



Financial Performance Analysis of Small Plastic Manufacturing Businesses in Indonesia - A Case Study Approach

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Abstract

This case study examines the financial performance of small and medium-sized plastic manufacturing enterprises in Indonesia. The research has a sample size of five companies. The investigation spans seven years, encompassing annual financial statements from January 2016 to December 2022. This case study focuses on analysing the financial performance of Small Plastic Manufacturing Businesses in Indonesia using various financial statement analysis methodologies such as vertical and horizontal ratio analysis, DuPont analysis, Peer Analysis, and hypothesis testing. The case study's findings indicate that business liquidity of few companies is improving generally, but profitability growth is stagnating.

Keywords: Financial performance, Small Plastic Manufacturing Businesses, Indonesia, Peer Analysis, DuPont analysis, Ratio Analysis

1. Introduction

The plastics business extends back to the early twentieth century when synthetic materials like Bakelite and celluloid were produced (Kohli, 2009). However, it was not until the 1950s that the plastic industry began to grow significantly, owing to rising consumer goods demand and the development of new plastic materials and production techniques (Andrady & Neal, 2009).

The plastic industry expanded significantly during the 1960s and 1970s as new applications for plastic materials were found and developed (Andrady & Neal, 2009). Plastic items such as packaging materials, toys, and consumer electronics became more prevalent, as did its usage in construction and automotive applications. According to (Thompson et al., 2009), the plastic sector witnessed immense pressure in the eerie eighties and nineties to solve

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environmental concerns. As per (Statista, 2021), the world plastic sector is currently the dominant contributor to the world economy with a forecasted market size of over USD 600 billion. However, the sector is facing challenges with regulatory compliance, waste management, and sustainability (Jambeck et al., 2015). The economic contribution of the plastic sector to Indonesia has grown significantly, and it is expected to keep expanding in the years to come.

However, despite the industry's substantial contribution to the Indonesian economy, its immense growth has posed many environmental challenges. (Akhmad et al., 2021; Siregar et al., 2020) emphasised in their research the significance of initiating important action to address these issues

To address sustainability concerns, Indonesia's plastic sector is implementing sustainability measures, but at a slower rate than other areas. The Indonesian government has adopted a number of programmes targeted at decreasing plastic waste, including a national action plan for marine debris and a ban on single-use plastic in some cities (World Bank, 2021). Furthermore, there is a growing market demand for eco-friendly and sustainable plastic goods, which is pushing industry innovation towards sustainable materials and manufacturing processes (Varghese et al., 2020; Hidayah et al., 2021). The Indonesian plastic sector has enjoyed enormous development in recent years, but its fast expansion has also resulted in severe environmental issues. There is an urgent need for action towards sustainability, and industry actors must take actions that successfully address these concerns.

2. Literature review

The plastics business has a long history that extends back to the early twentieth century, when synthetic materials such as Bakelite and celluloid were first manufactured (Kohli, 2009). However, it was not until the 1950s that the plastic industry began to enjoy major expansion, driven by rising consumer demand and the development of novel plastic materials and production techniques (Geyer et al., 2017).

The plastic industry expanded fast during the 1960s and 1970s as new applications for plastic materials were found and developed (Geyer et al., 2017). Plastic items such as packaging materials, toys, and consumer electronics became more popular, as did the usage of plastic in building and automotive applications.

Numerous researchers have been studied in recent academic studies. Reis et al. (2018) conducted recommended better waste management practises and regulatory changes to solve the problem. Borup et al. (2017) concluded in their study that innovation plays an important role in the plastics sector

and emphasized the importance of other party support in encouraging and reducing the waste.

According to previous research, Indonesia's plastic sector has grown immensely, (Varghese et al., 2020; Hidayah et al., 2021) explained by various factors including the country's increasing income group, growing modernisation, and encouraging government policies for foreign investment. According to (Varghese et al., 2020) Indonesia's packaging sector has emerged as the industry's biggest growth driver by making up about 70% of Indonesia's total plastic output.

In Indonesia, the fast growth of the plastics sector has created significant environmental problems. According to (Hidayah et al. 2021; Varghese et al. 2020) the countries' eco-environment, marine life, and public health have all been negatively impacted by this. (Siregar et al., 2020; Akhmad et al., 2021) concluded in their research the need for immediate action which requires better waste management systems, improved recycling, and other sustainable ways to single-use plastics.

Financial statement analysis is a significant tool for evaluating companies' health. Many researchers in the past have investigated the financial health of the various companies. (Bashir 1999, 2000, and 2001) conducted research on the financial statements of Islamic banks to find out the affinity between profitability and the banks' other variables and concluded that the debt ratios enhance profitability. Several studies have demonstrated that financial ratio analysis can be an effective technique for anticipating financial trouble or insolvency in a corporation (Altman, 1968; Ohlson, 1980; Zmijewski, 1984). Financial ratios have also been studied for their use in forecasting stock returns (Fama & French, 1992; Jegadeesh & Titman, 1993) and detecting cheap stocks (Graham & Dodd, 1934).

3. Research Methodology

According to the Ministry of MSME Industry in 2017, in Indonesia, at least 925 plastic companies were giving employment to nearly 37,327 people and its total production is 2.68 million tonnes per year. However, the problems and challenges for companies in this industry are countless. The total number of plastic manufacturing firms listed on the Jakarta Stock Exchange (JCI) in 2021 is only 5, and the proportion of market capitalization is around 1.34% of the industry (Indonesia Stock Exchange, 2020).. In Indonesia, around 80 percent of the business are family-owned, especially in the case of the plastic industry. Hence this study suffers from the limitations of data accessibility. The sample size for the research is five companies (four company's data has been collected through personal reference and listed company data is assembled through JCI. The period for the study is 6 years i.e. annual financial statement from January 2016 up to December 2021.

Financial Statement Analysis is mainly concerned with two main issues such as enhancing fundamental analysis and recognizing market inefficiencies regarding financial statement information (Yohn 2020). Fairfield et al. (1996) in his research focused on the significance of the income statement and how disaggregating it into its different parts can provide more useful information. According to (Diansari and Wijaya,2019) financial statements provide both qualitative and quantitative information to assist users to make financial decisions. This case study analyses the firm's financial position to assess the inefficiencies regarding the financial statement presentation and performance. The current research employs descriptive and analytical and descriptive research methods and financial statement tools such as trend analysis, horizontal, vertical analysis, and ratio analysis has been applied to derive a meaningful outcome. Further, t test is used to prove the hypothesis.

4. Results and discussion

To assess the financial position of the plastic firms in Indonesia total of four main firms were selected. In this section, we have first examined the components and then prepared vertical and horizontal and ratio analysis to draw meaningful outcomes. Table 1 demonstrates the vertical and horizontal income statement and focuses on profitability analysis of the firms. According to vertical and horizontal statements, Bima Polyplast is showing consistent profit as compared to the other rivals. The factors influencing the stable income of Bima Polyplast includes less complicated processes, lesser operating cycle, manager's efficiency and long and sustainable customer relationships. PT DJERAPAH MEGAH PLASINDHO should do price benchmarking with BIMA. Though Production is high for PT DJERAPAH MEGAH PLASINDHO when compared with BIMA Polyplast but since the operating cost is high the margin is lesser than BIMA.

INCOME STATEMENT Vertical Analysis (percent) **Horizontal Analysis (percent)** Bima Polyplast (2016-2022) Bima Polyplast (2016-2022) **SALE** -3 -9 -6 -7 **-**10 **COGS** -7 _9 _9 -11 GP 2.8 -3.6 7.1 4.1 2.6 **INT** 2.9 **PBT** -1.8 1.7 4.1 2.6 3.3 TAX 3.7 1.5 7.9 -3.0 2.4 -3 -3.1

-5

-45

2.8

6.8

4.8

3.8

3.9

Table 1: Vertical and Horizontal Income Statement

PAT

				ah M (Per				Pt	Djera		Megal ercent		sindh	10
	16	17	18	19	20	21	22	16	17	18	19	20	21	22
SALES	100	100	100	100	100	100	100	22	34	-10	-12	-11	-12	-10
COGS	90	88	88	82	82	82	81	20	33	-16	-13	-14	-14	- 15
GP	4	7	8	12	11	11	12	11	5.5	3.5	-2	7	-7	-6
INT	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PBT	4	7	8	12	11	11	12	11	8.3	4.5	7	2.6	14	16
TAX	1	3	2	3	3	3	3.4	18	-19	9.7	-3.3	3.2	0	1
PAT	3	4	6	9	8	8	8.6	7.1	11	2.2	-1.6	3%	-7	- 5
	F			ersoed Perce		n		P	t Panc		soeda ercent		Sedja	ıt
	16	17	18	19	20	21	22	16	17	18	19	20	21	22
SALES	100	100	100	100	100	100	100	7	-1 0	-8	- 13	-10	-12	-11
COGS	88	89	89	82	82	82	81	9	-10	-14	-14	-11	-11	-13
GP	10	8	7	13	13	13	11	-9	-18	7	-16	25	5	7
INT	2%	2%	1%	1%	1%	1%	0	-12	-20	<i>-</i> 15	-7	-4	<i>-</i> 5	-4
PBT	8	6	6	12	12	12	10	-10	-19	26	<i>-</i> 5	-8	-25	-22
TAX	0	1	2	3	4	3	3.4	19	6	5	5	28	16	17
PAT	7	5	4	9	9	9	7.6	-19	-33	10	-15	44	15	17
	C	ev Sal		ega P cent)	olind	lo		(Cv Salv	a Me (Perc	_	olindo	O	
	16	17	18	19	20	21	22	16	17	18	19	20	21	22
SALES	100	100	100	100	100	100	100	9	-14	17	-18	0	-9	=10
COGS	91	89	91	86	84	85	86	7	-12	10	-20	<i>-</i> 5	-12	-13
GP	3	5	3	8	9	8	7	6	- 5	2.5	-11	12	6	5
INT	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PBT	3	5	3	8	9	8	7	6	-15	20	-11	12	18	25
TAX	0	0	0	0	0	0	0	18.8	18.3	-9	-10	-10	-10	-9
PAT	3	5	2	8	9	8	7	57	-6	31	-11	15	7	6

Table 2 explain the vertical and horizontal balance sheet of the these firms. BIMA Polyplast is effectively managing the inventory when compared to its rivals. Their cash position is also better, however, they should reduce the receivable period and should invest cash in profitable projects. Pt Djerapah Megah Plasindho should also reduce the receivable period and inventory holding. Pt Panca Bersoedaraan Sedjati is earning better profits with less equity investments. The other nonbusiness receivables and vendor issues should be addressed.

Table 2: Vertical and Horizontal Statement of Financial Position

Statement of Financial Position															
			Vert		nalys			Horizontal Analysis							
		Cv R				Perce	nt)	Cv Bima Polyplast (Percent)							
	16	17	18	19	20	21	22	16	17	18	19	20	21		2
Cash	14	19	12	19	20	20	21	47	-36	84	13	49	31		0
Account												-			
Receivable	30	28	32	24	21	22	23	1	18	-15	-8	-11	-10	-	l1
Other Account Receivable	4	2	1	1	4	2	3	-25	-31	26	24	13	18	1	9
Inventory	14	11	11	14	13	13	12	-11	5	35	5	20	12	1	1
Total Current	61	60	56	57	58	58	59	6	-3	17	7	12	10	1	1
Asset Non-Current	00	40	4.4	40	40	40	44		45	40					
Assets	39	40	44	43	42	42	41	7	15	12	3		8	6	6
Total Asset	100	100	100	100	100	100	100	6	4	15	6	5	10	8	7
Liabilities & Equity															
Account Payable	14	16	17	17	10	14		17	15	11	-36		-12	-24	-22
Long Term Debt	0	0	0	0	0	0	0	0	0	0	0		0	0	0
Other Long- Term Debt	10	3	2	2	1	2	2	-27	-30	0	-32		0	-18	-12
Total Liabilities	24	19	19	19	12	15	13	-17	7	14	-2	26	-11	-23	-21
Equity	53	61	70	65	70	67	65	22	20	7	1	3	10	11	10
Retained Earning	23	20	11	16	19	17	16	-5	-45	60	2	8	41	32	33
Total Liabilities And Equity	100	100	100	100	100	100	100	6	4	15	6	6	10	8	7
											ı				
	16	17	18	19	20	21	22	16	17	18	1	9	20	21	22
				ah M indho	egah			F	Pt Dje	erapah	Meg	ah Pi	asindh	10	
Total Cash	9	10	8	14	11	13	11	24	-10	10		7	47	20	21
Account Receivable	23	31	37	25	15	20	21	42	37	-22	-3	31	-27	-29	-20
Other Account Receivable	12	4	4	8	20	14	15	-66	20	12	2	0	16	18	17
Inventory	18	18	18	15	16	16	15	5	14	-4	2	7	12	20	21
Total Current Asset	63	63	67	62	62	62	61	8	22	6%	1	8	12	15	16
Non-Current Assets	36	37	33	38	38	38	37	7	4	32	1	6	24	20	21

Total Asset	100	100	100	100	100	100	100	7	15	15	17	16	17	16
Liabilities &														
Equity														
Account Payable	29	21	15	7	6	7	6	-23	-14	-45	-7	-26	-17	-14
Long Term					_									
Debt	0	3	2	0	0	0	1	56	-43	-74	0	-37	-18	-17
Other Long	6	3	1	2	3	2	2	-48	-55	81	82	90	94	90
Term Debt	"		'		-			70	00	01	02	30	J7	30
Total Liabilities	35	26	18	9	9	9	7	-19	-22	-40	13	-14	-1	-1
Equity	59	64	64	71	77	74	74	16	15	28	27	27	27	27
Retained														
Earning	6	10	18	19	14	16	15	7.1	10	12	-16	3	-7	6
Total													17	
Liabilities And	100	100	100	100	100	100	100	7	15	15	17	16		18
Equity														
		4-	1.0	4.0				4.0	4-	4.0				
	16	17	18	19	20	21	22	16	17	18	19	20	21	22
	P	t Pan		ersoe Ijati	daraa	an			Pt	Panca	Bersoeda	raan S	edjati	
Total Cash	2	10	10	5	3	4	5	-61	66	23	-38	95	28	95
Account Receivable	28	15	15	14	13	13	14	-58	-20	2	-1	1	0	1
Other Account Receivable	9	8	27	23	25	24	24	-29	1	-9	20	5	12	13
Inventory	29	20	24	16	16	16	18	-46	-2	-27	41	-11	-41	-12
Total Current														
Asset	68	44	68	57	56	57	57	-49	24	-17	30	-10	22	31
Non-Current Assets	32	56	32	43	44	43	43	37	-53	41	43	28	19	28
Total Asset	100	100	100	100	100	100	100	-21	-19	10	7	9	8	9
Liabilities &														
Equity							_							
Account Payable	20	23	19	19	17	18	19	-10	-33	11	-5	3	-1	3
Long Term	Ε0	40	Ε0	04	7	4.4	100	14		F 4	C 4		C1	F-4
Debt	52	40	50	21	7	14	23	-41	2	-54	-64	-59	-61	-51
Other Long	1	1	3	3	3	3	4	-53	17	13	10	20	17	21
Term Debt	ļ .	·					+ -							
Total Liabilities	74	64	71	43	28	35	44	-32	-9	-33	-32	-33	-32	-30
Equity	11	20	15	32	53	43	36	49	-40	13	7	10.5	91	14
Retained Earning	15	16	13	25	19	22	24	-19	-33	10	-15	6	15	44
Total							1							
Liabilities And Equity	100	100	100	100	100	100	100	-21	-19	10	7	9	8	11

	16	17	18	19	20	21	22	16	17	18	19	20	21	22
	(Cv Sa	lva IV	lega	Polino	do		Cv Salva Mega Polindo						
Total Cash	11		12	10	14	12	13	-6	28	-12	72	30	34	35
Account Receivable	22	26	31	27	12	19	29	30	17	-10	-44	-27	-35	-29
Other Account Receivable	1	11	8	1	2	1	2	14	-35	-87	16	34	95	39
Inventory	8	8	8	12	14	13	13	5	-2	55	46	51	48	50
Total Current Asset	42	55	59	49	42	45	46	44	5	-12	5	-4	1	-47
Non-Current Assets	58	45	41	51	58	55	52	-13	-13	33	40	37	38	38
Total Asset	100	100	100	100	100	100	100	11	-3	7	23	15	19	19
Liabilities & Equity														
Account Payable	12	13	11	21	10	16	12	24	-18	101	-41	30	-6	32
Long Term Debt	31	30	31	29	0	14	0	8	0	0	-100	-50	-75	-45
Other Long Term Debt	10	10	11	11	1	6	4	13	1	13	-89	-38	-63	-32
Total Liabilities	53	54	53	62	11	36	10	13	-4	24	-77	-27%	-52%	-22%
Equity	41	37	43	22	77	50	78	0	12	-44	32	14	23	14
Retained Earning	7	9	4	16	11	14	15	57	-56	29	-12	14	64	56
Total Liabilities And Equity	100	100	100	100	100	100	100	11	-3	7	23	15	19	18

Table 3 shows the key financial ratios for all four firms. BIMA Polyplast is more efficient in terms of current asset utilization because its non-business debtors are only 6% and the process is simple and fast. Depreciation is also less since the machines are old and of small value. For Pt Djerapah Megah Plasindho and Pt Panca Bersoedaraan Sedjati, The current assets include long-term investments which are not generating any return that's why the current asset turnover ratio for Pt Djerapah Megah Plasindho and Pt Panca Bersoedaraan Sedjati is poor. Their inventory turnover is high due to high demand and fast production. Asset utilization is very poor Cv Salva Mega Polindo and the factory is struggling to survive the tough competition with rivals. Liquidity is high for all the firms as the ideal ratio should be 5:1, 1:1 and 2:1. Cash position is tight for Pt Panca Bersoedaraan Sedjati Because Of Excessive Loan. For Pt Panca Bersoedaraan Sedjati non business issues are critical that's why the cash crunch is happening. The operating profit ratio and Gross Profit ratio is be used to measure the performance of factory. ROE is better for Pt Panca Bersoedaraan Sedjati due to better profit. Rate of change in capital and rate of change in profit is higher for Pt Panca Bersoedaraan

Sedjati. However, ROA is better for BIMA Polyplast. ROCE is also better for Pt Panca Bersoedaraan Sedjati and BIMA Polyplast. Cv Salva Mega Polindo is more volatile due to inconsistent profit and cost management. Pt Panca Bersoedaraan Sedjati is overall better with respect to profitability.

Table 3: Key Financial Ratio Analysis

DETAILS											
	C	V BIMA	POLYPLAS	Т							
	2016	2017	2018	2019	2020	2021	2022				
Current Ratio	2.5	3.2	2.9	3	5	4	4				
Quick Ratio	2	2.6	2.3	2.3	3.8	3.1	3.3				
Total Debt Ratio	0.2	0.2	0.2	0.2	0.1	0.2	1.2				
Debt To Equity Ratio	0.3	0.2	0.2	0.2	0.1	0.2	1.2				
Inventory Turn Over	39.2	39.1	45.2	38.6	29.8	34.2	39.6				
Days Sales In Inventory	9.3	9.3	8.1	9.5	12.2	10.9	10.5				
Ar Turnover	20.2	19.3	19.2	19.9	21.2	20.6	20.9				
Average Collection Period	18.1	18.9	19	18.3	17.2	17.8	19.3				
Profit Margin	6%	8%	5%	5%	7%	6%	1.05				
Return On Asset (ROA)	36%	43%	31%	27%	34%	30%	1.27				
Return On Equity	47%	55%	38%	33%	41%	37%	1.33				
PT DJERAPAH MEGAH PLASINDHO											
	2016	2017	2018	2019	2020	2021	2022				
Current Ratio	1.8	2.4	3.72	6.61	6.92	6.76	7.61				
Quick Ratio	1.27	1.71	2.72	5	5.09	5.04	6				
Total Debt Ratio	0.35	0.26	0.18	0.09	0.09	0.09	1.09				
Debt To Equity Ratio	0.54	0.36	0.22	0.1	0.1	0.1	1.1				
Inventory Turn Over	22.5	22.35	25.99	26.25	20.12	23.18	27.25				
Days Sales In Inventory	16.22	16.33	14.04	13.9	18.14	16.02	14.9				
Ar Turnover	19.7	17.05	15.75	16.64	19.99	18.32	17.64				
Average Collection Period	18.53	21.41	23.18	21.93	18.26	20.09	22.93				
Profit Margin	2%	4%	5%	7%	8%	8%	1.07				
Return On Asset (Roa)	10%	16%	29%	37%	32%	35%	1.37				
Return On Equity	15%	24%	37%	43%	36%	39%	1.43				
	PT PANC	A BERSO	EDARAAN	SEDJATI							
	2016	2017	2018	2019	2020	2021	2022				
Current Ratio	0.9	0.7	1	1.3	2	1.7	2.3				
Quick Ratio	0.5	0.4	0.6	1	1.5	1.2	2				

Total Debt Ratio	0.7	0.6	0.7	0.4	0.3	0.4	1.4
Debt To Equity Ratio	2.8	1.7	2.5	0.8	0.4	0.6	1.8
Inventory Turn Over	14.7	17.7	25.1	25.8	25.7	25.7	26.8
Days Sales In Inventory	24.9	20.6	14.5	14.2	14.2	14.2	15.2
Ar Turnover	14.3	22.1	41	41.7	37.2	39.4	42.7
Average Collection Period	25.5	16.5	8.9	8.8	9.8	9.3	9.8
Profit Margin	5%	6%	5%	6%	9%	8%	1.06
Return On Asset (Roa)	21%	31%	30%	39%	44%	41%	1.39
Return On Equity	104%	102%	90%	89%	68%	78%	1.89
	CV	SALVA M	EGA POLII	ND0			
	2016	2017	2018	2019	2020	2021	2022
Current Ratio	0.8	1	1.1	0.8	3.7	2.2	1.8
Quick Ratio	0.6	0.9	1	0.6	2.4	1.5	1.6
Total Debt Ratio	0.5	0.5	0.5	0.6	0.1	0.4	1.6
Debt To Equity Ratio	1.1	1.2	1.1	1.6	0.1	0.9	2.6
Inventory Turn Over	42.8	44.7	42.9	33.6	21.3	27.4	34.6
Days Sales In Inventory	8.5	8.2	8.5	10.9	17.2	14	11.9
Ar Turnover	19.3	17	13.4	13.2	17.5	15.3	14.2
Average Collection Period	18.9	21.5	27.1	27.7	20.9	24.3	28.7
Profit Margin	0.04	0.04	0.04	0.05	0.08	0.07	1.05
Return On Asset (Roa)	0.17	0.16	0.14	0.2	0.27	0.23	1.2
Return On Equity	0.35	0.35	0.29	0.47	0.4	0.44	1.47

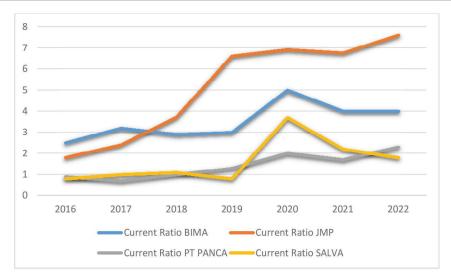


Figure 1: Overall liquidity of firms

Table 4 explains the one-year key financial ratio comparison where we

compared the key financial ratios of these firms with the market leader PT PANCABUDI. This company is the market leader and is listed on Jakarta Stock Exchange (JCI). PT PANCABUDI group is one of the biggest plastic firms operating in Indonesia which was established in 1979. Figure 1 expresses the overall liquidity position of four firms where JMP has the highest liquidity and MJ9 has least liquidity position.

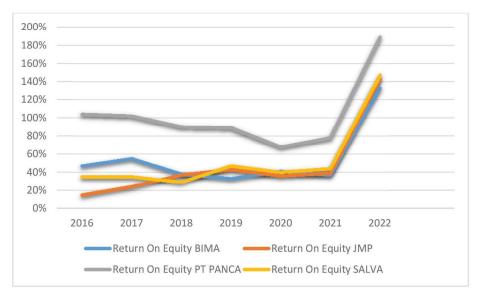


Figure 2: Profitability of all firms

As per the table CV SALVA MEGA POLINDO is generating less return on Investment. Their ROE.ROI and ROCE is poor has more investment in non-current assets, hence their efficiency ratios are lesser than the PT PANCA BERSOEDARAAN SEDJATI others. While comparing the market leader these small and medium size firms' financial performance we found out that PT PANCABUDI is much more efficient concerning turnover ratios. Their stock turnover ratio is 20 days and the collection period is only 18 days. To add further, the profitability for PT PANCABUDI is also high as compared to other small and medium-sized firms. Leverage only exists for PT PANCA BERSOEDARAAN SEDJATI. Figure 2 indicates the overall profitability of four firms where MJ9 has the highest profitability among all.

Table 4: Key Ratios- One-Year Comparison With Market Leader (The Year 2021)

KEY RATIOS- ONE-YEAR COMPARISON WITH MARKET LEADER (THE YEAR 2022)										
Details BIMA JMP PBS_MJ9 SALVA PT PANCABUDI										
Liquidity Ratios(TIMES) 2022 2022 2022 2022										
Cash Ratio (Cash/ CL)	1.59	1.01	0.07	0.90	1.10					

Current Ratio (CA/CL)	5.19	5.52	2.39	3.79	3.71
Quick Ratio (CA-Stock/CL)	4.16	4.22	1.68	2.69	2.10
,	4.10	4.22	1.00	2.09	2.10
Activity/Effciency Ratios(TIMES) Assets turnover: Revenue/AVG Total Asset	0.19	0.16	0.18	0.07	0.42
Fixed assets turnover: Revenue/AVG FA	0.46	0.45	0.43	0.10	1.11
Current assets turnover: Revenue/AVG CA	0.34	0.24	0.30	0.30	0.66
Stock turnover: COGS/Avg. Stock	1.37	0.87	0.85	0.88	1.57
Stock (inventory holding period), days	22.73	35.77	36.56	38.39	20 DAYS
Debtors turnover: Cr. Revenue/debtors	0.89	0.93	0.00	0.00	1.75
Collection period, days	34.83	33.54	0.00	0.00	18 DAYS*
Capital Structure Ratio(TIMES)					
Debt-equity: D/E	0.13	0.16	0.45	0.07	0.97
Debt ratio: D/CE	0.11	0.14	0.31	0.07	1.10
Profitability analysis(%)					
Net margin: PAT/Revenue	10.16	5.17	7.57	7.90	11.70
Operating Profit Ratio: EBIT/Revenue	12.14	6.75	11.63	7.90	15.00
GROSS PROFIT RATIO: GP/Revenue	16.54	13.81	16.95	14.72	22.00
ROE: PAT/NW	6.54	2.92	5.93	1.90	5.90
ROA: PAT/TA	5.89	2.51	4.08	1.77	4.70
ROCE : EBIT/(LONG TERM DEBT+ EQUITY& RES)	5.88	3.66	8.27	1.90	5.60
Leverage Ratio					
Income leverage: PAT/EBIT	0.84	0.65	0.63	0.00	0.77
Financial leverage: NA/NW	1.00	1.00	1.09	1.00	1.04
Leverage factor	0.84	0.65	0.69	0.00	0.80
				•	

Table 5 shows the one year Du-Pont Analysis comparison for the firms. The return on equity (ROE) of a corporation is evaluated using the Du-Pont Analysis, which divides it into three components: operating efficiency (measured by net profit margin); asset utilisation efficiency (measured by total asset turnover); and financial efficiency (measured by Equity Ratio). The Net Profit Margin, Total Asset Turnover, and Financial Leverage ratios for PT PANCABUDI are all at their greatest levels. A high du-pont ratio is always preferable, however even if the DuPont Analysis is an excellent place to start when analysing a company's creditworthiness, the results are meaningless unless they are compared to industry standards. If there isn't a benchmark like that,

DU PONT- ONE YEAR COMPARISON WITH MARKET LEADER (THE YEAR 2022)												
DU PONT(NET PROFIT RATIO *ASSET TURNOVER*FINANCIAL LEVERAGE)												
COMPANY	OMPANY NP RATIO ATR FL DU PONT RESULTS											
BIMA	10.16	0.21	1.10	2.35								
JMP	5.17	0.16	1.22	1.01								
PBSMJ9	7.57	0.19	1.44	2.07								
SALVA	7.90	0.09	1.10	0.78								
PT PANCABUDI	11.70	0.42	1.04	5.11								

Table 5: Du Pont- One Year Comparison with Market Leader (The Year 2022)



Figure 3: One Year Comparison with Market Leader (The Year 2022)

The above figure 3 shows the Du-Pont one-year comparison with the market leader Where PT PANCABUDI has the highest net profit and their Asset utilisation is also better.

5. Discussion

After a thorough review of the financial statement, we can declare that Cv Salva Mega Polindo's profitability position has been declining over the last several years as a result of subpar management, inexperienced employees, and the challenging local economic conditions. The COVID-19 epidemic also negatively impacted the financial performance of many enterprises, which resulted in weak demand.

Pt Panca Bersoedaraan Sedjati and BIMA Polyplast have been performing well in terms of profit after tax over the past several years. However, when Pt Panca Bersoedaraan Sedjati's Profitability Results were co¹mpared to those of its rivals, it became clear that while its performance is encouraging, it still falls short of the industry average. These small and medium-sized businesses have to invest in marketing and public relations while attempting to forge stronger ties with their clients. Since PT PANCABUDI is a long-standing business with a listing on the Jakarta Stock Exchange, its performance is superior than that of all other companies in the research.

Pt Panca Bersoedaraan Sedjati and BIMA Polyplast performed much better than Salva Mega Polindo and Pt Djerapah Megah Plasindho in the entire analysis, however this performance gap can be readily filled in the future.

6. Conclusion

After in depth analysis of the financial statement, we can say that the profitability position of Cv Salva Mega Polindo has been deteriorating for the past few years owing to poor management, unskilled staff, and the tough local economic conditions. COVID -19 pandemic has also hampered the financial performance of all companies, which led to depressed demand.

Over the period of five years, Pt Panca Bersoedaraan Sedjati and BIMA Polyplast have been performing better with respect to profit after tax. However, on comparing the profitability figures with its competitors it was revealed that Pt Panca Bersoedaraan Sedjati's performance is promising but it is still not as per the industry benchmark. These small and medium-sized firms should try to build better customer relationships and should spend funds on marketing and Pr. Pt Pancabudi is an old established firm listed on the Jakarta stock exchange hence the company's performance is better than all other firms included in the study.

Although the overall analysis showed Pt Panca Bersoedaraan Sedjati and BIMA Polyplast Faring Much Better Than Salva Mega Polindo And Pt Djerapah Megah PLASINDHO, this difference in performance can be plugged in the future easily.

The study like similar other studies suffers from a few limitations such as a limited data set, period, and only a few key ratios. Future researchers can add more variables and incorporate large data sets and periods to obtain a meaningful outcome

References

- [1]. Altman, Edward I. "Financial Ratios, Discriminant Analysis and the Prediction of Corporate Bankruptcy." *The Journal of Finance* 23, no. 4 (1968). https://doi.org/10.2307/2978933
- [2]. Andrady, Anthony L., and Mike A. Neal. "Applications and Societal Benefits of Plastics." *Philosophical Transactions of the Royal Society B: Biological Sciences* 364, no. 1526 (2009). https://doi.org/10.1098/rstb.2008.0304.
- [3]. Bashir, A.H. M., (1999) Risk and Profitability Measures in Islamic Banks: The Case of Two Sudanese Banks, *Islamic Economic Studies* 6, 1–24.

- [4]. Borup, Mads, Nik Brown, Kornelia Konrad, and Harro Van Lente. "The Sociology of Expectations in Science and Technology." *Technology Analysis and Strategic Management* 18, no. 3-4 (2006). https://doi.org/10.1080/09537320600777002.
- [5]. Chambers, Anne E., and Stephen H. Penman. "Timeliness of Reporting and the Stock Price Reaction to Earnings Announcements." *Journal of Accounting Research* 22, no. 1 (1984). https://doi.org/10.2307/2490700.
- [6]. Diansari, E.R. and Wijaya, T.A. (2019), "Diamond fraud analysis in detecting financial statement fraud", Journal of Business and Information Systems (e-Issn: 2685-2543), Vol. 1 No. 2, pp. 63-76.
- [7]. Euromonitor International. (2020). Plastic Products in Indonesia. Retrieved from https://www.euromonitor.com/plastic-products-in-indonesia/report
- [8]. Fairfield, P. M., R. J. Sweeney, and T. L. Yohn(2016). Accounting classification and the predictive content of earning. The Accounting Review 71(3): 337–355.
- [9]. Fama, Eugene F., and Kenneth R. French. "The Cross-Section of Expected Stock Returns." *The Journal of Finance* 47, no. 2 (1992). https://doi.org/10.2307/2329112
- [10]. Geyer, Roland, Jenna R. Jambeck, and Kara Lavender Law. "Production, Use, and Fate of All Plastics Ever Made Supplementary Information." *Science Advances* 3, no. 7 (2017). https://doi.org/10.1126/sciadv.1700782
- [11]. Graham, B., & Dodd, D. (1934). Security analysis: Principles and technique. McGraw-Hill.
- [12]. Healy, Paul M., and Krishna G. Palepu. "Information Asymmetry, Corporate Disclosure, and the Capital Markets: A Review of the Empirical Disclosure Literature." *Journal of Accounting and Economics* 31, no. 1–3 (2001). https://doi.org/10.1016/S0165-4101(01)00018-0.
- [13]. Hidayah, N., Widaningsih, N. W., & Arifin, B. (2021). The Role of Industrial Waste Management for the Sustainability of the Plastic Industry in Indonesia. Journal of Environmental Treatment Techniques, 9(1), 177-185.
- [14]. Hung, W. T., Lien, Y. C., & Wang, J. H. (2010). Enhancing financial ratio analysis with text mining. Expert Systems with Applications, 37(12), 8139-8148.
- [15]. K. L. (2015). Plastic waste inputs from land into the ocean. Science, 347(6223), 768-771.
- [16]. Kohli, R. (2009). The early history of plastics: From Bakelite to polyethylene. Chemical Heritage Magazine, 27(4), 26-33.
- [17]. Mordor Intelligence (2019)-"Plastic Industry in Indonesia Growth, Trends, COVID-19 Impact, and Forecasts (2021 2026)"
- [18]. Reis, E. G., De Fátima Lopes Alves, M., & Zamparoni, C. A. (2018). The impact of plastic pollution on marine environment: A review. Environmental Pollution, 237, 18-26.
- [19]. Statista. (2021). Plastic industry worldwide: Statistics & facts. Retrieved from https://www.statista.com/topics/3963/plastics-industry/.
- [20]. Thompson, Richard C., Charles J. Moore, Frederick S.Votn Saal, and Shanna H. Swan. "Plastics, the Environment and Human Health: Current Consensus and Future Trends." *Philosophical Transactions of the Royal Society B: Biological Sciences* 364, no. 1526 (2009). https://doi.org/10.1098/rstb.2009.0053

- [21]. Varghese, G. L., Rijal, S., & Triyono, J. (2020). An overview of the Indonesian plastic industry: current status, environmental impacts, and potential solutions. Journal of Material Cycles and Waste Management, 22(4), 1304-1314.
- [22]. Waryono, Tarsoen. "RINGKASAN Puding Merah (Gruptophyllum Pictum L Griff)." *Jurnal Farmasi Galenika (Galenika Journal of Pharmacy) (e-Journal)* 1, no. 1 (2019).
- [23]. Yohn, Teri Lombardi. "Research on the Use of Financial Statement Information for Forecasting Profitability." *Accounting and Finance* 60, no. 3 (2020). https://doi.org/10.1111/acfi.12394.