

## **Investigating the Relationship between Amihud liquidity and Default risk in Tehran Stock Exchange**

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### **Abstract**

*Financial institutions are of great importance in the economic structure of societies. These institutions working as the heart of the economy in capital and money markets, by creating a flow of money markets and liquidity, provide areas for attracting and equipping the resources required for investment activities and projects, and in this respect, the most important link between supply and demand for monetary resources. One of the important issues in allocating funds to organizations is to examine and assess the liquidity and risk of credit customers, or, in other words, the company's default risk. The most important issues that matter in allocating funds to organizations is the analysis assessment of customers today, credit risk management is one of the most important factors in reducing bankruptcy and improving the company's performance. Therefore, this research has investigated this issue companies listed in Tehran Stock Exchange during the period from 2008 to 2017. In this research, the combined data of 100 companies have been analyzed and the findings of the hypothesis test indicate that there is a negative and significant relationship between the liquidity variable and default risk, so that with increasing liquidity, the risk of corporate default is reduced. Also, the hypothesis test shows that there is a positive and significant relationship between liquidity with Amihud criteria and information asymmetry.*

## **1. INTRODUCTION**

*Among the institutions active in the money market, banks are among the oldest, most active and widespread financial intermediaries, facilitating the supply of services and facilities on one hand, and organizing and management payments and receipts on the other hand facilitates and trade exchange and expands markets and beconomic growth and prosperity of the country (Bagheri, 2006: 4). The important issues that matter in allocating funds to organizations are the assessment and assessment of credit risk customers. Today, credit risk management is one of the most important factors in reducing bankruptcy and improving the performance of companies. The composition of company's shareholders is different. A part of the ownership of the companies is held by the shareholders and the real persons. Another part of the stock is held by the managers and partly by major shareholders known as institutional shareholders. Institutional investors are major investors, such as banks, insurance companies and investment companies (Norouz, 2005). It is generally thought that the presence of institutional investors may lead to a change in the corporate behavior. The effectiveness of institutional investors has been proven in previous researches on financial decision-making decisions. These effects may be due to the concentration of ownership and the apparent and objective consequence of this, namely, the concentration of governance*

*and the control of the behavior and decisions of corporate executives by major shareholders (Mag and Larg, 1998). The ownership structure explains corporate governance issues such as management capability, stockholding supervision, corporate financing, investment decisions and corporate disclosure policies. A part of the ownership of the companies is held by the shareholders and the natural persons and other part of the ownership of the companies for institutional and major investment (leader of the gardening and colleagues, 2016). The institutional and major ownership is the degree of ownership of a company's stock by investment companies, organizations and public institutions, government agencies, and other companies. Institutional shareholders have a significant shareholding in the capital market and play an essential role in corporate decision-making and policies (praise, 2010). Indeed, the lack of information symmetry is a negative phenomenon that typically occurs in securities markets and leads to inappropriate economic decisions by investors. Therefore, it seems that the ownership of the company, in particular it is proprietary and institutional ownership, due to its power of influence in the company, can play a fundamental role in determining how the dividend policy is followed by information asymmetry and investor decision-making. . According to the above, this research seeks to investigate whether*

there is a meaningful relationship between information asymmetry and dividend policy according to the role of institutional ownership in the companies admitted to the stock market. One of the challenges faced by the credit system of organizations is liquidity management and management. Today, organizations face the problem of closing their liquidity under the title of dubious claims that due to the increasing trend of deferral of facilities, the more time is passed, the power of accreditation of the organization is reduced and, as a result, the shareholders' income and returns decreases. However, the proportion of suspect claims in some business organizations has increased several times of the limit (2%). Considering that most of the funding sources of some companies are provided from short-term deposits and also the facilities granted by these institutions to investment in relatively long-term assets with a lower degree of liquidity, management and control of cash flow are considered essential. (Rostamian and Haji Babaei, 2009). The existence of these inconsistencies and uncertainties in the management of the cash flows of the credit system has created a liquidity risk that, given the functional nature of the banking system, is one of the most commonly encountered risks faced by banks. The existence of proper and optimal management of liquidity in organizations makes it possible to prepare for crisis situations and cash flow deficits, preventing

the loss of investment opportunities, the use of surplus liquidity amounts for investment, and the granting of new facilities to make more efficient and ultimately improve Performance of the organization and increase the level of bank validation. To properly manage liquidity, it is necessary to properly identify the appropriate tools and effective factors. One of the most important factors affecting the liquidity of organizations is its asset position and debt. On the other hand, asset-liability management is one of the key factors in explaining the financial sustainability of the financial sector and the economy (Jayouswal, 2010). Considering the importance of the issues mentioned in previous sections in the country's economy and its high impact on the productivity of the bourse industry, this research seeks to link the relationship between stock liquidity, default risk and information asymmetry of banks in the stock market Tehran Stock Exchange will be analyzed

## **2. Theoretical Foundations**

### **2.1 Information Asymmetric**

When one side of the deal has an information advantage over the other side, the economic system is asymmetric in terms of information. In the theory of accounting, the issue of asymmetry of information is important because securities markets face the same problems as information asymmetry, due to the existence of intra-organizational information. Even if the price reflects fully all the information available on the market and publicly available, it is still possible for individuals inside the organization to have more information than those outside the organization. At this time, these people use the advantage of having information and gain more benefits. . When foreign investors are aware of this

issue, it is obvious that they do not pay the amounts they were willing to pay (if there is complete information) for securities, and thus respond to potential losses arising from the existence of confidential information (Scott, 2003).

## **2.2 Liquidity**

The liquidity capability of a stockpile means quick sales. The more shares can be sold faster and at a lower cost, it can be said that the share is more liquid (Fischer and Jordan, 1991). Securities that are traded on a daily basis are less liquid and more risky than bonds that are traded at low or low rates. The role of liquidity factor in asset valuation is important. Because investors consider that if they want to sell their assets, is there a good market for them The less liquidity a share has, the less attractive the shareholder will be to the less attractive if it yields more returns (Nicholson, 2003). Liquidity is a function of the ability to conduct a quick transaction with a high volume of securities and low cost. This means that the asset price does not change much between the order of sale and the purchase. The degree of liquidity of an investment is low when the fair price does not arrive quickly.

## **2.3 Default Risk or Non-payment of Debt**

The risk of non-payment of debt or default risk indicates the inability of a bank to receive interest or principal loans. Default risk also occurs when a bank pledges or guarantees on behalf of customers. In addition, there is a risk of default in derivatives such as interest rate swaps (Rai and Talangi, 2008). Necessary risk management balance sheet strategies include taking deposits for forecasted loan losses. However, higher savings would reduce bank profits, but higher savings as a percentage of total assets also point to a company's efforts to reduce the default risk. Therefore, saving as a percentage of total assets can be a sign of the magnitude of the risk of default. The percentage of stocks to the total assets, PROV, is considered as an indicator for the company's default risk management capabilities (Thajir Riahi, 2012)

## **3. Pervious Reaerarches**

*Pasiras (2008) investigated the effect of credit risk on the performance and liquidity*

*of the banking industry, and evaluated off-balance-sheet activities and international operations through the inclusion of input variables in the data envelopment analysis method. He concluded that with a rising risk of default, performance and cash flow rates are decreasing.*

*The International Standards Board (2009) has conducted a study entitled "The study of accounting theories about the credit risk of business units. In this research, credit risk has been investigated and discussed about the fair value judgment of debts, and it has raised the profit and loss arising from the fair value of assets and liabilities, and the issue of insurance and measurement of the fair value of assets and liabilities is probable. And the officials of this board accept the comprehensive responsibility of the board in financial crises.*

*In his study, Olavil (2014) evaluated the effect of credit risk on the performance and liquidity of commercial banks in Nigeria. In order to do this, he examined the secondary data collected from the CBN statistical bulletin and concluded that the ratio of loans and advances to deposits was negatively related to profitability and liquidity, although at a level of 5% and this considering the ratio of non-performing loans to loans and advances on profitability at a significant level of 5% is significant was not meaningful is significant*

*Also, his study suggests that there is a meaningful relationship between the performance of the bank (in terms of*

profitability) and credit risk management (in terms of loan performance). Finally, strengthening the securities market has a positive effect on the overall development of the banking sector by increasing competition in the financial sector.

In a study entitled "The Relationship between Information Asymmetry, Dividend Policy and Institutional Ownership", Lin and colleagues (2016) examined the relationship between information asymmetry, profit-sharing policy and institutional ownership in Chinese banks during the years 2003 to 2012. The results of the research indicate that companies with higher information asymmetry pay less cash dividends. The results of the research also show that companies with a permanent control system, but with high asymmetry, pay more profit than companies without a permanent internal control system.

Ghahari et al. (2011), in a study entitled "Investigating the Effect of Optional Disclosures and Ownership Structure on Information Asymmetry", investigated the separate effect of each of the factors of disclosure and ownership structure, as well as the interaction between optional disclosure and ownership structure on non-existence. The information symmetry of the banks was paid. The results of their research indicate a significant relationship between ownership structure and optional disclosure with information asymmetry. Also, the results of the research show that there is a positive and significant

relationship between the disclosure and the relationship between ownership structure and information asymmetry.

Khoshesima and Tash (2012) investigated the effect of credit, operational and liquidity risks on the efficiency of Iran's banking system. In order to evaluate the efficiency and ranking of banks, a mathematical optimization model has been used. In this regard, the bank has been studied as a statistical research community during the years of 2007-2013. The results of the research indicate the difference between parametric and nonparametric methods in assessing the efficiency and ranking of banks and the relative superiority of the parametric method compared to the nonparametric method. Also, the results of the research indicate that there is a significant relationship between credit risk, operational, liquidity and efficiency in the banking system of Iran.

Amini (2014) explores the effect of the property ownership structure on the relationship between voluntary disclosure and information asymmetry in companies listed on to Tehran Stock Exchange. The statistical population of this research includes 65 companies from listed companies in Tehran Stock Exchange during the period from 2008 to 2012. To test the hypotheses, regression analysis and parent test have been used. The results of this study show that all components of ownership structure (ownership concentration, institutional ownership

concentration, concentration of management ownership and corporate ownership concentration) have a significant effect on the relationship between voluntary disclosure and information asymmetry. In other words, all components of the ownership structure intensify the relationship between voluntary disclosure and information asymmetry.

Azar Pandar (2012) investigated the relationship between liquidity risk and credit in the banking industry of Iran during the period of 2004-2013. The results of his study indicate that there is a negative relationship between credit risk and liquidity risk, and this relationship is more severe from credit risk to liquidity risk. In other words, the effects of variable risk credit as a dominant variable in this connection are raised and the term of its effects will appear as a phenomenal phenomenon.

Ahmadi and Jeshfaghani (2016) investigated the effect of default on the performance of the banking system in Iran with the Panel Var approach. Their research results suggest that impulse as a standard deviation in default risk leads to lower liquidity of banks, return on assets, and profitability of banks. Accordingly, long-term default risk does not play a role in determining the profitability of banks, but liquidity and return on assets of banks in the long run are significantly affected by the risk of default.

#### **4. Methodology of Research**

This research is categorized as applied research. Applied research is a research that applies theories, rules, principles, and techniques to solve real and actual problems and is considered to be descriptive-correlation based on its nature and method. This kind of research involves collecting information to test the hypothesis or answer the questions related to the current state of the subject (Khaki, 2008). The data gathering and analysis of the data required by the present study is done as a panel. The data needed to calculate the liquidity variable has been received from Tehran Stock Exchange Technology Management Company according to the criterion of bid price difference. The data needed to compute other research variables were compiled from the software "New Raid" and the website of the Iranian Financial Information Processing Center (FIPIRAN), and then sorted through Excel 2013 software. To analyze the data The Eviews8 software was used. The statistical population of this research includes 100 companies from listed companies in Tehran Stock Exchange during the period from 2007 to 2016. Selected companies have 5 characteristics:

1. Investment, banking, insurance, financial intermediation and holding companies have been excluded from manufacturing companies due to the different nature and classification of items of financial statements
2. Stock companies with a positive book

value.

1. To maintain the reliability of the data, there is no trading term for more than 3 months.
2. In order to be comparable, the fiscal year of the companies will be March 29th.
3. The company has been admitted to Tehran stock exchange before the year 2007.

### 5. Research Hypotheses

According to the problem statement and the research objectives, the following hypotheses are presented:

1: There is a significant relationship between the amihud liquidity criterion and default risk.

2: There is a meaningful relation between the amihud liquidity criterion and information asymmetry

$$DD_{i,t} = \frac{\text{Log}\left(\frac{\text{Equity}_{i,t} + \text{Debt}_{i,t}}{\text{Debt}_{i,t}}\right) + \left(r_{i,t-1} - \frac{\sigma_{Vi,t}^2}{2}\right) \times T_{i,t}}{\sigma_{Vi,t} \times \sqrt{T_{i,t}}}$$

$$EDF_{i,t} = N(-DD_{i,t})$$

$EDF_{i,t}$  = probability of risk of default

$Equity_{i,t}$  = The stock market value of company  $i$  in year  $t$

$Debt_{i,t}$  = total debt of company  $i$  in year  $t$

$r_{i,t-1}$  = the total assets of company  $i$  in year  $t-1$

$\sigma_{Vi,t}^2$  = approximate the asset fluctuations Company  $i$  in year  $t-1$ , which is obtained using the following model:

$$\sigma_{Vi,t} = \frac{\text{Equity}_{i,t}}{\text{Equity}_{i,t} + \text{Debt}_{i,t}} \times \sigma_{Ei,t} + \frac{\text{Debt}_{i,t}}{\text{Equity}_{i,t} + \text{Debt}_{i,t}} \times (0.05 + 0.25 \times \sigma_{Vi,t})$$

$\sigma_{Ei,t}$  = Is the standard deviation of stock return of company  $i$  in year  $T$ .

### 6. Information Asymmetry

To estimate the information asymmetry parameter, we use the model of Hang and Estel (1997) and Tawares et al. (2014), which is based on the model for transactions. This model assumes that buying and selling prices are the result of competition between all the participants in the market. The bid difference is composed of 3 parts of the order process cost, inventory costs, and the cost of selection or information asymmetry. In this research, the original model of Hun and Steel, which does not include maintenance costs, is used because of the assumption that there is no market maker for stocks and competition between all contributors. The required regression model is as follows, and all data will be used on a daily bas

$$\Delta P_{i,t} = \alpha \frac{S}{2} Q_{i,t-1} + \frac{S}{2} \Delta Q_{i,t} + \varepsilon_{i,t}$$

$\Delta P_{i,t}$  = The difference between the actual price of the stock at time  $t$  and  $t-1$

$\alpha$  = Information asymmetry parameter

$S$  = Parameter Discounted price Buy and Sell

$\Delta Q_{i,t}$  = If at time  $t$  transactions with Purchase order has begun, this statement is equal to 1, and if it starts with a sales order, it is equal to 1.

$Q_{i,t-1}$  = If at the time  $t-1$  the transactions start with a purchase order, this statement is equal to 1, and if it starts with a sales order, it is equal to 1.

In this study, according to Lee and Reddy (1991), Hole Toosin et al. (1987), van Ness et al. (2001) and Lew and Wye (2009) to understand the direction of transactions (identification of the order of purchase or the order of market sales) from the rule tick (or check tick). In this method, for a transaction performed at time  $t$ , it is determined by comparing its price with the price of the previous transaction. This test classifies the transactions into four groups: optic (positive price change), down tick (negative price change), optic zero (incremental zero price change), and down-zero (downgraded zero price). If the price of the transaction at time  $t$  is higher (lower) than the price of the previous transaction at time  $t-1$ , then the optic (down tick). When the price is the same as the previous one, it is considered as zero-risk. In this case, if the last change in the incremental price (optic) is, the transaction is an incremental zero (optic zero). Similarly, if the last downturn has been downturn (down tick), the deal will be downsized (down-zero). Now, if the deal is positive or zero, the purchase transaction (1) is considered and otherwise it is considered as a sales transaction (1- )

$\varepsilon_{i,t}$  = The general information parameter available to all participants in the market

$\alpha \frac{S}{2} Q_{i,t-1}$  = This expression indicates the private information available to a small number of contributors in the market. In this research, a time series regression model is used to estimate the information asymmetry parameter for each company in each year.

## 7. The regression model of hypotheses

### Hypothesis 1:

$$EDF_{i,t} = \alpha_{i,t} + \beta_1 \text{liquidity} + \beta_2 \text{LNEquity}_{i,t} + \beta_3 \text{LNDebt}_{i,t} + \beta_4 \frac{1}{\sigma_{Ei,t}} + \beta_5 \text{Excess Return}_{i,t} + \beta_6 \frac{\text{Incom}}{\text{Assets}_{i,t}} + \varepsilon_{i,t}$$

### Hypothesis 2:

$$\text{Asym}_{i,t} = \alpha_{i,t} + \beta_1 \text{liquidity}_{i,t} + \beta_2 \text{LNEquity}_{i,t} + \beta_3 \text{LNDebt}_{i,t} + \beta_4 \frac{1}{\sigma_{Ei,t}} + \beta_5 \text{Excess Return}_{i,t} + \beta_6 \frac{\text{Incom}}{\text{Assets}_{i,t}} + \varepsilon_{i,t}$$

### Independent variable

Liquidity: Amihud liquidity model:

$$A_{i,t} = \frac{1}{T} \sum_{j=1}^T \frac{|r_{i,j}|}{\text{dvol}_{i,j}}$$

$r_{i,j}$  = Stock return  $i$  on day  $j$  in month  $T$

$T$  = number of days of transaction on share  $i$  in month

$\text{dvol}_{i,t}$  = Volume of trading  $i$  in day  $j$  from month  $T$

$A_{i,t}$  = Ratio of non-liquidity

### Control Variable:

Natural Logarithm of Stock Market Value (LNEquity)

Excess Return: The difference between the stocks return of the company  $i$  in year  $t$  and the return on the stock market in the year  $t$  the natural logarithm of total debt

(LNDebt) The ratio of net profit to total assets

(Incom / Assets) The reversal of the standard deviation of stock return of company  $i$  in year  $t$  ( $1/\sigma_{-}(Ei,t)$ )

## 8. Research findings

### 8.1 Descriptive Statistics

In this section, descriptive analysis of research data is discussed. The descriptive statistics indicators presented in this table are the mean, the mean, the maximum, the



minimum, the standard deviation, and the Jarck test. One of the most important uses that can be described in the descriptive statistics table is judgment about the normal or abnormal data. The Jarck test is for testing that is common for this review. According to the table below, the research variables are abnormal

**Figure 1: Descriptive statistics of research variables**

Variable	Risk of failure	Amyhud	Asymmetry
Average	0.0285	0.00001	10.5593
Middle	0.0093	0.000006	10.2981
Maximum	1	0.0003	14.5583
At least	0.0000	0.0000001	6.8178
Standard deviation	0.1247	0.00013	2.6055
Jark test for	14030	2098691	93.693
Number of observations	1000	1000	1000

  

Variable	Extra efficiency	Debt logarithm	Profit-to-asset ratio
Average	-0.006	12.682	0.1352
Middle	0.0219	12.464	0.1162
Maximum	3.1636	18.385	0.6274
At least	-8.1438	8.5377	-0.2554
Standard deviation	0.6399	1.6605	0.1193
Jark test for	38600	103.19	209.19 (0.0000)
Number of observations	1000	1000	1000

  

Variable	The logarithm of the market value of the market	Reversal of standard deviation
Average	7.0474	1.795
Middle	6.92	1.4908
Maximum	10.876	15.16
At least	4.7383	0.3378
Standard deviation	0.9393	1.3316
Jark test for	19.922	13514 (0.0000)
Number of observations	1000	1000

## 8.2 Statinary test

In order to investigate the safety of the research model from false regression, before making any estimation, we must first examine the variance of the model variables. In this study, due to the use of panel data in multivariate regression analysis, for examining the stagnation of each of the variables of the research, the tests of "Lyon, Lane and Choi", "I'm, Boys and Shane" and "Dickey Fuller Advanced" were used. Maneuverability results of research variables are summarized in

**Fig. 2. Based on these tests, all variables of research are manna**

Variable	Test	Statistics	Likelihood of statistics	Result
Risk of failure	Lyon, Lynn and Choi	-76.8046	0.0000	Mana
	We are boys and shin	-15.6101	0.0000	Mana
	Advanced Dickey Fuller	483.733	0.0000	Mana
Amyhud	Lyon, Lynn and Choi	-396.36	0.0000	Mana
	We are boys and shin	-42.1606	0.0000	Mana
	Advanced Dickey Fuller	449.97	0.0000	Mana
Asymmetry	Lyon, Lynn and Choi	-18.9356	0.0000	Mana
	We are boys and shin	-9.5712	0.0000	Mana
	Advanced Dickey Fuller	456.50	0.0000	Mana
Extra efficiency	Lyon, Lynn and Choi	-64.240	0.0000	Mana
	We are boys and shin	-23.7441	0.0000	Mana
	Advanced Dickey Fuller	702.60	0.0000	Mana

**Fig. 2. Based on these tests, all variables of research are manna**

Variable	Test	Statistics	Likelihood of statistics	Result
Profit-to-asset ratio	Lyon, Lynn and Choi	-16.8540	0.0000	Mana
	We are boys and shin	-6.9693	0.0000	Mana
	Advanced Dickey Fuller	375.34	0.0000	Mana
Debt logarithm	Lyon, Lynn and Choi	-16.1348	0.0000	Mana
	We are boys and shin	-4.8037	0.0000	Mana
	Advanced Dickey Fuller	342.88	0.0000	Mana
Logarithm of stock market value	Lyon, Lynn and Cho	-20.2686	0.0000	Mana
	We are boys and shin	-4.4555	0.0000	Mana
	Advanced Dickey Fuller	303.31	0.0000	Mana

### 8.3 Flemmer test

In this section, the Flemmer test (Chow) has been used to identify the compilation or combination of research data. The results of the test show that both research hypotheses are of a composite nature.

**Figure 3: Flemmer test**

Hypothesis	Flemmer test		Result
	Statistics t	Likelihood of statistics	
Hypothesis(1)	88.50	0.7662	Pooled
Hypothesis(2)	88.45	0.7672	Pooled

### 8.4 Testing hypotheses

Since the hypothesis model is a combined type, the OLS method is used to estimate the case.

**Figure 4: Testing Hypothesis 1**

Variable	Coefficients	Statistics t	Likelihood of statistics
Amyhud	-10.99	-4.1623	0.0472
Extra odds	1.011	1.9763	0.0009
Profit-to-asset ratio	-0.019	-1.9881	0.0158
Debt logarithm	-3.84	-1.9960	0.0197
Logarithm of stock market value	-7.60	-2.6652	0.0150
Reversal of standard deviation	0.841	2.1983	0.0235
Constant variable	0.126	2.2107	0.0121
The coefficient of determination	0.42		
Adjusted coefficient of determination	0.26		
Watson Camera Statistics	2.0217		
F statistics	1.9857		
Likelihoodof statistics statistics	0.0352		

**Figure 5: Testing Hypothesis 2**

Variable	Coefficients	Statistics t	Likelihood of statistics
Amyhud	-10.99	-4.1623	0.0472
Extra odds	1.011	1.9763	0.0009
Profit-to-asset ratio	-0.019	-1.9881	0.0158
Debt logarithm	-3.84	-1.9960	0.0197
Logarithm of stock market value	-7.60	-2.6652	0.0150
Reversal of standard deviation	0.841	2.1983	0.0235
Constant variable	0.126	2.2107	0.0121
The coefficient of determination	0.42		
Adjusted coefficient of determination	0.26		
Watson Camera Statistics	2.0217		
F statistics	1.9857		
Likelihoodof statistics statistics	0.0352		

Since the model of research hypotheses is of a composite type, it is used to estimate the OLS method as the case. In conjunction with the first hypothesis, the results of the probability of the F statistic show that the models are generally meaningful. Regarding the results of the OLS test, there is a negative and significant relationship between liquidity with Amihud criteria and default risk. This means that with the increase in liquidity, the risk of corporate default will be reduced. Also, the results of this test indicate a negative and significant relation between the ratio of the asset-earnings, the natural logarithm of the debt and the natural logarithm of the stock market value, and the positive and significant relation between the extra returns and the reversal of the standard deviation of return on equity with default risk.

Also, in the case of the second hypothesis of the study, the results of the probability of the F-statistic indicate that the models are generally meaningful. According to the results of the OLS test, there is a positive and significant relationship between liquidity with Amihud criteria and information asymmetry.

This means that with increasing liquidity, the asymmetry of company's increases. Also, the results of this test indicate a negative and significant relation between the natural logarithm of stock market value and the positive and significant relation between extra return, inverse standard

deviation of return on equity, profit-to-asset ratio and natural logarithm of debt with default risk

## **9. Conclusion and Discussion**

The main objective of this study is to investigate the effect of liquidity with the Amihud standard on the default risk of companies admitted to Tehran Stock Exchange. In this research, the descriptive statistics and correlation between the variables of the research were studied. The results of the correlation test indicated a significant relationship between the independent and dependent variable criteria of the research that is consistent with the results of the final test of the hypotheses. Then, by using panel-specific static tests, the reliability of variables was investigated and the results of the tests showed that the research models were protected from false regression. Finally, the findings of the hypothesis test indicate that there is a negative and significant relationship between the liquidity criterion and default risk, in which the risk of corporate default decreases with increasing liquidity. Also, the results of the test of the second hypothesis state that there is a positive and significant relationship between liquidity with Amihud criteria and information asymmetry.

## **10. Suggestions based on research results**

1. At the time of increasing liquidity of assets in the company, managers should better manage the asymmetry conditions.

2. Companies that are linked to credit activities are subject to more liquidity assessment and accuracy. 3. Banks should pay particular attention to the liquidity of their assets to other institutions.
  3. Due to the high correlation between bankruptcy and liquidity, corporate executives need to carefully assess the balance between liquidity and default risk.
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