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## **Evaluating Financial Performance Using Financial Ratios: A Case Study of ADF Foods Ltd, India**

**Rachna Aggarwal\***

*\*Associate Professor, Department of Mathematics, Mukand Lal National College, Yamuna Nagar, Haryana, India., E-mail id: [ragnarwal.math@mlncollegeynr.ac.in](mailto:ragnarwal.math@mlncollegeynr.ac.in)*

*This article provides an in-depth examination of the financial performance of ADF Foods Ltd., India; a prominent player in the food manufacturing industry, operating in over 55 countries worldwide using financial ratios. The financial ratio analysis encompasses Liquidity Ratios, Financial Leverage Ratios, Profitability Ratios, Efficiency Ratios, and Market Value Ratios, spanning the years 2015 to 2022. The study reveals that ADF Foods Ltd. exhibits commendable performance across a spectrum of ratios, making it an appealing prospect for potential investors. The company's robust financials signal its capacity to thrive in diverse markets. However, there are notable areas of improvement. ADF Foods Ltd. could optimize the utilization of its assets to enhance efficiency further. Currently, there is a trend of reinvesting profits into expanding business operations rather than distributing dividends to shareholders. While this strategy may contribute to long-term growth, it may necessitate a balance to ensure shareholder value is maximized.*

**Keywords:** *Financial Ratios, Performance analysis*

### **1. Introduction**

The Ministry of Commerce and Industry's Agriculture export policy highlights the remarkable growth of Indian ethnic foods export, reaching USD 280 million in 2019-20. The surge in the Indian domestic market for ready-to-eat and ready-to-cook ethnic foods is evident, fueled by the increasing number of Indians relocating overseas. The Ministry of External Affairs estimates the overseas Indian population to be 32 million, presenting a substantial buying power that can rival the domestic Indian market. Beyond catering to the diaspora, there's a broader appeal for instant Indian food, especially among foreigners, aligning with the global shift towards vegetarianism. In response to this demand, numerous brands have emerged to serve the 32 million-strong Indian diaspora yearning for authentic Indian cuisine.

ADF Foods Ltd. stands out as a prominent player in the Indian ethnic food industry, offering traditional Indian flavors to the Indian diaspora and domestic consumers in more than 55 countries. The company's diverse product range spans eight brands, encompassing frozen snacks, Indian breads, vegetables, ready-to-eat foods, side dishes such as pickles and chutneys, condiment pastes, cooking sauces, spices, and milk-based beverages. Notably, over 99% of the company's revenue during the fiscal year 2022-23 was derived from exports.

The aim of the present study is to analyze the financial performance of ADF Foods Ltd. based on its financial statements from 2015-2022. The financial ratio analysis encompasses Liquidity Ratios, Financial Leverage Ratios, Profitability Ratios, Efficiency Ratios, and Market Value Ratios.

## 2. Literature Review

Financial analysis involves the application of analytical tools to examine a company's performance and trends in order to make informed decisions. Analysts convert raw financial data into meaningful metrics, with financial ratios being a key component of this analytical process. These ratios, derived from logical relationships between items in financial statements, serve as valuable tools for understanding various aspects of a business (Robinson *et al.*, 2015)

Financial ratios, such as those comparing assets and liabilities or revenue and expenses, contribute to the decision-making process by offering insights into a company's financial condition (as reflected in the balance sheet) and operational performance (as indicated by the income statement). This assessment can be conducted for a specific point in time or by comparing multiple reporting periods. External stakeholders, like investors seeking investment opportunities, often use financial ratios to gauge a company's attractiveness. Internal stakeholders, such as business managers, utilize these analyses to compare actual results with budgeted expectations. Additionally, financial tools like ratios play a role in product or strategic planning. Companies may also use ratios to evaluate their performance in relation to competitors, a practice known as peer analysis (Ross *et al.*, 2015).

Many researchers have used these financial ratios to measure financial performance of various type of industry. Mohammadi and Malek (2012) assessed the financial performance of a Malaysian manufacturing company using financial ratios. Karim and Alam (2013) measured the performance of some private sector banks of Bangladesh through financial ratios. Innocent (2013) examined the relationship between the financial ratio analysis and profitability of the Nigerian Pharmaceutical industry from 2001-2011. Sultan (2014) measured performance and profitability of Baghdad Soft drink industry based on five financial ratios, namely, Profit Margin, ROA, ROE, Capital turnover ratio and Expense ratio. Adam (2014) investigated the financial performance of Erbil Bank for Investment and Finance, Kurdistan Region of Iraq during the period of 2009-2013 using financial ratios and other parameters. Erdogan *et al.* (2015) studied the effects of various financial ratios on financial performance of the companies traded in Borsa Istanbul-30 during the period 2002-2013. Anand (2017) performed comparative analysis and ratio analysis to study financial performance of Maruti Suzuki India Ltd. Otekunrin *et al.* (2018) examined the relationship between financial ratio analysis and market price of share in the selected quoted agriculture and agro-allied firm in Nigeria after Adoption of International Financial Reporting Standard from 2012 to 2016. Anthony *et al.* (2019) used financial ratios along with DEA to evaluate financial performance of seven Indian chemical industries during 2010 to 2018. Rachman *et al.* (2023) investigated the effect of financial ratios on property and real estate companies listed in the Indonesia Stock Exchange for the 2016-2020 period.

### 3. Methodology

#### 3.1. Financial ratio analysis

To conduct the financial ratios analysis, the financial ratios considered and the formulas used are displayed in Table 1.

**Table 1. Description of Financial Ratios**

S.No.	Financial Ratio Group	Financial Ratio	Formula Used	Objective
1.	Liquidity Ratios	<i>Current Ratio</i>	$\frac{\text{Current assets}}{\text{Current liabilities}}$	Assess a company's capability to fulfill its short-term responsibilities
		<i>Quick Ratio (Acid Test Ratio)</i>	$\frac{(\text{Current assets} - \text{Inventory} - \text{Prepaid Expenses})}{\text{Current liabilities}}$	
		<i>Cash ratio</i>	$\frac{\text{Total assets and cash equivalents}}{\text{Current liabilities}}$	
		<i>Operating cash flow ratio</i>	$\frac{\text{Cash generated by a company by its core operations}}{\text{Current liabilities}}$	
2.	Financial Leverage Ratios or Solvency Ratios	<i>Debt ratio</i>	$\frac{\text{Total Debts}}{\text{Total Assets}}$	Assess a company's ability to fulfill its long-term debt obligations.
		<i>Debt to equity ratio</i>	$\frac{\text{Debt Capital}}{\text{Equity Capital}}$	
		<i>Interest coverage ratio</i>	$\frac{(\text{Income Before Tax} + \text{Interest Expense})}{\text{Interest Expense}}$	
		<i>Debt service coverage ratio</i>	$\frac{\text{Net operating income}}{\text{Current debt}}$	
3.	Efficiency Ratios or Asset utilization ratio or activity ratios	<i>Asset Turnover Ratio</i>	$\frac{\text{Net sales}}{\text{Average total assets}}$	Measure the efficiency of management of both working capital and longer-term assets of a company.
		<i>Inventory turnover ratio</i>	$\frac{\text{Cost of goods sold}}{\text{Average inventory}}$	
		<i>Receivables turnover ratio</i>	$\frac{\text{Net credit sales}}{\text{Average accounts receivable}}$	
		<i>Days sales in inventory ratio</i>	$\frac{\text{Average inventory} \times 365}{\text{Cost of goods sold}}$	
4.	Profitability Ratios	<i>Gross profit margin</i>	$\frac{\text{Net income}}{\text{Net sales}}$	Indicate a company's competitive position in the market but also reflects the quality of its management.
		<i>Operating profit margin</i>	$\frac{\text{Earning before interest and tax}}{\text{Net sales}}$	
		<i>Return On Assets (ROA)</i>	$\frac{\text{Net income}}{\text{Average total assets}}$	
		<i>Return On Equity (ROE)</i>	$\frac{\text{Net income}}{\text{Shareholder's equity}}$	
5.	Market Value Ratios	<i>Book Value Per Share</i>	$\frac{\text{Total stockholders' equity}}{\text{Number of shares outstanding}}$	Assess the valuation and market perception of a company.
		<i>Dividend Yield Ratio</i>	$\frac{\text{Total dividends paid in a year}}{\text{Current market price of the stock}}$	
		<i>Earnings Per Share (EPS)</i>	$\frac{\text{Net income attributable to common stock}}{\text{Average number of common shares}}$	
		<i>Price/Earnings Ratio</i>	$\frac{\text{Current market price of the stock}}{\text{Earnings per share}}$	

### 3. Data Analysis and Interpretation

Data for the present study is the secondary data derived from Annual Reports of the Company from 2015-16 to 2021-22.

#### 3.1 Liquidity Ratios

Table 1. shows the various liquidity ratios from 2015-2022.

**Table 1. Liquidity Ratios**

Year	Current Ratio	Acid Test Ratio	Cash Ratio	Operating Cash Flow Ratio
2015	2.450	1.871	0.216	0.284
2016	3.676	1.736	0.280	0.957
2017	4.433	3.304	0.509	1.156
2018	4.058	3.239	0.983	1.127
2019	5.159	3.613	0.646	1.689
2020	3.018	2.086	0.344	0.662
2021	5.294	3.680	0.884	1.081
2022	5.365	4.000	0.972	0.868
Average	4.182	2.941	0.604	0.978
Min	2.450	1.736	0.216	0.284
Max	5.365	4.000	0.983	1.689

The following are the key observations from the table:

- The company consistently maintains a strong current ratio, ranging from 2.450 to 5.365, with an average value of 4.182. This indicates that the company has a substantial buffer of current assets to cover its current liabilities. The current ratio well above the industrial benchmark of 1.3 suggests a robust liquidity position, indicating the company's ability to meet its short-term obligations comfortably.
- The acid test ratio, with an average value of 2.941, consistently remains above 1 from 2015 to 2022. This signifies that the company possesses more than enough liquid assets (excluding inventory) to cover its short-term liabilities. A ratio above 1 is generally considered healthy, reflecting a strong ability to meet immediate financial obligations without relying on the sale of inventory.

- The analysis indicates that the company's cash ratio remains consistently less than 1 during the study period. This implies that the company does not have sufficient cash on hand to cover its short-term debt obligations. While a low cash ratio can be a concern, it's important to note that this ratio alone may not provide a comprehensive picture of the company's overall liquidity, as it does not consider other liquid assets.
- Although the operating cash flow ratio was low in the initial year (2014-15), it improved over the subsequent years, reaching an average of 0.978. This suggests that the company has enhanced its ability to generate cash from its core operations to settle short-term debt. It is observed that the company has strong base of current assets but needs to work upon generation of more cash from its core operations.

### 3.2 Financial Leverage Ratios

Table 2 depicts the financial leverage ratios of the company from 2015-22.

**Table 2. Financial Leverage Ratios**

Year	Debt Ratio	Debt to equity ratio	Interest coverage ratio	Debt service coverage ratio
2015	0.242	0.12	8.17	8.403
2016	0.178	0.04	8.91	7.905
2017	0.165	0.02	25.05	23.937
2018	0.182	0.01	29.45	28.372
2019	0.159	0.00	44.35	43.368
2020	0.248	0.11	42.46	41.346
2021	0.164	0.00	58.52	57.509
2022	0.266	0.05	42.02	35.989
Average	0.201	0.044	32.37	30.854
Min	0.159	0.000	8.17	57.509
Max	0.266	0.120	58.52	7.905

**The main findings of this analysis are as follows:**

- The company demonstrates a consistently low debt ratio, averaging 0.201 over the period analyzed. This signifies that the company relies minimally on borrowed funds, making it highly creditworthy for investors, creditors, banks, and other financial institutions.

- The debt to equity ratio is also notably low, with a mean value of 0.044. This suggests that the equity held by the company's shareholders is substantial in comparison to its debt. The low debt to equity ratio implies that the company does not heavily depend on external financing to support its business and growth operations.
- The interest coverage ratio has shown positive growth, increasing from 8.17 in 2015 to 58.52 in 2021, with a slight dip in 2022. Despite the dip, the company maintains a high interest coverage ratio, well above the generally accepted threshold of 3. A higher interest coverage ratio indicates a company's ability to meet its interest obligations comfortably. This is reassuring to investors, creditors, and lenders, suggesting a low risk of financial distress.
- Debt Service Coverage Ratio ranges from 7.905 in 2016 to a maximum of 57.509 in 2021. Reflecting that the company's capacity to service its total debt, considering both principal and interest payments is strong.

### 3.3 Efficiency Ratios

Table 3 shows the efficiency ratios of the company from 2015-22.

Table 3. Efficiency Ratios

Year	Asset Turnover Ratio	Inventory Turnover Ratio	Receivable Turnover Ratio	Day Sales in Inventory
2015	1.010	7.35	6.521	49.56
2016	1.083	8.41	6.087	45.67
2017	0.991	8.04	5.715	45.22
2018	0.981	8.84	5.228	44.13
2019	1.133	6.70	5.328	45.88
2020	1.049	5.22	5.875	57.08
2021	1.130	5.06	6.262	62.96
2022	0.840	5.65	6.200	64.63
Average	1.027	6.91	5.902	51.89
Min	0.840	5.06	5.228	44.13
Max	1.133	8.84	6.521	64.63

**Following are the observations drawn after a careful study of Table 3:**

- The asset turnover ratio for ADF Foods Ltd. ranges between 0.899 and 1.185. While a ratio of 2.5 or above is considered good, the company falls short of this benchmark. This suggests that the company may need to explore ways to enhance the efficient utilization of both fixed and current assets to generate higher sales.
- The inventory turnover for each year falls within the range of 5 to 10, which is considered favorable for the food processing industry. This range indicates that the company's products are selling well, and the inventory is restocked after one or two months.
- The receivable turnover ratio varies between 5.228 and 6.521, indicating that the company has efficient practices for debt collection. The values neither being too high nor too low suggest a balanced approach to managing receivables.
- Day sales in inventory of the company varies between 44.13 and 64.63 and ideal range for it is 30 to 60 days. It reveals that company is more efficiently and frequently selling off its inventory, which means rapid turnover leading to the potential for higher profits.

**3.4 Profitability Ratios**

The profitability ratios of the company from 2015-22 are shown in Table 4

Table 4. Profitability Ratios

Year	Gross Margin Ratio	Operating Margin Ratio	Return on Assets Ratio	Return on Equity Ratio
2015	0.624	11.13	4.74	6.42
2016	0.616	11.53	3.26	4.16
2017	0.575	14.06	7.75	8.74
2018	0.588	18.71	8.88	10.36
2019	0.563	18.54	13.08	14.74
2020	0.508	21.80	16.18	20.92
2021	0.459	19.95	14.89	18.31
2022	0.587	18.05	9.99	14.02
Average	0.565	16.72	9.846	12.208
Min	0.459	11.13	3.26	4.16
Max	0.624	21.8	16.18	20.92

**The key observations about profitability ratios are:**

- The gross margin ratio for ADF Foods Ltd. falls within the preferred range of 0.5 to 0.7, with a maximum value of 0.624, a minimum of 0.459, and an average of 0.565. This suggests that the company is pricing its products effectively to make a reasonable profit on sales, while also maintaining control over overhead costs. The consistently healthy gross margin is a positive indicator for the company's pricing and cost management strategies.
- The operating margin ratio was below 15% during 2015-2017 but has shown improvement since then, exceeding 15% in subsequent years. This indicates that the company has generated sufficient funds to cover its fixed costs, such as interest on debt and taxes. The upward trend in the operating margin is a positive sign of improved operational efficiency and profitability.
- The return on asset ratio increased every year from 2015 to 2020, reaching a maximum of 16.18%. This suggests that the company has become more efficient in utilizing its assets to generate profits. While there was a slight drop in subsequent years, the overall trend indicates effective asset management for profitability.
- The return on equity ratio ranges from 4.16% in 2016 to 20.92% in 2020, indicating the effective use of shareholder equity. A higher ROE signifies that the company is generating a higher return for its shareholders relative to their equity investment.

**3.5 Market Value Ratios**

Table 5 depicts the market value ratios of the company from 2015-22.

Table 5. Market Value Ratios

Year	Book Value per share Ratio	Dividend Yield Ratio	Earnings per Share Ratio	Price Earnings Ratio
2015	68.36	2.57	4.47	13.05
2016	70.93	0	3	27.64
2017	77.38	1.44	6.88	25.15
2018	80.82	0	8.52	23.58
2019	84.22	0	12.65	19.05
2020	100.2	1.76	21.36	7.98
2021	134.07	0.34	25.01	35.67
2022	161.91	0.52	22.94	33.73
Average	97.236	0.828	13.104	23.23
Min	68.36	0	3	7.98
Max	161.91	2.57	25.01	35.67



**Significant observations about Market Value Ratios are:**

- Book Value Per Share (BVPS) is increasing every year implying that the stock is valuable. However till 2020, the stock of the company is undervalued as its BVPS is more than its Market Value Per Share (MVPS) which is 13.00, 17.70, 43.50, 48.51, 49.27, 41.24 rupees respectively during 2015, 2016, 2017, 2018, 2019 and 2020. In contrast, in the subsequent years 2021 and 2022, the MVPS surpassed the BVPS, with values of 188.89 and 151.59 rupees, respectively. This reversal in the relationship between MVPS and BVPS suggests a shift in market perception, potentially signaling that the stock is now trading at a premium compared to its book value.
- The dividend yield ratio varies, ranging from 0 to a maximum of 2.57 in 2015. The absence of a dividend yield in some years (0) indicates that the company did not pay dividends in those periods. This could be due to various factors, such as the company retaining earnings for reinvestment or other strategic reasons.
- Earnings per share show a substantial increase from 3 in 2016 to a peak of 25.01 in 2021. It reflects a positive trend in earnings per share, indicating the company's profitability and potential for generating earnings for shareholders.
- Price earnings ratio displays fluctuations, with a high of 35.67 in 2021 and a low of 7.98 in 2020. A higher P/E ratio suggests the market is willing to pay more for each unit of earnings, possibly indicating higher market expectations.

**4. Conclusions:**

In conclusion, the comprehensive analysis of ADF Foods Ltd. reveals several key insights into the company's financial health, operational efficiency, profitability, and market valuation. Here are the overarching conclusions drawn from the study:

- The company demonstrates a strong overall liquidity position, as evidenced by the consistently high current and acid test ratios. However, the low cash ratio suggests a reliance on non-cash liquid assets. The improvement in the operating cash flow ratio is a positive sign, indicating that the company's core operations are generating sufficient cash to address short-term debt. It would be advisable for the company to monitor and manage its cash position effectively to ensure liquidity in handling short-term obligations.
- The company's financial health appears robust, characterized by prudent management of debt, a strong equity position, and solid coverage of interest and debt service obligations. These factors collectively suggest a low-risk profile for investors, creditors, and lenders, making the company an attractive investment and lending prospect.
- While the asset turnover ratio falls below the ideal benchmark, the company exhibits healthy inventory turnover, consistent receivable turnover, and efficient day sales in

inventory. The analysis suggests that ADF Foods Ltd. is managing its operational efficiency effectively, particularly in terms of inventory management and receivables, which bodes well for its overall financial performance and profitability. The company may explore opportunities to enhance asset turnover for further improvement.

- The profitability analysis indicates that ADF Foods Ltd. has been effective in pricing its products, managing costs, and generating profits. The improving operating margin, efficient use of assets, and effective return on equity all contribute to a positive assessment of the company's financial performance. The company's focus on maintaining healthy gross margins and sustaining profitability is evident in the analysis.
- The analysis of stock-related ratios suggests a dynamic and evolving market perception of the company. The shift from undervaluation to a premium valuation, along with the substantial increase in earnings per share, indicates positive momentum. The variations in the dividend yield and price earnings ratio further reflect the complexity of factors influencing market behavior. Investors may interpret these trends to make informed decisions based on their risk tolerance and investment objectives.

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