

# **A Study on Ratio Analysis at Manufacturer of Tillers and Tractors, Malur**

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<b>Article History</b> Received: 15 Aug 2023 Revised: 28 Sept 2023 Accepted: 29 Oct 2023  <b>CC License</b> CC-BY-NC-SA 4.0	<b>ABSTRACT:</b> This research article provides an in-depth examination of ratio analysis as a fundamental tool for evaluating the financial performance and stability of businesses. Ratio analysis involves the calculation and interpretation of various financial ratios, such as liquidity, profitability, leverage, and efficiency ratios, to assess a company's fiscal health. The abstract summarizes the prominence of ratio analysis in decision-making processes for investors, creditors, and management. It also discusses key ratio categories and their significance in assessing different aspects of financial performance. Furthermore, the abstract highlights the limitations and challenges associated with ratio analysis and its value in guiding strategic financial planning. The findings emphasize the crucial role of ratio analysis in making informed business and investment decisions.
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## **1. INTRODUCTION**

Financial analysts and investors utilize ratio analysis to examine a company's financial health and performance. Ratio analysis in the framework of VST Tillers and Tractors Limited, a key participant in the agricultural machinery market, entails examining several financial ratios generated from the company's financial statements. These ratios offer details regarding the company's activities in areas such as liquidity, profitability, solvency, and efficiency. Stakeholders can assess the ability of the concern to meet short-term obligations, manage debt, produce profits, and use assets

effectively by analysing measures such as current ratio, quick ratio, debt-to-equity ratio, return on assets, and others.

One of India's top producers of power tillers and compact tractors, VST Tillers and Tractors Limited (VST Tillers), holds a commanding 54% market share in power tillers, which are largely utilised for farm mechanisation and directly benefit rural farming.

## **2. REVIEW OF LITERATURE**

1. Choi, Kee-Bong (2018): The amplification ratio was examined using a mathematical model, which was fully compliant and was built for a single-stair bridge-type amplification mechanism. The new model was contrasted with earlier models and analysis findings obtained from finite element models. Investigations on the impacts of each member's rigidity, except the flexure hinge, were also conducted. The model with simply a rigid input body's different amplification ratio.

2. Subalakshmi. S, S. Grahalakshmi, and M. Manikandan (2018): The performance of SBI was discussed in the current research with reference to ratio and percentage analysis. The SBI has made enough progress, and the bank is performing well overall. By way of deposit mobilisation, loans and advances, investment position, nonperforming assets, earnings, and profitability efficiency, the effectiveness of SBI bank has been thoroughly examined. The analysis shows that SBI is operating profitably and keeping the necessary requirements. SBI is more profitable because it expands into both the industrial and commercial markets and continually raises the bar for customer service. For the SBI bank to succeed in this fiercely competitive global climate, it is essential that it display exceptional performance across a range of metrics.

3. Limbong, Tonni (2018): The MOORA method was used to build the Decision Support System (DSS) for the selection of the Lecturer Assistant in the Computer Laboratory Faculty of Computer Science at St. Thomas Catholic University of Medan because it has a very straightforward calculation and is simple to comprehend, making it applicable to the solution of a variety of complex decisionmaking problems. The rules in the Academic Guidance of the Computer Science Faculty of St. Thomas Catholic University of Medan are utilised to calculate the weight employed in each criterion. The correctness, sensitivity, and modification of the criteria are the tests that are utilised in the decision-making system. The accuracy test is being conducted in respect to the outcomes.

4. Hatefi, Mohammad Ali (2019): The subjective methods for extracting weights from the DM may run into a variety of issues, such as the elicitation process and diminishing outcomes that depend heavily on evaluation accuracy with the quantity of characteristics. Applying the objective or semi-objective procedures, which have not been sufficiently investigated, may therefore be useful.

### **3. STATEMENT OF THE PROBLEM**

The issue at VST Tillers and Tractors limited is how to conduct a thorough ratio analysis for a business to evaluate its financial performance and give management and stakeholders useful information. The organisation under consideration is a manufacturer that serves the automobile sector. The management aims to evaluate the firm's financial health, pinpoint its advantages and disadvantages, and base its choices on the analysis.

### **4. NEED OF THE STUDY**

The need for the study on VST Tillers and Tractors Limited could revolve around gaining a deeper understanding of its operational efficiency, market positioning, and financial stability. The research design might involve a combination of quantitative analysis, such as financial ratio calculations, trend analysis, and benchmarking against industry peers, along with qualitative analysis through interviews or surveys with company executives and industry experts. This comprehensive approach would offer valued insights into the company's performance, strategic direction, and potential areas for improvement.

### **5. OBJECTIVES OF THE STUDY**

- To study at VST Tillers and Tractors Limited could involve conducting a ratio analysis to evaluate the company's financial performance.
- To help assess various aspects of the company's financial health such as liquidity, profitability and solvency.
- To learn about VST Tillers and Tractors Limited's operating costs.
- To do a thorough review of each and every line item on VST Tillers and Tractors Limited's balance sheet.

### **6. SCOPE OF THE STUDY**

The scope of a study on the research design of VST Tillers and Tractors Limited would include examining their research methodologies, data collection and analysis techniques, innovation processes, and how they incorporate research findings into their product development and business strategies. Additionally, the study might explore the effectiveness of their research design in terms of improving product performance, customer satisfaction, market share, and overall company growth within the agricultural machinery sector.

### **7. LIMITATIONS OF THE STUDY**

- Data Availability: Limited access to historical or comprehensive data, hindering indepth analysis and accurate trend identification
- Data Quality: Inaccuracies or inconsistencies in financial or operational data, affecting the reliability of findings.

- Time Constraints: Limited time for conducting extensive research, leading to potential oversights or insufficient analysis.
- Measurement Challenges: Complexity in accurately measuring certain aspects of the business, such as intangible assets or customer satisfaction.
- Confidentiality: Constraints related to sharing sensitive company information, limiting the depth of analysis.

## 8. RESEARCH METHODOLOGY

Sampling Size: 5 years Balance Sheet and Cash Flow Statement Sampling Frame: VST Tillers and Tractors Limited Sampling Technique: Ratio analysis is the utmost popular and effective method for analysing financial statements. Source of Data: Secondary Data These are the data collected and gathered from publications such as books, journals, annual reports, and other papers.

## 9. DATA ANALYSIS AND INTERPRETATION

DEBT-EQUITY RATIO:

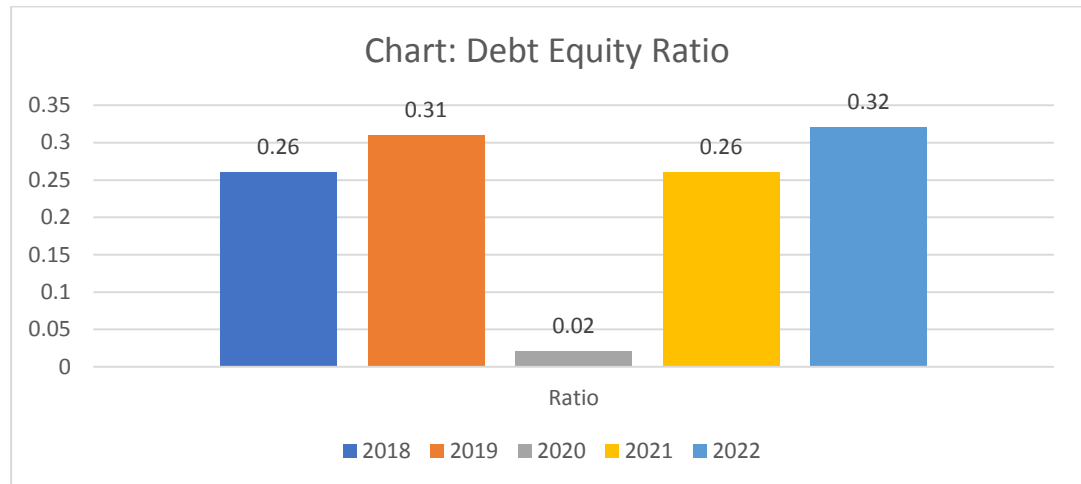
Debt – Equity Ratio = **Total Debt / Equity**

**TABLE: 4.1 SHOWING DEBT EQUITY RATIO**

Year	Total Debt	Equity	Ratio
2018	1310663683	5000190385	0.26
2019	1894100088	5963696341	0.31
2020	1583529377	5898994461	0.02
2021	1517327419	5769088987	0.26
2022	2177801647	6675704617	0.32

### ANALYSIS:

In 2018, the company's debt to equity ratio was 0.26, meaning there were 0.26 loans for every dollar of equity. This ratio decreased to 0.02 in 2020, showing a decrease in debt relative to equity in 2020. The ratio had risen to 0.26 by 2021, indicating that the company's debt load had once more risen over equity. The ratio sharply grew to 0.32 in 2022, signaling a significant growth in the company's debt to equity.

**GRAPH: SHOWING DEBT EQUITY RATIO.**

**INTERPRETATION:** The above analysis shows that, across the five-year period, the company's financial leverage fluctuated, with some years exhibiting increased leverage higher debt-to-equity ratio and others showing decreasing leverage. These modifications might have an influence on the company's risk profile, financial stability, and capacity to repay debt.

**DEBT ASSET RATIO:**

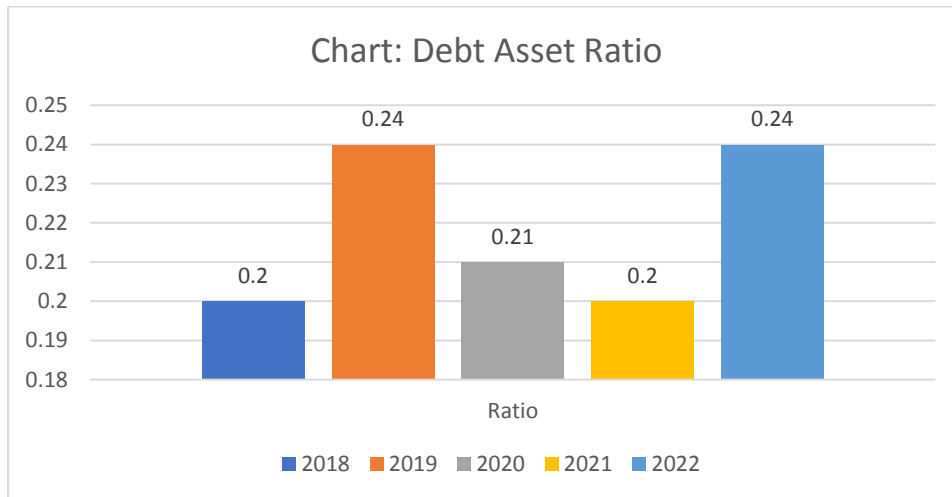
$$\text{Debt – Asset Ratio} = \frac{\text{Total Debt}}{\text{Total Asset}}$$

**TABLE: 4.2 SHOWING DEBT ASSET RATIO**

Year	Total Debt	Total Asset	Ratio
2018	1310663683	6310854068	0.20
2019	1894100088	7857796341	0.24
2020	1583529377	7482523838	0.21
2021	1517327419	7286416406	0.20
2022	2177801647	8853506264	0.24

**ANALYSIS:**

The company's Debt Asset Ratio has gradually fallen during the year 2018, but it has suddenly soared to 0.24 in 2019. The ratio is 0.21 in 2020, 0.20 in 2021, and 0.24 in 2022. The trend indicates that the company's financial status is Fluctuating.

**GRAPH: SHOWING DEBT ASSET RATIO**

**INTERPRETATION:** The above graph shows financial leverage and debt-to-asset ratio of a business or other organization during a five-year period, from 2018 to 2022, appear to be represented by this analysis. Indicating how much debt is used to finance a company's activities, the debt-to-asset ratio is a measurement of the ratio of debt (liabilities) to total assets.

### **SOLVENCY RATIO**

**Net Income+Depreciation**

**Solvency Ratio =  $\frac{\text{Net Income+Depreciation}}{\text{Long term Liabilities+Short term liabilities}}$**

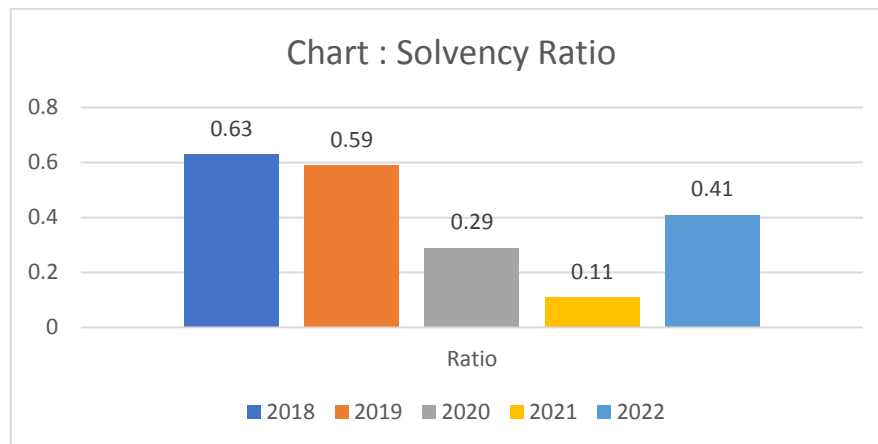
**Long term Liabilities+Short term liabilities**

**TABLE: 4.4 SHOWING SOLVENCY RATIO**

Year	Total net income	Total liabilities	Ratio
2018	827079760	1310663683	0.63
2019	1119797299	1894100088	0.59
2020	460632885	1583529377	0.29
2021	180059052	1517327419	0.11
2022	907762858	2177801647	0.41

### **ANALYSIS:**

The company's Solvency Ratio is decreased, after the year 2019, 0.59 in the year 2019 and decreased to 0.29 in 2020 and 0.11 in 2021. But in the year 2022 it implies in the rise of Solvency Ratio and showing a better financial situation.

**GRAPH: SHOWING SOLVENCY RATIO:**

**INTERPRETATION:** The graph of the solvency ratio above illustrates the five-year period, the company's financial health fluctuated, with periods of better profitability in contrast to liabilities (2018) and periods of sharp decline (2020, 2021).

**INTEREST COVERAGE RATIO:**

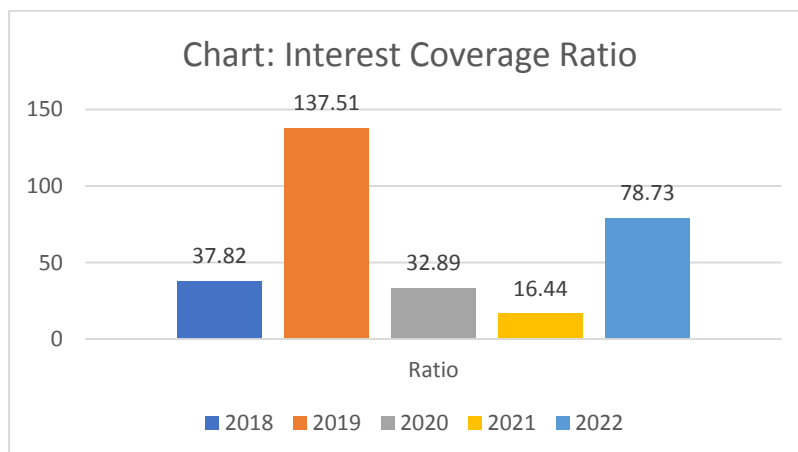
$$\text{Interest Coverage Ratio} = \frac{\text{EBIT}}{\text{Interest}}$$

**TABLE: 4.5 SHOWING INTEREST COVERAGE RATIO:**

Year	EBIT	Interest	Ratio
2018	1125767072	29760564	37.82
2019	1522313948	11069891	137.51
2020	715327204	21745095	32.89
2021	231033695	14046376	16.44
2022	1192248301	15143045	78.73

**ANALYSIS:**

The company's interest coverage ratio for the year 2019 was 137.51. from 2020 to 2021 the interest coverage ratio was decreased to 32.89 and 16.44, but in the year 2022 there is increase in the company's coverage ratio to 78.73 tells that the company's earnings before tax is increasing and here after covers its interest charges, indicating a better financial position.

**GRAPH: SHOWING INTEREST COVERAGE RATIO**

**INTERPRETATION:** The above graph shows variations in a company's interest coverage ratio over time may be an indication of changes to its profitability, risk profile, and financial stability. A greater ICR often denotes a lesser likelihood of interest payment default, whereas a lower ICR could denote a larger risk of financial instability. The context of industry benchmarks and the company's overall financial strategy should be considered while analyzing these numbers.

**RETURN ON EQUITY RATIO:**

$$\text{Return on Equity} = \frac{\text{Net Income}}{\text{Shareholder's Equity}}$$

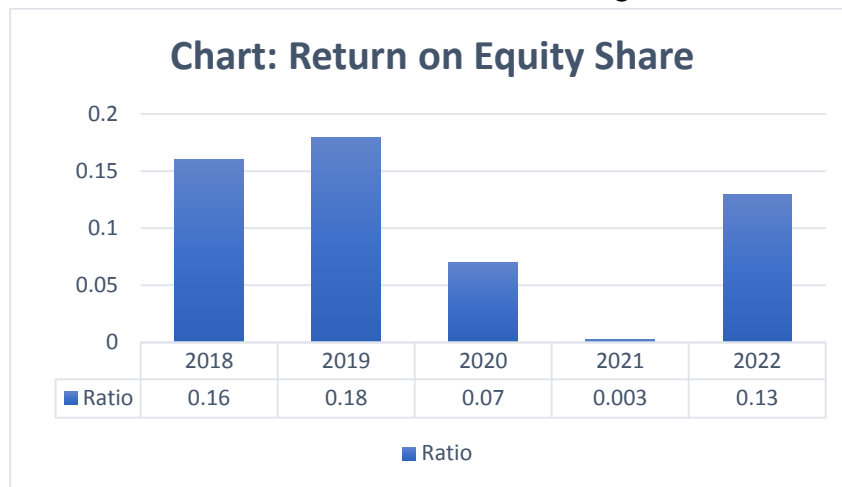
**TABLE: SHOWING RETURN ON EQUITY RATIO**

Year	Net Income	Shareholder's Equity	Ratio
2018	827079760	5000190385	0.16
2019	1119797299	5963696341	0.18
2020	460632885	5898994461	0.07
2021	180059052	57669088987	0.003
2022	907762858	6675704617	0.13

**ANALYSIS:**

The return on equity (ROE) ratio computes a company's net revenue as a percentage of its stockholders' equity. In 2018, the company's ROE was 0.16; however, the ROE increased in 2019 by 0.18 from 2020 and 2021 ROE decreased to lower level, suggesting a decrease in ratios; yet, in 2022, the ROE increased to 0.13, indicating an increase in the company's profit in relation to its equity.



**GRAPH: SHOWING RETURN ON EQUITY RATIO:**

**INTERPRETATION:** The effectiveness of the corporation in making a profit off of its shareholders' equity is shown in the following graph. The ratio can be used as a gauge of financial performance and possible hazards for investors and stakeholders because of its historical trend, which shows how the company's profitability has evolved over time. The ratio may fluctuate for a number of reasons, including changes in revenue, expenses, management choices, prevailing economic conditions, or market trends.

#### **FINDINGS**

- The Debt Equity Ratio helps in improving its overall financial health and lower risks, the VST company should concentrate on achieving a more stable and sustainable debt-to-equity ratio, optimizing its capital structure, and applying efficient financial management practices.
- The Debt Asset Ratio Considering the Total Debt to Total Asset ratio in order to find methods to enhance the VST Company's financial situation. This ratio should be decreased since it shows a lower level of financial risk and a better ratio of assets to debt.
- Ratio of Return on Equity (ROE) for the VST Company from 2018 to 2022. The profitability of a company's equity investment is gauged by the ROE ratio. More effective use of shareholders' equity is often indicated by a greater ROE.
- The solvency ratio shows whether a corporation will be able to pay its long-term debt obligations. It is computed by dividing a company's net income by all of its liabilities. An organization's ability to pay its financial commitments is better demonstrated by a higher solvency ratio, because it shows a greater ability to handle long-term debt obligations and a healthier financial situation. The VST Tillers and Tractors Limited company's solvency ratio appears to change over time, declining in recent years (2020 and 2021) and slightly improving in 2022.
- The Interest Coverage Ratio as well as historical EBIT (Earnings Before Interest and Taxes) and EBIT statistics. The interest coverage ratio shows how well a corporation can finance its interest costs out of operational profits. In general, a greater ratio denotes better financial health at VST Tillers and Tractors.

## SUGGESTIONS

- Risk Assessment and Mitigation: It's critical that the business evaluate any hazards that could arise from its present debt levels and have backup strategies to address those risks. Stress testing the financials under various economic scenarios may be necessary for this.
- Transparency and Communication: Maintaining the trust of stakeholders, such as shareholders, lenders, and investors, requires open and transparent communication about the company's financial decisions, capital structure, and strategies.
- Consult Financial Experts: The business may benefit from seeking the advice of financial professionals, such as financial advisors or consultants, who can give the company specialized advice on managing debt and maximizing the capital structure.
- Asset Efficiency: Although Total Assets have expanded with time, efforts to maximize asset utilization should be taken into account. It could be necessary to sell or divest noncore or underperforming assets in order to raise money for debt repayment.
- Cost optimization: Examine operational costs in-depth. Find places where expenses can be cut without affecting the caliber of the goods or services. Better cost control can free up money that can be used to pay off debt.
- Growth in Revenue: Concentrate the focus on boosting your bottom line through tactical moves like broadening your clientele, launching fresh goods or services, or improving what you already have. The ability to create more cash flow to use towards debt repayment might be aided by increasing income.
- Equity Management for Shareholders: Take into account strategies for boosting equity for shareholders, such as issuing new equity shares or luring equity investments. The ROE may be stronger with a larger equity base.
- Operational Efficiency: Simplify corporate procedures and operations to cut costs and boost output. This may have a favorable effect on net income and general profitability.
- Financial Planning and Analysis: Create thorough financial plans and predictions to serve as a roadmap for the business's financial decisions. Regularly check actual outcomes against projections to spot discrepancies and implement any necessary remedial measures.

## CONCLUSION

In conclusion, the study on Ratio Analysis should focus of VST Tillers and Tractors Limited should be strengthening its overall financial situation and managing its capital structure and debt appropriately. The company may strengthen its financial stability, reduce risks, and put itself in a position for long-term success by tackling these areas. Debt Asset Ratio and Debt Equity Ratio are significant metrics that highlight the necessity of a stable and balanced capital structure. The company has to focus on stabilizing its debt-to-equity ratio and improving its assets-to-debt ratio. This is possible with careful debt management, asset efficiency, and costcutting measures. The importance of effectively using shareholders' money is shown by the Return on money (ROE) ratio. The company can demonstrate efficient use of its equity assets and draw in future investors by putting plans to increase ROE

into place. The company's capacity to service its long-term debt commitments can be gauged by looking at its solvency ratios and interest coverage ratios

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