., 2013). Thus, it is probable that there is a negative and significant relationship between assets growth and the rank of liquidity.

2. STATEMETN OF PROBLEM

Most of investors (with short-term investment horizon) prefer highly liquidated stock to low liquidated stock. Liquidity is easy asset purchase and sale (Mehrani and Resayian, 2009). Some of the relevant factors of liquidity include the number of traded stocks each day, the number of traded companies per day, the traded stock

value each day, total volume of trade to total market value, number of buyers and purchase frequency (Ahmadpour and Resayian, 2006). Recently, the bid-ask spread is one of the important criteria of liquidity and it is one of the important components of capital market structure. The need to perceive and measure the important factors of bid-ask spread in the evaluation of competitive market structure is necessary (Ahmadpour and Rasayian, 2006). Liquidity of company in financial literature is liquidity of its real assets and the stock liquidity. An asset is considered cash if it is turned into cash flow rapidly with low price. This definition includes real assets and financial assets. The first concept of liquidity is liquidity of real assets of company by which a company is considered as liquidated and if there is high ratio of cash assets as cash flow in the balance sheet (Gopalan et al., 2008). The second concept is stock liquidity of company. According to this concept, a company is considered liquidated if its stock has high liquidity (Salavati and Rasayian, 2007). The asset liquidity is determined by the real assets of company in the market but the stock liquidity is determined in financial markets. The main purpose of this study is evaluation of the relationship between assets growth criteria and the rank of liquidity in Tehran Stock Exchange (TSE).

3. REVIEW OF LITERATURE

Ahmadpour and Mohsen (2014) evaluated the relationship between liquidity of assets and liquidity of stock of companies listed on TSE during 2007-2012. Gopalan liquidity criterion, market value to book value of asset, fixed asset ratio, accounts receivable are used to describe the features of company to short-term investment and inventory ratio and for stock liquidity index, the current debt to total asset and non-current debt ratio to total assets are used. The results showed that there was a positive and significant relationship between asset liquidity and stock liquidity.

Mashayekhi et al. (2013) in a study evaluated the relationship between different criteria of assets growth and future return during 2007-2011. In this study, to evaluate the relationship between assets growth and future return, Fama and Makbes model was used. Based on the results of regression analysis, there was a negative relationship between assets growth and future return of stock. Also, the results showed that asset growth model of Lyandres et al. (2008) had high predictability compared to other criteria. In addition, the evidences showed that the calculated criterion via the factor analysis approach had lower predictability compared to other asset growth criteria.

Firoozi et al. (2012) evaluated the asset liquidity and stock liquidity of pharmacology industry companies in TSE during 2008-2009. The turnover criterion was used as liquidity index. The results showed that there was a significant relationship between assets liquidity and stock liquidity.

Azad et al. (2012) evaluated the liquidity of assets and capital structure of the companies listed on TSE for 168 companies during 2005-2011. The results showed that there was a direct and significant relationship between the asset liquidity and capital structure. Mehrani and Resayian (2009) in a study evaluated the relationship between bid-ask spread as stock liquidity of companies and asset liquidity in TSE. In this study, stock liquidity, bid-ask spread and assets liquidity, the sum of cash flow to total assets ratio were considered and tested by regression method using panel data.

The companies were investigated during 2002-2006. The results showed that there was a negative and non-significant relationship between bid-ask spread and assets liquidity.

Xuan and Hong (2016) evaluated asset growth and the cross section of stock returns - evidence from Vietnam. They used a large and unique dataset of market and accounting variables of firms listed on the Ho Chi Minh City Stock Exchange for the period from 2008 to 2012. The results indicated that asset growth had no significant effect on stock returns in Vietnam stock market.

Yifeng et al. (2015). This study examined the effect of firm investment on stock returns by using data on the Chinese stock market. The results showed that the high investment firms earned higher returns than low investment firms before portfolio formation; however the high investment firms earned lower returns than low investment firms after portfolio formation.

Iqbal and Wibowo (2015) in a study "analysis of asset growth anomaly on cross-section stock returns: Evidence from Indonesia Stock Exchange" had correlation method and multi-variate regression using panel data was used for data analysis. The results showed that there was a significant relationship between assets growth and stock return and the stock with high asset growth in the next periods has low return.

Li et al. (2012) in a study Asset Growth and Future Stock Returns: International Evidence: Performed a study on the data of 23 countries in 3 continents US, Europe and Asia. The results showed that there was high predictability in assets growth for stock return. This predictability power continued for the next 4 years after the initial measurement. In addition, they stated that these results were generalized in the different samples including big, small companies and the existing companies in a geographical location.

Maggina and Tsaklanganos (2012) provided evidence drawn from publicly traded companies in Greece on the predictability of assets growth with respect to firm performance. Results indicated that assets growth was predictable at an 85.7% rate in large companies.

Cooper et al. (2009) evaluated the asset growth effect in stock returns in American companies. The results showed a negative relationship between assets growth and future return. Other results showed that low asset growth stocks had maintained a return premium of 20% per year over high asset growth stocks.

Gopalan et al. (2009) predicted a positive relationship between asset liquidity and stock liquidity of the company. The illiquidity measures proposed by Amihud, the implicit bid-ask spread, bid-ask spread, the mean of effective bid-ask spread and zero return. For asset liquidity, the combination of assets in terms of liquidity, 0-1 score was given and their weight score was computed and it

was applied as the asset liquidity criterion. They found that one unit increase of asset liquidity increased 5.14% of stock liquidity.

Gopalan et al. (2009) in a study presented a model that linked investment decisions to the liquidity of a firm's assets and the liquidity of its stock. Greater asset liquidity increased future investment and was associated with uncertainty. They found that a one standard deviation increase in asset liquidity increased stock liquidity by 15%. The asset liquidity was more positive for firms with low growth opportunities. They found that a dollar of cash was worth 7-10 cents more for firms with less liquid stock. The illiquidity measures proposed by Amihud, the implicit bid-ask spread, bid-ask spread, the mean of effective bid-ask spread and zero return. For asset liquidity, the combination of assets in terms of liquidity, 0-1 score was given and their weight score was computed and it was applied as the asset liquidity criterion.

Gopalan et al. (2009) evaluated the relationship between assets liquidity and liquidity of financial claims on these assets and linked the financial decisions of the company to the stock liquidity. Their model showed that if the high asset liquidity reduced uncertainty based on the valuation of existing asset, future investment and uncertainty were increased. Also, it was shown that for the companies with low probability for re-investment of liquidity assets, the companies with low growth opportunities and financially constrained, the assets liquidity improves the stock liquidity. Their model showed that there was a positive relationship between assets liquidity and stock liquidity. For the companies with low growth opportunities and financially constrained firms, this relationship is strong.

Cooper et al. (2008) evaluated the investment effect of assets on the future return of stock. They believed that assets growth predicted the future return of stock considerably. In addition, the asset growth variable predicted the stock. They stated that the asset growth was better in future return prediction compared to other variables on the return as B/M, accruals, etc.

Zhang et al. (2008) evaluated the asset growth and future stock return. They evaluated 9 Asian financial markets during 1981-2007. The results showed that there was a negative relationship between assets growth and future return. In addition, they found that the negative relationship in the markets in which funding was performed via the banks was weaker.

4. STUDY HYPOTHESES

H_1: There is a significant relationship between 1-year asset growth of Cooper et al., with the liquidity rank of future year.

H_2: There is a significant relationship between 2-year asset growth of Cooper et al., with the liquidity rank of future year.

H_3: There is a significant relationship between investment growth of Lyandres et al., with the liquidity rank of the future year.

H_4: There is a significant relationship between the asset growth model of Zhang et al., with the liquidity rank of future year.

5. STUDY METHODOLOGY

This study is descriptive-correlation and applied. In this study, by library studies, the theoretical basics of study are collected and then the required data for analysis and decision making of hypotheses for a period 5 years is collected from the financial statements of companies listed on TSE. Finally, correlation analysis is used to evaluate a significant relationship between independent and dependent variable and for hypothesis test, a regression is used.

6. STUDY SAMPLE AND POPULATION

The study population is companies listed on TSE with the following features:

1. The company is not one of the investment and brokerage or insurance companies. The reason of selection of this criterion is the different structure of profit and loss statement (based on the different nature of income and costs) of these firms in comparison to that of commercial and manufacturing companies and this leads to the homogeneity of information in financial reports of these firms.
2. The required data are available and there is no fiscal year change in the study period.
3. In terms of the increase of comparison, their fiscal period leads to Esfand. The reason of selection is that the periods are similar and the seasonal factors are not effective on selection of factors and variables.
4. The stock of company is traded during 2009-2014 in TSE. Thus, all stock market companies with the above features are samples of study. Finally 122 companies are extracted.

7. VARIABLES AND THEIR COMPUTATION METHOD

7.1. Asset Growth

The 1-year asset growth model (Cooper et al., 2008) is used as follows:

1. AG1 = (Total assets of year t-1/total assets of year t)-1.
2. The 2-year asset growth model (Cooper et al., 2008) is used as follows: AG2 = (Total assets of year t-2/total assets of year t)-1.
3. Criterion of investment growth (Lyandres et al., 2008) is as follows: AG2 = ([Property, machinery and equipment t]-[t-1 property, machinery and equipment)]+[(inventory t]-[inventory t-1])/total assets of year t.
   1The asset growth model (Zhang et al., 2008): AG3: (Capital expenditure t/capital expenditure t-1)-1.

7.2. The Rank of Liquidity

The investors use liquidity rank in business units and the rank of liquidity is a value showing the liquidity of a share in the market and the liquidity capability of a share means its rapid sale. If the share is sold rapidly with low cost, its liquidity is increased. The securities being traded daily and frequently, it has higher liquidity and low risk compared to the securities being traded less. The low liquidity rank is a sign of lack of frequent trading of share

in the capital market as the investors are less inclined to invest in the markets with low liquidity rank as the stock purchase with liquidity above 100 is not recommended. To calculate this ratio, some values as the number of buyers, frequency of traded share, number of traded days, number of companies, turnover during the period and number of traded stock and the daily value.

$$\text{The rank of liguidity} = \frac{}{1/\text{Number of buyers}/1+\text{frequency of trade}/1+\text{Number of traded days}/1+\text{Number of traded shares}/1+\text{turnover}/1+\text{average daily value}/1)}$$

After the calculation of the above formula for each company, a coefficient is calculated, then by ordering it for the company based on the highest coefficient, the first rank and the next ranks are calculated.

8. HYPOTHESES TESTING

The descriptive statistics of hypotheses is as shown in Table 1.

As shown, the standard skewness coefficient and standard coefficient of kurtosis is ranging +2, −2 and the data have about normal distribution.

8.1. The First Hypothesis Test

First hypothesis states that there is a significant relationship between 1-year asset growth of Cooper et al., with the rank of liquidity of future year.

$$\text{Rank of liquidity}_{it-1} = \beta_0+\beta_1 \text{ Asset growth (Cooper)}_{it}+\varepsilon$$

As shown in Table 2, correlation coefficient between the independent variable of 1-year Cooper criterion and dependent variable of future year liquidity rank is 0.012 and the P = 0.757 as bigger than 0.05 and H_0 is supported. Thus, by the probability 95%, there is no positive and significant relationship.

As shown in Table 3, the adjusted coefficient of determination of model (r^2) is −0.001 and it means that about 0.1% of changes of response variable (rank of liquidity) are explained by independent variable (1-year Cooper criterion) and the probability value regarding H_0 is regarding the lack of a linear relationship between independent variable and response variable (H_0) in Table 4 as 0.757 as bigger than 0.05 and by confidence interval 95%, this statistical hypothesis is supported and there is no significant linear relationship between two variables and H_1 is not supported.

As shown in Table 5 in standardized coefficients, it is said that the independent variable coefficient is 0.012 and the probability value (significant) regarding constant value of regression model is 0.000 as smaller than 0.05 and the constant value is significant at the level 95% and the fitted model based on the coefficients is as follows:

$$\text{Rank of liquidity}_{it-1} = 151.463+4.106 \text{ Asset growth (Cooper)}_{it}+\varepsilon$$

8.2. Second Hypothesis Test

Second hypothesis states that there is a significant relationship between 2-year asset growth of Cooper et al., with the rank of liquidity of future year.

$$\text{Rank of liquidity}_{it-1} = \beta_0+\beta_1 \text{ Asset growth (Cooper)}_{it}+\varepsilon$$

As shown in Table 6, it is observed that correlation coefficient between the independent variable of 2-year cooper criterion and dependent variable of the rank of liquidity is −0.028 and the P = 0.448 bigger than 0.05 and H_0 is supported and with the probability 95%, a negative and significant relationship is not supported.

As shown in Table 7, the adjusted coefficient of determination of model (r^2) is 0.000 and it means that about 0.000% of changes of response variable (rank of liquidity) are explained by independent variable (2-year Cooper criterion) and the probability value regarding H_0 is regarding the lack of a linear relationship between independent variable and response variable (H_0) in Table 8 as 0.448 as bigger than 0.05 and by confidence interval 95%, this statistical hypothesis is supported and there is no significant linear relationship between two variables and H_1 is not supported.

As shown in Table 9 in standardized coefficients, it is said that the independent variable coefficient is −0.028 and the probability

Table 1: Descriptive statistics

Explanation	Cooper 1-year criterion	Cooper 2-year criterion	Lyandres	Zhang	Rank of liquidity
Mean	1.1777	1.375822	0.047549	1.909408	156.31
Mean standard error	0.00973	0.0164659	0.0038281	0.1110606	3.492
Median	1.1374	1.296806	0.037080	1.041716	149.00
Mode	1.00	0.4411[a]	0.0000	1.0000	150[a]
SD	0.26338	0.4454926	0.1027189	2.9924608	93.820
Variance	0.069	0.198	0.011	8.955	8.802E3
Skewness	1.684	1.805	0.397	4.715	0.377
Standard error of skewness coefficient	0.090	0.090	0.091	0.091	0.091
Kurtosis	5.895	7.725	1.819	29.654	−0.623
Standard error of kurtosis coefficient	0.180	0.180	0.182	0.181	0.182
Variance range	2.17	4.5853	0.8555	30.6886	417
Minimum	0.49	0.4411	−0.3774	−1.7029	1
Maximum	2.66	5.0264	0.4780	28.9857	418

SD: Standard deviation

Table 2: Correlation coefficient

Explanation	Cooper 1-year criterion	Rank of liquidity
Cooper 1-year criterion		
Pearson correlation coefficient	1	0.012
Probability statistics		0.757
n	732	732
Rank of liquidity		
Pearson correlation coefficient	0.012	1
Probability statistics	0.757	
n	732	732

Table 3: The model summary

Model	Correlation coefficient	Coefficient of determination	Adjusted coefficient of determination	Estimation standard error	Durbin–Watson
1	0.012[a]	0.000	−0.001	93.879	1.854

Table 4: Variance analysis

Model	Sum of squares	Degree of freedom	Mean of squares	Fisher statistics	Probability statistics
Regression	846.150	1	846.150	0.096	0.757[a]
Residual	6345594.354	731	8813.325		
Total	6346440.504	732			

Table 5: Coefficients

Model	Non-standardized coefficients		Standardized coefficients	T statistics	Probability statistics coefficient
	Coefficient	Standard error	Beta coefficient		
Constant	151.463	16.029		9.449	0.000
Cooper 1-year criterion	4.106	13.250	0.012	0.310	0.757

Table 6: Correlation coefficient

Explanation	Cooper 2-year criterion	Rank of liquidity
Cooper 2-year criterion		
Pearson correlation coefficient	1	−0.028
Probability statistics		0.448
n	732	732
Rank of liquidity		
Pearson correlation coefficient	−0.028	1
Probability statistics	0.448	
n	732	732

Table 7: Model summary

Model	Correlation coefficient	Coefficient of determination	Adjusted coefficient of determination	Estimation standard error	Durbin–Watson
1	0.028[a]	0.001	0.000	93.848	1.846

Table 8: Variance analysis

Model	Sum of squares	Degree of freedom	Mean of squares	Fisher statistics	Probability statistics
Regression	5074.059	1	5074.059	0.576	0.448
Residual	6341366.445	731	8807.453		
Total	6346440.504	732			

Table 9: Coefficients

Model	Non-standardized coefficients		Standardized coefficients	T statistics	Probability statistics coefficient
	Coefficient	Standard error	Beta coefficient		
Constant	164.557	11.412		14.420	0.000
Cooper 2-year criterion	−5.965	7.859	−0.028	−0.759	0.448

value (significant) regarding constant value of regression model is 0.000 as smaller than 0.05 and the constant value is significant at the level 95% and the fitted model based on the coefficients is as follows:

$$\text{Rank of liquidity}_{it-1} = 164.557-5.965\ \text{Asset growth (Cooper)}_{it}+\varepsilon$$

8.3. Third Hypothesis Test

Third hypothesis states that there is a significant relationship between asset growth of Lyandres with the rank of liquidity of future year.

$$\text{Rank of liquidity}_{it-1} = \beta_0+\beta_1\ \text{Asset growth (Lyandres)}_{it}+\varepsilon$$

As shown in Table 10, it is observed that correlation coefficient between the independent variable of asset growth of Lyandres and dependent variable of the rank of liquidity is 0.036 and the P = 0.340 bigger than 0.05 and H_0 is supported and with the probability 95%, a positive and significant relationship is not supported.

As shown in Table 11, the adjusted coefficient of determination of model (r^2) is 0.000 and it means that about 0.000% of changes of response variable (rank of liquidity) are explained by independent variable (Lyandres criterion) and the probability value regarding H_0 is regarding the lack of a linear relationship between independent variable and response variable (H_0) as 0.340 as bigger than 0.05 and by confidence interval 95%, this statistical hypothesis is supported and there is no significant linear relationship between two variables and H_3 is not supported (Table 12).

Table 10: Correlation coefficient

Explanation	Rank of liquidity	Lyandres
Rank of liquidity		
Pearson correlation coefficient	1	0.036
Probability statistics		0.340
n	732	732
Lyandres		
Pearson correlation coefficient	0.036	1
Probability statistics	0.340	
n	732	732

As shown in Table 13 in standardized coefficients, it is said that the independent variable coefficient is 0.036 and the probability value (significant) regarding constant value of regression model is 0.000 as smaller than 0.05 and the constant value is significant at the level 95% and the fitted model based on the coefficients is as follows:

$$\text{Rank of liquidity}_{it-1} = 154.177+32.780\ \text{Asset growth (Lyandres)}_{it}+\varepsilon$$

8.4. Fourth Hypothesis Test

Fourth hypothesis states that there is a significant relationship between asset growth of Zhang with the rank of liquidity of future year.

$$\text{Rank of liquidity}_{it-1} = \beta_0+\beta_1\ \text{Asset growth (Zhang)}_{it}+\varepsilon$$

As shown in Table 14, it is observed that correlation coefficient between the independent variable of asset growth of Zhang and dependent variable of the rank of liquidity is 0.077 and the P = 0.038 smaller than 0.05 and H_0 is not supported and with the probability 95%, a positive and significant relationship is supported.

As shown in Table 15, the adjusted coefficient of determination of model (r^2) is 0.005 and it means that about 0.005% of changes of response variable (rank of liquidity) are explained by independent variable (Zhang criterion) and the probability value regarding H_0 is regarding the lack of a linear relationship between independent variable and response (Table 16) as 0.038 as smaller than 0.05 and by confidence interval 95%, this statistical hypothesis is not supported and there is a significant linear relationship between two variables and H4 is supported.

As shown in Table 17 in standardized coefficients, it is said that the independent variable coefficient is 0.077and the probability value (significant) regarding constant value of regression model is 0.000 as smaller than 0.05 and the constant value is significant at the level 95% and the fitted model based on the coefficients is as follows:

Table 11: Model summary

Model	Correlation coefficient	Coefficient of determination	Adjusted coefficient of determination	Estimation standard error	Durbin–Watson
1	0.036[a]	0.001	0.000	93.784	1.826

Table 12: Variance analysis

Model	Sum of squares	Degree of freedom	Mean of squares	Fisher statistics	Probability statistics
Regression	8004.253	1	8004.253	0.910	0.340
Residual	6227164.344	731	8795.430		
Total	6235168.597	732			

Table 13: Coefficients

Model	Non-standardized coefficients		Standardized coefficients	T statistics	Probability statistics coefficient
	Coefficient	Standard error	Beta coefficient		
Constant	154.177	3.902		39.515	0.000
Lyandres	32.780	34.362	0.036	0.954	0.340

Table 14: Correlation coefficient

Explanation	Zhang	Rank of liquidity
Zhang		
Pearson correlation coefficient	1	0.077*
Probability statistics		0.038
n	732	732
Rank of liquidity		
Pearson correlation coefficient	0.077*	1
Probability statistics	0.038	
n	732	732

Table 15: Model summary

Model	Correlation coefficient	Coefficient of determination	Adjusted coefficient of determination	Estimation standard error	Durbin–Watson
1	0.077[a]	0.006	0.005	93.785	1.852

Table 16: ANOVA variance analysis

Model	Sum of squares	Degree of freedom	Mean of squares	Fisher statistics	Probability statistics
Regression	37922.853	1	37922.853	4.312	0.038
Residual	6280122.983	731	8795.690		
Total	6318045.837	732			

Table 17: Coefficients

Model	Non-standardized coefficients		Standardized coefficients	T statistics	Probability statistics coefficient
	Coefficient	Standard error	Beta coefficient		
Constant	151.961	4.160		36.530	0.000
Zhang	2.426	1.168	0.077	2.076	0.038

Rank of liquidity$_{it-1}$ = 151.961+2.426 Asset growth (Zhang)$_{it}$+ε

9. CONCLUSION

This study evaluates the relationship between asset growth in prediction of stock liquidity rank of the companies listed on TSE. Based on the findings of this study, the asset growth of Zhang is a good predictor for liquidity rank. This result is consistent with the study of Li et al. (2012) and this shows that the investors can use the asset growth criterion in the required companies as a predicting factor of future condition. The 1-year asset growth criteria of Cooper et al., 2-year asset growth of Cooper et al. (2008) and Lyandres et al. (2008) asset growth are not good predictors for the rank of liquidity of stock. This finding is inconsistent with the results of study of Ahmadpour and Mohsen (2014), Mashayekhi et al. (2013), Firoozi et al. (2012), Iqbal and Wibowo (2015), Gopalan et al. (2009) and Li et al. (2012). The results of study of Li et al. (2012) state that 2-year asset growth of Cooper et al. (2008) has high predictability but the results of study show that Zhang et al. growth model (2008) has high predictability power compared to other criteria and this inconsistency is based on the difference in the studied markets. It is proposed that in the future studies in Iran, this criterion are used. Also, the investors can use this criterion in the better analysis of the future condition of the company.

10. RECOMMENDATIONS OF STUDY

1. Another period is used to calculate the study variables in future years.
2. This study is performed regarding the active companies of different industries listed on TSE except investment and financial brokerage companies. Based on the difference of type of operation of investment companies, it is proposed to evaluate the relationship between asset growth models in prediction of the stock liquidity rank in investment group companies. This study is important as different results can be achieved in these companies.

REFERENCES

Ahmadpour, A., Resayian, A. (2006), The relationship between financial information and bid-ask spread. The Useful Economic Letter, 57, 29-48.

Ahmadpour, A., Mohsen, B. (2014), The evaluation of the relationship between asset liquidity and stock liquidity of the firms listed on TSE. The Journal of Empirical Researches of Accounting, 4(2), 61-77.

Azad, A., Aryan, T.A. (2012) The ability of asset liquidity and capital structure of companies accepted in Tehran stock exchange. Quarterly Journal of Accounting Research, 2(3), 125-136.

Cooper, M., Gulen, H., Schill, M. (2008), Asset growth and the cross-

section of stock returns. Journal of Finance, 63(4), 1609-1651.
Cooper, M., Gulen, H., Schill, M. (2009), The Asset Growth Effect in Stock Returns. Available from: http://www.ssrn.com/abstract=1335524`.
Firoozi, M., Hemmati, H., Hassan, G. (2012), The evaluation of the relationship between asset liquidity and stock liquidity. The Research of Economics and Business. Period, 3(1), 75-83.
Gopalan, R., Kadan, O., Pevzner, M. (2009), Asset Liquidity and Stock Liquidity. Available from: http://www.ssrn.com/sol3/papers.cfm?abstract_id=1362073.
Gopalan, R., Kadan, O., Pevzner, M. (2009), Investment Decisions, Asset Liquidity, and Stock Liquidity. Available from: http://www.ssrn.com/sol3/papers.cfm?abstract_id=1362074.
Gopalan, R., Kadan, O., Pevzner, M. (2009), Managerial Decisions, Asset Liquidity, and Stock Liquidity. Available from: http://www.ssrn.com/sol3/papers.cfm?abstract_id=1342706.
Iqbal, M., Wibowo, B. (2015), Analysis of Asset Growth Anomaly on Cross-Section Stock Returns: Evidence from Indonesia Stock Exchange. Available from: http://www.ssrn.com/abstract=2640839.
Li. X, Becker, Y., Rosenfeld, D. (2012), Asset growth and future stock returns: International evidence. Financial Analysts Journal, 68(3), 51-62.
Lyandres, E., Sun, L., Zhang, L. (2008), The new issues puzzle: Testing the investment-based explanation. Review of Financial Studies, 21(6), 2825-2855.
Maggina, A., Tsaklanganos, A. (2012), Asset growth and firm performance evidence from Greece. The International Journal of Business and Finance Research, 6(2), 113-124.
Mashayekhi, B., Fadayinejad, V.E., Akbar, P. (2013), The evaluation of different criteria of asset growth in the prediction of future return of stock in TSE (by considering the factor analysis approach). The Scientific and Research Journal of Financial Knowledge of Securities Analysis, 6(19), 99-112.
Mehrani, S., Resayian, A. (2009), Stock liquidity and asset liquidity. Auditory, 46, 52-56.
Salavati, S., Rasayian, A. (2007), The evaluation of the relationship between capital structure and stock liquidity in Iran. Useful Economic Letter, 63, 143-163.
Xuan, V.V., Hong, T.B. (2016), Asset growth and the cross section of stock returns - Evidence from Vietnam. Afro-Asian Journal of Finance and Accounting, 6(4), 289-304.
Yifeng, W., Cheyuan, L., Jen-Sin, L., Yanming, W. (2015), The relation between asset growth and the cross-section of stock returns: Evidence from the Chinese stock market. Economic Modelling, 44, 59-67.
Zhang, T., Chen, S., Yao, T., Yu, T. (2008), Asset Growth and Stock Returns: Evidence From the Pacific-Basin Markets. Available from: http://www.cass.city.ac.uk/data/assets/pdf_file/0011/76916/Yu-141-EVISED.pdf.