# DEBT PAYING ABILITY WITH LIQUIDITY OF SHORT TERM ASSETS IN A BUSINESS

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**ABSTRACT**. This company is one of the new multinational market research company in Indonesia. The head office in Singapore and has branches in 8 countries including Indonesia, In 2015, this company just started in Indonesia. It is promoting more than 20 brands or clients in different section like health, IT, insurance, banks, food, airline, oral care, hair care, beauty products, laundry products etc. As a local brand they gain consumer's trust by their quality products. This research applies Financial Performance Evaluation of this market research company, especially for debt paying ability with liquidity of short term. It means how well the company performs for the paying ability as a beginner company in Indonesia. The main data is collected from the audited annual financial reports of the company from 2015 to 2017. Different financial ratios are evaluated by liquidity ratios and account receivable turnover. and finally measure the best performance of the company. The ratios analysis and comparisons are applied for the measurement of several types of financial ratio analysis. Liquidity ratio is conveying the ability to repay short-term creditors and its total cash. It determines the performance of short term creditor of the company under the three categories such as current ratio, quick ratio and cash ratio. Account receivable turnover ratio is measured to know how long the collection of accounts receivable is for one period or how many times the funds embedded in these receivables revolve in one period. I hope this analysis will be helpful for the management of the company who are responsible for taking decisions and formulating plans for future. It will also help the creditors who are the provider of loan capital of the company. They can decide whether they want to extend their loans or not in future. In the conclusion part there are some advice based on their problems which found from the analysis. So this research will show a clear picture about company's performance on the debt paying ability of short term assets in the last 3 years.
Keywords: Financial analysis, ratio analysis, debt paying ability

## 1. INTRODUCTION

An entity's ability to maintain its short-term debt-paying ability is important to all users of financial statements. If the entity cannot maintain a short-term debt-paying ability, it will not be able to maintain a long term debt paying ability, nor will it able to satisfy its stockholders. Even a very profitable entity will find itself bankrupt if it fails to meet its obligations to short-term creditors. The ability to pay current obligations when due is also related to the cash-generating ability of the firm.

The problem is, when analysing the short term debt paying ability of the firm, we find a close relationship between the current assets and the current liabilities. Generally, the current liabilities will be paid with cash generated from the current assets. As previously indicated, the profitability of the firm does not determine the short term debt paying ability. In other word, using accrual accounting, the entity may report very high profits but may not have the ability to pay its current bills because it lacks available funds. If the entity report a loss, it may still be able to pay short term obligations. This analysis explains and evaluates the performance of the ability to pay obligations with short-term assets of a new service company in Indonesia.

The strong positive correlation between current ratio and accounts receivable turnover was studied and there were also strong positive correlation found between current ratio and inventory turnover and between current ratio and payable turnover (Agha, 2014).

## 2. LITERATURE REVIEW

The liquidity of short term assets includes cash, account receivable and prepayments. These assets will in management's opinion, be realized in cash or conserve the use of cash within the operating cycle of business or one year, whichever is longer. The study is done to explain the classical theory 'liquidity of short term assets related to debt paying ability'. This concept is common in financial management and analysis of financial statements. According to Hossan & Habib (2010), Liquidity ratios explain the relationship between current assets and current liabilities and turnover ratios explain how efficiently company use and control its assets and generate turnover by sales. The results of different studies explain the relationship between liquidity and turnover ratios. The study done by Raheman & Nasr (2007).

A research done in India by Kaur & Silky (2013), on all Indian cement companies and analysis explained that the inventory turnover was insignificantly related to current ratio, liquid ratio and cash ratio according to the evidences. There was also a relationship studied between turnover ratios by Gill, Biger & Mathur (2010), that accounts receivable turnover in days has a positive correlation with inventory turnover in days and cash conversion cycle at level of significance 0.01. Inventory turnover has a positive correlation with cash conversion cycle at level of significance 0.01. Moreover, Positive correlation between accounts receivable turnover, accounts payable turnover and inventory turnover was studied. There was also positive correlation found between cash conversion cycle, accounts receivable turnover and inventory turnover but negative correlation studied between cash conversion cycle and accounts payable turnover (Manzoor, 2013). Finally in the past studies it was concluded that the short-term debt financing become common in financial crises because in financial crises businesses generally sell out their fixed assets (Fosberg, 2013). So it is important for any entity to manage its short-term liquidity because it is directly related to short-term debt paying position of an entity.

## 3. RESEARCH APPROACH

This research use the ratio calculation to analyse the financial report of this company. This ratio classed with several others known as liquidity ratios. These ratio all assess the operations of a company and how financally solid the company is in relation to its outstanding debt. Knowing the ratio is vital in decision making for investors, creditors and suppliers of company. When it comes to these parties, the current ratio is an important tool in assessing the viability of the business interest. The below is the satandar of the specific ratios :

*Table 1 Proportion of Ratios Analysis*

| Name | Standard proportion | Explanation |
|---|---|---|
| Days Sales Ratio | 30 days | Good <30 days, Poor > 30 days |
| Account Receivable Turn Over | High | Good -> The higher the receivable turnover. Poor -> the lower the receivable turnover |
| Account Receivable Turn | 15 - 30 days | Good <30 days, Poor > 30 days |

| | | |
|---|---|---|
| Over in days | | |
| Working Capital | Current Asset > Current Liabilities | Good, Current Asset > Current Liabilities. Poor, Current Asset < Current Liabilities |
| Current Ratio | >2 times | Good, >2, Poor <2 |
| Acid/Quick Ratio | >1 times | Good, >1, Poor <1 |
| Cash Ratio | >1 times | Good, >1, Poor <1 |

sources : Management

The below, Table III.2 is present the statement of financial position or the balance sheet for 3 years, 2015, 2016 and 2017.

*Table 2 Statement of Financial Posisiton*

| **PT Asia Network Indonesia**<br>Statement of Financial Position<br>As of 31 December 2017, 2016 and 2015<br>*These financial statements are presented in Rupiah* | | | |
|---|---|---|---|
| ASSETS | 2017 | 2016 | 2015 |
| Current Assets | | | |
| Cash and cash equivalent | 333.407.995 | 162.178.911 | 405.428.323 |
| Account Receivable | 4.756.912.148 | 3.575.738.281 | 3.211.169.439 |
| Prepayment | 171.727.827 | 182.934.804 | 148.321.032 |
| Project in Progress | - | 125.457.583 | - |
| Prepaid Tax | 89.466.381 | 73.110.519 | - |
| Total Current Assets | 5.351.514.351 | 4.119.420.098 | 3.764.918.794 |
| Non-Current Assets | | | |
| Fixed Assets - book value | 198.482.105 | 282.284.238 | 364.458.425 |
| Deposit for rental | 66.000.000 | 66.000.000 | 66.000.000 |
| Deferred tax assets | 9.984.350 | 9.984.350 | 69.348.734 |
| Total Non-Current Assets | 274.466.455 | 358.268.588 | 499.807.159 |
| TOTAL ASSETS | 5.625.980.806 | 4.477.688.686 | 4.264.725.953 |
| LIABILITIES | | | |
| Current Liabilities | | | |
| Account Payable | 1.590.386.051 | 767.674.658 | 614.015.259 |
| Accrued taxes | 129.970.507 | 47.717.201 | 107.219.226 |
| Accrued Expenses | 1.372.183.808 | 761.586.661 | 647.035.706 |
| Deffered Revenue | - | 86.419.200 | 76.425.000 |
| Total Current Liabilities | 3.092.540.366 | 1.663.397.720 | 1.444.695.191 |
| Non-Current Liabilities | | | |
| Provision for employee bene | 128.546.204 | 39.937.400 | 50.442.117 |
| Total Non-Current Liabilities | 128.546.204 | 39.937.400 | 50.442.117 |
| TOTAL LIABILITIES | 3.221.086.570 | 1.703.335.120 | 1.495.137.308 |
| EQUITY | | | |
| Share Capital (Authorized capital 2.500 shares @ IDR 1.000.000. All shares have been fully issued and paid) | 2.500.000.000 | 2.500.000.000 | 2.500.000.000 |
| Retained Earnings | - 95.105.764 | 274.353.566 | 269.588.645 |
| TOTAL EQUITY | 2.404.894.236 | 2.774.353.566 | 2.769.588.645 |
| TOTAL LIABILITIES and EQU | 5.625.980.806 | 4.477.688.686 | 4.264.725.953 |

The below, Table 3 is present the statement of comprehensive income or income statement for 3 years, 2015, 2016 and 2017.

*Table 3 Statement of Comprehensive Income*

| **PT Asia Network Indonesia**<br>Statement of Comprehensive Income<br>For the years ended 31 December 2016 and 2015<br>*These financial statements are presented in Rupiah* | | | |
|---|---|---|---|
| | 2017 | 2016 | 2015 |
| Consultation Income | 9.655.875.312 | 7.819.956.464 | 4.898.135.701 |
| Direct Cost | 4.897.596.906 | 2.638.977.364 | 2.061.225.447 |
| Gross Profit | 4.758.278.406 | 5.180.979.100 | 2.836.910.254 |
| Operating Expenses | 4.942.212.759 | 5.039.860.692 | 2.655.574.345 |
| Operating Profit | - 183.934.353 | 141.118.408 | 181.335.909 |
| Other Income/ (expense) - net | 79.968.649 | - 76.989.103 | 90.306.857 |
| Net Income before corporate Income Tax Income Tax | 263.903.002 | 64.129.305 | 271.642.766 |
| Corporate Income Tax | - 253.252.438 | - 59.364.384 | - 2.054.121 |
| Net Income | 10.650.564 | 4.764.921 | 269.588.645 |
| Other Comprehensive income | | - | - |
| TOTAL Comprehensive income | 10.650.564 | 4.764.921 | 269.588.645 |

## 4. DATA ANALYSIS

The analysis selected 3 years of the financial report, year 2015, 2016 dan 2017 from the annual financial report audited in service multinational company in Indonesia.

**OVERVIEW COMPANY IN 3 YEARS**

Following the above financial reports, this study emphasizes on 3 years periods of financial activities. The days sales in receivables ratio computations as follows :

$$\textbf{Days sales in Receivables} = \frac{\textbf{Gross Receivables}}{\textbf{Average Receivable}}$$

$$\textbf{Average Receivable} = \textbf{Net Sales/365 days}$$

2017 Days sales Receivables = $\frac{9.655.875.312}{365} = 26.454.453$

$\frac{4.756.912.148}{26.454.453} = 180$ days

2016 Days sales Receivables = $\frac{7.819.956.464}{365} = 21.424.538$

$\frac{4.756.912.148}{21.424.538} = 222$ days

2015 Days sales Receivables = $\frac{13.211.169.439}{365} = 36.194.985$

$\frac{4.756.912.148}{36.194.985} = 131$ days

*Figure 1 DAYS SALES IN RECEIVABLE RATIO*

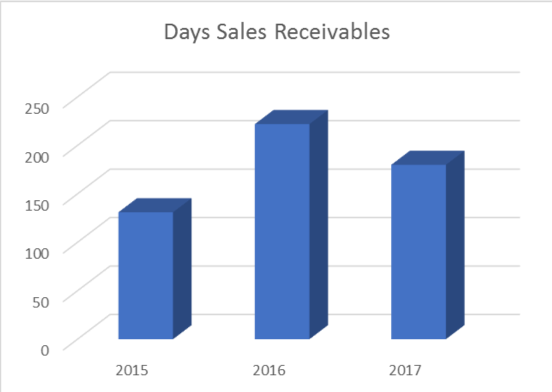


*Figure 2 Days Sales Receivables*

The result of the days sales receivable, in year 2017 the receivables are collected for 180 days better than year 2016 222 days, but 2015 was 131 days, its better than year 2016 and 2017. I t means for 3 years the collection of account receivables is bad.

The computation for the account receivable turnover based on the above financial report as follows:

$$\textbf{Account Receivable Turnover} = \frac{\textbf{Net Sales}}{\textbf{Average Gross Receivable}}$$

$$\textbf{Average Receivable} = \frac{\textbf{Begining AR + Ending AR}}{\textbf{2}}$$

$$\textbf{Account Receivable Turnover} = \frac{\textbf{Average Gross Receivable}}{\textbf{Net Sales/365 days}}$$

$$\text{2017 Account Receivable Turnover} = \frac{9.655.875.312}{4.166.325.215} = \text{2 times}$$

$$\text{2016 Account Receivable Turnover} = \frac{7.819.956.464}{3.393.453.860} = \text{2 times}$$

$$\text{2015 Account Receivable Turnover} = \frac{4.898.135.701}{1.605.584.720} = \text{2 times}$$

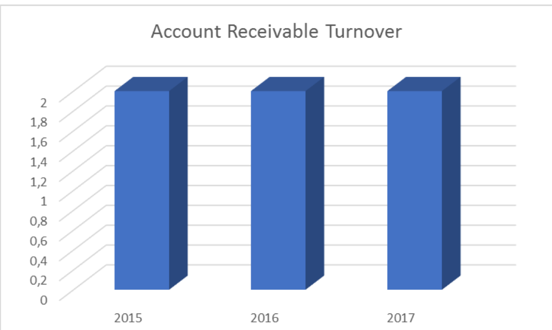


*Figure 3 ACCOUNT RECEIVABLE TURNOVER*

The result of the receivables turnover from 2015, 2016 and 2017 are quite slow because in a year it only occurs 2 times . This means that the company's effectiveness ratio in collecting sales is converted into cash is very slow. This has caused by the possibility of failed to collect the receivables and also its affecting to the company's cash flow due to disrupted cash inflows.

The computation for the account receivable turnover in days based on the above financial report as follows :

$$\textbf{Account Receivable Turnover in Days} = \frac{\textbf{Average Gross Receivable}}{\textbf{Net Sales/365 days}}$$

$$\textbf{Average Gross Receivable} = \frac{\textbf{Begining AR + Ending AR}}{2}$$

$$\text{2017 } \textbf{Account Receivable Turnover in Days} = \frac{4.166.325.215}{26.454.453} = \text{157 days}$$

$$\text{2016 } \textbf{Account Receivable Turnover in Days} = \frac{3.393.453.860}{21.424.538} = \text{158 days}$$

$$\text{2015 } \textbf{Account Receivable Turnover in Days} = \frac{1.605.584.720}{13.419.550} = \text{120 days}$$

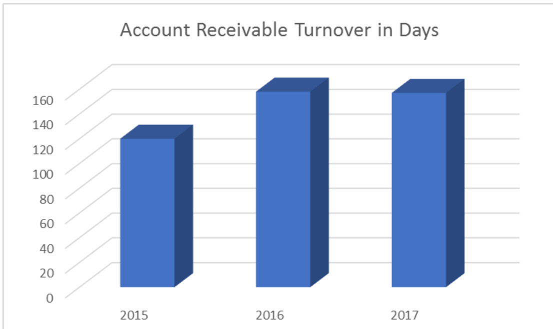


*Figure 4 Account Receivable Turnover in Days*

The result of the Accounts Receivable Turnover in days, year 2017 was 157 days. It means that the company was able to collect its receivables averagely in 157 days that year. In year 2016 this ratio only increased 1 point, indicating that the company needed 158 days to collect its receivables, and in 2015 was 120 days. It means for 3 years Account receivable turn over in days take many days, so its not good condition

## WORKING CAPITAL

The computation for the working capital based on the above financial reports as follows:

Working Capital = Current Assets - Current Liabilities

| | | |
|---|---|---|
| 2017 | Working Capital | =5.351.514.351-3.092.540.366<br>=2.258.973.985 |
| 2016 | Working Capital | =4.119.420.098-1.663.397.720<br>=2.456.022.378 |
| 2015 | Working Capital | =3.764.918.794-1.444.695.191<br>=2.320.223.603 |

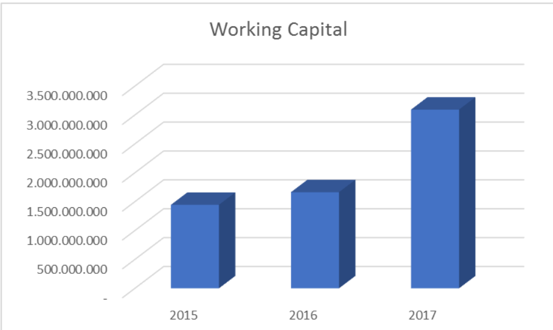


*Figure 5 Working Capital*

The result of the working capital of this company is always positive for 3 years, and the working capital increased from 2015 to 2016, but then decresed on 2017. But, this shows that this company has a good level of liquidity.

## CURRENT RATIO

The computation for the current ratios based on the above financial reports as follows:

$$\text{Current Ratio} = \frac{\text{Current Assets}}{\text{Current Liabilities}}$$

| | | |
|---|---|---|
| **2017** | $\frac{5.351.514.351}{3.092.540.366}$ | = 2 times |
| **2016** | $\frac{4.119.420.098}{1.663.397.720}$ | = 2 times |
| **2015** | $\frac{3.764.918.794}{1.444.695.191}$ | = 3 times |

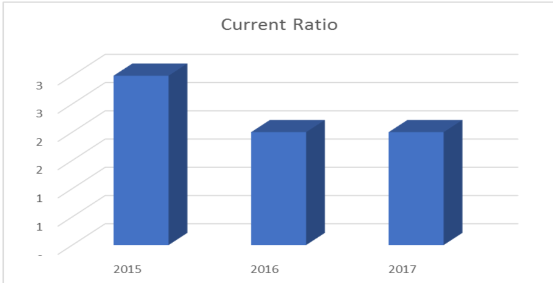


*Figure 6 Current Ratio*

The result of the current ratio for 3 years; year 2015, the business currently has a current ratio of 3 times, year 2016 2 times and year 2017 2 times, meaning it can easily settle each rupiah on loan or accounts payable 3 times. A rate of more than 1 suggests financial well-being for the company. There is no upper-end on what is "too much", as this can be very dependent on the company, however, a very high current ratio may indicate that a company is leaving excess cash unused rather than investing in growing its business.

Companies with current ratios that are less than 1 times indicate that the company concerned cannot pay its current liabilities in a short time. These are bad signs for Creditors, Business Partners and Investors.

## ACID TEST RATIO (QUICK RATIO)

The computation for the acid test (quick ratio) based on the above financial reports as follows:

$$\text{Acid Test Ratio} = \frac{\text{Cash Equivalents + Marketable Securitis + Net Receivables}}{\text{Current Liabilities}}$$

| | | |
|---|---|---|
| **2017** | $\frac{333.407.995 + 4.756.912.148}{3.092.540.366}$ | 2 times |
| **2016** | $\frac{162.178.911 + 3.575.738.281}{1.663.397.720}$ | 2 times |
| **2015** | $\frac{405.428.323 + 3.211.169.439}{1.444.695.191}$ | 3 times |

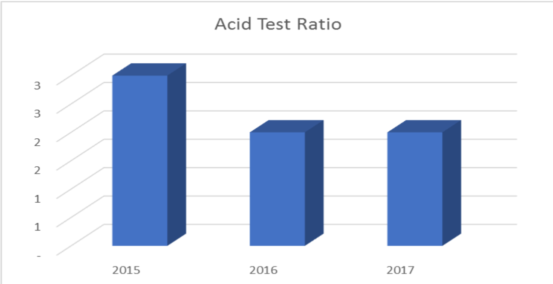


*Figure 7 Acid Test Ratio*

The result for this quick ratios in year 2017 has 2 times, this means that for every rupiah of current liabilities, this company has Rp 2,00 of very liquid assets to cover those immediate obligations. Year 2016 has same position with year 2017, but 2015 has 3 times and this number higher than year 2016 and 2017. It means the company condition better in 2015, than decreased on year 2016 and 2017.

## CASH RATIO

The computation for the cash ratios based on the above financial report as follows:

Cash Ratio = $\dfrac{\text{Cash and Cash Equivalen}}{\text{Current Liabilities}}$

2017 $\dfrac{333.407.995}{3.092.540.366}$ = 0,11%

2016 $\dfrac{162.178.911}{1.663.397.720}$ = 0,10%

2015 $\dfrac{405.428.323}{1.444.695.191}$ = 0,28%

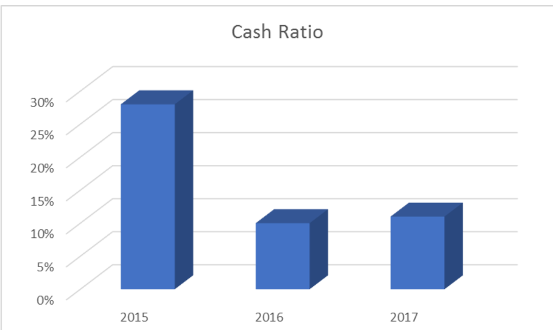


*Figure 8 Cash Ratio*

The result for the cash ratios ; for year 2015, the figure above indicates that this Company possesses enough cash and cash equivalents to pay off 11% of its current liabilities. Year 2016 decreased to 10% than increased in year 2017, 28% in other words, this figure shows that the company has cash and cash equivalents to pay < 20% in 2015,2016 and 8 points > 20% in 2017 of its current liabilities.

## DATA COMPARISON

*Table 4 Ratio Analysis Result and Conclusion*

| | Ratio | 2015 | 2016 | 2017 | Result | Conclusion | |
|---|---|---|---|---|---|---|---|
| 1 | Days Sales Ratio | 131 days | 222 days | 180 days | In year 2017 the receivables are collected for 180 days better than year 2016 222 days, but 2015 was 131 days, its better than year 2016 and 2017. I t means for 3 years the collection of account receivables is bad. | The age of this receivable must be compared to the payment terms. Ideally the age of receivables may not exceed the terms of payment, and the payment terms for these account receivables are 30 days. So company must work hard to collect all the account receivables before the payment date, and company must has strick regulation to the clients regarding to the term of payments from the beginning | (-) |
| 2 | Account Receivable Turn Over | 2 times | 2 times | 2 times | The receivables turnover from 2015, 2016 and 2017 are quite slow because in a year it only occurs 2 times . This means that the company's effectiveness ratio in collecting sales is converted into cash is very slow. This has caused by the possibility of failed to collect the receivables and also its affecting to the company's cash flow due to disrupted cash inflows. | Same with the Days Sales Ratio, this turn over is not in a good condition, this turn over ratio only to make sure this bad condition for 3 years are quite important to be concerned by management. The things to do for the next year in order to prevent the condition like this. The management must review all the old clients which have bad payment track record, the management must double check the business history for prospect clients and the management must review the internal work process, if there anything lack in this process that cause the delay of the deadline, where the account receivable will appears after the work completed. | (-) |
| 3 | Account Receivable Turn Over in days | 120 days | 158 days | 157 days | Accounts Receivable Turnover in days, year 2017 was 157 days. It means that the company was able to collect its receivables averagely in 157 days that year. In year 2016 this ratio only increased 1 point, indicating that the company needed 158 days to collect its receivables, and in 2015 was 120 days. It means for 3 years Account receivable turn over in days take many days, so its not good condition | It is necessary to conduct the analysis of the accounts receivable quality, to measure the economic efficiency of the consumer loans policy (if have loan, to compare the profit increase, caused by the implementation of the consumer loans policy, with the volume of interest paid on the borrowings used for financing the accounts receivable) | (-) |
| 4 | Working Capital | 1.444.695.191 | 1.663.397.720 | 3.092.540.366 | Working capital of this company is always positive for 3 years, and the working capital increased from 2015 to 2016, but then decresed on 2017. But, this shows that this company has a good level of liquidity. | This means that this company has sufficient current assets to pay off its obligations that will be due immediately. So that in terms of liquidity this company can be said to be safe. | (+) |
| 5 | Current Ratio | 3 times | 2 times | 2 times | Year 2015, The business currently has a current ratio of 3 times, year 2016 2 times and year 2017 2 times, meaning it can easily settle each rupiah on loan or accounts payable 3 times. A rate of more than 1 suggests financial well-being for the company. There is no upper-end on what is "too much", as this can be very dependent on the company, however, a very high current ratio may indicate that a company is leaving excess cash unused rather than investing in growing its business. | Companies with current ratios that are less than 1 times indicate that the company concerned cannot pay its current liabilities in a short time. These are bad signs for management, Creditors, Business Partners and Investors. But for the current ratio condition, this company still in the good condition, but it must be careful, because the number decreased from year 2015 to year 2016 and year 2017 | (+) |
| 6 | Acid/Quick Ratio | 3 times | 2 times | 2 times | Year 2017, this means that for every rupiah of current liabilities, this company has Rp 2,00 of very liquid assets to cover those immediate obligations. Year 2016 has same position with year 2017, but 2015 has 3 times and the number higher than year 2016 and 2017. It means the company condition better in 2015, than decreased on year 2016 and 2017. | This Company current liabilities have very liquid assets to cover those immediate obligations. | (+) |
| 7 | Cash Ratio | 0,11% | 0,10% | 0,28% | For year 2015, the figure above indicates that this Company possesses enough cash and cash equivalents to pay off 0,11% of its current liabilities. This company is low liquid and cannot easily fund its debt. Year 2016 decreased to 0,10% than increased in year 2017, 0,28% | The company has not enough cash and cash equivalent to pay of its current liabilities | (-) |

## 5. CONCLUSIONS

Conclusions can be summarized as follows:

1. This study was done to explain the relationship between debt paying ability with liquidity of short term assets in this business. The results revealed that there is a significant relationship found between liquidity and short term assets. It means that by improving the turnover companies can improve their liquidity and the study explained that by improving the accounts receivable turnover an entity can easily manage its net working capital. It can also

be concluded by this study that an entity can improve its current ratio by improving accounts receivable turnover in time and in days but cash conversion cycle do not play any vital role in managing the current ratio in this service sector.

2. Answer the problem, how the company's performance measured and analyzed as well as evaluated in a certain period 2017-2018.

a. Days sales ratio: The age of this receivable must be compared to the payment terms. Ideally the age of receivables may not exceed the terms of payment, and the payment terms for these account receivables are 30 days. So company must work hard to collect all the account receivables before the payment date, and company must has strick regulation to the clients regarding to the term of payments from the beginning

b. Account receivable turn over: Same with the Days Sales Ratio, this turn over is not in a good condition, this turn over ratio only to make sure this bad condition for 3 years are quite important to be concerned by management. The things to do for the next year in order to prevent the condition like this. The management must review all the old clients which have bad payment track record, the management must double check the business history for prospect clients and the management must review the internal work process, if there anything lack in this process that cause the delay of the deadline, where the account receivable will appears after the work completed.

c. Account receivable turn over in days: It is necessary to conduct the analysis of the accounts receivable quality, to measure the economic efficiency of the consumer loans policy (if have loan, to compare the profit increase, caused by the implementation of the consumer loans policy, with the volume of interest paid on the borrowings used for financing the accounts receivable).

d. Working capital: This means that this company has sufficient current assets to pay off its obligations that will be due immediately. So that in terms of liquidity this company can be said to be safe.

e. Current Ratio: Companies with current ratios that are less than 1 times indicate that the company concerned cannot pay its current liabilities in a short time. These are bad signs for management, creditors, business partners and investors, but for the current ratio condition, this company still in the good condition, but it must be careful, because the number decreased from year 2015 to year 2016 and year 2017

f. Acid/Quick ratio: This Company current liabilities have very liquid assets to cover those immediate obligations. Acid test ratio can be improved by improving turnover ratios. In this study it can be concluded that by improving the turnover ratios an entity can improve its liquidity as well as an entity can bring its liquidity on such optimal level which is described in different financial literatures by which entity can improve its short-term debt paying ability.

g. Cash Ratio: Overall in 3 years the ratio shows a relatively low number, this company is low liquid and cannot easily fund its debt. In other words the company has not enough cash and cash equivalent to pay of its current liabilities.

Then, to assist further research based on the data analyzed results, the recommendation is as follows:

1. The company has not enough cash and cash equivalent to pay of its current liabilities and finally, this analyst assumes that a company would liquidate its current assets to pay current liabilities, which is not always realistic, considering some level of working capital is needed to maintain operations.

2. It is also important to understand that the timing of asset purchases, payment and collection policies, allowances for bad debt and even capital-raising efforts can all impact the calculation and can result in different quick ratios for similar companies.

3. Capital needs that vary from industry to industry can also have an effect on quick ratios. For these reasons, liquidity comparisons are generally most meaningful among companies within the same industry.

## REFERENCES

AB & Rekan, Public Accountants (2017), Financial Statement of PT AII for years ended 31 December 2016 and 2015, Jakarta.

Arief Sugiono, SE., M.Ak dan Edy Untung, SE (2016): Panduan Praktis Dasar Analisa Laporan Keuangan, edisi revisi. Penerbit PT Grasindo Jakarta, 2016.

Chares H. Gibson (2011) : Financial Statement Analysis, 12th edition 206-213, 224-226. South western cengage learning.

Charles H. Gibson, Financial Reporting Analysis, using Financial Accounting Information (2017), South western cengage learning.

Ciaran Walsh (2006), Key Management Ratios, edisi keempat. Edisi ini diterjemahkan dengan izin dari Pearson Education, Ltd, pada tanggal 02 Agustus 2012 oleh Esensi, divisi dari Penerbit Erlangga.

Dr. Stanley C. Abraham (2012): Strateic Planning, a Practical Guide for Competitive Success, 2nd edition 85-86, 112. Emerald group publishing group.

Dr. D. Agus Harjito, MSi dan Drs. Martono, SU (2011): Manajemen Keuangan, edisi 2, 52- 57. Penerbit Ekonisia, kampus Fakultas Ekonomi Universitas Islam Indonesia Yogyakarta.

O.C. Ferrel, Geoffrey Hirt and Linda Ferrel (2014): Business, a Changing World, 9th edition, published by McGraw Hill/Irwin

Omar Durrah1, Abdul Aziz Abdul Rahman, Syed Ahsan Jamil, Nour Aldeen (2016), Exploring the Relationship between Liquidity Ratios and Indicators of Financial Performance: An Analytical Study on Food Industrial Companies Listed in Amman Bursa,Ghafeer4http://dergipark.gov.tr/download/article-file/363363

Roger Wohlner (2017), Liquidity Measurement Ratio https://www.investopedia.com/university/ratios/liquidity-measurement/ .

V. Wiratna Sujarweni, SE., Msi (2016) : Manajemen Keuangan, Teori, Aplikasi dan Hasil Penelitian, 110-113. Penerbit Pustaka Barau Press, ISBN: 978-602-6237-55-2.

Wen-Cheng Lin, Chin-Feng Liu and Gin-Shuh Liang (2010), Analysis of debt-paying ability for a shipping industry in Taiwan, http://www.academicjournals.org/app/webroot/article/article1380700184_Lin%20et% 20al.pdf