BUSINESS DYNAMICS DURING THE COVID-19 PANDEMIC AT LIQUIDITY LEVEL BASIC CHEMICAL INDUSTRY AND CONSUMER GOODS COMPANIES IN INDONESIA

Risti Ulfi Hanifah¹, Adhi Widyakto², Tri rinawati³
¹,²,³ Faculty Of Economic, University Semarang,

ABSTRACT

Researchers want to prove the ratio of debt as well as turnover from inventory, receivables, working capital and also company size to liquidity and its impact during the covid-19 pandemic. The research sample uses basic Chemical industry and consumer goods listed on the IDX for the fourth quarter of 2019 to the first quarter of 2020. This research is quantitative research and secondary data consisting of quarterly financial reports on the IDX. Sampling was carried out using purposive sampling method and produced 135 samples of companies. The method used is the panel data regression analysis method. The results of the analysis show that only the debt ratio has a significant negative reaction on liquidity. Company size, accounts receivable turnover, inventory turnover and working capital turnover are not significant because the increase or decrease in the variable does not affect the level of liquidity. During this covid-19 pandemic, there is no change in the relationship between each independent variable to liquidity.

Keywords: covid-19; debt ratio; financial performance; liquidity; operational activities

INTRODUCTION

Indonesia became one of the countries affected by exposure to coronavirus disease 19 or covid-19 on March 2, 2020 with its first case of 2 people. The declaration left the domestic sphere massively shaken. This makes the state order take an intense stance and adjustment, especially in the economic aspects of the country where as the driving force of national growth. Gross domestic product as the main indicator in knowing, assessing, and predicting the economic condition of a country in a certain period of time. The Central Bureau of Statistics (2020) explained that Gross Domestic Product gains in almost all business sectors have decreased. This is due to the impact of the Indonesian government's policy of implementing large-scale social restrictions resulting in a decrease in people's purchasing power over commodity goods so that the price and amount of production of goods and services also decreased and the implementation of restrictions on import export trade activities. However, there is a business sector that has experienced a significant increase in GDP, namely the agricultural sector.

The basic chemical industry sector as an strengthening sector for national food security in economic recovery because Indonesia which is an agrarian country rich in natural resources and the majority of its livelihoods in that sphere. According to data from the Central

¹Email: ristiulfi@usm.ac.id, adhiwidyakto92@gmail.com, tri_rinawati@usm.ac.id
²Corresponden Author, Email: ristiulfi@usm.ac.id
P-ISSN: 2580-6084, E-ISSN: 2580-8079
Bureau of Statistics (2020) the GDP gain of the agricultural sector in Q4 2019 amounted to 449,379.30 billion, then increased to 503,727.90 billion in Q1 2020 and responded positively to 570,033.70 billion in Q2 2020.

One of the main components of assessing the company's condition in a healthy or unhealthy condition is by measuring the liquidity level ratio. (Cashmere, 2015) suggests liquidity has a function as a measurement of the company's ability to meet its current financial obligations to both internal and external parties. Liquidity is not only about fulfillment, but also the management of current assets into cash (Hamdi, 2014). According to (Cashmere, 2015) ideally the ratio figure is 2 or 200%. However, the standardization of each company varies with regard to the minimum limit for its liquidity level.

Based on Figure 1, the average liquidity has varying values. However, the sectors that have increased liquidity and survived the covid-19 pandemic are the basic chemical industry and consumer goods sectors. In the basic chemical industry sector, liquidity gains in Q4 2019 amounted to 1.49, then increased to 6.51 in Q1 2019 and grew positively again to 9.58 in Q2 2020. Indonesian Ministry of basic chemical industry (2020) said operational activities in the agricultural sector experienced positive and strong growth in both company management and export activities.

Subsectors that become the highest contributors to GDP are plantations, especially food crops because it is focused as a domestic food security effort. Furthermore, the positive growth was influenced by the increase in product export sales, simplification of supply chain distribution and absorption of people’s business credit capital (KUR).

The business sector that also survived during the covid-19 pandemic is consumer goods including food and beverage (F&B), medical devices, pharmaceuticals and medicines (Allianz, 2020). Strengthened by Ridhoi (2020) the covid-19 pandemic in Indonesia until entering the second quarter of 2020, the processing industry contributed 19.87% to GDP with subsectors responding positively, namely consumer goods including food and beverages by 0.22%, pharmaceutical chemistry, and traditional medicine by 8.65%. Liquidity has not
undergone significant changes as in Q4 2019 its liquidity gain of 2.85 then decreased to 2.77 in Q1 2019 and responded positively again in Q2 2020 to 3.14. Where it relates to the behavior of people who are aware of the virtues of health and activities to stay at home.

Liquidity levels can be affected by several factors both internal and external. In this study, the factors used are the size of the company, the turnover of receivables, the ratio of debt, the turnover of inventory, and the turnover of working capital. (Hani, 2015) said current assets and current debt can form liquidity. Current assets can be categorized in cash, securities, receivables, and inventory. (Kim et al, 1998) also added company size and debt ratio as elements that contribute to liquidity.

The size of the company can reflect how prosperous it is in acquiring and managing the company's assets. The larger the assets owned, the company is considered independent and the financial condition is liquid. The statement supported (Norvašienė &Stankevičienė, 2014) and (Gill &Mathur, 2011) the size of the company positively significantly affected liquidity. According to (Misnawati, 2019) it affects significantly. Unlike (Puspitasari & Haryanto, 2013) and (Sugiono & Christiawan, 2013) which did not significantly affect liquidity.

The next factor is the turnover of receivables where as a management investment the company is embedded in the collected receivables and converted into cash so as to increase liquidity. Research (Puspitasari & Haryanto, 2013), Ammy &Alpi (2018), Indarti &Oetomo (2019), (Aji et al. (2016), Ningsih &Soekotjo (2018), Astuti &Maelona (2013) and Savitri &Dianingsih (2015) mentioned that the turnover of receivables positively significantly affected liquidity. Differently Puspitasari &Haryanto (2013) and Sugiono &Christiawan (2013) which did not significantly affect liquidity.

Debt ratio as a measurement of the use of external funds to fund the company's wealth with the aim of encouraging its operations to be sustainable and earn profit. Research (Bem et al, 2014), (Misnawati, 2019), and (Maulana, 2011) showed significant negative results on liquidity. The use of high debt with a fixed asset value will be difficult to pay the nominal debt plus interest expense so as to reduce liquidity. Unlike (Puspitasari & Haryanto, 2013) which does not significantly affect liquidity.
Furthermore, inventory turnover is a major factor in the company's management investment which is invested in inventory and converted into cash so as to earn profit and at the same time increase liquidity. The results of (pranaditya, 2018), (Yunita & Argamaya, 2017) and (Aji et al, 2016) study said the inventory turnover positively affected liquidity. On the other hand, (Dewi, 2016) suggests a significant negative influence. In contrast to others, (Gaol, 2015) and (Mulyanti & Supriyani, 2018) did not significantly affect liquidity.

The last factor is the turnover of working capital which is the overall result of operational activities carried out and then managed in order to obtain capital back to increase the company's liquidity. The level of effectiveness of the company in managing its working capital determines the sustainability of its operational activities. (Sugiono & Christiawan, 2013) said the turnover of working capital positively significantly affects liquidity. On the other hand, (Pranaditya, 2018), (Saputra et al, 2020), (Misnawati, 2019), (Chakiki, 2016), (Indarti & Oetomo, 2019), (Ningsih & Soekotjo, 2018), (Heriyanto & Herliana, 2016) and (Yunita & Argamaya, 2017) expressed working capital significantly affecting liquidity. High expenditures on working capital led to a reduction in cash, resulting in decreased liquidity. In contrast to (Ammy & Alpi, 2018), (Savitri, 2014), (Aji et al, 2016), (Dewi, 2016), (Maulana, 2011), (Savitri & Dianingsih, 2015) and (Julita, 2015) which stated that working capital has no influence on liquidity.

Therefore, this research was conducted to understand and analyze the effect of the debt ratio and turnover from inventory, receivables, working capital, and company size to liquidity in the agricultural sector and consumer goods industries in Indonesia which were listed on the IDX during the COVID-19 pandemic. In addition, it is also aware of changes related to the relationship between independent variables to liquidity during the covid-19 pandemic.

STUDY LIBRARY

PECKING ORDER THEORY

By Myers (1984) pecking order theory explains hierarchically related to the selection of funding sources chosen by a company. (Sudana, 2011) suggests that the company with the highest profit is considered able to obtain optimal internal cash for operational and investment needs so that the use of external funds is low or eliminates debt costs. Conversely, if the company generates low profit because it is unable to meet its operational needs then it tends to use external funds and or prefer external funding policies (Husnan & Pudjiastutti, 2012). This theory relates to the size of the company and the debt ratio in accordance with (Kim et al, 1998) when the size of the company reflects the company is at the point of independence in generating profit so that the use of internal funds is more important than external funds in operational and investment activities. Thus, pecking order theory is used to explain the relationship between firm size and the debt ratio that can affect liquidity.

1Email: ristiulfi@usm.ac.id, adhiwidykto92@gmail.com, tri_rinawati@usm.ac.id
2Corresponden Author, Email: ristiulfi@usm.ac.id
P-ISSN: 2580-6084, E-ISSN: 2580-8079
LIQUIDITY PREFERENCE THEORY

(Keynes, 1936) suggests liquidity preference theory relates to determining the interest rate on demand for money where it is claimed as a liquidity level. The concept is meaningful as income generation and is realized in the form of cash or cash. This theory relates to the turnover of receivables and the turnover of inventory if the higher the turnover of receivables and the turnover of inventory, the faster the revenue earned is converted in cash. Thus, liquidity preference theory is used to explain the relationship between receivables and inventory turnover that can affect liquidity.

SIGNALING THEORY

Investors/creditors in assessing and considering the company's image and management management for investment or investment activities by looking at information such as financial statements containing future profitable prospects (Brigham &Houston, 2014). According to (Fahmi, 2011), the financial statements describe the firm's financial performance and as the firm's fundamentals in decision making as well as policies such as investments. Signals containing information from the financial statements can be responded positively or negatively by investors / creditors. Positive signals can be shown by the increase in the company's profit and high prospects for future visits so that investors / creditors are tempted to transactions and invest in the company's image. This theory relates to the turnover of working capital if the higher the turnover of working capital, the company is considered effective in the management of working capital to obtain profit so as to provide a positive signal for investors / creditors to invest with a profitable prospect also in the future. Therefore, signaling theory is used to explain the interrelationship of working capital turnover that can affect liquidity.

Modigliani and Miller argue that company management typically sees changes in dividends to forecast future earnings for the company. If there is a dividend increase then this is a signal to shareholders that the company will experience a rise in revenue in the future and if there is a decrease in dividends or a below-normal dividend increase then this is believed by shareholders is as a signal that the company will face difficulties in the future. Signal theory is used to explain that basically financial statements are used by companies to give positive and negative signals to the wearer. Dividends distributed are an announcement that will provide a signal for investors in investment decision making. Investors will interpret and analyze the dividend distribution information as a positive signal or good news. On the contrary, if an investor receives information that a company does not distribute its dividends then it is considered a negative signal or bad news (Tahu Gregory Paulus, 2018)

LIQUIDITY
Companies in any field always need working capital to carry out any operating activities within the company. Definition of working capital according to (Riyanto, 2013) that working capital is the total of current assets on top of short-term debt. 

(Seligova, 2017) argues liquidity is an important indicator as a measurement to know the firm's ability to meet its current financial obligations without causing losses beyond expected and liquidity has a period of time running for one year of the company's bookkeeping. Liquidity can be measured using the current ratio by comparison between total current assets owned and current debt to assess the expectations of investors / creditors related to short-term assets (Cashmere, 2015). (Cashmere, 2015) assesses the current ratio can be formulated with the formula:

\[
\text{Current Ratio} = \frac{\text{Current assets}}{\text{Current debt}}
\]

**COMPANY SIZE**

The scale or size of a company is an overview of the grouping of company levels that are reviewed from the wealth owned or the field of business run and determined based on total assets, total sales, and average sales (Seftianne &Handayani, 2011). (Sawir, 2004) explained that companies with wealth or large businesses tend to earn more profit compared to small companies. According to (Jogiyanto, 2000) to know the position of the company level can be formulated with the formula:

In this study, the Company Size indicator was measured using natural logarithm (Ln) of total assets. Natural logarithm (Ln) is used to reduce significant differences between the size of companies that are too large and the size of companies that are too small, then from the number of assets formed natural logarithm that aims to make data the number of assets distributed normally (Mita Tegar Pribadi, 2018).

(Putu Ayu & Gerianta, 2018), suggested that the size of the company is a scale where the size of the company can be classified by the size of the company measured by total assets, number of sales, stock value and etc.

\[
\text{Company Size} = \text{Total Assets}
\]

**RECEIVABLES TURNOVER**

Trade receivables are the acquisition of company results arising from the sale of goods and services on a credit basis. (Sunyoto, 2013) explained that credit sales can be applied in whole or in part only and the value of the sale is able to have an impact on the turnover rate of receivables. According to (Cashmere, 2015) receivable turnover is used as a measure of receivable collection time in the current receivables period. (Cashmere, 2012) explains the receivables turnover can be formulated as follows:

\[
\text{RT0} = \frac{\text{Net sales}}{\text{Average receivables}}
\]

---

1Email: ristiulfi@usm.ac.id, adhiwidykt92@gmail.com, tri_rinawati@usm.ac.id
2Corresponden Author, Email: ristiulfi@usm.ac.id
126
**DEBT RATIO**

Debt as one of the external sources of funding of the company. (Keown et. al, 2008) suggests the use of external funds is carried out in the presence of income and availability of adjusted asset value on the agreement between creditors and debtors as a determinant of guarantees and risk analysis that has been assumed. The debt ratio provides an overview of the proportion of the nominal amount of external funds used to finance the company's overall assets (Keown et al., 2008). According to (Cashmere, 2012) the debt ratio can be formulated as follows

(Bambang Riyanto, 2014) argues that the capital structure is a comparison between external capital and internal capital for the fulfillment of the company's operations. External capital is both long-term and short-term debt. While the internal capital is short-term debt or permanent with "own power" and divided on retained earnings with the inclusion of ownership of the company.

\[
DTA = \frac{Total\ debt}{Total\ assets}
\]

**INVENTORY TURNOVER**

According to (Rudianto, 2009) supplies consist of raw materials, in-process goods, and finished goods owned by the company with the aim to be processed solidly and sold to earn profit by investing capital or investment in it. Inventory turnover as a measurement of the effectiveness of investment value or capital invested in inventories with the acquisition of the converted rate of return in cash in a certain period of time (Moeljadi, 2006). According to (Cashmere, 2012) inventory turnover can be formulated with the formula:

\[
ITO = \frac{Selling\ Cost}{Supplies}
\]

**WORKING CAPITAL TURNOVER**

Working capital as the main asset for the sustainability of the company's operational activities. (Munawir, 2010) presented the turnover of working capital as a measurement of the effectiveness of the company's working capital in a period of how much return on the amount of working capital owned has been invested in one period. The turnover of working capital has a relationship between working capital and the level of sales obtained by the company for each amount of working capital value (Munawir, 2007). According to Cashmere (2012) working capital turnover can be formulated with the formula:
\[ NWCT = \frac{\text{Net sales}}{\text{Net working capital}} \]

**RELATIONSHIPS BETWEEN VARIABLES**

According to (Jogiyanto, 2000), the size of the firm can be reviewed from the total wealth of assets owned and as one of the indicators that contribute to the sustainability of the company's management and reflect the performance of operational and investment activities carried out. The small level of the company is measured by the logarithm of the acquisition of the company's overall assets. Clearly, the total assets reflect the performance of operational activities and investments carried out. The bigger the company, the more able to master the rivalry or continue in the industry (Christiawan & Sugiono, 2015). (Gill & Mathur, 2011) mentions that the larger a company, the more liquid the assets are, so that it is in the best position to fund illiquid operational activities by increasing capital in the capital market to reach the point of independence.

The statement is supported by pecking order theory that companies with high returns are able to generate optimal internal cash for operational needs so as to prioritize the use of internal funds rather than external. According to the theory, the size of firm has an influence on liquidity. This theory is supported by (Gill & Mathur, 2011) and (Norvaišienė & Stankevičienė, 2014). The size of firm has a positive and significant influence on liquidity. The greater the wealth of the company's assets, the profit is also high and the company has an optimal internal cash reserve so that the liquidity level of the company is in liquid condition. According to (Misnawati, 2019) Firm size on liquidity has a significant negative effect. That is, the greater the wealth of its assets, the level of liquidity decreases due to increased and complex operational activities require high working capital as well as large companies are easy to obtain external funding so that the liquidity level tends to be low. On the other hand, (Sugiono & Christiawan, 2013) and (Puspitasari & Haryanto, 2013) mentioned that the size of the company does not have a significant influence on liquidity.

H1: The size of the company has a negative reaction on liquidity in the agricultural and consumer goods sectors listed on the IDX for the period Q4 2019, Q1-Q2 2020

Turnover of receivables as an important factor to know the level of efficiency of the quality of capital value embedded in receivables until collected. According to (Keown et. al, 2008) receivable turnover shows the billing period with the period of receivable value during the current period. The turnover of receivables can be measured through the sale of net credit conducted in conjunction with the average receivables earned. The sale of credit as one of the company's investments in the form of receivables to obtain internal income. The faster the turnover of receivables, the value invested in receivables is low and reflects the optimal quality of receivables and the faster the capital returns to achieve liquid (Prihadi, 2010). In this case, collectible receivables can be converted in cash so that internal cash acquisition

---

1Email: ristiulfi@usm.ac.id, adhiwidykto92@gmail.com, tri_rinawati@usm.ac.id
2Corresponden Author, Email: ristiulfi@usm.ac.id
P-ISSN: 2580-6084, E-ISSN: 2580-8079
also increases and independently has been able to manage all its operational activities using internal funds.

The statement is supported by liquidity preference theory which states that the revenue earned can be realized in cash or cash. The cash can prevent companies from external funding that will add to the burden again. According to the theory, the turnover of receivables has an influence on liquidity. The theory is supported by (Puspitasari & Haryanto, 2013), (Ammy & Alpi, 2018), (Indarti & Oetomo, 2019), (Aji et. al, 2016), (Ningsih & Soekotjo, 2018), (Astuti & Maelona, 2013) and (Savitri & Dianingsih, 2015) the turnover of receivables has a positive and significant influence on liquidity.

The higher the turnover rate of receivables, the effective and efficient achievement of the company in the management of collectible receivables the more optimal to be converted into cash and working capital of companies invested in receivables quickly returns. According to (Chakiki, 2016) and (Dewi, 2016) the turnover of receivables has a significant negative influence on liquidity. That is, a high turnover of receivables. However, the average value of receivables earned is low, so the amount of receivables collected is also low so that the value of investments embedded in receivables is not optimal to be converted into cash and liquidity to be low. On the other hand, (Maulana, 2011), (Gaol, 2015), and (Aminah & Hidayat, 2014) explained that the turnover of receivables did not have a significant influence on liquidity.

H2: Receivable turnover has a positive reaction on liquidity in the agricultural and consumer goods sectors listed on the IDX for the period Q4 2019, Q1-Q2 2020

Debt ratio as a proportion of the use of external funding of the company with the availability of company assets to fund the entire assets used for operational and investment activities. According to (Cashmere, 2012) the debt ratio can be measured by comparing the acquisition of total assets with total debt. Debt is generally part of the company's commitment in the short term relating to operations not to invest (Bem et al., 2014). Misnawati (2019) mentioned that the higher the debt ratio, the greater the risk faced related to operational activities so that liquidity becomes unstable.

According to pecking order theory, companies in generating high profits tend to use low external funds and hierarchically prioritize external funds. Thus, the theory can explain the debt ratio affects liquidity. This theory is supported by (Maulana, 2011), (Misnawati, 2019), and (Bem et. al, 2014) the debt ratio has a significant negative influence on liquidity. The higher the debt ratio, the costs incurred on external funding for the company's assets require to issue more cash reserves to meet them with a fixed value of the company's assets so that liquidity decreases. According to (Puspitasari & Haryanto, 2013) the debt ratio does not have a significant impact on liquidity.

H3: Debt ratio has a positive reaction on liquidity in agricultural and consumer goods sector industries listed on IDX for Q4 2019, Q1-Q2 2020
(Harjito & Martono, 2008) suggests that inventory turnover provides an overview of the movement of used supplies either in or out and replaced with new ones to achieve effective and efficient. The movement is measured by the cost of goods sold by the average inventory used. According to (Yunita & Argamaya, 2017) the higher the inventory turnover, the more inventory sold and the risk of potential losses due to deflation or trend shift is also low so that the company remains in liquid condition. Increased sales of products based on the high value of inventory will earn high income in the form of cash that will be used to meet its current financial obligations.

The statement is supported by liquidity preference theory where revenue generation on sales can be realized in cash or cash. According to the theory, inventory turnover has an influence on liquidity. This theory is supported by (Pranaditya, 2018), (Aji et al., 2016), and (Yunita & Argamaya, 2017) which stated that inventory turnover has a positive and significant influence on liquidity. The higher the inventory turnover, the faster the inventory managed both incoming and outgoing goods due to increased product sales activity so that the return on any investment value embedded in the inventory can be quickly converted into internal cash. According to (Dewi, 2016), the turnover of receivables has a significant negative influence on liquidity. That is, the turnover of high inventory but the activity of product sales of inventory goods slows or stagnates, the production process also slows down because the inventory used has been produced so that the risk to debt to the purchase of resupply goods is high, liquidity also decreases due to additional costs on the purchase debt. On the other hand, (Gaol, 2015) and (Mulyanti & Supriyani, 2018) explained that inventory turnover has no significant impact on liquidity.

H4: Inventory turnover has a positive reaction on liquidity in the agricultural and consumer goods sectors listed on the IDX for the period Q4 2019, Q1-Q2 2020

(Cashmere, 2012) suggests the turnover of working capital can be measured by sales and the difference between wealth and funding in order to obtain any profit invested to achieve effectiveness. The turnover of working capital runs when current assets have been invested into the working capital element until it returns again (Yunita & Argamaya, 2017). The higher the turnover of working capital reflects the increase in net sales of the company, the profit obtained is also high and the management of investment in working capital is easier to do so that quickly capital returns and assets are now available so that the company is in liquid condition to manage its operational activities.

The statement is supported by signaling theory that mentions a high level of profitability indicates the prospect or image of the company is at the point of independence and maturity so that external parties will give signals or responses to the internal company. This will have an impact on increasing sales so that according to the theory the turnover of working capital has an influence on liquidity. The theory is supported (Sugiono & Christiawan, 2013) working capital turnover has a positive and significant influence on liquidity.
higher the turnover of working capital, the higher the value of each invested working capital, the faster it returns in the form of current assets or cash so that internal cash reserves increase. According to (Heriyanto & Herliana, 2016), (Pranaditya, 2018), (Saputra et. al, 2020), (Misnawati, 2019), (Chakiki, 2016), (Indarti & Oetomo, 2019), (Ningsih & Soekotjo, 2018), and (Yunita & Argamaya, 2017) working capital turnover has a significant negative influence on liquidity. That is, the higher the turnover of working capital, the more working capital or current assets are issued to be managed in operational and investment activities so that internal cash reserves are reduced and liquidity is low. On the other hand, (Ammy & Alpi, 2018), (Savitri, 2014), (Aji et. al, 2016), (Dewi, 2016), (Maulana, 2011), (Savitri & Dianingsih, 2015) and (Julita, 2015) explained that working capital turnover has no significant impact on liquidity.

H5: The turnover of working capital affects positive liquidity in the agricultural and consumer goods sector industry listed on the IDX for the period Q4 2019, Q1-Q2 2020.

**RESEARCH MODEL**

![Research Model Diagram]

Source: Author processed data (2021)

**RESEARCH METHODS**

The type of research applied is a causal associative approach to prove the existence of a causal relationship between independent variables to liquidity. The research uses quantitative data types and The secondary data is taken from the IDX official website and

---

1Email: ristiulfi@usm.ac.id, adhiwidykto92@gmail.com, tri_rinawati@usm.ac.id
2Corresponden Author, Email: ristiulfi@usm.ac.id
P-ISSN: 2580-6084, E-ISSN: 2580-8079
the official pages of each related company that became objects in the research. The population in this study is agricultural sector industry and consumer goods listed on the IDX for the fourth quarter of 2019, the first quarter of 2020.

Sampling techniques using purposive sampling method with industry criteria / companies listed on the IDX and publish financial statements consecutively in the fourth quarter of 2019, quarter I-II of 2020 and not delisting. Thus, 135 companies were obtained that met the sample criteria. Data analysis techniques used are regression analysis of panel data through several stages of tests such as chow test and hausman test. Furthermore, the classic assumption test includes normality test, heteroskedastisity test, multicolineerity test. The final stage is hypothesis test such as model feasibility test (F statistic), t statistical test, determination coefficient (R2).

RESULTS AND DISCUSSION

In data regression panel there is a model estimation test to find the right model to use. First, chow test was conducted as the determination of the best model between common effect model (CEM) and fixed effect model (FEM). The result of chow test shows the probability value of Chi-square of 0.0000 or < 0.05, then the right model used is FEM. Furthermore, hausman test is conducted as the determination of the best model between FEM and REM. The result of hausman test shows a random cross-section probability value of 0.0393 or < 0.05, then the right model used is FEM. The regression output of panel data using FEM can be formulated in the regression equation as follows:

\[ CR = 86,19627 - 6,951238DR + eit \]

![Figure 3. Histogram Normality Test](source: Output Eviews 10 (2021))
To find out the regression equation used has been distributed normal or can not be done normality test in advance which is reviewed from the value of residual variables. Based on Figure 3, the normality test result is seen in jarque-bera probability value of 0.086368 or > 0.05, so it can be said that the data has been allocate normally.

Furthermore, to test indications of correlation or strong relationship between independent variables or not conducted multicolerity tests. Multico-co-ordistity test results showed the lowest value acquisition range of -0.055309 to a high of 0.483163 or ≤ 0.95, so it can be said that there is no correlation or free from symptoms of multicolerity. Lastly, heteroskedastisity tests were conducted to determine variance deviations of residual values from regression equations used between observations. This test uses a glejser test with the lowest probability value acquisition range of 0.2347 to a high of 0.9152 or > 0.05, so it can be said that the data is free from symptoms of heteroskedastisitas.

<table>
<thead>
<tr>
<th>Variabel</th>
<th>Coefficient</th>
<th>Std. Error</th>
<th>t-Statistic</th>
<th>Probabilitas Prob(F-Statistic)</th>
</tr>
</thead>
<tbody>
<tr>
<td>C X1</td>
<td>86,19627</td>
<td>44,38686</td>
<td>1,941932</td>
<td>0,0541</td>
</tr>
<tr>
<td>X2</td>
<td>-2,808685</td>
<td>1,554164</td>
<td>-1,807200</td>
<td>0,0728</td>
</tr>
<tr>
<td>X3</td>
<td>-0,000402</td>
<td>0,008729</td>
<td>-0,046081</td>
<td>0,9633</td>
</tr>
<tr>
<td>X4</td>
<td>-6,951238</td>
<td>2,360441</td>
<td>-2,944889</td>
<td>0,0038</td>
</tr>
<tr>
<td>X5</td>
<td>-0,007779</td>
<td>0,023747</td>
<td>-0,327592</td>
<td>0,7437</td>
</tr>
</tbody>
</table>

Source: Eviews 10 Output (2021, data processed)

Based on Table 1, F test result with a probability value of 0.000000 or < 0.05, meaning variable size of the company, turnover of receivables, debt ratio, turnover of inventory, and turnover of working capital is able to explain the relationship to liquidity. Furthermore, the test result t shows the value of T count X1 of -1.807200 with a probability value of 0.0728 or > 0.05, then H0 is accepted. That is, the size of the company does not affect the liquidity of the company. In X2, the calculated t value is -0.046081 with a probability value of 0.9633 or > 0.05, ha is rejected and H0 is accepted. That is, the turnover of receivables does not affect the liquidity of the company. In X3, the calculated t value is -2.944889 with a probability value of 0.0038 or < 0.05, then H0 is rejected and Ha is accepted. That is, the debt ratio affects the liquidity of the company in a negative direction. In X4, the
calculated t value is obtained by -0.327592 with a probability value of 0.7437 or > 0.05, then Ha is rejected and H0 is accepted. That is, inventory turnover does not affect the company's liquidity. Finally, in X5, the calculated t value is -0.299274 with a probability value of 0.7652 or > 0.05, ha is rejected and H0 is accepted. That is, the turnover of working capital does not affect the liquidity of the company.

The results of the coefficient of determination in the study obtained adjusted R Square value of 0.847945 or 84.7945%. It can be said that the ability of model equations on independent variables, namely the size of the company, the turnover of receivables, the ratio of debt, the turnover of inventory and the turnover of working capital is able to explain the level of dependent variation of 84.7945%. While the difference of 15.2055% is influenced or explained by other variables outside the model such as sales growth and company profit.

Furthermore, chow tests were conducted to determine the similarity of the coefficient of regression equations in the overall observation. The observations are classified into 2 conditions, namely before the declaration of covid-19 in Indonesia and after the declaration of covid-19 in Indonesia to see changes related to the relationship of each independent variable, namely the size of the company, the turnover of receivables, the ratio of debt, the turnover of inventory and the turnover of working capital to liquidity during the covid-19 pandemic.

Based on Table 2, the residual value result of each independent variable. In X1 obtained the value of F count of 0.1865 and F table 3.036710 or F count < F table with df = 2 and n = 221 and significance 0.05. That is, there is no change in the relationship between the size of the company to liquidity during the covid-19 pandemic.

Tabel 2.
Nilai Restricted Sum Squared Residual (RSSr)

<table>
<thead>
<tr>
<th>Variable</th>
<th>overall observation (Q4 2019 – Q2 2020)</th>
<th>Before the declaration of covid-19 in Indonesia</th>
<th>After declaration covid-19 in Indonesia (Q1-Q2 2020)</th>
</tr>
</thead>
<tbody>
<tr>
<td>X1</td>
<td>1657,291</td>
<td>386,9030</td>
<td>1267,596</td>
</tr>
<tr>
<td>X2</td>
<td>1623,887</td>
<td>370,9034</td>
<td>1250,686</td>
</tr>
<tr>
<td>X3</td>
<td>1268,735</td>
<td>302,7027</td>
<td>956,1457</td>
</tr>
<tr>
<td>X4</td>
<td>1614,556</td>
<td>363,7570</td>
<td>1235,794</td>
</tr>
<tr>
<td>X5</td>
<td>1645,489</td>
<td>372,0663</td>
<td>1272,982</td>
</tr>
</tbody>
</table>

Source: Eviews 10 Output (2021, data processed)
Furthermore, in X2 obtained the value of F count of 0.1566 and F table 3.036710 or F count < F table with df = 2 and n = 221 and significance 0.05. That is, there is no change in the relationship between the turnover of receivables to liquidity during the covid-19 pandemic.

\[
F = \frac{(1657,291 - 1654,499)}{2} = 0.1865
\]

\[
\frac{1654,499}{221}
\]

Then, in X3 obtained the value of F count of 0.8678 and F table 3.036710 or F count < F table with df = 2 and n = 221 and significance 0.05. That is, there is no change in the relationship between debt to liquidity ratio during the covid-19 pandemic.

\[
F = \frac{(1628,887 - 1621,589)}{2} = 0.1566
\]

\[
\frac{1621,589}{221}
\]

Then, in X4, obtained the value of F count of 1.0366 and F table 3.036710 or F count < F table with df = 2 dan n = 221 and significance 0.05. That is, there is no change in the relationship between Inventory Turnover to Liquidity ratio during the covid-19 pandemic.

\[
F = \frac{(1614,556 - 1599,551)}{2} = 1.0366
\]

\[
\frac{1599,551}{221}
\]

Lastly, in X5 is obtained the value of F count of 0.0296 and F table 3.036710 or F count < F table with df = 2 and n = 221 and significance 0.05. That is, there is no change in the relationship between inventory turnover to liquidity during the covid-19 pandemic.

\[
F = \frac{(1645,489 - 1645,048)}{2} = 0.0296
\]

\[
\frac{1645,048}{221}
\]
EFFECT OF COMPANY SIZE ON LIQUIDITY

Based on the statistical test T found the results of the company's size has no effect on liquidity. The results do not support the explanation of pecking order theory regarding the selection of funding sources of management companies hierarchy that have high assets tend to prioritize internal funds and minimize external funds. The size of the company is reviewed from the acquisition of total wealth owned by the company and reflects its performance in earning profit to reach the point of independence. It can be said, investors / creditors do not consider the size of the company to know the liquidity conditions of the company because the size of the company only shows the acquisition of assets and related decisions of working capital needs are not considered so that the size of the company does not become the benchmark of investors / creditors in funding decisions related to the company's liquidity.

The results of the study were supported by (Puspitasari & Haryanto, 2013) and (Sugiono & Christiawan, 2013) which stated that the size of the company did not have a significant influence on liquidity. Strengthened by (Puspitasari & Haryanto, 2013) the larger the size of the company does not always increase the need for working capital that will later generate additional profit and vice versa, the size of small companies does not always reflect the need for a small working capital and generates a small profit as well.

The results of the study were supported by company data on the consumer goods sector, namely SCPI in the first quarter of 2020 experienced an increase in total assets by 0.2283 and working capital needs decreased and liquidity also decreased by 6.1216. In addition, companies in the agricultural sector, namely AALI in the second quarter of 2020 experienced a decrease in total assets of 0.0649 but the need for working capital issued increased and liquidity increased by 1.3367. On the other hand, companies in the consumer goods zone, namely LMPI in the second quarter of 2020 experienced a decrease in total assets by 0.0275 and the need for working capital issued decreased but the liquidity obtained tends to stagnate / insignificant changes so that the small size of the company doesn’t affect liquidity.

EFFECT OF RECEIVABLES TURNOVER ON LIQUIDITY

The results showed that the turnover of receivables had no reaction on liquidity. The results do not support the liquidity preference theory explanation of the acquisition of income on demand can be realized in the form of cash or cash. Turnover of receivables as a measure

\[ F = \frac{2}{1645.048} = 0.0296 \]

1Email: ristiulfi@usm.ac.id, adhiwidykto92@gmail.com, tri_rinawati@usm.ac.id
2Corresponden Author, Email: ristiulfi@usm.ac.id
P-ISSN: 2580-6084, E-ISSN: 2580-8079
of the level of quality efficiency of the value of capital invested in receivables until collected to be converted back in cash. Investors/creditors do not consider the turnover of receivables to determine the liquidity conditions of the company.

The results of the study were supported by (Aminah & Hidayat, 2014), (Gaol, 2015) and (Maulana, 2011) which explained that the turnover of receivables had no significant reaction on liquidity. According to (Gaol, 2015) can be caused by a global crisis and impact on the value of receivables with sales that cause the need for emergencies. This is in accordance with the current covid-19 pandemic conditions experiencing disruptions and disruptions in the economic supply chain that impact on revenue generation due to the shift in purchasing power of the community. In addition, the decrease in sales volume caused by large-scale social restriction policies (PSBB) makes the public also more priority in consuming goods and export-import activities also decreased so that the value of receivables continues to increase in accordance with the current period with relatively stagnant sales / decreases.

The results of the study were supported by data on consumer goods sector companies, namely AISA in the first quarter of 2020 experienced a decrease in receivables turnover by 6.0021 due to a decrease in sales volume followed by an increase in the value of receivables. However, the liquidity obtained increased by 0.7292. In addition, basic chemical and industry, namely IFII in the second quarter of 2020 experienced an increase in receivable turnover of 20.6734 due to increased sales volume and receivable value. However, the liquidity obtained decreased by 0.1107. On other side, in the basic chemical and industry sector, AMFG in the first quarter of 2020 experienced a significant decrease in receivables turnover of 60.5902 due to a decrease in sales volume followed by an increase in the value of receivables. However, the liquidity obtained tends to stagnate / insignificant changes so that the high turnover of receivables does not reacti

EFFECT OF DEBT TO LIQUIDITY RATIO

Data analysis results in debt ratios having an impact on liquidity. The conclusion are in accordance with the pecking order theory of the selection of the company's funding sources hierarchically. Debt ratio as an overview of the value of assets of companies funded with external funds. The results were supported by (Misnawati, 2019), (Bem et. al, 2014) and (Maulana, 2011) if the debt ratio had a significant influence on liquidity. This indicates a high debt ratio so that companies hierarchically prefer external funding to control the value of the company's assets.

Consistent with (Husnan &Pudjiastuti, 2012) if a high debt ratio indicates that the company chooses external funding as a driver of operational activities or indeed the company

1Email: ristiulfi@usm.ac.id, adhiwidyykt92@gmail.com, tri_rinawati@usm.ac.id
2Corresponden Author, Email: ristiulfi@usm.ac.id
P-ISSN: 2580-6084, E-ISSN: 2580-8079
prefers to use external funds even if internal funds are sufficient. Therefore, it creates additional expenses other than nominal debt such as interest expense so that there is a high cost of external financing that will affect the company's liquidity. The statement was corroborated by (Bem et. al, 2014) if the liquid assets were used to pay debts.

The results of the study were supported by data on agricultural sector companies, namely UNSP in the first quarter of 2020 experienced the highest debt ratio increase of 0.2121 from the previous quarter and followed by a decrease in liquidity of 0.0122. This means that the company adds debt to its operations to keep it sustainable and there are additional burdens to be paid and the liquidity level also decreases. On the other side, in the consumer goods sector, DMND in the first quarter of 2020 experienced a decrease in debt ratio of 0.2236 from the previous quarter and followed by an increase in liquidity of 2.5946 so that the debt ratio significantly affects liquidity.

**EFFECT OF INVENTORY TURNOVER ON LIQUIDITY**

Based on the results of the T statistical test shows the turnover of inventory has no reaction on liquidity. The results do not support the explanation of liquidity preference theory related to the acquisition of revenue on demand embodied in the form of cash or cash. Inventory turnover as a measure of the effectiveness of the value of the inventory of embedded goods to be immediately distributed in order to obtain cash back. Investors/creditors do not consider inventory turnover to determine the company's liquidity conditions.

The results of the study were supported by (Mulyanti & Supriyani, 2018) and (Gaol, 2015) which stated that inventory turnover has no reaction on liquidity. This is due to the different types of industries (Gaol, 2015). The treatment of processing between goods both input and output in accordance with the long period of storage and maintenance so that it depends on the nature of the goods and the best results obtained will adjust its liquidity.

The results of the study were supported by data on consumer goods sector companies namely ALTO. In the second quarter of 2020 the company experienced an increase in inventory turnover of 0.5133 due to increased production and decreased inventories. Thus, the company was at the point of effectiveness but the liquidity obtained decreased by 0.0611. In addition, agricultural sector companies, namely TBLA in the second quarter of 2020 experienced an increase in inventory turnover of 0.9119 due to increased production and inventory. The Company indicated that deposition and liquidity decreased by 0.1452. On the other hand, in the agricultural sector, JAVA in the first quarter of 2020 experienced a decrease in inventory turnover of 6.2797 due to the increasing number of production and...
inventory. However, the liquidity obtained tends to stagnate / insignificant changes so that the high turnover of inventory affects liquidity.

EFFECT OF WORKING CAPITAL TURNOVER ON LIQUIDITY

Data analysis shows working capital turnover has no effect on liquidity. In this case, it does not correspond to the signaling theory where the investor/creditor will give a signal in the investment decision. Turnover of working capital as a measure of the effectiveness of working capital owned to be invested and will be returned in the form of cash. The turnover of working capital is not a special consideration for investors / creditors as an assessment of the company's liquidity conditions.

The results of the study were supported by (Ammy & Alpi, 2018), (Savitri, 2014), (Aji et. al, 2016), (Maulana, 2011) and (Julita, 2015) which stated that working capital turnover has no reaction on liquidity. According to (Cashmere, 2012) this can be due to the imbalance between current asset posts and working capital cycles are always running or rotating and can be reviewed from cash turnover, receivable turnover and inventory turnover (Aji et al., 2016). High working capital turnover does not necessarily increase the effectiveness of investment and vice versa if the turnover of working capital owned low does not necessarily reflect the investment is not effective in obtaining additional profit.

The results of the study were also supported by data on basic chemical industry sector companies, namely CAKK in the first quarter of 2020 experienced a decrease in working capital turnover of 8.5477. This is due to the increase in working capital which then occurred deposition and liquidity obtained decreased by 0.0442. In addition, companies in the consumer goods sector, namely DLTA in the second quarter of 2020 experienced an increase in working capital turnover of 0.0434 due to a decrease in working capital which was then managed and then invested and liquidity obtained increased by 2.4084. The other side, in the consumer goods sector company PANI in the second quarter of 2020 experienced an increase in working capital turnover of 1.1393 due to a decrease in working capital which was then managed and invested. However, the liquidity obtained tends to stagnate / insignificant changes so that the high working capital turnover does not reaction liquidity.

Changes in company size relationships, receivables turnover, debt ratio, inventory turnover, and working capital turnover to liquidity during the covid-19 pandemic

Based on chow test results showed no change in each independent variable of company size, turnover of receivables, debt ratio, turnover of inventory, and turnover of working capital to liquidity during the covid-19 pandemic. This can be caused in the period before the declaration of covid-19 in Indonesia in Q4 2019 has not provided any signs or
evidence of massive pandemic conditions and the event does not include adjusting events of the company's financial performance and its components for the next quarter (CAS Unpad, 2020). In addition, after the declaration of covid-19 in Indonesia, new policies and regulations related to adjusting pandemic conditions for established economic activities have not provided balancing between the relevant parties and the recovery is likely to slow down.

CONCLUSION

Based on the above exposure, it can be concluded that only the debt ratio has an influence on the liquidity of the company so that it receives H3. This proves that during the covid-19 pandemic the company tends to conduct external funding for its operational activities and indicated a high cost of external financing that must be met so as to have an impact on the condition of the management of the company's assets and cash acquisition to achieve liquid conditions. The findings in the study are expected that the company can maintain its liquidity level in liquid conditions by paying attention to the value of the debt ratio.

Because the high value of the company's assets with owned debt can affect investors / creditors in funding and investment decisions. In addition, the company also manages the value of its assets in order to generate additional value to reduce external funding. While the size of the company, the turnover of receivables, the turnover of inventory, and the turnover of working capital have no reaction on liquidity. During the COVID-19 pandemic in Indonesia, there were no changes related to the relationship of the independent variable debt ratio as well as turnover from inventory, receivables, working capital and also company size to liquidity.

SUGGEST

For the basic chemical and industry sector and consumer goods during the covid-19 pandemic to improve evaluation and analysis of performance and effective strategies, especially in the field of finance related to external funding decisions, namely debt ratios to keep the company's operational activities sustainable and able to build trust to the parties involved in investment decisions so that illiquid risk can be minimized. For investors / creditors need to pay attention to policies and regulations so that the value of investments that have been invested have good prospects and provide benefits. In addition, it is necessary to consider external funding conducted by the company because the high level of debt ratio triggers the company to sell its assets if it is unable to pay off nominal and interest expense
thus affecting liquidity. In order to maximize, further research can add a period of observation or observation in the covid-19 pandemic so that the data obtained more varied following the dynamics of the business. In addition, it can use other sectors and involve variables outside the model such as sales growth (Indarti & Oetomo, 2019) and profitability (Bem et al., 2014).

REFERENCE


1Email: ristiulfi@usm.ac.id, adhiwidykto92@gmail.com, tririnawati@usm.ac.id
2Corresponden Author, Email: ristiulfi@usm.ac.id
P-ISSN: 2580-6084, E-ISSN: 2580-8079


---

1Email: ristiulfi@usm.ac.id, adhiwidyo92@gmail.com, tri_rinawati@usm.ac.id
2Corresponden Author, Email: ristiulfi@usm.ac.id

P-ISSN: 2580-6084, E-ISSN: 2580-8079


1Email: ristiulfi@usm.ac.id, adhiwidykt92@gmail.com  
2Corresponden Author, Email: ristiulfi@usm.ac.id

P-ISSN: 2580-6084, E-ISSN: 2580-8079


---

1Email: ristijufl@usm.ac.id, adhiwidykto92@gmail.com2, tri_rinawati@usm.ac.id
2*Corresponden Author, Email: ristijufl@usm.ac.id
P-ISSN: 2580-6084, E-ISSN: 2580-8079

