

Financial Ratio Analysis to Predict Financial Distress at PT. Perkebunan Nusantara IV (Persero) Medan

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Abstract:

This study is entitled "Financial Ratio Analysis to Predict Financial Distress Conditions at PT. Perkebunan Nusantara IV (Persero) Medan". This study aims to analyze the ratio of leverage (Debt to equity ratio), liquidity (Current ratio) and profitability (Return on Assets) to predict financial distress at PT. Perkebunan Nusantara IV (Persero) Medan during the 2017-2019 period. This research was conducted using descriptive method with the employment of secondary data. This study also aims to determine the level of financial performance of SOEs (BUMN) based on the Decree of the Minister of State-Owned Enterprises No: KEP-100/MBU/2002 concerning the assessment of the financial health of SOEs. This study used several ratio indicators, namely, Return on equity, Return on investment, Cash ratio, Collection period, Inventory turnover, Total assets turnover, and Total equity to total assets. Based on the results, PT. Perkebunan Nusantara IV (Persero) Medan obtained the health level of BB (Less Healthy). The results also showed that the leverage, liquidity and profitability ratio variables could predict financial distress at PT. Perkebunan Nusantara IV (Persero) Medan.

Keywords:

Financial ratio; financial distress

I. Introduction

Reports have an important role in an organization because there is the relationship between superiors and subordinates which is a part of the success of the organization. With the well-established relationship between individuals in an organization, it would be able to realize a delegation of authority system and the accountability would be carried out effectively and efficiently. State-Owned Enterprises (BUMN) are business entities whose ownership is held by the state. They are one of the economic actors in Indonesia with their own characteristics as a business entity that carries out economic functions as well as an agent of development. With their independence, SOEs make every effort to achieve the best results with business strategies and professional performance improvements in their fields.

PT. Perkebunan Nusantara IV Medan is a State-Owned Enterprise engaged in the agribusiness and agro-industry. PTPN IV operates the plantations and processing of oil palm and tea commodities which includes area and plant management, nursery, and other supporting activities. In its activities, the company is very dependent on various resources that must be managed properly to produce goods and services with high quality.

The large number of SOEs and private parties engaged in the same field, resulted in the level of financial health of the company being unstable which could result in its bankruptcy. The risk of bankruptcy for the company could actually be seen and measured by analyzing the financial statements issued by the company. The results of the analysis of financial statements would also provide information about the weaknesses and strengths of the company. In this case, the

competition between companies in Indonesia has been increasing after being hit by crisis for several years.

In order to find out the development of State-Owned Enterprises, the SOE's financial performance assessment system is regulated based on the Decree of the Minister of State-Owned Enterprises No: KEP-100/MBU/2002 concerning the assessment of the financial health level of SOEs, which could reflect the condition of the company's financial health.

Financial statements issued by the company's performance as well as changes in the company's financial position are very useful to support the right decision making. However, financial data must be converted into information that is useful in making economic decisions. This is achieved by conducting analysis in the form of financial ratios. One form of research that uses financial ratios is research related to the benefits of financial statements for the purpose of predicting company performance such as bankruptcy and financial distress.

The limitation occurring at PT. Perkebunan Nusantara IV (Persero) Medan at that time was the absence of a financial data collection information system that could support the performance of business processes that occur within the organization, especially in the field of accounting data processing and financial statement presentation. Based on the background that has been described above, the author raised "Financial Ratio Analysis to Predict Financial Distress Conditions at PT. Perkebunan Nusantara IV (Persero) Medan" as the title of this study.

II. Review of Literature

2.1 Analysis of Accounting Information System

Accounting information system (AIS) is a framework for coordinating resources (data, materials, equipment, suppliers, personal, and funds) to convert inputs in the form of economic data into outputs in the form of financial information that is used to carry out the activities of an entity and provide accounting information for the necessary parties. Transactions allow companies to carry out operations, maintain up-to-date records and archives, and reflect its organizational activities (Dwi Fitri Khasanah; 2013: 1).

Accounting information system is responsible for reporting the results of the company's operations to interested parties. Thus, the field of accounting information system study is related to both management and financial accounting. The accounting information referred to in this text is not only limited to financial statements published for external parties. The provision of information could not be separated from data, namely numbers or raw facts, which have not been processed, and would be processed into information. Information is data that has been processed and has meaning and benefits for its users (Indra Bastian; 2012: 208).

Various techniques and methods could be used to make it easier for users of financial statements to understand them and to assess the financial condition and progress that occurred during a financial period. The analytical technique that becomes the main focus in conducting financial statement analysis is ratio analysis. Several types of this analysis include:

1. Leverage ratio

Leverage ratio shows how much debt the company has in both short and long term. The decision to take funding from third parties is in the hands of the agent.

However, if the total debt owned by the company is too large, it is necessary to further review the agent's performance in managing the company.

$$DER = \frac{\text{Total Debt}}{\text{Total Capital}}$$

2. Liquidity ratio

Liquidity ratio shows the company's ability to pay off its short-term debt. Accounts payable decisions are in the hands of the agent. The company's current debt is the result of the agent's past decision to do third party funding. If a company has too much debt, then one day the company would have higher liabilities to pay off.

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

3. Profitability ratio

Profitability ratio shows the ability of a company to make a profit. If a company generates high profits, it could be said that the agent is successful in managing the company.

$$ROE = \frac{\text{Net Profit}}{\text{Total Assets}}$$

2.2. Financial Distress

Financial distress is the stage of declining financial conditions that occurred before a company experience bankruptcy or liquidation. Financial distress states a condition in which the company's operating cash flow is inadequate to pay off the company's current liabilities such as tradeor interest debt. Thus, the company is forced to take corrective action. Luciana's research (2006) illustrates that financial distress is a condition in which a company is experiencing negative net profit for several years in a row. Meanwhile, research conducted by Luciana (2006) defines financial distress as a condition in which a company is delisted due to negative net income and book value of equity in a row and the company has demerged. The main predictors of financial distress leading to bankruptcy and the direction of its influence on the probability of failure could be structured as follows:

1. Losses,
2. Debt,
3. Company's age,
4. Company's size,
5. Legal status,
6. Corporate shareholder,
7. Number of creditors,
8. Diversification,
9. The industrial sector could determine the company's access to finance, the business cycle effect. (Srikalimah; 2017: 46).

Based on the Decree of the Minister of SOEs NO: KEP-100/MBU/2002, the financial health level of SOEs is determined based on the company's performance assessment for the financial year concerned, which includes financial aspects, operational aspects, and administrative aspects. The financial aspect consists of:

1. Assessment of returns on equity (ROE)

Return on equity is a ratio to assess the company's ability to generate profits from shareholder investment which is defined in percentage.

$$ROE = \frac{\text{Revenue After Taxes}}{\text{Equity Capital}} \times 100\%$$

2. Return on investment (ROI)

Return on investment is the profit sharing between EBIT plus depreciation and capital employed. EBIT is earnings before interest and taxes.

$$ROI = \frac{\text{EBIT} + \text{Depreciation}}{\text{Capital Employed}} \times 100\%$$

3. Cash ratio

Cash ratio measures how much cash is available to pay debts. The higher the ratio of cash generated, the greater is the company's ability to pay liabilities that would due.

$$\text{Cash Ratio} = \frac{\text{Cash} + \text{Bank} + \text{Short Term Securities}}{\text{Current Liabilities}} \times 100\%$$

4. Current ration

Current ratiomeasures the availability of current assets that could be immediately cashed in to pay the company's current liabilities. The bigger this ratio, the better the financial condition.

$$\text{Current Ratio} = \frac{\text{Current Asset}}{\text{Current Liabilities}} \times 100\%$$

5. Collection periods (CP)

Collection periodsshow the time it takes for the company to collect receivables in a period of one year or 365 days. The shorter the billing day, the better is the efficiency of the company's CP.

$$CP = \frac{\text{Total Trade Receivables}}{\text{Total Operating Revenue}} \times 365 \text{ hari}$$

6. Inventory Turnover (IT)

Inventory turnover measures the company's effectiveness in managing inventory for one year or 365 days. Generally, the smaller the inventory turnover, the better inventory management is carried out.

$$IT = \frac{\text{Total Inventory}}{\text{Total Operating Revenue}} \times 365 \text{ hari}$$

7. Total Asset Turnover

Total asset turnover measures the level of effectiveness of the company in using its assets to earn income. The bigger the ratio, the better the company is in utilizing its assets.

$$TATO = \frac{\text{Total Revenue}}{\text{Capital Employed}} \times 100\%$$

8. Total Equity Capital to Total Assets Ratio

The ratio of equity capital to total assets (TEC to TA) measures the percentage of equity capital used to fund all company assets. The greater the TEC to TA, the better the company utilizes its assets to generate financing from its own capital.

$$TEC \text{ to } TA = \frac{\text{Total Equity Capital}}{\text{Total Assets}} \times 100\%$$

III. Research Method

3.1. Research Technique

The research technique used was descriptive method. Descriptive is a method that seeks to collect data in accordance with the actual situation, present, and analyze it to provide a fairly clear comparison of the object under study from which conclusions could be drawn.

3.2. Data Collection Technique

In a research study, data collection techniques are an important factor for its success. This relates to how the data are collected, who the source is, and what tools are used. The technique used in this research was the study of documentation (library) by collecting data or supporting theories through journals. The data collection method used was secondary data which was data obtained indirectly. The source of the data in question was the company's data such as the published financial reports accessed through the www.ptpn4.co.id website.

3.3 Data Analysis Technique

The technique used in this research was descriptive analysis technique which included collecting, processing, classifying, and interpreting the data to obtain a clear picture of the object under study.

The researcher also used the assessment method according to the Decree of the Minister of State-Owned Enterprises No: KEP-100/MBU/2002 in assessing the level of financial health of PT. Perkebunan Nusantara IV (Persero) Medan.

IV. Results and Discussion

4.1 Financial System Analysis

Financial ratio analysis or financial ratio is an analytical tool used by companies to assess their financial performance based on comparative data of each item contained in financial statements such as Balance Sheet, Loss / Profit, and Cash Flows in a certain period. Financial statements made by the accounting department periodically usually follow the standards set by Financial Accounting Standards (FAS) and is generally applicable.

Analysis of the financial statements of a company to determine the level of profitability (profit) and the level of risk or the financial health level of a company. Financial analysis which includes analysis of financial ratios and analysis of weaknesses and strengths in the financial sector would be very helpful in assessing past management achievements and prospects in the future.

The following is the balance sheet and income statement of PT. Perkebunan Nusantara IV (Persero) Medan from 2017 to 2019.

Table 1. PT. Perkebunan Nusantara IV (Persero) Medan 2017-2019 Balance Sheet

Information	31 December 2017	31 December 2018	31 December 2019
Cash	764.585.535.542	299.567.095.518	298.934.840.147
Net Account Receivables	54.684.556.259	327.583.026.029	58.753.890.010
Net Other Receivables	151.485.955.583	180.692.854.015	224.637.018.019
Inventory	506.227.281.534	507.651.634.497	643.523.001.829
Biological Assets	78.837.927.597	55.775.577.817	87.512.304.113
Prepaid Taxes	420.344.052.084	511.802.123.544	636.155.824.570
Other Current Assets	6.862.701.449	8.350.130.891	15.047.745.861
Total Current Assets	1.983.107.712.314	1.891.422.442.311	1.964.564.657.549
Net Long Term Other Receivables	98.757.231.733	2.213.911.160.803	2.587.052.310.918
Net Stock Investment	181.221.864.276	339.001.864.275	289.459.583.343
Net Deferred Assets	356.726.982.759	275.900.880.982	433.772.381.801
Net Fixed Assets	11.154.383.099.833	11.611.585.005.758	11.719.337.452.908
Net Land Rights Deferred Expense	140.347.982.313	136.668.535.493	130.997.844.677
Net Nursery	42.912.834.992	26.756.652.727	38.994.721.943
Net Other Non-Current Assets	160.771.100.914	179.176.394.264	363.534.401.172
Total Non-Current Assets	12.450.678.302.611	15.139.476.126.934	15.977.234.696.762
Total Assets	14.433.786.014.925	17.030.898.569.245	17.941.799.354.311
Short-term Debt	200.000.000.000	500.000.000.000	750.000.000.000
Account Payable	421.763.418.638	869.683.242.475	559.717.536.864
Other Debt	30.747.311.285	50.878.945.303	239.575.793.020
Customer Advances	205.724.725.754	209.196.724.705	178.831.281.145
Tax Debt	149.023.617.547	72.082.102.610	41.146.112.854
Fees to be paid in advance	460.069.119.936	256.658.651.005	390.493.122.036

Information	31 December 2017	31 December 2018	31 December 2019
Share of unearned revenue	613.636.364	613.636.364	401.481.833
Part of due debt	695.612.519.543	21.252.084.171	347.166.000.000
Total Short-Term Debt	2.188.891.872.103	1.980.365.386.633	2.507.331.327.752
Long-Term Debt	2.779.624.171.493	5.088.741.170.444	5.112.967.447.87
Other long-term payables	8.061.596.159	6.005.582.489	510.640.902.855
Prepaid income	869.318.197	602.181.835	2.733.750.000
Employee benefit liability	2.640.116.192.908	2.201.707.536.461	2.684.508.007.582
Net deferred tax liability	14.134.068.789	15.450.891.151	16.126.312.107
Total Long-Term Debt	5.442.805.347.548	7.312.507.362.380	8.326.976.420.423
Total Liabilities	7.631.697.219.651	9.292.872.749.013	10.834.307.748.175
Total Equity	6.802.088.795.274	7.738.025.820.232	7.107.491.606.136

Source: PT. Perkebunan Nusantara IV (Persero) Medan, 2022

Table 2. PT. Perkebunan Nusantara IV (Persero) Medan 2017-2019 Income Statement

Information	2017	2018	2019
Sale	5.620.786.153.855	5.224.597.530.217	4.753.412.187.519
Cost of goods sold	(3.062.978.359.010)	(3.018.281.450.670)	(3.040.426.647.924)
Gross profit	2.557.807.794.845	2.206.316.079.545	1.712.985.539.595
Gain/loss from changes in fair value of biological assets	-	31.736.726.296	(23.062.349.780)
Marketing expenses	(131.856.928.789)	(1.32.982.758.351)	(120.983.192.002)
General & admin expenses	(1.122.268.321.766)	(907.954.995.758)	(967.072.361.194)
Other operating expenses	(104.825.838.313)	(225.763.631.934)	(154.759.011.593)
Other operating income	122.541.212.296	129.401.973.322	205.974.095.655
Operating profit	1.321.397.918.273	1.045.954.317.044	707.881.796.757
Profit before income tax	1.050.551.647.622	790.591.301.882	301.273.048.420
Income tax expense	(307.690.908.730)	(307.189.060.517)	(183.871.824.602)
Net profit after tax	742.860.738.892	483.402.241.365	117.401.223.818

Source: PT. Perkebunan Nusantara IV (Persero) Medan, 2022

Financial statement analysis includes a comparison of the company's performance with other companies in the same industry. For evaluation purposes, it was necessary to analyze the financial statements by connecting the elements in the financial statements or often called financial ratio analysis. Based on theresearch, below is the analysis of financial ratios.

Table 3. Financial Ratio Analysis

Ratio	2017	2018	2019
Leverage ratio	112,20	120,09	152,44
Liquidity ratio	90,60	95,51	78,35
Profitability ratio	3,54	2,84	0,65

Source: Data Analysis Result, 2022

To explain each variable descriptively, it was necessary to discuss the condition of each independent variable used as a predictor to predict financial distress in the company.

Table 4. Descriptive Statistics

	N	Minimum	Maximum	Sum	Mean	Std. Deviation
Leverage	3	112,20	152,44	384,73	128,2433	21,32304
Liabilities	3	78,35	95,51	264,46	88,15333	8,83776
Profitability	3	,65	3,54	7,03	2,34333	1,50766
Valid N (listwise)	3					

Source: Data Analysis Result, 2022

Based on Table 4, it could be seen that the leverage variable has a minimum value of 112,20, a maximum value of 152,44, and a mean value of 128,2433 with a standard deviation of 21,32304. The liquidity variable has a minimum value of 78,35, a maximum value of 95,51, and a mean value of 88.15333 with a standard deviation of 8.83776. The profitability variable has a minimum value of 0,65, a maximum value of 3,54, and a mean value of 2,3433 with a standard deviation of 1,50766.

4.2 Financial Distress

Financial distress is the stage of declining financial conditions that occurred before experiencing bankruptcy or liquidation. The conditions that occur in running a business are complex and companies sometimes experience losses. Companies that experience financial distress usually have high interest rates, large debt values, and the inability to face competition.

In assessing the financial health level of SOEs, the determination is based on the Decree of the Minister of State-Owned Enterprises No: KEP-100/MBU/2002. Below is the assessment of the aspect of the financial ratios of PT. Perkebunan Nusantara IV (Persero) Medan.

Table 5. Assessment of the Financial Aspects of PT. Perkebunan Nusantara IV (Persero) Medan

Ratio	2017		2018		2019	
	Ratio	Score	Value	Score	Value	Score
<i>Return on equity</i>	7,52	10	6,24	8,5	1,65	4
<i>Return on investment</i>	12,79	10,5	10,58	9	7,58	6
<i>Cash ratio</i>	34,93	4	15,13	3	11,92	2
<i>Current ratio</i>	90,60	1	95,51	2	78,35	0
<i>Collection periods (day)</i>	3,56	5	22,89	3	15,81	1,8
<i>Inventory turnover (day)</i>	36,42	5	40,45	1,2	49,41	1,8
<i>Total assets turnover</i>	38,58	2	30,58	3,5	28,95	4
<i>Total equity to total assets</i>	47,13	9	45,44	9	39,61	10
Total Score	46,5		39,2		29,6	
Financial Health Level	BB (Less Healthy)		B (Less Healthy)		CCC (Unhealthy)	

Source: Data Analysis Result, 2022

Based on the assessment method, the financial health level of SOEs are classified into:

1. HEALTHY, which consists of:
 - AAA if (TS) is greater than 95
 - AA if $80 < TS \leq 95$
 - A if $65 < TS \leq 80$
2. LESS HEALTHY,
 - BBB if $50 < TS \leq 65$
 - BB if $40 < TS \leq 50$
 - B apabila $30 < TS \leq 40$
3. UNHEALTHY,
 - CCC if $20 < TS \leq 30$
 - CC if $10 < TS \leq 20$
 - C if $TS \leq 10$

Based on Table 4, the calculations of the above indicators show that PT. Perkebunan Nusantara IV (Persero) Medan experienced a decline in the level of health every year. In 2017 the score was 46.5%, in 2018 it was 39.2%, and in 2019 it was 29.6%. This shows that the company was experiencing a decline in term of financial health.

4.3 Discussion

Financial ratio analysis or financial ratio is an analytical tool used by companies to assess financial performance based on financial report data. Based on the results of the analysis above, the followings could be concluded.

a. Leverage Ratio to Financial Distress

Leverage ratio is the ratio used by the company to measure its ability to meet its long-term liabilities such as interest payments on debt. If the company could not pay its existing debts that are greater than the assets owned, the greater the possibility of financial distress to happen if it is not addressed properly. Based on the company's leverage ratio data, it was revealed that in 2017 it was 90,60, 95,51 in 2018, and 78,35 in 2019. This is in line with research by Luciana and Kristijadi (2003) and Imam and Reva (2010). This is not

in line with Widhiari and Merkusiwati (2015), Yuanita (2010), and Mas'ud and Srengga (2012) which stated that liquidity had no effect on predicting financial distress conditions. Based on research conducted by Mas'ud and Srengga (2012), liquidity had no significant effect on financial distress with a significance level of 0,094. This shows that the liquidity variable could not predict the company's financial distress.

b. Liquidity Ratio to Financial Distress

The liquidity ratio is a ratio that shows the company's ability to pay off short-term debt on time. The higher the current ratio, the more capable the company is to meet its current obligations. Based on the data, the company's current ratio in 2017 was 112,20, 120,09 in 2018, and 152,44 in 2019. These numbers show high current ratio, indicating that the company would be far from financial distress.

c. Effect of Profitability on Financial Distress

The company's profitability ratio in 2017 was 3,54,2,84 in 2018, and 0,65 in 2019. This is in line with the research of Andre (2013) and Hapsari (2012) which stated that profitability had a negative effect on financial distress. This profitability ratio is very sensitive to the occurrence of financial distress because the greater the company's ability to generate profits from income related to sales, assets and others, the smaller the occurrence of financial distress in the company.

V. Conclusion

The conclusions drawn based on the discussion on Financial Ratio Analysis to Predict Financial Distress Conditions at PT. Perkebunan Nusantara IV (Persero) Medan are:

1. Financial statement analysis includes a comparison of the company's performance with other companies in the same industry. Thus, for evaluation purposes, it is necessary to analyze the financial statements by connecting the elements in the financial statements or often called financial ratio analysis.
2. The use of Financial Ratios method with its calculations could help companies in assessing their financial performance through the results of the right calculations.
3. Based on the analysis of financial ratios, it was shown that the company had the ability to pay obligations in both short and long term. However, it also showed that the company was unhealthy in the level of SOEs financial health based on the results obtained; in 2017 it obtained a value of 465%, in 2018 it earned 39.2%, and in 2019 it earned 29.6%. This shows that the company was experiencing a decline in term of financial health.

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