

ANALYSIS FINANCIAL PERFORMANCE OF PT. ASTRA INTERNATIONAL TBK BEFORE AND AFTER ECONOMY CRISIS IN 2020

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ABSTRACT

Currently each continent withinside the global has been stricken by this fantastically contagious disease which is named of pandemic COVID-19 as a result many countries are facing an economic crisis. The corona virus pandemic also affected all industrial sectors in almost every country, including Indonesia. One of the companies that affected by this pandemic was PT Astra International Tbk (ASII) that had significant decrease on sales which impacted on its share price. Therefore, the purpose of this study is to analyze financial performance of ASII and use paired t-test to analyze if there is significance difference on finance performance before and after economy crisis. The data were collected from ASII financial reports with two periods: before (2019, Q1-Q3) and after (2020, Q1-Q3). The results indicated that liquidity, solvency and activity have significance difference before and after economy crisis, while profitability have no significance difference. This study has added knowledge in financial literature and give insight to managers in automotive industry.

Keywords: Financial Performance, Financial Ratios, Economy Crisis, Automotive

1. INTRODUCTION

Almost all humans withinside the global are actually acutely aware, an epidemic of COVID-19 changed into detected in mainland China in December of 2019. Currently, each continent withinside the global has been stricken by this fantastically contagious disease, with almost one million instances identified in over two hundred international locations worldwide.

The corona virus pandemic also affects all industrial sectors in almost every country, including Indonesia. At first, the corona virus which originated from China was known to have entered Indonesia in mid-March 2020. Not long after this notification, almost all provinces in Indonesia implemented large-scale social restrictions. Certainly, it has an impact not only in the health sector but also on the economic sector. The impact of this pandemic is there has been a change in the pattern of life in the community, such as building operational hours and the number of people engaged in field activities, layoffs of work everywhere, even public consumption has dropped dramatically which has an impact on negative economic growth. The figure 1 below shows that in the second quarter of 2020, economic growth fell drastically to -5.32% as impact of regulation large-scale social restrictions.



Figure 1: Indonesian Economic Growth
Source: Central Bureau of Statistics (2020)

According to the Governor of Bank Indonesia (BI) Perry Warjiyo said that the economic conditions in 2020 were different from the 1998 monetary crisis and the 2008 global recession. The economic crisis that occurred in 2020 cannot be equated with the crisis that occurred in 1998 which is commonly known as the Asian Monetary Crisis or in 2008, known as the global financial crisis. The cause of the crisis in 1998 was due to a combination of conflicts between politics and the economy, and the global financial crisis in 2008 was the result of an imbalance between the financial sector and the production sector due to the monopolistic practice of economic resources by large corporations and developed countries against poor countries. Meanwhile, the current economic downturn is the impact of the corona virus (covid-19) outbreak that has spread throughout the world.

In accordance with Indonesia Investment's website, it stated that the automotive manufacturing in Indonesia is an important aspect that give much contribution to Indonesia's GDP. Indonesian automotive manufacturing sector has been well-known as car manufacturer and was ranked second-largest motor vehicles sales in Southeast Asia and the ASEAN region as seen in Figure 2 below.

ASEAN AUTOMOTIVE FEDERATION					
SALES : 2020					
1. MOTOR VEHICLES					
COUNTRY	PASSENGER VEHICLES	COMMERCIAL VEHICLES	2020	2019	VARIANCE (%)
Brunei	12,239	266	12,505	11,909	5%
Indonesia	388,886	143,141	532,027	1,030,126	-48%
Malaysia	474,104	48,469	522,573	604,281	-14%
Myanmar	12,867	4,840	17,707	21,916	-19%
Philippines	69,638	154,155	223,793	369,941	-40%
Singapore	46,986	9,437	56,423	90,429	-38%
Thailand	343,494	448,652	792,146	1,007,552	-21%
Vietnam	221,274	75,360	296,634	322,322	-8%
TOTAL	1,569,488	884,320	2,453,808	3,458,476	-29%

Figure 2: Motor Vehicles Sales in ASEAN
Source: ASEAN Automotive Federation (2020)

One of the automotive companies in Indonesia that affected by this pandemic is PT Astra International Tbk (ASII), multinational conglomerate automotive company that headquartered in Jakarta, Indonesia, that has significant decrease on sales which impact on its share price. From the figure 3 below, share price of ASII decreased significantly in April as a result of the implementation of large-scale social restriction policies and because the vehicles are not primary need, so people tend to hold their money rather than purchase vehicles. From June until November the share price of ASII has been rising slowly.

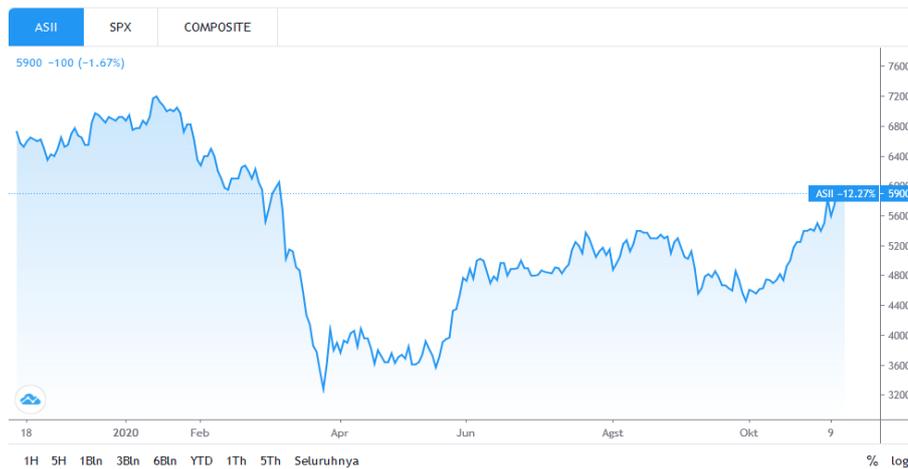


Figure 3: Graphic of Astra's Stock Price
Source: Yahoo Finance (2020)

According to GAIKINDO, the economic crisis hit Indonesia in 2020 as a result of the economic downturn during the outbreak. The economy also plummeted, making car sales stumble. People's purchasing power is in freefall due to the COVID-19 pandemic. The automotive factory was temporarily closed as well as the auto show which was even canceled due to social restrictions to prevent the spread of the epidemic. As a result, car sales throughout 2020 fell.

In accordance with Maximilianus Nico Demus, *Pilarmas Investindo Sekuritas analyst*, as soon as distribution and vaccination are provided, the sooner automotive industry recovery will begin to take place. But the thing to pay attention is a sense of security first that vaccination provides an opportunity for people to start activities, so that there is an increase in consumption which will encourage an increase in purchasing power. The improvement or deterioration in the performance of automotive issuers is all back again related to process of administering vaccines and controlling the outbreak. The second key factor is strategy and marketing will be important points to encourage people to start buying vehicles

The purpose of this study is to analyze financial performance of PT Astra International Tbk which is proxied by Current Asset Ratio, Debt to equity Ratio, Return on Equity Ratio and Inventory Turnover Ratio during year 2019-2020 and use paired t-test to analyze if there is any significance difference on financial performance before and after economy crisis as impact of COVID-19 pandemic.

2. LITERATURE REVIEW

COMPANY PROFILE OF PT ASTRA INTERNATIONAL TBK

PT Astra International Tbk is multinational conglomerate company that headquartered in Jakarta, Indonesia. Astra International was originally founded by Tjia Kian Liong (William Soerjadjaja), Tjia Kin Joe (Benyamin), and Liem Peng Hong in the 1950s. The company was founded in 1957 under the name PT Astra International Incorporated. In 1965 there was monetary crisis and Kian Liong tried to keep his company alive. In 1969, Astra shifted its business to Japan. In 1990, the company changed its name to PT Astra International Tbk. The company has been listed on the Jakarta Stock Exchange since April 4, 1990 with stock code ASII. At this time, the company is domiciled in Jakarta, Indonesia, with its head office located at Menara Astra, Jalan Jenderal Sudirman after previously domiciled in the AMDI Building which is located at Jalan Gaya Motor Raya No. 8, Sunter II, Jakarta. Astra has vision *“to become one of the best-managed companies in Asia Pacific with an emphasis on sustainable growth with competency building through human resource development, solid financial structure, customer satisfaction and efficiency and become a company that has a social responsibility also environmentally friendly”*. The mission is *“prosper with the nation by providing the best value to our stakeholders”*.

The scope of the firm's activities as stated in its articles of association are general trading, industry, mining services, transportation, agriculture, development and consulting services. Until 2019, Astra has developed its business by implementing a business model based on synergy and diversification includes the assembly and distribution of cars, motorbikes with their spare parts, sales and rental of heavy equipment, mining and related services, plantation development, financial services, infrastructure and information technology.

FINANCIAL RATIO

According to Van Horne (2013) Financial ratio is an index that connects two accounting numbers and is obtained by dividing one number by another. Financial ratios are used to evaluate the company's financial condition and performance. From the results of these financial ratios, it will be seen the health condition of the company concerned. It used to assess the performance of management in a period of whether it has reached the predetermined target or not. Then also can be assessed the ability of management in empowering company resources effectively.

Based on the performance that has been achieved can be used as an evaluation by manager in determining the company's future strategy. So, the manager can manage resources effectively and efficiently in order to improve the financial performance.

According to Gerald (2003), there are four ratio categories which are activity ratio, liquidity ratio, solvency ratio and profitability ratio. According to Subramanyam (2015) the activity ratio is the ratio is used to measure the level of effectiveness of the company in using the assets owned by the company. In addition, according to Wachowicz (2012) the activity ratio is a ratio that measures how effectively a company uses its various assets.

Liquidity ratio is the ratio that shows the relationship between cash and other current assets of a company with current liabilities. It is a ratio to measure the company's ability to meet its financial obligations that must be fulfilled immediately or short-term obligations (Van Horne, 2013). Solvency ratio measures the company's ability to meet its long-term obligations. This ratio also measures the company's long-term liquidity and thus focuses on the right side of the balance sheet (Van Horne and Wachowicz, 2012). Profitability ratio measures the overall management effectiveness which is aimed at the level of profit obtained in relation to sales and investment. The better the profitability ratio, the better the picture of the company's high profitability. (Bodie Kane, 2014).

3. CONCEPTUAL FRAMEWORK

The conceptual framework is a structure which the researcher believes can best explain the natural progression of the phenomenon to be studied (Camp, 2001). In a statistical perspective, the conceptual framework describes the relationship between the main concepts of a study. It is arranged in a logical structure to aid provide a picture or visual display of how ideas in a study relate to one another (Grant & Osanloo, 2014).

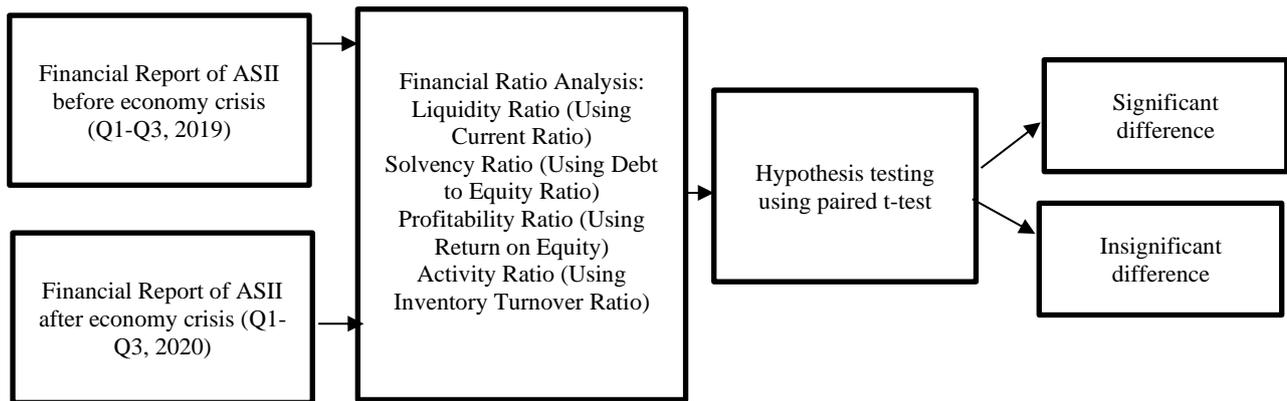


Figure 4: Conceptual Framework
Source: Author Analysis (2021)

Based on the Figure 4 above, it shows that this study will examine financial ratio analysis of liquidity ratio, solvency ratio, profitability ratio, and activity ratio. The data that use in this study is financial report of ASII before and after economy crisis (Q1-Q3, 2019-2020). The method that will be used is paired t-test which is to examine if there is significant difference between before and after economy crisis.

4. HYPOTHESIS

Developed from the literature review these hypotheses are tested in this research, as follow:

4.1 Liquidity ratio

Current Ratio (CR)

H₀: There is no significance difference on Current Ratio before and after economy crisis in 2020
H₁: There is significance difference on Current Ratio before and after economy crisis in 2020

4.2 Solvency Ratio

Debt to Equity Ratio (DER)

H₀: There is no significance difference on DER before and after economy crisis in 2020
H₁: There is significance difference on DER before and after economy crisis in 2020

4.3 Profitability Ratio

Return on Equity (ROE)

H₀: There is no significance difference on ROE before and after economy crisis in 2020
H₁: There is significance difference on ROE before and after economy crisis in 2020

4.4 Activity Ratio

Inventory Turnover (ITO)

H₀: There is no significance difference on ITO before and after economy crisis in 2020
H₁: There is significance difference ITO before and after economy crisis in 2020

5. METHODOLOGY

5.1 Research Design

This type of research is a quantitative research, namely systematic scientific research on parts and phenomena and their relationships. The objective of quantitative research is to develop and use mathematical models, theories and or hypotheses related to phenomena (Sekaran and Roger, 2017). Quantitative research methods can be interpreted as a research method based on the philosophy of positivism used to examine certain populations and samples, sampling techniques are generally carried out randomly, data collection uses research instruments, data analysis is quantitative or statistical in order to test predetermined hypotheses (Sugiyono, 2013).

5.2 Data Collection

The data used in this study are included in secondary data. Secondary data is data that is processed and presented by other parties, secondary data in this study consists of financial report of ASII during Q1-Q3 in year 2019-2020. The data accessed through official website of Indonesia Stock Exchange: www.idx.co.id

5.3 Data Analysis

In analyze the data, this study using financial ratio analysis and statistical analysis. Financial ratio analysis shows about the firm performance in period of time, the ratios that will use such as liquidity ratio, solvency ratio, profitability ratio and activity ratio. Besides that, this study also used statistical analysis which is paired t-test to see if there is significance difference before and after economy crisis in 2020.

5.3.1 Financial Ratio Analysis

These are the formula of variables that used in financial ratio analysis:

Table 1. Formulation of Financial Ratio

Liquidity Ratio	
Current Ratio	(Current Asset/ Current Liabilities) x 100%
Solvency Ratio	
Debt to Equity Ratio	(Total Liabilities/ Total Equity) x 100%
Profitability Ratio	
Return on Assets	(EAT/ Total Equity) x 100%
Activity Ratio	
Inventory Turnover	(Cost of goods sold/ Average of Inventory) x 100%

Source: Subramanyam (2014)

5.3.2 Paired T-test

The paired t-test is used to determine whether two samples that have a relationship have a significant difference in performance before and after a certain situation (Sekaran, 2017). According to Neil (2010), a paired samples *t* test is a hypothesis test for determining whether the population means of two dependent groups are the same. The researcher begins by selecting a sample of paired observations from the two groups. Thus, each observation in each group is paired (matched) with another observation from the other group. The researcher then calculates the difference between each of these paired observations and conducts a one-sample *t* test on these difference scores through the formula:

$$t = \frac{\bar{x}_d}{s_d/\sqrt{n_d}}$$

where \bar{x}_d is the sample mean difference score, s_d is the standard deviation of the sample difference scores, and n_d is the number of paired observations in the sample (i.e., the number of difference scores). This *t* value can then be used to determine the likelihood that any difference before and after a certain situation.

This study used paired t-test to examine the results of ASII's financial performance if there is any significance difference or not between before economy crisis and after economy crisis due to pandemic of COVID-19. The timeline will be divided into two sections, the first is before which is using data of ASII's financial performance in 2019 from Q1-Q3 and the second is after which is using data of ASII's financial performance in 2020 from Q1-Q3. The tools to calculate the paired t-test is SPSS 23.

The basis to take decision based on results of Paired T-test:

1. If signification value (2-tailed) < 0,05 it means there is significance difference between pre-test and post-test
2. If signification value (2-tailed) > 0,05 it means there is no significance difference between pre-test and post-test

6. EMPRICIAL RESULTS AND DISCUSSION

6.1 Liquidity Ratio Analysis

In figure 5, Liquidity is represented by Current Ratio. From the graph below, it shows that trend graph of Current Ratio of ASII from 2019 (Q1) to 2019 (Q3) is relative constant. But from 2020 (Q1) until 2020 (Q3), it shows that current ratio is increasing, or it can be concluded that it is experiencing an upward trend. The reason why the Current ratio is increasing during year 2020 compare to year 2019, it because of decreasing on its short-term liabilities that result in increasing Current Ratio. The result of financial performance of Current Ratio of ASII in the first quartal in 2019 is 1.22 while in the first quartal in 2020 is 1.37. For the second quartal of Current Ratio in 2019 is 1.22 while in the second quartal in 2020 is 1.49. For the third quartal of Current Ratio in 2019 is 1.26 while for the third quartal in 2020 is 1.56.

Overall, the number of Current Ratios from 2019 (Q1) until 2020 (Q3) still at a safe point. Because the numbers are >1 and still <2 , it shows that the firm still can manage between its current assets and current liabilities efficiently. If the ratio <1 , it indicates that a firm has trouble in paying its short-term obligation. On the other hand, if the current ratio >2 , it indicates that a firm is not optimal in using manage its assets or short-term obligation.

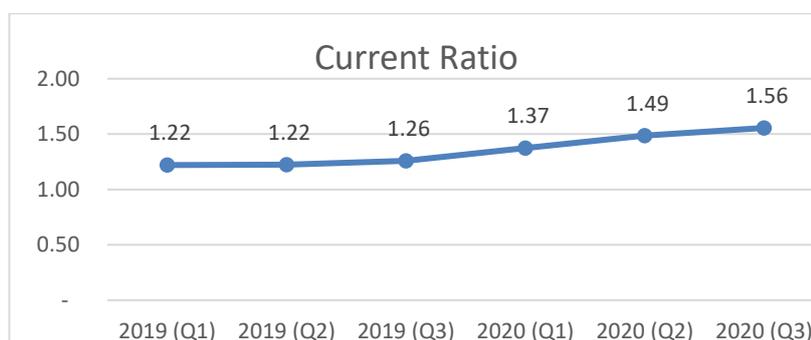


Figure 5. Current Ratio of ASII
Source: Financial report of ASII processed by Ms. Excel (2021)

6.2 Solvency Ratio Analysis

In figure 6, Solvency is represented by Debt-to-Equity Ratio (DER). From the graph below, it shows that trend graph DER of ASII from 2019 (Q1) to 2019 (Q3) is constant or stable. But from 2020 (Q1) until 2020 (Q3), it shows that DER is decreasing or it can be concluded that it is experiencing a downward trend. The reason why DER decreasing in 2020 because of decreasing in total liabilities and increasing of its total equity. The increasing of total equity as result of the increasing in foreign exchange reserves and increasing in retained earnings. While the decreasing on total liabilities because decreasing number of accounts in the short-term liabilities and long-term liabilities.

The result of financial performance of DER in the first quartal in 2019 is 0.98, while for the first quartal in 2020 is 0.87. For the second quartal in 2019 is 0.98 while in the second quartal in 2020 is 0.79. For the third quartal in 2019 is 0.98 while in the third quartal in 2020 is 0.75. Overall, DER of ASII also still in safe point because less than of one.

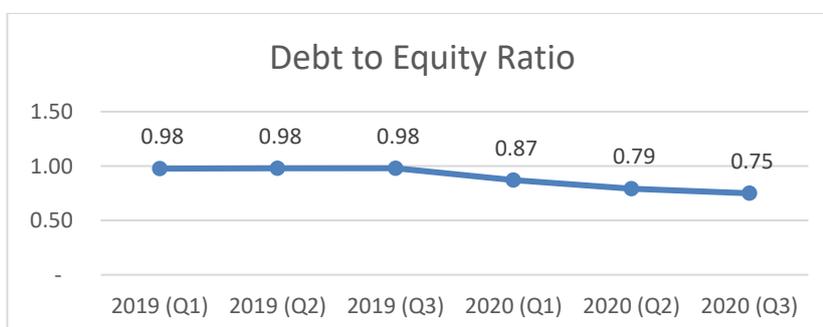


Figure 6. Debt to Equity Ratio of ASII
Source: Financial report of ASII processed by Ms. Excel (2021)

6.3 Profitability Ratio Analysis

In figure 7, Profitability ratio is represented by Return on Assets. From the graph below, it shows that trend graph ROA of ASII from 2019 (Q1) to 2019 (Q3) is increasing or upward trend. It looks similar with the trend of Return on Asset of ASII from 2020 (Q1-Q3) that also facing upward trend, even its financial performance of ROA in 2019 less than financial performance of ROA in 2020.

The result of financial performance of Return on Assets in the first quartal in 2019 is 1.46, while for the first quartal in 2020 is 1.31. For the second quartal of ROA in 2019 is 2.50, while for the second quartal in 2020 is 3.23. For the third quartal of ROA in 2019 is 4.43, while for the third quartal in 2020 is 4.16. There is no specific number of measurements in Return on Asset ratio, but the higher percentage that gain is the higher financial performance of profitability that achieved.

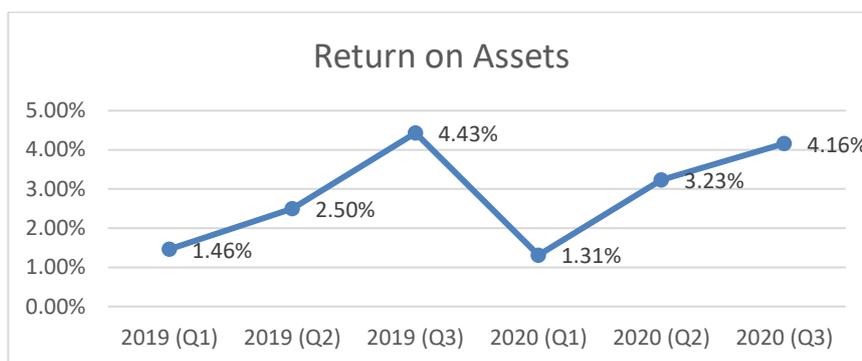


Figure 7. Return on Assets of ASII
Source: Financial report of ASII processed by Ms. Excel (2021)

6.4 Activity Ratio Analysis

In figure 8, Activity is represented by Inventory Turnover Ratio (ITO). From the graph below, it shows that trend graph ITO of ASII from 2019 (Q1) to 2019 (Q3) is increasing or called as upward trend. It also similar with the trend of Inventory Turnover Ratio that facing upward trend in 2020 from Q1 to Q3. Even though, if compare to the results of ITO in 2019, the ITO in 2020 is not really perform well like in 2019. It because of the sales decreased so impact on inventory turnover has become much slower than usual. But, ASII was quite swift in handling the condition by providing various discounts and gifts to attract buyers and increase sales. Therefore, ASII's inventory turnover began to adjust with the current situation and slowly rise from 2020 (Q2-Q3).

The result of financial performance of Inventory Turnover Ratio in the first quartal in 2019 is 1.57 while in the first quartal in 2020 is 1.32. For the second quartal of ITO in 2019 is 3.02 while in the second quartal in 2020 is 2.65. For the third quartal of ITO in 2019 is 4.54 while in the third quartal in 2020 is 4.01. Similar with the ROA, there is no specific number of measurements in Inventory Turnover Ratio, but the higher number that gain is the higher financial performance of Inventory Turnover Ratio. Because if the higher number achieved, it means how fast the company processed and convert the inventory into sales.

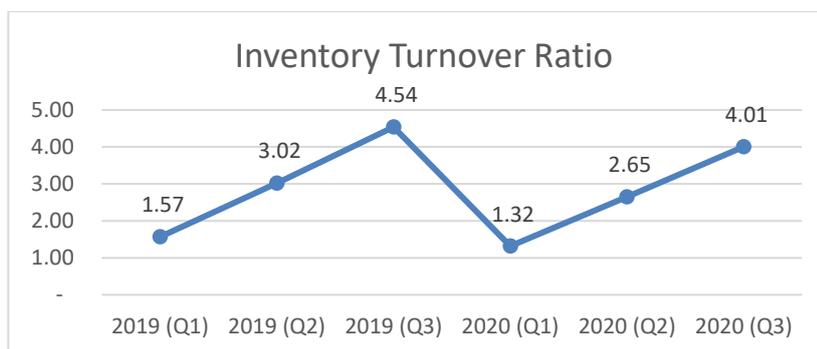


Figure 8. Inventory Turnover Ratio of ASII
Source: Financial report of ASII processed by Ms. Excel (2021)

6.5 Paired T-test Analysis

In table 2 below, it shows that the result of Paired T-test of ASII. The data that used in this pre-test is ASII's financial report 2019 from Q1-Q3, while the data used in post-test is financial report 2020 from Q1-Q3. To process the data, author use IBM SPSS Statistics 23. It shows the results that Current Ratio has mean of 0.2400, standard deviation of 0.7937, significance 0.035. Because sig of CR is $0.035 < 0.05$, it concludes that Current Ratio has significant difference before and after economy crisis in 2020. It also

shows the result of Debt-to-Equity ratio has mean of 0.1766, standard deviation of 0.6110 and significance of 0.038. Because sig of DER is $0.038 < 0.05$, it concludes that DER has significant difference before and after economy crisis in 2020. It also shows the result of Return on Assets Ratio has mean of 0.1033, standard deviation of 0.5460 and significance of 0.774. Because sig of ROA is $0.774 > 0.05$, it concludes that ROA has no significant difference before and after economy crisis in 2020. It also shows the result of Inventory Turnover Ratio has mean of 0.3833, standard deviation of 0.1404 and significance of 0.042. Because sig of ITO is $0.042 < 0.05$, it concludes that ITO has significant difference before and after economy crisis in 2020. Overall, from four ratio below it can conclude that three of them which are Current Ratio, Debt to Equity Ratio, Inventory Turnover Ratio has significant result before and after economy crisis in 2020. While one of them which is Return on Assets Ratio has no significant results before and after economy crisis in 2020.

Table 2. Paired T-test of ASII

Financial Ratio	Status	Mean	Std. Dev	Sig	Results
Current Ratio	Pre & Post	0.2400	0.7937	0.035	Significant
Debt to Equity Ratio	Pre & Post	0.1766	0.6110	0.038	Significant
Return on Assets Ratio	Pre & Post	0.1033	0.5460	0.774	Insignificant
Inventory Turnover Ratio	Pre & Post	0.3833	0.1404	0.042	Significant

Source: Financial ratio of ASII processed by SPSS 23 (2021)

7. LIMITATIONS

There will be some limitations during this research, which are: since the event of economy crisis no longer happened, so the data is very limited especially the finance report that author use only Q1-Q3 before and after monetary crisis in 2020. This research has limitation only for PT Astra International Tbk in Period 2019-2020. The data that used in this study only secondary data that get from Astra's website, financial statement that accessed by Indonesian Stock Exchange's website and yahoo finance.

8. CONCLUSSION/ RECOMMENDATION

8.1 Conclusion

The financial performance of PT Astra International Tbk before economy crisis in 2019 (Q1-Q3) face upward trend for Current Ratio, Return on Assets, Inventory Turnover. While, for Debt-to- Equity Ratio is stable or constant during year 2019 (Q1-Q3). On the other hand, the financial performance of PT Astra International Tbk after economy crisis in 2020 (Q1-Q3) also face upward trend for Current Ratio, Return on Assets, and Inventory Turnover, even though the results of those financial performance not really well if compare to the financial performance in 2019. In contrast for Debt-to- Equity Ratio is facing downward trend during year 2020 (Q1-Q3) as impact of decreasing on total liabilities and total equity.

On the other hand, after economy crisis in 2020 (Q1-Q3) as impact of pandemic COVID-19 the financial performance of Debt-to-Equity Ratio, Return on Assets and Inventory Turnover decline dramatically in beginning year 2020, while Current Ratio was increasing. As time goes by, both of automotive industry and society start to adapt with pandemic situation and then impact to these ratios that rising slowly.

From the results of paired t-test, it shows that Current Ratio, Debt-to-Equity Ratio and Inventory Turnover Ratio have significant difference before and after economy crisis in 2020 due to pandemic. But, Return on Assets Ratio has no significant difference before and after economy crisis in 2020 due to pandemic.

8.2 Recommendation

Suggestion that can be given to ASII and other automotive industry to improve its financial performance during this pandemic era, such as: create scenario planning carefully, to create scenario planning there are some aspects that need to consider such as from PEST analysis (how about the political situation and how the government support automotive industry to sustain during pandemic, how about the economic situation whether it leads to an improving or worsening trend, how about the socio-cultural of people that shifting from buying offline to online, maybe ASII can offer its products through online and give home service to customer, and how about the technological development is there any feature or new innovation of vehicles that can attract people to buy its product) From that analysis, ASII and other automaker can make prediction about how much production volumes adjust with customer demand due to uncertain short-term outlook.

From finance side, there are some considerations for ASII and automotive industry such as stay up to date with short-term and long-term forecast, management should make sure all the forecasts has been adjusted with the current situation (pandemic) and control if there is a potential financial problem occur, the manager can respond it in timely manner. Due to this pandemic also impact on firm's liquidity so manager need to do some liquidity test such as sensitivity analysis of the cash flow statement and find other source of financial alternatives. Manager also can-do analysis of capital allocation and budgeting projects and then assess the impact on firm's cash and liquidity, and then what managers can do is press cost of production (such as reduce production volumes) and operational expense in order to manage firm's cash flow.

From corporate strategy side, if ASII has strong financial capabilities, this is the right time to carry out corporate strategies such as mergers and acquisitions. Because in this pandemic era, there are some companies that has financial lack of capabilities, they need money and usually they have low bargaining power. So, it is the right choice for ASII/ other automotive companies that want to do merger/ acquisition if have strong financial capabilities (PwC, 2020).

8.3 Manager Implication

From the results of this study hopefully management and stakeholder can use this assessment as your consideration to take a decision or policy and management can improve its financial performance after impact of this pandemic.

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