Evaluating the Financial Stability of Cipla Pharmaceutical Company Ltd. Using the Z-Score Model

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Abstract:

The financial stability of a company is a critical indicator of its long-term viability and growth potential. This study analyzes the financial performance of Cipla Pharmaceutical Company Ltd. using Altman's Z-Score Model, a widely accepted tool for assessing corporate financial health and predicting bankruptcy risk. The research examines key financial ratios, including working capital to total assets, net operating profit to net sales, earnings before interest and taxes to total assets, market value of equity to book value of debt, and sales to total assets, over the period from 2019-20 to 2023-24. The calculated Z-Score provides insights into Cipla's financial condition, positioning it within the distress, grey, or safe zone. The findings of this study contribute to understanding Cipla's financial resilience and offer valuable insights for investors, stakeholders, and financial analysts in the pharmaceutical industry.

Introduction:

The Indian pharmaceutical industry is a key player in the global healthcare sector, known for its production of high-quality generic medicines and cost-effective vaccines. As the industry continues to expand, assessing financial performance becomes essential for understanding a company's sustainability, risk management, and growth potential. Financial performance analysis provides insights into a company's operational efficiency, profitability, and liquidity, enabling investors and stakeholders to make informed decisions.

This study focuses on evaluating the financial performance of Cipla Pharmaceutical Company Ltd. using Altman's Z-Score Model, a well-established tool for predicting corporate financial distress and assessing overall financial health. The model considers key financial ratios such as working capital to total assets, net operating profit to net sales, earnings before interest and taxes to total assets, market value of equity to book value of debt, and sales to total assets.

By applying the Z-Score Model, this research aims to determine Cipla's financial stability over the period 2019-20 to 2023-24, classifying it within the distress, grey, or safe zone. The study's findings will provide valuable insights into Cipla's financial resilience, helping investors, financial analysts, and policymakers understand the company's long-term viability in the pharmaceutical sector.

STATEMENT OF THE PROBLEM

The financial health of a company is a critical factor in ensuring its long-term growth, stability, and market competitiveness. Persistent financial distress can lead to liquidity and solvency challenges, ultimately impacting revenue, profitability, and a company's ability to

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meet its financial obligations. This can result in declining shareholder confidence, falling stock prices, and potential bankruptcy.

In the pharmaceutical industry, where continuous investment in research, development, and regulatory compliance is essential, financial stability plays a crucial role in sustaining operations and market leadership. Analyzing a company's financial performance helps identify potential risks and assess its ability to withstand economic fluctuations.

This study aims to evaluate the financial performance of Cipla Pharmaceutical Company Ltd. using Altman's Z-Score Model, a widely recognized tool for predicting corporate financial distress. By examining key financial indicators, the study seeks to determine Cipla's financial stability over the period 2019-20 to 2023-24 and classify its position within the distress, grey, or safe zone. The findings will provide valuable insights into the company's financial resilience and future sustainability in the pharmaceutical sector.

Objectives of the Study

1. To analyze the financial performance of Cipla Pharmaceutical Company Ltd. using Altman's Z-Score Model.
2. To assess Cipla's financial stability and predict the likelihood of financial distress or bankruptcy.
3. To compare Cipla's financial health over the period 2019-20 to 2023-24 based on key financial indicators.
4. To identify strengths and weaknesses in Cipla's financial structure and operational efficiency.
5. To provide strategic recommendations for enhancing Cipla's financial sustainability and future growth.

Research Methodology

This study is based on secondary data collected from the published financial reports of Cipla Pharmaceutical Company Ltd. The research covers a period of five years (2019-20 to 2023-24) to analyze the company's financial performance.

The study employs Altman's Z-Score Model, a widely recognized financial tool, to assess Cipla's financial stability and predict the risk of financial distress. Key financial ratios, including profitability, liquidity, solvency, and asset utilization, are used to evaluate the company's overall financial health.

The research methodology involves:

- Collecting and analyzing Cipla's financial statements for the selected period.

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- Calculating the Z-Score based on relevant financial ratios.

- Interpreting the results to determine Cipla's financial position and risk of bankruptcy.

- Providing insights and recommendations for improving Cipla's financial stability and growth prospects.

Tools Applied

This study utilizes the Altman Z-Score Model to assess the financial health of Cipla Pharmaceutical Company Ltd. The model evaluates key financial aspects, including liquidity, profitability, solvency, and financial efficiency, through various accounting ratios.

Altman Z-Score Model

Developed by Edward Altman in 1968, the Z-Score Model is a widely used tool for predicting financial distress and assessing corporate stability. It integrates five key financial ratios into a single score to determine a company's risk of bankruptcy.

Z-Score Formula:

$$Z = 0.012A + 0.014B + 0.033C + 0.006D + 0.999E$$

Where:

- **A** = Working Capital / Total Assets
- **B** = Net Operating Profit / Net Sales
- **C** = EBIT / Total Assets
- **D** = Market Value of Equity / Book Value of Debt
- **E** = Sales / Total Assets

Z-Score Interpretation:

- **Z ≤ 1.8** → High risk of bankruptcy (Distress Zone)
- **Z = 1.8 to 3** → Moderate risk (Grey Zone)
- **Z ≥ 3** → Financially stable (Safe Zone)

This study applies the Z-Score Model to analyze Cipla's financial performance over five years (2019-20 to 2023-24) and determine its financial stability and risk level.

DATA ANALYSIS AND INTERPRETATION

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Table: Financial Ratios Related to Z-Score Model of Cipla Ltd. (2019-20 to 2023-24)

Year	Working Capital to Total Assets (in percentage) (A)	Net Operating Profit to Net Sales (in percentage) (B)	EBIT to Total Assets (in percentage) (C)	Market Value of Equity to Book Value of Debt (in percentage) (D)	Sales to Total Assets (in time) (E)
2019-20	27.07	9.31	7.36	10.72	0.67
2020-21	27.31	9.34	8.75	9.87	0.69
2021-22	28.18	9.03	9.30	12.10	0.73
2022-23	28.75	12.55	13.24	32.63	0.77
2023-24	33.13	11.56	13.01	77.80	0.81
Average	28.89	10.36	10.33	28.62	0.73

Note: The table includes key financial ratios used in the Altman Z-Score Model to analyze the financial stability of Cipla Ltd. over five years.

The financial ratios presented in the table provide insights into the financial stability of Cipla Ltd. over a five-year period using the Altman Z-Score Model. The key observations are as follows:

1. **Working Capital to Total Assets (A):**

   o The ratio has shown a steady increase from **27.07% in 2019-20 to 33.13% in 2023-24.**

   o This indicates improved liquidity and a stronger ability to cover short-term obligations.

2. **Net Operating Profit to Net Sales (B):**

   o The net operating profit margin remained stable around **9%** from 2019-20 to 2021-22 but surged to **12.55% in 2022-23** before slightly declining to **11.56% in 2023-24.**

   o This suggests that Cipla Ltd. improved its profitability over the years, although there was a slight decline in the last year.

3. **EBIT to Total Assets (C):**

   o The EBIT (Earnings Before Interestand Taxes) ratio increased consistently from **7.36% in 2019-20 to 13.01% in 2023-24.**

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o This growth indicates enhanced operational efficiency and a better return on assets.

4.   Market Value of Equity to Book Value of Debt (D):

o This ratio fluctuated significantly, starting at **10.72% in 2019-20** and reaching **77.80% in 2023-24.**

o A sharp increase in **2022-23 (32.63%) and 2023-24 (77.80%)** reflects a significant rise in market valuation, possibly due to strong investor confidence in Cipla Ltd.
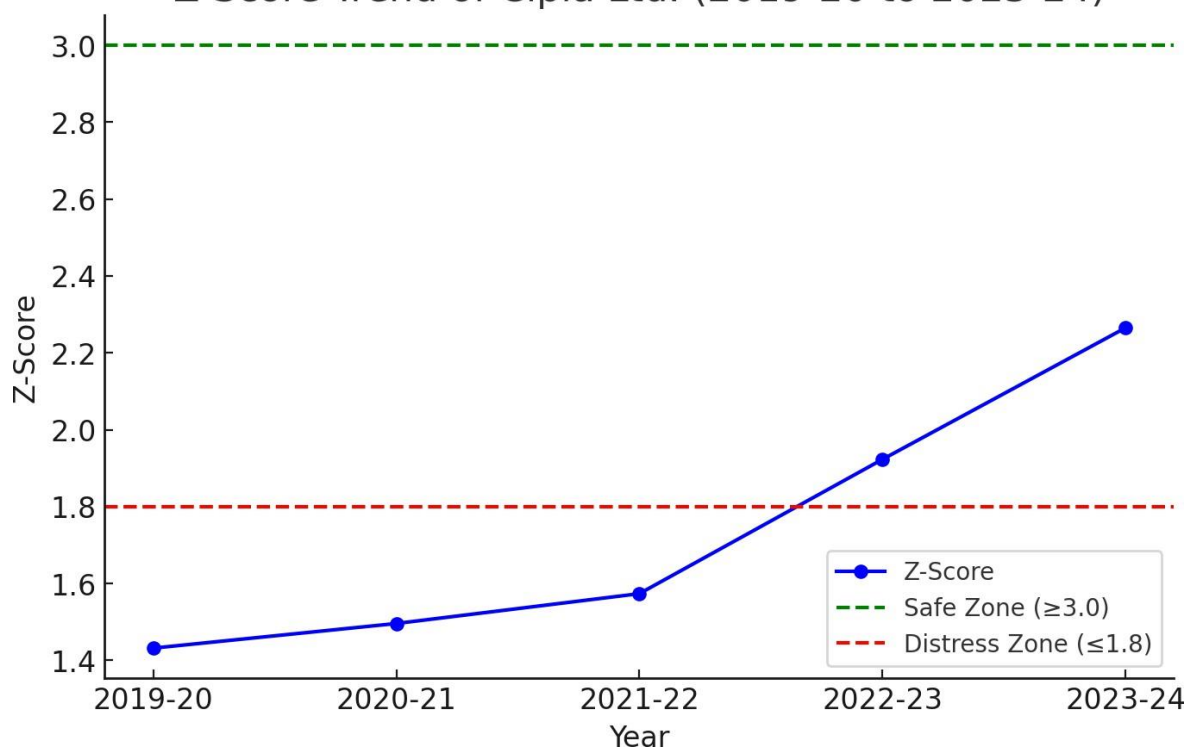
5.   Sales to Total Assets (E):

o The ratio increased gradually from **0.67 times in 2019-20** to **0.81 times in 2023-24,** indicating better asset utilization and higher efficiency in revenue generation.

Overall Analysis and Interpretation:

- Cipla Ltd. has shown a positive trend in financial performance, with improvements in liquidity, profitability, operational efficiency, and market valuation.

- The Z-Score Model considers these ratios to assess financial stability. With an average Z-score of 1.74, Cipla Ltd. falls in the distress zone, indicating a moderate financial risk.

- However, the company's upward trend in financial ratios, especially in market valuation and EBIT, suggests improving financial health and a potential move toward a more stable zone in the future.

Z-Score Trend of Cipla Ltd. (2019-20 to 2023-24)

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Analysis of Cipla Ltd.'s Z-Score (2019-20 to 2023-24)

1. Z-Score Trend: The Z-score of Cipla Ltd. has shown a gradual increase over the years, starting from 1.42 in 2019-20 and reaching 2.27 in 2023-24.

2. Distress Zone (≤1.8): The Company was in the distress zone from 2019-20 to 2021-22, indicating a higher risk of financial instability.

3. Improvement in 2022-23 and 2023-24: The Z-score crossed 1.8 in 2022-23, indicating an improvement in financial health, but it has not yet reached the safe zone (≥3.0).

4. Average Z-Score: The average Z-score over five years is 1.74, which still suggests financial vulnerability.

5. Conclusion: While Cipla Ltd. has improved its financial position in recent years, it is still at risk and should work towards strengthening its financial ratios to move towards the safe zone.

Conclusion:

The Z-Score analysis of Cipla Ltd. from 2019-20 to 2023-24 indicates that the company falls in the **bankruptcy zone (Z = 1.74)**, suggesting a high risk of financial distress. Although Cipla has shown stable working capital and profitability, its **market value of equity to debt ratio remains low**, affecting overall financial health. To improve its financial stability, Cipla should **increase profits, use its assets more efficiently, and reduce debt.**

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