

## FINANCIAL PERFORMANCE ANALYSIS AND EVALUATION OF PALM OIL AGROINDUSTRY: AN INDONESIA EXPERIENCE

**Wiwiek Mardawiyah Daryanto**

*Sekolah Tinggi Manajemen IPMI, Jakarta, Indonesia*

*Email: wiwiek.daryanto@ipmi.ac.id, Tel: +62- 811894273*

### ABSTRACT

Indonesia is the world largest producer and exporter of crude palm oil (CPO). The export of CPO has increased by 46% from 15.1 million ton in 2008 became 27 million ton in 2016. However, the value of the export decreased by 11.67%, from US\$ 21.1 billions in 2014 to US\$ 18.64 billions in 2015. This was caused by the decrease of CPO export price significantly (33.33%), from US\$ 1,033/ton in 2008 to US\$ 689/ ton in 2016. The Decree No.KEP-100/MBU/2002 issued by Indonesia Ministry of State-Owned Enterprises (SOEs) on June 2002 provides the mandatory of measuring and rating the financial health condition of SOEs. This study aims to analyze and evaluate the financial health condition of three Palm Oil SOEs under Indonesia Ministry of Agriculture: (1) PT Perkebunan Nusantara I; (2) PT. Perkebunan Nusantara III; (3) PT. Perkebunan Nusantara IV for periods of 2011 – 2015. The results of investigating of eight financial ratios: return on equity, return on investment, cash ratio, current ratio, collection period, inventory turnover, total asset turnover, total equity to total asset, then be validated by the decree of the SOEs ministry to conclude the financial health condition of the companies. The result shows that the three Palm Oil SOEs have achieved financial health condition levels with rank ratings as follows: (1) PT. Perkebunan Nusantara IV (AA,AA,A,AA,BBB), (2) PT Perkebunan Nusantara III (A,AA,A,BBB,BBB), and (3) PT Perkebunan Nusantara I (A,A,A,BB,CCC).

**Keywords:** *financial health condition, financial ratios, SOEs, CPO*

### ABSTRAK

Indonesia adalah produsen dan pengeksport minyak sawit mentah (CPO) terbesar di dunia. Eksport CPO meningkat 46% dari 15,1 juta ton pada 2008 menjadi 27 juta ton pada 2016. Namun, nilai eksport turun 11,67%, dari AS\$ 21,1 milyar pada 2014 menjadi AS\$ 18,64 milyar pada 2015. Hal ini disebabkan oleh turunnya harga eksport CPO secara signifikan (33,33%), dari AS\$ 1.033/ton pada 2008 ke AS \$ 689/ton pada 2016. Keputusan Menteri Badan Usaha Milik Negara No.KEP-100/MBU/2002 mewajibkan penilaian dan memberikan rating terhadap kondisi kesehatan keuangan BUMN. Studi ini bertujuan menganalisis dan mengevaluasi rasio keuangan terhadap tiga BUMN Perkebunan Kelapa Sawit: (1) PT Perkebunan Nusantara I; (2) PT Perkebunan Nusantara III; (3) PT Perkebunan Nusantara IV pada periode 2011–2015. Hasil investigasi terhadap delapan rasio keuangan: imbal hasil modal sendiri, imbal hasil investasi, rasio kas, rasio lancar, periode koleksi piutang, perputaran persediaan, perputaran total aktiva, total modal sendiri terhadap total aktiva kemudian divalidasi dengan SK Menteri BUMN tersebut untuk menyimpulkan tingkat kesehatan keuangan perusahaan. Hasil studi ini menunjukkan bahwa tiga BUMN Perkebunan Kelapa Sawit tersebut mencapai tingkat kondisi kesehatan keuangan dengan urutan ranking sebagai berikut: (1) PT Perkebunan Nusantara IV

(AA,AA,A,AA,BBB);(2) PT Perkebunan Nusantara III (A,AA,A,BBB,BBB); dan (3) PT Perkebunan Nusantara III (A,A,A,BB,CCC).

**Kata kunci:** kondisi kesehatan keuangan, rasio keuangan, BUMN, CPO

## INTRODUCTION

Indonesia is the first rank of CPO production in the world, amounted to 32.5 million tonnes in 2015, and followed by Malaysia 19.2 million tonnes, Thailand 2.18 million tonnes, Columbia 1.23 million tonnes, and Nigeria 0.93 million tonnes. The production rate in 2015 increased by 3 percent compared with the production of 2014, which was 31.5 million tonnes. (Indonesia Ministry of Agriculture, 2016).

CPO has played a significant role in most sectors. Indonesia needs only 25 to 30 percent of CPO production for domestic consumption, and the rest of 70 to 75 percent of CPO production was available for export purposes. While Malaysia, as the competitor and the second rank of palm oil producer in the world, used about 30 percent of it'sCPO production as raw material for vegetable oil production, and about 45 percent for oleo chemical production, such as ethyl alcohol, biodiesel, cosmetic, pharmaceutical, detergent, etc. The remaining of about 25 percent was used for export purposes (Saputro, 2016).

In general, Indonesia is the 25<sup>th</sup> rank of the world's exporter. In 2014, the value of export was US \$ 197 million, and the value of import was US \$ 178 million. Therefore, Indonesia had positive balance of trade amounted to US \$ 19.4 million. The rank of Indonesia's commodity export in 2014 were as follows: 1) Coal (US \$ 20 million); 2) Palm Oil (US \$ 17.5 million); 3) Petroleum Gas (US \$ 17 million); 4) Crude Petroleum (US \$ 5.42 million); and Rubber (US \$ 5.42 million) and the main export destinations were to Japan, China, USA, Singapore, and India (Saputro, 2016).

The Indonesian government expects that the development of palm oil industry will gives direct impact and benefit towards the sustainability of land resources and the society's welfare. In terms of employment, the palm oil industry in 2016 has absorbed of 4.2 millionspeople directly, and 12 millions people indirectly (Samiyanto and Banowati, 2016).

However, in the case of CPO price, palm oil industry has experienced dramatic volatility, both in Indonesia and globally. The average price of CPO per ton in global market decreased significantly, from US \$ 11.25/ton in 2011 to US \$ 1.020/ton in 2012, and in December 2016 became only US \$ 800 per ton(Arifin, 2013).

The unpredictable situation has continued until 2015, where the average price of CPO in the global market had never achieved US \$ 700 per metric ton. The average price was only US\$ 614.2 per metric ton in 2015, and it was decreased of 25 percent from 2014, which was US \$ 818.2 per metric ton.

Based on table 1, in the case of CPO production, although the export volume of CPO increased, but the value of export decreased, due to the low price of CPO in global market. The value of CPO export in 2015 decreased about 11.85 percent compared with the export value of US \$ 21.1 billions in 2014. The uncontrollable of CPO prices in the global market caused the decrease of the profitability of palm oil industry.

The Government of Indonesia decides mandatory to the company under the Ministry of Stated Owned Enterprises of Indonesia that they should implement financial ratio analysis to measure the level of financial health. The previous research about financial performance

has been discussed in many sectors such as hospital, bank, and small business. Edmister (1972) stated that financial ratio is really useful to measure the performance of small business and it can be used to predict the failure. Toshiyuki (2003) used financial ratio to compare the performance of US and Japanese power companies. The finding shows that debt and profitability ratios are important indicators to analyse their financial performance. The present study is focusing on palm oil industry. It is covering three of the biggest state owned palm oil enterprises in Indonesia under Ministry of Agriculture: PT. Perkebunan Nusantara I (PTPN I), PT. Perkebunan Nusantara III (PTPN III), and Perkebunan Nusantara IV (PTPN IV) for the period of 2011 – 2015. However, the literature about financial performance in palm oil industry is very limited. Therefore, the purpose of this study is to measure the financial performance of palm oil industry which then be validated by the decree of Ministry of State Owned Enterprises (SOEs) No. KEP-100/MBU/2002 and to compare the financial performance among PTPN I, PTPN III, and PTPN IV. In view of this, the research questions are: 1) How was the financial performance of palm oil industries: PTPN I, PTPN III, and PTPN IV based on the decree of Ministry of State Owned Enterprises (SOEs) No. KEP-100/MBU/2002 for the periods of 2011 - 2015?; 2) What was the difference of financial performance among the three enterprises?. This study is beneficial for academician because it extends the knowledge of financial ratio in the real practice. Besides that, it helps student and lecturer to understand financial ratio more effectively. In addition, this study is also important for manager, because it can help them to analyse the company's situation and guide them before making decision.

This study is organized into nine sections. Section one captures the introduction, section two highlight the performance of Indonesia's palm oil industry, section three highlights the literature review about previous researchers, section four explains the Decree of Ministry of SOEs No. KEP-100/MBU/2002 about financial health assessment of SOEs, section five discuss the methodology, section six discuss the finding and analysis, section seven discuss the validation testing, section eight highlights the limitation and implication, and section nine captures the conclusion.

## **PALM OIL INDUSTRY IN INDONESIA**

Indonesia is the world largest producer and exporter of CPO. Table 1 shows that during the last eight years, the export of CPO increased by 46% from 15.1 ton in 2008 became 27.0 ton in 2016. The industry also creates job employment for millions people, and it is main contributor of income generating for the people in the villages. Almost 70 percent of palm oil estates are located in Sumatra Island, and the industry has been started since the Dutch colony. And almost the rest of 30 percent are located in Kalimantan Island (Indonesia Investment, 2016).

In 2016, the palm oil estates area in Indonesia almost 10.96 millions hectares. And it consisted of state owned estates 0.75 millions hectares (7 percent), private owned estates 5.66 millions hectares (51 percent), and smallholder estates 4.55 millions hectares (42 percent) (Samiyanto and Banowati, 2016).

**Table 1.** Production and Export of Crude Palm Oil (CPO) of Indonesia

	2008	2009	2010	2011	2012	2013	2014	2015	2016
Production (millions ton)	19.2	19.4	21.8	23.5	26.5	30.0	31.5	32.5	32.0
Eksport (millions ton)	15.1	17.1	17.1	17.6	18.2	22.4	21.7	26.4	27.0
Eksport (billions US \$)	1.6	10.0	16.4	20.2	21.6	20.6	21.1	18.6	18.6
Average Price/ton (US \$)	1,033	585	959	1,148	1,187	920	972	705	689

**Source:** Indonesian Palm Oil Producers Association (GAPKI) and Indonesian Ministry of Agriculture (2016)

## PREVIOUS RESEARCH ON FINANCIAL PERFORMANCE

Financial ratio is a good evaluation method to measure the company performances (Megaladevi, 2015). Company usually uses this method to compare their performance with other competitors. There have been a large number of empirical studies on financial ratio on different industries around the world (Yeh, 1996; Webb, 2003; Lacewell, 2003; Halkos and Salamouris, 2004; Tarawneh, 2006). However, there are limited resources which evaluate the financial performance of Estate Palm Oil Enterprises in Indonesia. According to Tarawneh (2006), the financial ratio analysis (FRA) has been applied in Banking industry to examine, evaluate, and ranked based on their performance. Based on the study in Oman Commercial Banks, financial performance has relationship with asset management, size and operational efficiency. There are two methods to measure the financial performances which are accounting and market measurement. There are many researchers who prefer to use accounting measurement (Waddock and Graves 1997; Cochran and Wood 1984), rather than market measurement (Alexander and Buchholz, 1978; Vance, S. C., 1975), and some of them adopt both methods (McGuire, J. B., Sundgren, A., Schneeweis, T., 1988). There are few differences between accounting and market measurement method. In accounting, company use the historical aspects to measure their financial performance (McGuire, Schneeweis, & Hill, 1986) and it contain a bias which lead to managerial manipulation. On the other hand, market measurement method is straight forward, focus on performance and represent the ability of a company to generate future income (McGuire, J. B., A. Sundgren, and T. Schneeweis, 1988).

## THE DECREE OF MINISTRY OF STATE OWNED ENTERPRISES (SOEs)

Based on the Decree of Ministry SOEs No. KEP-100/MBU/2002 about financial health assessment of SOEs, the growth of business should be supported by good infrastructure and evaluation system to measure the efficiency and level of competition among SOEs. This financial evaluation applies to all state-owned enterprises in the financial and non-financial industry. In non-financial industry, the companies are divided into infrastructure and non-infrastructure. This evaluation method consists of three aspects which are financial, operational, and administration. In a financial aspect, total weight score for infrastructure is 50 and non-infrastructure is 70. There are eight indicators to measure the

financial health such as return on investment (ROI), return on equity (ROE), cash ratio, current ratio (CR), collections period (CP), inventory turnover (ITO), total asset turnover (TATO), and total equity to the total asset (TETA).

## **METHOD**

Descriptive financial ratios were used to measure, describe, analyse, and evaluate the financial health condition of three state-owned palm oil enterprises under Ministry of Agriculture: PT. Perkebunan Nusantara I (PTPN I), PT. Perkebunan Nusantara III (PTPN III), and Perkebunan Nusantara IV (PTPN IV), because those companies are state-owned enterprises in non-financial services which qualified in the decree of Ministry of State Owned Enterprises No. KEP-100/MBU/2002 about financial health assessment of SOEs. All variables used are ratio measurement scales were taken from the decree. The data were collected from their Annual Report (audited) between 2011 and 2015. Additionally, this decree was used to validate the financial health condition level of those enterprises whether in the level of: very healthy level (AAA, AA, A), or healthy level (BBB, BB, B), or unhealthy level (CCC, CC, C).

The level of financial assessment are divided into very healthy (the highest level of financial literacy), healthy (the middle level of financial literacy), and unhealthy (the lowest level of financial literacy). In the highest category, there are three types of levels such as AAA (if the total score is more than 95 points), AA (if the total score is more than 80 and less than 95), and A (if the total score is more than 65 and less than 80). In the middle category, there are three types of levels such as BBB (if it is more than 50 and less than 65), BB (if it is more than 40 and less than 50), and B (if it is more than 30 and less than 40). In the lowest category, there are three types of levels such as CCC (if it is more than 20 and less than 30), CC (if it is more than 10 and less than 20), and C (if it is less than 10).

The selection of the Financial Ratio Analysis (FRA) method for this study is motivated by the researchers' knowledge due to limited literature review on oil palm industry in Indonesia. In addition, financial ratios can be used to identify a company's specific strengths and weaknesses as well as providing detailed information about company profitability, liquidity, activity and solvency (Hempel *et al*, 1994; Dietrich, 1996). Although accounting data in financial statements is subject to manipulation and financial statements are backward looking, they are the only detailed information available on the company's overall activities (Sinkey, 2002). Furthermore, they are the only source of information for evaluating management's potential to generate satisfactory returns in the future (Mabwe Kumbirai, Robert Webb, 2010).

## **THE VARIABLES AND WEIGHT SCORE**

**Table 2.** List of Assessment Score

Indicators	Weight Score
ROE	20
ROI	15
Cash Ratio	5
Current Ratio	5
Collection Period	5
Inventory Turnover	5
Total Asset Turnover	5
Total Equity to Total Asset	10
Total weight score	<b>70</b>

**Source:** The decree of Ministry of SOE No. KEP 100/MBU/2002

### Profitability Performance

The profitability is the most common measure for company's financial performance. Profitability is measured using the following criteria:

$$\text{Return on Equity (ROE)} = (\text{Net Income} / \text{Shareholders' Equity}) \times 100 \%$$

Return on equity is an important ratio for investors to consider its profits. ROE measures how efficiently a company can use the money from shareholders to generate profits and grow the company (Anthony, 2011).

**Table 3.** List of ROE Assessment Score

ROE (%)	Score
15 < ROE	20
13 < ROE ≤ 15	18
11 < ROE ≤ 13	16
9,0 < ROE ≤ 11	14
7,9 < ROE ≤ 9	12
6,6 < ROE ≤ 7,9	10
5,3 < ROE ≤ 6,6	8,5
4,0 < ROE ≤ 5,3	7
2,5 < ROE ≤ 4	5,5
1,0 < ROE ≤ 2,5	4
0 < ROE ≤ 1	2
ROE < 0	0

**Source:** The decree of Ministry of SOE No. KEP-100/MBU/2002

Return on investment is a profitability ratio that calculates the profits of an investment as a percentage of the original cost.

**Table 4.** List of ROI Assessment Score

	ROI (%)	Score
18	< ROI	15
15	< ROI ≤ 18	13,5
13	< ROI ≤ 15	12
12	< ROI ≤ 13	10,5
10,5	< ROI ≤ 12	9
9	< ROI ≤ 10,5	7,5
7	< ROI ≤ 9	6
5	< ROI ≤ 7	5
3	< ROI ≤ 5	4
1	< ROI ≤ 3	3
0	< ROI ≤ 1	2
	ROI < 0	1

**Source:** The decree of Ministry of SOE No. KEP-100/MBU/2002

### Liquidity Performance

$$\text{Cash Ratio} = (\text{Cash} + \text{cash equivalents} / \text{Current Liabilities}) \times 100 \%$$

It measures the company ability to pay its short-term debt. If the company has cash ratio equal to one, it indicate that company has the same amount of cash and its debt. If the value of cash ratio is more than 1, it indicates that company has more cash to pay its debt. However, if the value is less than 1, it indicates that company has less cash to pay its debt.

$$\text{Current ratio} = (\text{Current Asset} / \text{Current Liabilities}) \times 100 \%$$

It measures the company ability to repay its current liability with current asset. If the company has current ratio below 1, it indicates that company has problem with its short-term debt. If the company has too high current ratio, it indicates that company has problem in managing their current asset.

**Table 5.** List of Cash Ratio Assessment Score

	Cash Ratio = x (%)	Score
	x > = 35	5
25	<= x < 35	4
15	<= x < 25	3
10	<= x < 15	2
5	<= x < 10	1
0	<= x < 5	0

**Source:** The decree of Ministry of SOE No. KEP-100/MBU/2002

**Table 6.** List of Current Ratio Assessment Score

Cash Ratio = x (%)	Score
125 ≤ x	5
110 ≤ x < 125	4
100 ≤ x < 110	3
95 ≤ x < 100	2
90 ≤ x < 95	1
x < 90	0

**Source:** The decree of Ministry of SOE No. KEP-100/MBU/2002

$$\text{Collection Period} = (\text{Average Accounts Receivables}/\text{Sales Revenue}) \times 365 \text{ days}$$

This ratio is an important indicator for company to monitor their cash flow and the company ability to pay its debt in due date.

**Table 7.** List of Inventory Turn-over Assessment Score

Inventory Turnover = x (days)	Adjustment (days)	Score
x ≤ 60	30 < x	5
60 < x ≤ 90	30 < x ≤ 35	4,5
90 < x ≤ 120	25 < x ≤ 30	4
120 < x ≤ 150	20 < x ≤ 25	3,5
150 < x ≤ 180	15 < x ≤ 20	3
180 < x ≤ 210	10 < x ≤ 15	2,4
210 < x ≤ 240	6 < x ≤ 10	1,8
240 < x ≤ 270	3 < x ≤ 6	1,2
270 < x ≤ 300	1 < x ≤ 3	0,6
300 < x	0 < x ≤ 1	0

**Source:** The decree of Ministry of SOE No. KEP-100/MBU/2002.

### Activity Ratio

$$\text{Inventory Turnover} = \text{Cost of goods sold}/\text{Average Inventory}$$

This ratio measures how many time the inventory are being sold over a period of time.

**Table 8.** List of Inventory Turn-over Assessment Score

Inventory Turnover = x (days)	Adjustment (days)	Score
x ≤ 60	30 < x	5
60 < x ≤ 90	30 < x ≤ 35	4,5



90 < x <= 120	25 < x <= 30	4
120 < x <= 150	20 < x <= 25	3,5
150 < x <= 180	15 < x <= 20	3
180 < x <= 210	10 < x <= 15	2,4
210 < x <= 240	6 < x <= 10	1,8
240 < x <= 270	3 < x <= 6	1,2
270 < x <= 300	1 < x <= 3	0,6
300 < x	0 < x <= 1	0

**Source:** The decree of Ministry of SOE No. KEP-100/MBU/2002

Total Asset Turn Over= (Revenue/Capital Employed) x 100 %

This ratio measures the company ability to measure the efficiency to use its asset to generate sales.

**Table 9.** List of Total Asset Turn-over Assessment Score

TATO = x (%)	Adjustment = x (%)	Score
120 < x	20 < x	5
105 < x <= 120	15 < x <= 20	4,5
90 < x <= 105	10 < x <= 15	4
75 < x <= 90	5 < x <= 10	3,5
60 < x <= 75	0 < x <= 5	3
40 < x <= 60	x <= 0	2,5
20 < x <= 40	x < 0	2
x <= 20	x < 0	1,5

**Source:** The decree of Ministry of SOE No. KEP-100/MBU/2002.

### Solvency ratio

Total equity to total asset= (Total equity/Total asset) x 100 %

This ratio is similar with debt to equity ratio. If the company has less value, it indicates that company funding its asset inefficiently. In the other words, company has very low net value for investor.

**Table 10.** List of Solvency Assessment Score

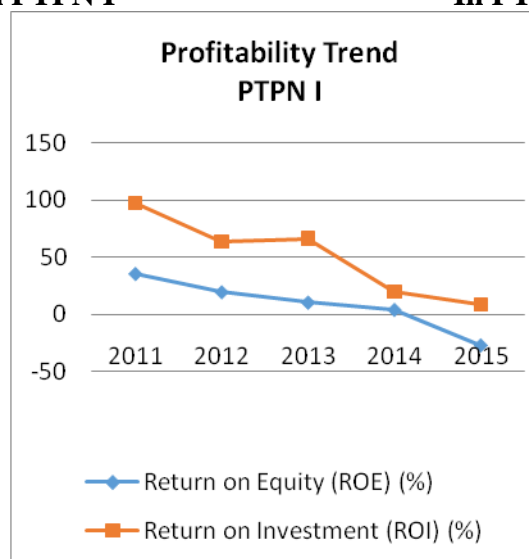
Total Equity to Total Asset (%) = x	Score
x < 0	0
0 <= x < 10	4
10 <= x < 20	6
20 <= x < 30	7,25
30 <= x < 40	10
40 <= x < 50	9
50 <= x < 60	8,5
60 <= x < 70	8
70 <= x < 80	7,5
80 <= x < 90	7
90 <= x < 100	6,5

**Source:** The decree of Ministry of SOE No. KEP-100/MBU/2002

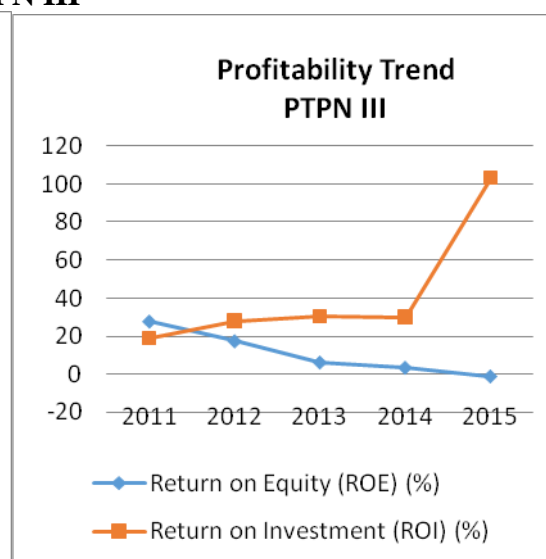
## RESULTS AND DISCUSSION

### PROFITABILITY ANALYSIS

**Figure 1: Profitability Trend In PTPN I**



**Figure 2: Profitability Trend In PTPN III**



**Figure 3: Profitability Trend In PTPN IV**

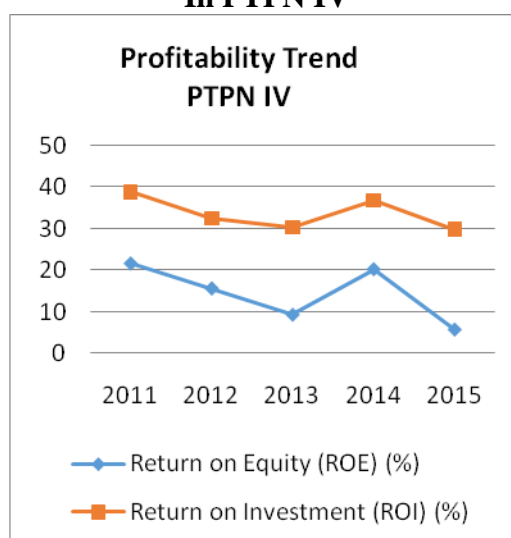


Figure 1 gives information about the return of investment and return on equity of PTPN I between 2011 and 2015. Overall, table 11 below shows that the percentage of ROI decreased sharply, (97.45%, 64.06%, 66.45%, 19.50%, and 8.63%, respectively). The minimum standard of Decree is 18% for ROI, therefore only in the year 2015 below the standard. Table 11 also shows that the percentages of ROE also decreased significantly (35.15%, 19.12%, 10%, 3.58%, -27.55%, respectively). The minimum standard of Decree is 15% for ROE, therefore for the last three years were below the standard. There was a dramatic decrease both for ROI and ROE percentages, especially for the last two years.

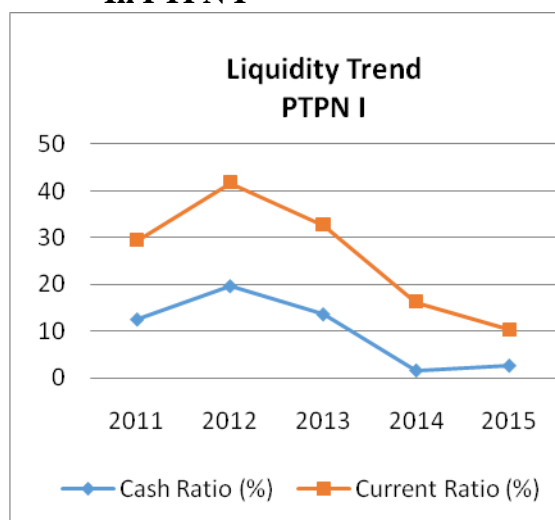
Figure 2 gives information about the return of investment and return on equity of PTPN III between 2011 and 2015. Overall, table 13 shows that the percentage of ROI increased sharply, (19.3%, 27.96%, 30.38%, 30.13%, and 103.04%, respectively). Table 13 shows the percentage of ROE decreased significantly (27.95%, 17.43%, 8.5%, 3.34%, -1.13%, respectively). There was a dramatic increase for ROI percentage, while ROE percentage decreased sharply, even negative in the last year, 2015.

Figure 3 shows information about the return of investment (ROI) and return on equity (ROE) of PTPN IV between 2011 and 2015. Overall, table 15 shows that the percentage of ROI decreased (38.86%, 32.58%, 30.32%, 36.81%, and 29.85%, respectively). The percentage of ROE fluctuated, and decreased significantly in 2015. The percentages of ROE as follows: 21.69%, 15.66%, 9.28%, 20.30%, 5.70%, respectively.

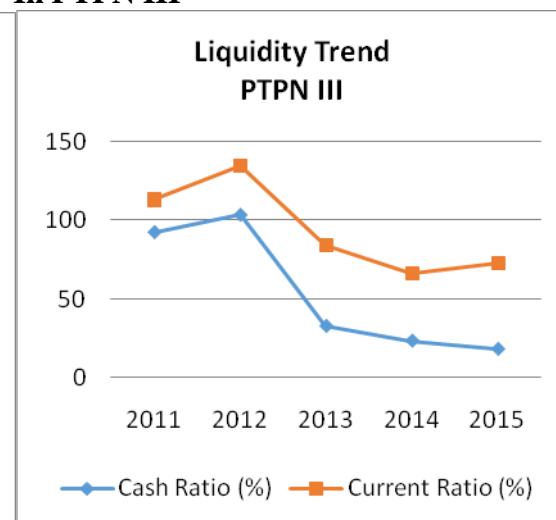
### LIQUIDITY ANALYSIS

Figure 4 gives information about the liquidity performance in PTPN I between 2011 and 2015. Overall, table 11 shows that there was a significant decrease in the percentage of cash ratio and current ratio, and both ratios showed that PTPN I was in illiquid situation, all ratios were below 100%. The company had financial problem in the short term. The table 11 also shows that the percentages of cash ratios fluctuated and were very poor (12.54%, 19.68%, 13.64%, 1.59%, 2.62%, respectively). The percentages of current ratios were also very poor, which were far below the standard of liquidity (29.46%, 41.74%, 32.68%, 16.26%, 10.34%, respectively).

**Figure 4: Liquidity Trend Figure In PTPN I**



**Figure 5: Liquidity Trend In PTPN III**



**Figure 6: Liquidity Trend In PTPN IV**

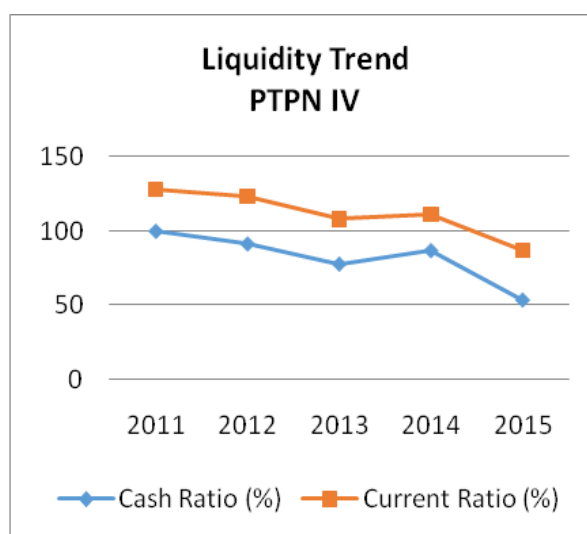


Figure 5 gives information about the liquidity performance in PTPN III between 2011 and 2015. Overall, table 13 shows that there was a significant decrease in the percentage of cash ratio and current ratio, especially in the last two years. Both ratios showed that in 2011 and 2012 the company was liquid, but in the last three years the company was illiquid. The percentages of cash ratios fluctuated, and was very poor in the last three years (92.98%, 104.02%, 33.11%, 23.69%, 18.46%, respectively). Table 13 shows the same situation with the percentages of current ratios, which was below the standard of liquidity in the last three years, 2013, 2014, and 2015 (113.12%, 134.45%, 84.17%, 66.28%, 72.70%, respectively).

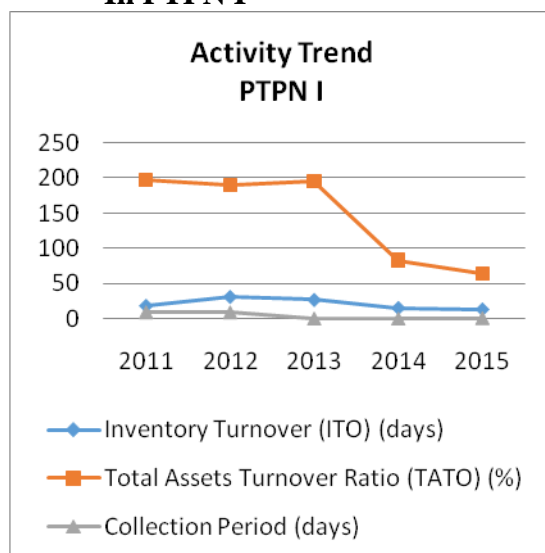
Figure 6 gives information about the liquidity performance in PTPN IV between 2011 and 2015. Overall, table 15 shows that there was an insignificant decrease in the percentage of cash ratio and current ratio, and both ratios showed that PTPN IV was in liquid situation, all ratios were close to 100%. The company had no financial problem in the short term. The percentages of cash ratios decreased insignificantly (100.13%, 91.58%, 77.99%, 87.07%, 53.65%, respectively). The same situation with the percentages of current ratios, which were decreased insignificantly, but the ratios were close to 100%, therefore the company was liquid (127.52%, 123.01%, 107.84%, 110.92%, 87.09%, respectively).

## ACTIVITY ANALYSIS

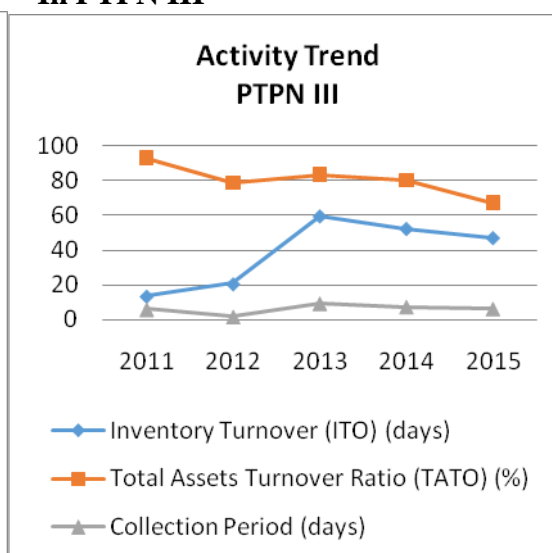
Figure 7 gives information about inventory turnover (ITO), total assets turnover (TATO), and collection day's period (CP) for PTPN I between 2011 and 2015. Overall, table 11 shows that there was a significant decrease in the percentage of TATO in the last two years, 83.60% in 2014 and 64.98% in 2015. It means that every US\$ 100 of assets generates sales of US\$ 83.60 in 2014, and decreased to US\$ 64.98 in 2015. But in the first three years, the TATO ratios were very good, 198.25% in 2011, 191.64% in 2012, and 196.46% in 2013. And over-all, there were fluctuated in the day's of collection period and inventory turn over. The number of collection periods decreased slightly from 9.89 days in 2011 to 9.56 days in 2012, and then it decreased significantly to 0.38 days in 2013. Then it increased slightly to 0.44 days in 2014, and followed by 1.19 days in 2015. The sales

value during the five years absolutely high compared with the value of receivable, therefore the day's of collection period were relatively low. The number of days of ITO increased significantly from 18.62 days in 2011 to 31.58 days in 2012. Then, it decreased to 27.30 days in 2013, 15.58 days in 2014, and 13.52 days in 2015. The days of ITO were very good in the last two years.

**Figure 7: Activity Trend Figure In PTPN I**



**Figure 8: Activity Trend In PTPN III**



**Figure 9: Activity Trend In PTPN IV**

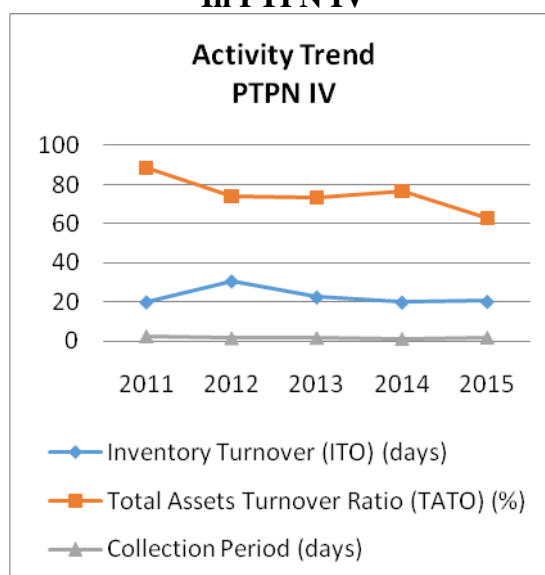


Figure 8 gives information about inventory turnover (ITO), total assets turnover (TATO), and collection day's period (CP) for PTPN III between 2011 and 2015. Overall, table 13 shows that there were fluctuations in the percentages of TATO; 93.16%; 78.81%; 83.39%; 80.22%; and 67.11% respectively from 2011 to 2015. The lowest of TATO was in 2015, which was 67.11%. It means that every US\$ 100 of assets generates sales of US\$ 67.11. Therefore, the higher the TATO the better. And overall, there were fluctuations in the

number of days in collection period and in inventory turn over. The number of collection periods decreased significantly from 5.71 days in 2011 to 1.54 days in 2012, and then it increased significantly to 9.12 days in 2013, and then decreased to 7.19 days in 2013, and 6.11 days in 2015. The sales values during the five years absolutely high compared with the value of receivables, therefore the days of collection period were relatively low. The days of ITO increased significantly from 13.40 days in 2011 to 20.54 days in 2012, and 59.75 days in 2013. And then the ratio decreased to 52.50 days in 2014, and 47.23 days in 2015. Overall, the company was poor in managing their inventory during the last three years.

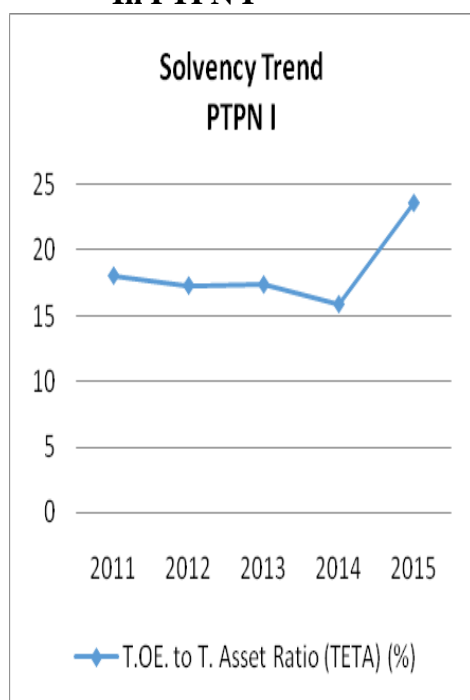
Figure 9 gives information about inventory turnover (ITO), total assets turnover (TATO), and collection day's period (CP) for PTPN IV between 2011 and 2015. Overall, table 15 shows that there were insignificant decrease in the percentage of TATO in the last five years, 88.42%; 74.01%; 73.34%; 76.86%; and 62.91% respectively from 2011 to 2015. The company was very successful in achieving the TATO, although the price of CPO had been decreasing during the years. And overall, there were fluctuated in the days of collection period and inventory turn over. The number of collection periods decreased slightly from 2.56 days in 2011 to 1.63 days in 2012, and then it increased slightly to 1.74 days in 2013. And then the ratio decreased slightly to 1.18 days in 2014, and increased to 1.88 days in 2015. The sales values during the five years absolutely high compared with the value of receivables, therefore the days of collection period were relatively low. The number of days of ITO increased significantly from 20.01 days in 2011 to 30.54 days in 2012. And then decreased to 22.52 days in 2013, 19.88 days in 2014, and 20.23 days in 2015. The days of ITO were very good in the last five years, except in 2012.

## SOLVENCY ANALYSIS

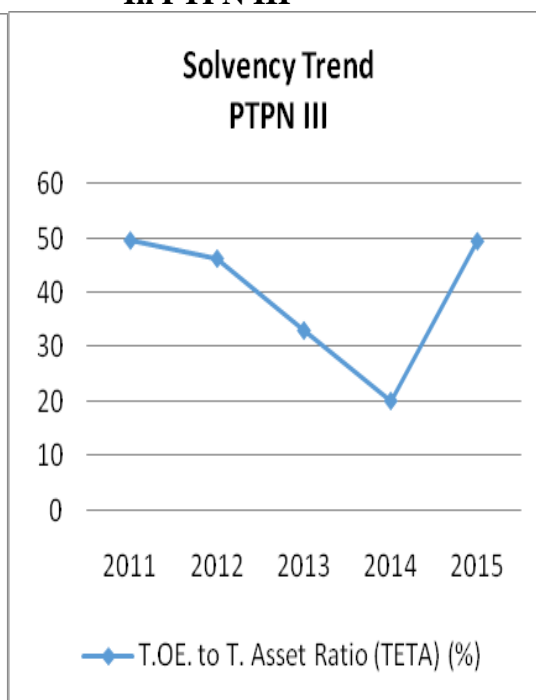
Figure 10 shows the percentage of total equity to total asset in PTPN I between 2011 and 2015. Overall, in table 11, there were fluctuated in the percentage of solvency ratios (18.10%, 17.34%, 17.42%, 15.92%, and 23.66%, respectively). In 2011, the percentage was 18.10% and then it increased to 23.66% in 2015. It means that in 2011, only 18.10% of the total assets were financed by owner's equity, and in 2015, only 23.66%, or in other words, the amount of debt is smaller than the total owner's equity. PTPN I is insolvent conditions during the five years, the TETA ratios were below the safe limit of 50%, therefore, it had financial problem in the long run.

Figure 11 shows the percentage of total equity to total asset in PTPN III between 2011 and 2015. Overall, in table 13, there were fluctuated in the percentage of solvency ratios or TETA ratios (49.62%, 46.30%, 33.10%, 20.16%, and 49.50%, respectively). In 2011, the percentage was 49.62, in 2012 was 46.30%, and in 2015 it was 49.50%. The ratios were to close to the safe limit of 50%. It means that in the three years the company was in solvent condition. Unfortunately, the ratios of 2013 and 2014 decreased sharply to 33.10% and 20.16% respectively. The TETA ratios were below the safe limit of 50%, therefore, it had financial problem in the long run.

**Figure 10: Solvency Trend In PTPN I**



**Figure 11: Solvency Trend In PTPN III**



**Figure 12: Solvency Trend In PTPN IV**

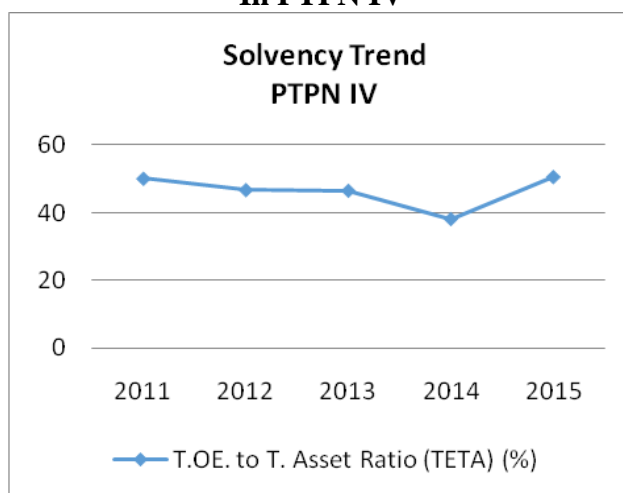


Figure 12 shows the percentage of total equity to total asset in PTPN IV between 2011 and 2015. Overall, in the table 15, there were fluctuated in the percentage of solvency ratios, or TETA ratios (50.11%, 46.76%, 46.56%, 38.23%, and 50.61%, respectively). The company had good solvency ratios, represented by TETA ratios. All ratios during five years were about the safe limit of 50%, except in 2014 was only 38.23%. It means that the company had been successfully maintaining its ability to repay its long-term debt, except in 2014.

**VALIDATION TESTING**

To examine the level of financial assessment for the three enterprises under Indonesia Ministry of Agriculture, for the periods of 2011-2015, the decree of Ministry of State Owned Enterprises No. KEP-100/MBU/2002 is employed to test the validation. Table 11 shows the test results for PTPN I during 2011 to 2015. Overall, there was a decrease sharply in the total score during 2011 to 2015 (52.80; 55.30; 46.00; 33.00; and 19.25). Next, the total score converted to the total weight with the calculation formula, which is total score/weight multiplied by 100, and the result is shown in table 12. During the first three years, 2011 to 2013, the weight scores were 52.80; 55.30; 46.00 with level of A; A; and A respectively, and considered as very healthy financial condition. But for the last two years, in 2014 and 2015, the weight scores were 33.00 and 19.25 respectively; with levels of BB (healthy), and CCC (unhealthy).

**Table 11.** Test Results for PT. Perkebunan Nusantara I

Indicators	2015		2014		2013		2012		2011	
	Ratio	Score	Ratio	Score	Ratio	Score	Ratio	Score	Ratio	Score
Roe	- 27.55	0	3.58	5.5	10	14	19.12	20	35.15	20
Roi	8.63	6.0	19.50	15	66.45	15	64.06	15	97.45	15
Cash Ratio	2.62	0	1.59	0	13.64	2	19.68	3.0	12.54	2
Current Ratio	10.34	0	16.26	0	32.68	0	41.74	0	29.46	0
Collection Period	1.19	0.6	0.44	0	0.38	0	9.56	1.80	9.89	1.80
Inventory Turnover	13.52	2.4	15.58	3.0	27.30	4.0	31.58	4.50	18.62	3.0
Tato	64.98	3.0	83.60	3.50	196.46	5.0	191.64	5.0	198.25	5.0
Total Equity To Total Asset	23.66	7.25	15.92	6.0	17.42	6.0	17.34	6.0	18.10	6.0
Total		19.25	Total	33.00	Total	46.00	Total	55.30	Total	52.80

**Table 12.** Summary of Test Results for PT. Perkebunan Nusantara I

Years	Total Score	Weight	Total Weight	Value	Level	Category
2015	19.25	70	27.50	20<TS<=30	CCC	Unhealthy
2014	33.00	70	47.14	40<TS<50	BB	Healthy
2013	46.00	70	65.71	65<TS<=80	A	Very Healthy
2012	55.30	70	79.00	65<TS<=80	A	Very Healthy
2011	52.80	70	75.43	65<TS<=80	A	Very Healthy

Table 13 shows the test results for PTPN III during 2011 to 2015. Overall, there was a decrease slightly in the total score during 2011 to 2015 (60.60; 61.60; 47.80; 41.05; and 36.80). Next, the total score converted to the total weight with the calculation formula, which is total score/weight multiplied by 100, and the result is shown in table 14. During the first three years, 2011 to 2013, the weight scores were 60.60; 61.60; and 41,05 with level of A; AA; and A respectively, and considered as very healthy financial condition. But for the last two years, in 2014 and 2015, the weight scores were 41.05 and 36.80; with levels of BBB (healthy) respectively.



**Table 13.** Test Results for PTP Nusantara III

Indicators	2015		2014		2013		2012		2011	
	Ratio	Score	Ratio	Score	Ratio	Score	Ratio	Score	Ratio	Score
Roe	-1.13	0	3.34	5.50	6.12	8.5	17.43	20.00	27.95	20.00
Roi	103.04	15.00	30.13	15.00	30.38	15	27.96	15.00	19.03	15.00
Cash Ratio	18.46	3.00	23.69	3.00	33.11	4	104.02	5.00	92.98	5.00
Current Ratio	72.70	0	66.28	0	84.17	0	134.45	5.00	113.12	4.00
Collection Period	6.11	1.8	7.19	1.80	9.12	18.00	1.54	0.60	5.71	1.20
Inventory Turnover	47.23	5.0	52.50	5.00	59.75	5.0	20.54	3.50	13.40	2.40
Tato	67.11	3.0	80.22	3.50	83.39	3.50	78.81	3.50	93.16	4.00
Total Equity To Total Asset	49.50	9.00	20.16	7.25	33.10	10.00	46.30	9.00	49.62	9.00
	Total	36.80	Total	41.05	Total	47.80	Total	61.60	Total	60.60

**Table 14.** Summary of Test Results for PTP Nusantara III

Years	Total Score	Weight	Total Weight	Value	Level	Category
2015	36.80	70	52.57	50<TS<=65	BBB	Healthy
2014	41.05	70	58.64	50<TS<=65	BBB	Healthy
2013	47.80	70	68.29	65<TS<=80	A	Very Healthy
2012	61.60	70	88.00	80<TS<=95	AA	Very Healthy
2011	60.60	70	86.57	65<TS<=80	A	Very Healthy

Table 15 shows the test results for PTPN IV during 2011 to 2015. Overall, there was a decrease slightly in the total score during 2011 to 2015 (61.10; 61.60; 53.10; 61.10; and 44.10). Next, the total score converted to the total weight with the calculation formula, which is total score/weight multiplied by 100, and the result is shown in table 16. During the first four years, 2011 to 2014, the weight scores were 61.10; 61.60; 53.10, and 61.10 with level of AA; AA; A and AA respectively, and considered as very healthy financial condition. But for 2015, the weight score was only 44.10; with level of BB (healthy).

**Table 15.** Test Results for PTP Nusantara IV

Indicators	2015		2014		2013		2012		2011	
	Ratio	Score	Ratio	Score	Ratio	Score	Ratio	Score	Ratio	Score
Roe	5.70	8.5	20.30	20	9.28	14	15.66	20	21.69	20
Roi	29.85	15	36.81	15	30.32	15	32.58	15	38.86	15
Cash Ratio	53.65	5	87.07	5	77.99	5	91.58	5	100.13	5
Current Ratio	87.09	-	110.92	4	107.84	3	123.01	4	127.52	5
Collection Period	1.88	0.6	1.18	0.6	1.74	0.6	1.63	0.6	2.56	0.6
Inventory Turnover	20.23	3.5	19.88	3.0	22.52	3.5	30.54	4.5	20.01	3.5
Tato	62.91	3	76.86	3.5	73.34	3.0	74.01	3.0	88.42	3.5
Total Equity To Total Asset	50,61	8.5	38.23	10.0	46.56	9	46.76	9	50.11	8.5
	Total	44.10	Total	61.10	Total	53.10	Total	61.10	Total	61.10

**Table 16.** Summary of Test Results for PTP Nusantara IV

Years	Total Score	Weight	Total Weight	Value	Level	Category
2015	44.10	70	63.00	50<TS<=65	BB	Healthy
2014	61.10	70	87.29	80<TS<=95	AA	Very Healthy
2013	53.10	70	75.86	65<TS<=80	A	Very Healthy
2012	61.10	70	87.29	80<TS<=95	AA	Very Healthy
2011	61.10	70	87.29	80<TS<=95	AA	Very Healthy

## LIMITATION

This study has expanded the literature about financial evaluation in the real working world. In near future, it is suggested to carry out a research with many companies from palm oil agro industry to get more generalize result. Since the focus is on only one industry, it is worth to explore it on a wider scale, and find out if different industry yields the same result.

## CONCLUSION AND RECOMMENDATION

The study shows the financial performance of palm oil agro- industry between 2011 and 2015. Based on the decree of Ministry of SOEs No. KEP-100/MBU/2002 about financial health assessment of SOEs, the study concerns about four classification of ratios measurement that includes liquidity, solvency, profitability and activity ratios. The outcome shows that PTPN I and PTPN III experienced decreasing financial performance in the last two years, but PTPN IV only in the last year, 2015. This was caused by the decreasing of CPO price during the last three years in the global market. The result shows that during the five years period, 2011 to 2015, the enterprises have achieved health condition levels and rating as follows: PTPN I (A,A,A,BB,CCC); PTPN III (A,AA,A,BBB,BBB); and PTPN IV (AA,AA,A,AA,BBB). Health levels: A is very healthy; B is healthy; and C is unhealthy. Therefore, the first rating rank was PTPN IV, followed by PTPN III, and PTPN I. This study has added the knowledge in the financial literature. It also gives a strong insight for managers in palm oil agro industry about the financial performance. Therefore, the managers can make a better decision with the purpose to increase the market share and the profitability.

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