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Analyzing Liquidity and Profitability Relation of Companies in Borsa Istanbul

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Abstract:
Liquidity and profitability (L & P) is one of the most important factors of interest to commercial and industrial institutions in all sectors. Through its indicators, companies can measure the extent of their progress and sustainability in the commercial market, as well as know about aspects that need more attention in the present and future aspects of marketing, sales and logistics. Interest in research in the liquidity and profitability relationship has benefits for emerging companies with a commercial sector in the market. Therefore, the research aims to find that liquidity is part of several factors affecting profitability. For this purpose, the indices of liquidity and profitability of companies listed on the Borsa Istanbul in Turkey will be examined. The companies have been classified by sector in order to ascertain the potential relationship between liquidity and profitability in the studied sectors according to liquidity and profitability rates.
The research hypothesis was presented to identify the variables that we will rely on in the research to verify the relationship between liquidity and profitability and the specificity of this relationship for 100 companies listed on the Borsa Istanbul. The results showed that some sectors showed a positive correlation between liquidity and profitability. Some sectors showed a negative correlation between liquidity and profitability.
The research presented several recommendations through the results extracted for companies and proposals for future researchers. The recommendations include continuing to maintain sufficient liquidity to maintain the work of enterprises and reach the highest level of profitability to avoid the failure of companies and the risk of bankruptcy.

Keywords: *L, P, LR, PR*

1. Introduction

The world in this days faced common problem in business and commercial markets, and this common problem had reflected to markets in cycle of capital and it has negative affect to markets and this leads to a reduction in confidence among businessmen. The role of accounting and financial information in the management of liquidity risk has positive effects in the drawing up of the monetary and incoming monetary policy plan. Therefore, when faced with a lack of liquidity with how to work to reduce, avoid and overcome in the short and long term.

As risk management and liquidity management are closely linked, as well as in the preparation of cash balances, they are also linked to accounting information. Accounting reports should not be overstated because they provide a vision in the preparation of cash and analytical budgets for companies and can identify periods in which the company undergoes a severe shortage of liquidity in companies with a single activity.

The importance and specificity of liquidity we want to look for relationship to the profitability of companies, to see if there is an impact and relationship between the liquidity of companies and profitability, and so we have to look at liquidity factors in full to see the extent of their impact and strengths and weaknesses, and thus affect the profitability.

The company is suffering from a liquidity crisis, how will this affect to profitability, will it decline or will it remain profitable as it is, or it will decrease by a certain percentage or it is not affected, so have to ask these questions and looking for the result.

The management of liquidity in institutions is the center of strength of economic activity and the backbone of economic and development projects. With the financial crises experienced by the world and low liquidity rates in large banks and small and medium companies, it was necessary to go to the knowledge of good governance to achieve the required balance because any imbalance will have economic and monetary effects At the level of individuals, financial institutions, companies and banks to know the importance of liquidity must know the meaning and mean in the original cash or similar cash, which gives economists the importance of the major study is to increase the acceptable limit and lower than the minimum to remain in the balance of cash and overcome any imbalance in the balance of cash in the markets and companies and financial institutions .

Liquidity management is one of the most dangerous departments, it pays great attention to money, and money is the most important element of the project's survival.

The lack of organization and planning how to get money may come at a time when the company cannot pay its obligations and this point is pivotal and sensitive and leads to either the fall of the company or to collapse its reputation and fall from good sales to bad. Profit management is one of the most important departments for the continuity of companies. It pays great attention to profitability and its continuity and growth. Profit is the most important element in the survival of the project. It is a continuous development and the absence of executive, organizational and marketing plans for the company's profitability continues with time. To a low level of profitability and thus to the arrival of the break-even point and the beginning of loss and lead to the company's deterioration and the sensitive point and lead to lower sales to become relatively low.

The International classification of companies is very cautious for what happens to companies as we observed in Egypt and Greece when the liquidity of the central Bank decreased directly the credit rating of these countries, the study company in financial market because when the economy growth should you try to increase funds by issuing stocks or bonds, we have to know the financial market affect every day in life and also affect huge flow of funds throughout all the economy.

The importance of liquidity on companies and the relationship between profitability and liquidity were highlighted, and this issue will give clear indicators of the performance of companies in the control of liquidity as it is a central tool to reach the objectives of the company.

1.1. Problem Statement

As well as to determine the degree of liquidity impact to profitability in companies, when entering the financial difficulty in the companies and reduce the risks to companies and banks that have a key role either in solving the problem of lack of liquidity and what the affect to profitability or through the increase and we will discuss the detailed study.The objective of the study was to clarify the importance of liquidity and its impact on the profitability of companies to determine the strength of their relationship. If there is a liquidity crisis, External intervention that leads to a change in the balance of money in companies may affect the profitability of the company and this is what we want to look for Is the liquidity crisis has a large party in reducing the level of profitability.

The liquidity crisis is happened markets as it happened in America international crisis in mortgage in 2008 because decrease liquidity in banks, this situation didn't make affect to America only, but its affect extend to another country aboard border of U.S.A to countries which it uses Dollar.

The problem in liquidity being bigger and to be huge problem which it commercial and Industrial Companies and government and made problem in political life, so we will study impact of liquidity on the profitability rates of companies listed on the Istanbul stock exchange, and determine which ways made it and get knowledge alternative to avoid lack in liquidity.

The importance of the study stems from the enrichment of scientific and practical knowledge within Companies listed under the Borsa Istanbul regarding the stability of liquidity in the four years.

The importance of economic and political decisions of the state affects the company's behavior by increasing and decreasing cash flows. Hence the importance of corporate management decisions to see how they affect internal liquidity and thus profitability. The importance of liquidity management planning and the preparation of cash balances for a limited period with the use of accounting data and forecasting the potential and potential risks of cash flows and also to determine the periods of default in the payment of financial liabilities in order to determine the correlation between changing profitability levels .

The new company will be open or which thinking to open commercial project, they want data about how it could begin project and save and continue in the beginning without any problem which related to reducing liquidity or profitability Any company suffering from a liquidity crisis will see the negative effect of this on profitability because when the finance management know about reasons of crisis liquidity, it will solve and avoid its problem.

The data for the study were taken from the Borsa Istanbul website. The data included financial statements of companies. 100 companies were selected from Indicator BIST 100 companies. The financial statements of these companies were taken over four years from 2013 to 2016 to study the rate of corporate liquidity and profitability rates. The liquidity ratio was considered to be an independent variable and the profitability rate was considered a dependent variable, these companies are located within the Turkish Republic, the study was initiated in October 2017 and is expected to be completed by the end of November 2018.

2. Literature Review

Definition of liquidity and liquidity crisis: the liquidity formula is used to express cash, liquidity. In other words, cash flow is the net cash flow which is the internal cash flow minus the outflow of cash. Inward cash flow is all operations that lead to the entry of cash into a fund cash and bank balance in the company, while the cash outflow is all operations performed by the company and lead to the exit of cash from them, and the liquidity of the company means the existence of liquid funds (cash and semi-cash) sufficient to the company in a timely manner to meet their obligations on due date and move its session The liquidity of the asset means the ease and speed of converting this asset to a ready cash and without a few losses according to the natural course of things (Jaffer, 2004).

A liquidity crisis is defined which we can to explain about event which it appears sudden and prolonged evaporation related to market and in government economy and affect to governmental expenses , often it affect to the stability of the financial system.

The meaning of market liquidity is about ability to trade by asset or financial instrument or note financial at short time and in long time with determine price and make expectation about funding liquidity, we have to know the target of any company which include in market its target about collect money and made positive profit or cash equivalents ,the money made from sell an asset or by borrowing money and invest in many section in financial life as we know the liquidity crisis have strong affects to countries and transfer the problem from section to another section ,example from company to another company and from company to bank and from bank to bank and from bank to center bank in government and to all country and from country to country until reach to the world and made international crises, so this topic which related to direction country to avoid this problem so that we must know reasons and ways which get to decrease liquidity in companies and affect to full market.

The bank system which work in its policies and procedures it affect and reflect to liquidity, sometimes bank take a lot of money from customer with accepting from them to make more profit and make addition income, this case will appear when the bank decided to make range of interest rate is highest rate top proportion to the rest of the banks and this case made decreasing in liquidity in market but big problem will be appear when the bank will take this money and invest in another country so this case made decreasing money in hand people and in companies and many of people will buying on credit until they will take the first income payment from deposit their money in bank to close their liability.

Depositor behavior can be a reflection of expectations in the financial markets, which in turn, contribute more to short-term use of bank resources by creating a considerable cost affect for the banking sector (Ulgen, 2016).

Definition of Profitability is the primary objective of all institutions and it is necessary for the survival and continuity and the goal that investors look forward to and achieve this goal through two important decisions, the investment decision and the decision to finance.

The decision to decide on how to choose the sources from which funds will be obtained to finance investment in their assets in such a way as to enable the owners of the project to obtain the greatest return possible by taking advantage of the advantage of the expansion of the fixed-cost borrowing and without the risks that could result from exaggeration in Borrowing.

The decision to invest according to the theory of the sequence of sources of finance, the retained earnings come in the forefront of sources of funding and then followed by loans and then the issuance of new shares and accordingly it is expected that the institution, which is characterized by high profitability and have the opportunity to hold profits to rely less on the borrowed money and to the degree greater on the property rights of retained earnings and the enterprises (Abdullah, 2002), that have low profitability and face good investment opportunities will resort to external financing and will start debt before issuing equity and according to the principle of sequencing the use of sources of financing, this will lead to a high level debt at the facility and therefore we see that the facilities that have high profitability will face good opportunities for investing activities because they will use their profits in investments and will thus be the debt ratio is low.

The liquidity ratio of a company can be measured by comparing its short-term needs with its short-term assets to determine the extent to which these assets are able to cover these needs. The Liquidity ratio (current assets divided by current liabilities) (Ak-Chmielewska & Kuleta, 2018), is the common measure of liquidity measurement of the company.

The importance of cash flow is that:

- Supporting the trust of the company's lenders by building a good credit reputation.
- Continuing the operations of the Company (its operational activities) continuously.
- The company benefit from the cash discount when liquidity is available.
- Avoid lending and not having to pay high costs on borrowed funds.
- To meet the obligations at maturity and to avoid the risk of falling into financial difficulty.
- Confronting emergency situations.

One of the main objectives of the company's liquidity management is to maintain a positive cash balance (cash flow inward greater than cash flow abroad) in which it can meet its short-term liabilities. If the company cannot maintain a positive cash balance, turns into financial hardship.

Financial difficulty can be defined as the lack of ready cash or semi-cash sufficient to meet the needs of the company, which results in the inability of the company to meet its financial obligations on maturity there financial hardship two types.

The influence of the types of companies that affect and have special treatment in liquidity, for example, real estate companies, which are long-term investments, they need a large mass of liquidity to create and establish projects and need a long time to give a return from these investments that give liquidity but over a period of more than 15 years and sometimes.

Liquidity and profitability do not meet in a very limited manner. Cash in the Fund in the Fund is the most liquid assets of the Company. The Company's assets and assets are the less liquid assets of the Company but are the basis of operation and profit from the enterprise. Varying in inversely proportional to their liquidity. Although they sometimes seem to go hand in hand, the CFO aims to achieve a double result in managing the assets of his business. The first to maximize the market value of the wealth of the owners, and the second to maintain the liquidity of the establishment and not to occur in any financial hardship. But making profit is not alone enough for the company not to be in financial difficulty due to lack of liquidity. The company may use the money earned from the profits to buy fixed assets or repay a long-term loan or may distribute dividends to owners. It is not surprising that some profitable enterprises suffer from low liquidity. On the other hand, there are some establishments that do not make a profit or have a low profit. They do not suffer from a shortage in their capital and are not exposed to financial difficulties due to the sale of some of their fixed assets, borrowing long term loans or adding new money to their investments and financial analysis. (Rajan, 2006).

Asset management means the distribution of funds available for the project among its various items of cash, receivables and goods in a manner that achieves the highest possible income within acceptable risk limits and maintains appropriate liquidity. It is natural that the establishment should be kept in check of the following current assets: Cash in the Fund or the Bank, which is fully equivalent to the expenses urgently required to meet the operational requirements, expenses and obligations due to the Tambour. Goods that are fully commensurate with the needs of customers and the production needs of receivables in accordance with the ideal credit policy (Rajan, 2006).

The liquidity is not limited and it cannot determined cycle of liquidity and its affective to the company and every section affect to another section ,example to that economic company affect to lender and to investors and to economy country , the level of people in economy before the crises in liquidity and after this crises ,the people before crises he was high level in economy will be transfer to intermediate level in economy after decreasing the liquidity ,and the people who level in economy intermediate level before the problem he will be in low level in economy, and the people who level in economy low level before the problem he will be in under low level in economy and he doesn't have money to buying anything to be staying in life so this point shall be the responsibility of the government in providing for the needs of people who are below the minimum level to provide them with a social life as a responsibility (Kiyotaki, 2012).

Affective of liquidity by cost on security price and return, there are many people want to invest their money in stocks so the money goes to company and made decreasing in liquidity in hand people and in banks but many times who buy security need money as soon so he will sell this stock in low price to get money so there is cost between difference price buying and price selling, this cost to transfer stock to money. The raise price of buying and low price of selling price resulting in a market impact cost. And the market impact cost is greater for larger transactions, this is also considered a trade in order to obtain liquidity by paying the cost of obtaining liquidity (Amihud, 2013).

The financial reports, the statement of financial position, the income statement, the cash flow list, the financial analysis study, the cost reports and the focus on the health of the company. The focus is much on the monthly cash balances, we monitor their deviations and we update them constantly to avoid any future changes and problems.

To see company's valuation of liquidity, the liquidity assessment has several determinants from the cash flow and balance sheet and the working capital analysis because only the study of financial flows has a gap as well as only the budget study and therefore all aspects of the liquidity assessment of the company, periodically analyze liquidity ratios and cash inflows and outflows for operational activity as it is the main backer of the company. It also gives a strong focus on return on investment ratios and planned returns.

For example, the planned return is 20% but the return on investment is 10%, 10% is unrealistic and this indicator gives us the strength of the company and the ability of the staff who tried to reach the goaland we evaluate the performance of the cash budget by comparing them with the list of cash flows.

There is a relationship between the output of accounting information from the accounts section and the management of liquidity and the correct and accurate accounting information gives a positive advantage to the performance of the Treasury Department to determine the determinants of liquidity study.

Liquidity is disclosed through preliminary studies through budgets. Plans are made to invest liquidity from horizontal or vertical expansion from the establishment of companies that manufacture raw materials for our products or to establish distribution companies for our products. The excess liquidity is invested with a confirmation of a margin or a part of the dividend.

To processing the shortage or excess liquidity ,the cash balances are used in the event of a deficit and funding plans are drawn up either by withdrawing money from the branches of the company that have a cash surplus or taking a loan from companies or by financing from banks such as loans. The loss or condition of entering a new project is more than the company's financial capacity or is a chronic deficit and requires long-term financing.

The risks which it appear when the lack liquidity, the company is prohibited from purchasing raw materials and from the commercial inventory. It also prevents the company from expanding and granting credit to customers for its cash needs, the company's inability to buy assets, the inability of the company to pay suppliers.

The company's nerve and engine are liquidity and any company that does not manage its liquidity correctly will reverse all the assets of the company and do not lead to a benefit.

It is natural that we distribute cash in several banks which have a strong name in the financial and financial market and from the instructions of risk management, if any bank has a liquidity problem and began to put an end to the cash withdrawals, will be go to the legal courts to bring cash from the bank, the country's regulations may be set by the Emergency Plan, the political and economic decisions of the state directly affect the liquidity of the company.

The tax instructions have a strong effect on liquidity decisions and limit the flow of liquidity in some cases, to handle surplus or deficit liquidity, the company's strategic plans have been based on management's vision both in the direction of expansion plans and in horizontal or vertical expansion plans.

Liquidity can increase profits and distributions can be distributed and this leads to liquidity shortages through distributions and puts the company in a financial predicament, that profitability generates liquidity as well as liquidity generates.

A measure that examines a company's net liquid financial assets. The net liquid assets show how much of a company's liquid assets would be left if all current liabilities were paid net liquid assets =liquid financial assets – current liabilities example we have one hundred thousand dollars liquid assets and we have 8 thousand dollars current liabilities so we have 92 thousand dollars net liquid assets (Muhamad, 2012).

The relationship between risk and liquidity is negative, the degree of risk is measured by the probability, and the company will be disrupted or unable to pay its obligations at the time of payment and will have reached insolvency. There is an inverse relationship between risk and liquidity. In order to minimize the risk level, the liquidity margin must be minimized (Tranel & Camerer, 2005).

Needs liquidity there is opportunity cost to give up something to get money which is cost you get and loss, the inventory which you sell it in low price to get money when Necessary to take money, liquidity for investors They pay lower prices and demand higher returns from less liquid assets than from otherwise similar more liquid assets (Modaran, 2016).

Determines the full cost of the project after examining the market, determining the production capacity and determining its costs, with a margin of safety and securing adequate liquidity for these costs.

To receive customer payments customers must be credited and given discounts to encourage their payment and the discount is included in the cost of obtaining cash , not only must we get what we need but we must also get a higher amount of cash than we need.

3. The Hypotheses of the Study

- H0 = There isno relationship between the independent variable, the liquidity ratio and the dependent variable, the profitability rate.
- H1 = There is relationship between the independent variable, the liquidity ratio and the dependent variable, the profitability rate.

4 Data and Methodology

4.1. Description of the Data and Variables Definition

This section deals with the specificity of the impact of the liquidity rate on the profitability rate to be included in regression models. The approved methodology examines the sensitivity of the liquidity rate characteristics related to profitability indicators. Performance study is conducted on companies listed in Borsa Istanbul in Turkey. Listed companies within the Borsa Istanbul are listed to make sure that the data is in high accuracy and correct and because it is a confirmed model from the Borsa Istanbul in order to arrive at accurate data for companies with high accuracy.

There are two variables used in the regression. These variables are: liquidity ratio (LR) and profitability ratio (PR), the variables will be explained in further detail in the next section.

This section introduces and explains variables included in the regression analysis, there are a total of two variables: one dependent variable and one independent variables. The performance indicator, profitability ratio (PR) serves as dependent variables. Liquidity ratio (LR) serve as explanatory variables.

4.1.1. The Dependent Variable: Profitability Ratio (PR)

The most important, or "bottom line", profitability ratio, stockholders invest to get a return on their money, and this ratio tells how well they are doing.). PR is calculated by dividing net income by sells. PR also determines how efficient the management uses liquidity, In addition, PR is the dependent variable in our study of profitability because it will show how efficient the management uses liquidity.

The profitability have been converted into logarithmic instead of dollars to be consistent with other ratios.

4.1.2. The Independent Variable: Liquidity Ratio (LR)

For companies, liquidity predominantly include cash and equivalents and money in banks and which are the basis for liquidity.

- Liquidity ratio is included in this study as an independent variable because it determines the importance of liquidity. The liquidity has been converted into logarithmic instead of dollars to be consistent with other ratios.
- The liquidity ratio are expected to have a positive relationship with the profitability because by increasing the profitability by increasing liquidity ratio.

4.2. The Research Methodology

This study will use both descriptive and analytical statistics to analyze the data and test the hypotheses using SPSS program to examine the liquidity ratio influence to profitability ratio and compares it to sectors in companies in Borsa Istanbul. There is one dependent variable, PR that estimate the profitability of companies. The remaining variable is included as independent variable LR.

PR = a + b (LR)

Where: (PR) represents the profitability ratio for companies.

A represents alpha (constant) for each model,

(LR) represents the liquidity ratio for companies.

The hypothesis of the study:

There is a statistical relationship and significance when the correlation coefficient is0.05 ≤ a. There is a relationship between the independent variable, the liquidity ratio and the dependent variable, the profitability rate.

4.2.1. Regression Analysis

If we have a set of data, (Xi.Yi) if we have reason to believe that there exists a linear Relationship between the variables x and y, we can plot the data and draw a "best-fit" Straight line through the data. Of course, this relationship is governed by the familiar Equation y= mx +b. We can then find the slope, m, and y-intercept, b, for the data.

If we expect a set of data to have a linear correlation, it is not necessary for us to plot the data in order to determine the constants m (slope) and b (y-intercept) of the equation y= mx +b. Instead, we can apply a statistical treatment known as linear regression to the data and determine these constants (Muhamad, 2012).
(Note that the limits of the summation, which are i to n, and the summation indices on
x and y have been omitted.)
The linear regression will be used to test our hypotheses according to the enter
Method, by using regression method we will:

- Predict the value of a dependent variable based on the value of independent variable.
- Explain the impact of changes in an independent variable on the dependent variable.

The results of regression analysis will be the following figures:
R: Correlation coefficient represents the strength and the direction of the correlation between the dependent variable and independent variable.
R-square: Represents the percentage change in the dependent variable that the regression equation has explained, which is the portion of the total variation in the dependent variable that is explained by variation in the independent variable.
F-test: It is a statistical test in which the test statistic has an F-distribution if the null hypothesis is true. It tests the ability of independent variable to make change in dependent variable, F ratio is used to test statistical significance, if the percentage for F ratio is significant this means that independent variable has great ability to predict the values of the dependent variable. As in all statistical tests, this ratio is considered significant if (sig) F is small.
T-test: It is a statistical test, the null hypothesis will be rejected if the level of significance of T less than acceptable level.

4.2.2. Correlation Analysis

Correlation analysis is the statistical tool that we can use to describe the degree to which one variable is linearly related to another. Frequently, correlation analysis is used in conjunction with regression analysis. Correlation analysis can also be used by itself, however, to measure the degree of association between two variables (Cox, 2018).
Correlation coefficients (typically denoted by the statistic "r") describe the strength of the relationship between two variables. Correlations range from -1.0 to +1.0 in value.
A correlation coefficient of 1.0 indicates a perfect positive relationship in which high values of one variable are related perfectly to high values in the other variable, and conversely, low values on one variable are perfectly related to low values on the other variable.
A correlation coefficient of 0.0 indicates no relationship between the two variables.
That is, one cannot use the scores on one variable to tell anything about the scores on the second variable (Cox, 2018).
A correlation coefficient of -1.0 indicates a perfect negative relationship in which high values of one variable are related perfectly to low values in the other variables, and conversely, low values in one variable are perfectly related to high values on the other variable.
If a correlation coefficient is squared (multiplied by itself), the resulting number is the
"Percentage of the variation" in the two variables that is in common (Cox, 2018).

$$r = \frac{\Sigma(x-\bar{x})(y-\bar{y})}{\sqrt{[\Sigma(x-\bar{x})^2(y-\bar{y})^2]}}$$

(Cox, 2018)

5 .Hypotheses Testing

5.1. Descriptive Statistics

Table (1) below shows facts about sports companies in sample of the community listed companies in Borsa Istanbul, it seems that the level of significance of 34.3%%, which is more than 5% so we accept the hypothesisH0 and say there is no relationship in the sports companies between the rate of liquidity and the rate of profitability.
In table (1) below shows facts about Banking sector in sample of the community listed companies in Borsa Istanbul, it seems that the level of significance of 17.3 %, which is more than 5% so we accept the hypothesisH0 and say there is no relationship in the Banking sector between the rate of liquidity and the rate of profitability.

In table (1) below shows facts about Commercial companies' sectorin sample of the community listed companies in Borsa Istanbul, it seems that the level of significance of 89.5 %, which is more than 5% so we accept the hypothesisH0 and say there is no relationship in the Chemical companies sector between the rate of liquidity and the rate of profitability.

In table (1) below shows facts about Commercial companies' sector in sample of the community listed companies in Borsa Istanbul, it seems that the level of significance of 79.6 %, which is more than 5% so we accept the hypothesisH0 and say there is no relationship in the Chemical companies sector between the rate of liquidity and the rate of profitability.

In table (1) below shows facts about Energy sector in sample of the community listed companies in Borsa Istanbul, it seems that the level of significance of 0.2 %, which is low than 5% so we accept the hypothesisH1 and say there is relationship in the Energy sector between the rate of liquidity and the rate of profitability.

In table (1) below shows facts about Industrial sector in sample of the community listed companies in Borsa Istanbul, it seems that the level of significance of 0.05 %, which is low than 5% so we accept the hypothesisH1 and say there is relationship in the Industrial sector between the rate of liquidity and the rate of profitability.

In table (1) below shows facts about Real estate sector in sample of the community listed companies in Borsa Istanbul, it seems that the level of significance of 0.3 %, which is low than 5% so we accept the hypothesisH1 and say there is relationship in the Real estate sector between the rate of liquidity and the rate of profitability.

Sectors	R Square	Std. Error of Estimate	Significance Regression	Accepted Hypothesis
Sports sector	0.09	0.17485	34.3	H0
Banking sector	0.07	0.45595	17.3	H0
Commercial companies sector	0.001	0.83439	89.5	H0
Chemical companies sector	0.001	0.89074	79.6	H0
Energy sector	0.162	0.96366	0.2	H1
Industrial sector	0.356	2.13843	0.05	H1
Real estate sector	252	27.31444	0.3	H1

Table 1: Hypotheses testing of sectors

5.2. The Correlation Analysis Results

The correlation analysis tests the relation between the variables selected in the regression analysis. The correlation matrix shows the expected coefficient signs from the regression. . The correlation matrix table (2) has two parts; the variables are presented separately for each type of sports companies, a correlation coefficient.is 0.3 which mean there is positive correlation between liquidity and profitability at level of significance 34.3%.

The correlation matrix table (2) has two parts; the variables are presented separately for each type of banking sector, a correlation coefficient.is -0.265 which mean there is negative correlation between liquidity and profitability at level of significance 17.3 %.

The correlation matrix table (2) has two parts; the variables are presented separately for each type of chemical companies, a correlation coefficient.is 0.024 which mean there is positive correlation but very weak because is very near to 0 between liquidity and profitability at level of significance 89.5%.

The correlation matrix table (2) has two parts; the variables are presented separately for each type of commercial corporation, a correlation coefficient.is -0.29 which mean there is negative correlation but is very weak because is very near to 0 ,between liquidity and profitability at level of significance 79.6 %.

The correlation matrix table (2) has two parts; the variables are presented separately for each type of energy companies, a correlation coefficient.is 0.403 which mean there is positive correlation between liquidity and profitability at level of significance 0.2 %.

The correlation matrix table (2) has two parts; the variables are presented separately for each type of industry companies, a correlation coefficient.is 0.597 which mean there is positive correlation between liquidity and profitability at level of significance 0.05 %.

The correlation matrix table (2) has two parts; the variables are presented separately for each type of real estate companies, a correlation coefficient.is 0.502 which mean there is positive correlation between liquidity and profitability at level of significance 0.3 %.

Sectors	Significance Regression	Correlation	Relation
Sports sector	34.3	0.3	Positive
Banking sector	17.3	-0.265	Negative
Commercial companies sectors	89.5	0.024	Positive
Chemical companies sectors	79.6	-0.29	Negative
Energy sector	0.2	0.403	Positive
Industrial sector	0.05	0.597	Positive
Real estate sector	0.3	502	Positive

Table 2: Correlation Analysis Results of Sectors

6. Conclusions

A study by sports companies and commercial companies showed negative correlation between liquidity and profitability, but the test result showed that there wasn't a relationship between liquidity and profitability.

The banking sector and the chemical sector showed positive correlation between liquidity and profitability, but the test result showed that there wasn't a relationship between liquidity and profitability.

The energy sector, industry and real estate companies showed positive correlation between liquidity and profitability, but the test result showed that there was a relationship between liquidity and profitability.

The test of all sectors showed a relationship between liquidity and profitability. The test also showed positive correlation between liquidity and profitability. But there are other factors supporting profitability, not just the liquidity, where the banking and commercial sector showed the lack of liquidity and profitability others affect profitability.

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