

CAPITAL STRUCTURE AND FINANCIAL STABILITY

A TIME SERIES STUDY OF
RELIANCE INDUSTRIES LTD.
(2011–2024)

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Abin Sunny, Abil Reji, Abin Jose, and Dr Boby Thomas

**Capital Structure and Financial Stability: A Time Series
Study of Reliance Industries Ltd. (2011–2024)**

By

Abin Sunny, Abil Reji, Abin Jose, and Dr Bobby Thomas

A book based on the Undergraduate Dissertation titled “The Influence of
Capital Structure on Financial Stability: A Thirteen-Year Study of
Reliance Industries Ltd”

**Capital Structure and Financial Stability: A Time Series Study
of Reliance Industries Ltd. (2011–2024)**

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PREFACE

This book, *Capital Structure and Financial Stability: A Time Series Study of Reliance Industries Ltd. (2011–2024)*, results from a collaborative undergraduate research project undertaken by three students under my guidance, now co-authored by all four of us. It examines the influence of capital structure on the financial stability of one of India's largest and most dynamic corporations—Reliance Industries Ltd.—over thirteen years.

Drawing on secondary data from published financial records, the study employs statistical tools such as descriptive analysis, trend projection, and regression modelling to assess key financial indicators, including owner's equity, liabilities, assets, earnings, and market value. Our findings highlight a nuanced financial strategy characterized by stable long-term debt management, steady asset growth, and some challenges in liquidity—together reflecting a balanced yet evolving capital structure.

This research offers timely insights into how capital structure decisions influence corporate stability in large-scale enterprises. It is intended to serve students, scholars, and practitioners studying finance, corporate strategy, and business management.

A noteworthy achievement of this collaborative undergraduate effort is the Turnitin similarity score of just 5%. This low percentage stands as a testament to the originality, academic discipline, and ethical standards maintained throughout the research and writing process. For an undergraduate team project, it highlights the strength of authentic inquiry and academic integrity.

We also acknowledge the judicious use of Artificial Intelligence in preparing this manuscript. AI tools were utilized to enhance clarity, structure, and presentation—without compromising the integrity of the original research or its analytical depth. AI was a supportive instrument in refining communication, not a substitute for critical thinking or scholarly input.

We hope this work adds value to the growing discourse on financial stability and corporate finance in India and inspires further research.

Dr Bobby Thomas Athickal

PhD, MPhil, MCom, MA (Eco), MA (Phi), BEd, SET, NET

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Place : Idukki

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ABSTRACT

This study examines the influence of capital structure on the financial stability of Reliance Industries Ltd. over a thirteen-year period, using data from 2011 to 2024. The research focuses on analyzing trends in current and fixed assets, owner's equity, liabilities, total income, earnings before tax (EBT), working capital, and market value. Descriptive statistics, trend analysis, and regression models were used to assess performance and relationships among variables. The findings show that while owner's equity remained stable, total liabilities and fixed assets experienced moderate fluctuations, reflecting effective financial control. Current assets grew consistently, but working capital often showed negative values, pointing to liquidity management challenges. Both net sales and EBT increased over time despite occasional declines, while market value surged significantly, indicating strong investor confidence. Regression analysis revealed that owner's equity had a negative impact on financial stability, whereas total current assets contributed positively. Current liabilities had a slightly negative effect, and long-term liabilities had no significant influence, suggesting sound long-term debt handling. The average financial distress level was moderate but showed stability. Overall, the study concludes that Reliance Industries' capital structure reflects a well-balanced approach to long-term investments and short-term financial management, contributing to its resilience and sustained financial stability.

CHAPTER 1

INTRODUCTION

1.1 Introduction

A corporation's financial stability is an essential factor that reflects its ability to endure market uncertainties and sustain long-term growth. Among the various elements influencing financial stability, capital structure is pivotal as it determines how a company finances its operations, whether through debt, equity, or a combination of both. Understanding the intricate relationship between capital structure and financial stability is critical for assessing an organization's financial health and strategic decisions.

Reliance Industries Limited (RIL), a conglomerate consistently at the forefront of India's corporate landscape, is an exemplary case for examining this dynamic. Over the past thirteen years, RIL has undergone significant transformations, adapting to economic challenges, exploring new business avenues, and evolving its capital structure to sustain its market position.

This study aims to investigate the influence of RIL's capital structure on its financial stability from 2011 to 2024. The objectives of this analysis include examining trends in key financial parameters such as Owners' Equity, Total Liabilities, and Total Assets, as well as Current and Fixed Assets. Additionally, it evaluates the company's income performance through Total Income and Earnings Before Tax (EBT) and correlates EBT with Market Value (MV) over the same period.

The findings of this study will provide valuable insights into how changes in capital structure impact financial stability and overall performance, offering strategic lessons for other corporations navigating similar financial landscapes. Through this comprehensive analysis, the study seeks to bridge the gap between theoretical understanding and practical implications of capital structure management in enhancing financial stability.

1.2 Impact of study

This research offers valuable insights into the relationship between capital structure and financial stability, mainly through Reliance Industries Limited's (RIL) lens. It provides crucial information for stakeholders such as investors, analysts, and management by examining how RIL's financing decisions—balancing debt and equity—have impacted its long-term financial health. The study sheds light on how RIL's aggressive expansion into sectors like telecommunications and retail has influenced its stability, offering lessons for other large corporations with similar strategies. By tracking RIL's net worth over a decade, the research also evaluates the company's capacity to manage assets and liabilities effectively, providing a clearer picture of its financial resilience. Additionally, this work contributes to corporate finance theories by exploring the link between net worth and stability, offering practical and strategic insights for diversified conglomerates and emerging market giants. Policymakers may also benefit from these findings, as they highlight the importance of managing corporate capital structures for long-term sustainability. Ultimately, the research has broad implications for financial decision-making, corporate governance, and the

development of financial strategies in large multinational corporations.

1.3 Objectives of the Study

The study was conducted with the following objective:

1. Analyze the trend of Current Assets and Fixed Assets.
2. Analyze the trend of Owners' Equity, Long-Term Liabilities and Current Liabilities.
3. Analyze the Total Income and Earnings Before Tax (EBT) trend.
4. Analyze the Total Current Assets and Working Capital trend.
5. Analyze the trend of Earnings Before Tax (EBT) and Market Value (MV).
6. The influences of capital structure on financial stability.

1.4 Research Methodology

This study employs a quantitative research approach with a descriptive and analytical design to examine the impact of capital structure on financial stability. Secondary data from Reliance Industries Ltd. (2011–2024) focuses on key financial indicators. Purposive sampling ensures the selection of a relevant case, while statistical techniques such as descriptive analysis, correlation, and regression are used for data interpretation.

1.4.1 Sample Selection

Reliance was chosen because of its strong market presence, diverse capital structure, and financial stability, making it a suitable case study for analyzing the impact of capital structure on

financial stability. Purposive sampling (judgmental or selective sampling) is used to select the sample.

1.4.2 Data Collection

The study utilized secondary data obtained from published financial records of Reliance Industries Ltd. spanning 13 years, from 2011 to 2024. These records provided key financial indicators, including Owner's Equity, Long-term Liabilities, Current Liabilities, Total Fixed Assets, and Total Current Assets, essential for analyzing the relationship between capital structure and financial stability. Secondary data ensured accuracy, relevance, and consistency over the study period.

1.4.3 Hypotheses of the Study

H₀ 1 Capital structure does not have a significant influence on financial stability.

1.5 Tools for Data Analysis

The study utilized descriptive statistics to summarise and assess variability, including mean, median, standard deviation, and coefficient of variation. Skewness and kurtosis were used to analyze data distribution, while trend analysis identified patterns over time. Regression analysis evaluated the impact of capital structure on financial stability, ensuring a comprehensive analysis.

1.6 Period of Study

We analyzed data from the sample company's 13-year annual reports (Reliance Industries Ltd.) from 2011 to 2024.

1.8 Chapter Scheme

The presentation is divided into four chapters.

Chapter 1- Introduction

Chapter 2- Literature Review

Chapter 3- Data Analysis

Chapter 4- Findings, Recommendations and Conclusion

CHAPTER 2

LITERATURE REVIEW

2.1 Introduction

The financial performance and stability literature reveals a multifaceted landscape across various sectors and regions, highlighting the intricate dynamics of capital structure, intellectual capital, and financial risk. Research into machine-building companies in Kharkiv demonstrates how intellectual capital influences financial stability, with varying effects depending on enterprise clusters. The performance of Nigerian banks post-consolidation illustrates the effectiveness of balancing debt and equity to enhance financial outcomes. Similarly, analyses of Reliance Industries Ltd. delve into the impacts of financial leverage on profitability, uncovering significant relationships with specific metrics while noting limited overall impact. Risk assessments show increased operating risks and negative correlations with returns. Broader studies on financial crises reveal profound effects on corporate financing and expenditure, particularly in emerging markets, while European industry restructuring underscores the risks of artificially low interest rates. Additionally, examining microfinance institutions in Rwanda highlights the detrimental effects of excessive debt on financial sustainability. Collectively, these studies offer valuable insights into optimizing capital structures and managing financial risks across diverse contexts.

2.2 Capital Structure and Financial Stability

The restructuring of the industry at the European level has significant financial stability implications. Artificially low interest rates created a bubble in the durables sector, leading to the deepest recession since 1929 when it burst. The assumption that interest rates can be freely manipulated to influence aggregate investment and demand should be reconsidered for global financial stability. Markets operate globally through fundamental and financial variables, with financial contracts enabling rapid adjustments. The subprime crisis was a natural outcome of long-term economic processes driven by shifts in relative prices, interest rates, and profit rates (Tsionas, 2013).

This paper uses flow-of-funds and balance sheet data to examine how financial crises affect corporate financing and expenditure across various countries. It finds that investment and inventory contractions are the primary drivers of GDP decline, with a more substantial impact in emerging markets. A higher debt-equity ratio is linked to more significant declines in investment and inventories after crises. Econometric analysis indicates that corporate sectors in emerging markets are more vulnerable to financial crises than those in industrial countries, which benefit from increased bond issuance after banking crises. Despite holding more precautionary liquidity, emerging market firms experience more severe expenditure shocks (Davis & Stone, 2004).

2.3 Impact of Capital Structure and Intellectual Capital on Financial Stability

The study aims to develop a method for assessing the impact of intellectual capital on the financial stability of enterprises,

focusing on machine-building companies in the Kharkiv region. Using various analytical methods, including cluster and regression analysis, the study identifies groups of enterprises based on their capital structure and efficiency. It finds a positive relationship between the functioning of intellectual capital and the financial outcomes of these enterprises. However, the influence of intellectual capital on asset turnover is inconsistent across all enterprises, and the significance of different components of intellectual capital varies between clusters. The research highlights that individual components of intellectual capital are not effective in isolation but contribute significantly when combined. The findings offer practical recommendations for optimizing the structure and use of total and intellectual capital, aiming to enhance the efficient use of material, financial, and intellectual resources in enterprises (Zhuravlyova et al., 2019)

The study investigates the impact of post-consolidation capital structure on the financial performance of Nigerian banks listed on the Nigerian Stock Exchange (NSE). Analyzing data from 10 banks over eight years (2005-2012), the study uses profit before Tax as the dependent variable and equity and debt as independent variables. Ordinary least square regression analysis of the collected data reveals a significant positive relationship between capital structure and financial performance. The findings suggest that Nigerian banks effectively use a combination of debt and equity to enhance their earnings and overall financial performance (Sanjeevi & Srinivasa Rao, 2013).

2.4 Financial Performance and Risk Analysis

This paper examines the financing pattern of Reliance Industries Ltd. over five years (2010-2014), focusing on the impact of debt

and equity capital on the company's performance. The study uses long-term solvency ratios to assess the firm's ability to meet fixed interest costs and repayment schedules associated with long-term borrowings. The research provides insights into using ratio analysis as a financial tool by analyzing the relationship between external and internal equity. The objective is to help readers understand how to use these tools to evaluate a firm's solvency position. The analysis of various ratios calculated from the company's balance sheet and income statements reveals that Reliance Industries Ltd.'s capital structure is equally balanced between outsider (debt) and owner (Equity) capital (Tiwari & Parray, 2014).

This study examines the impact of financial leverage on the profitability of Reliance Industries Ltd., focusing on data from 2016-17 to 2020-21. The research tests two hypotheses: first, there is no significant relationship between financial leverage and profitability, and second, that financial leverage has no significant impact on the company's profitability. Financial leverage is the independent variable, while Net Profit Ratio (NPR), Earnings Per Share (EPS), Return on Equity (ROE), and Return on Assets (ROA) are the dependent variables. Using correlation analysis, the study finds no significant relationship between financial leverage and NPR but a significant positive relationship between financial leverage and EPS, ROE, and ROA. Linear regression analysis indicates that financial leverage does not significantly impact the overall profitability of Reliance Industries Ltd. during the study period. This suggests that while leverage influences specific profitability metrics, it does not broadly impact the company's profitability (Meghanathi & Chakrawal, 2021).

The study analyses business and financial risks for Reliance Industries Ltd. using various indicators such as operating leverage, asset ratios, financial leverage, and debt-equity ratio over 2008-2012 and 2013-2017. Statistical tools were used to evaluate these indicators, including descriptive statistics, correlation, and regression analysis. The findings indicate that Reliance experienced increased overall risk over the past decade, primarily driven by operating risk. The Pearson correlation analysis showed no significant association between the debt-equity ratio and fixed asset-to-total asset ratio. Additionally, the study found a negative correlation between risk and return for Reliance, which contrasts with the theoretical expectation of a positive relationship between risk and return (Yadav & Kumar, 2016).

2.5 Impact of Financial Crises and Sector-Specific Factors

The paper examines the impact of financial crises on corporate financing and expenditure across various countries using unique flow-of-funds and balance sheet data. It finds that investment and inventory contractions significantly contribute to lower GDP growth, especially in emerging markets. The debt-equity ratio is linked to these declines post-crisis. Econometric analysis shows that financial crises substantially impact corporate expenditure and financing in emerging markets compared to industrial countries, which benefit from increased bond issuance after the banking crisis. Despite holding more precautionary liquidity, emerging market companies experience a stronger adverse response in expenditure to shocks (Stone & Davis, 2004).

The study analyses how accounting variables such as financial strength, long-term profitability, asset tangibility, business risk,

and solvency affect the capital structure of oil companies listed on the National Stock Exchange in India. Using panel data analysis on ten companies from 2006 to 2015, the study finds that financial strength positively relates to leverage, while the other variables have a negative relationship. All accounting variables are significant determinants of capital structure, and companies employ different strategies despite being in the same industry. Once established, capital structures show little change over the years (Dhingra, 2020)S.

2.6 Capital Structure and Financial Sustainability of MFIs

The study aimed to assess how capital structure affects the financial sustainability of Rwanda's microfinance institutions (MFIs). Using data from the annual financial reports of 20 MFIs and SACCOs from 2014 to 2018, the analysis employed fixed effects OLS regression models. The findings show that relying on debt financing negatively impacts these institutions' financial self-sufficiency and performance (Rutanga et al., 2021).

2.7 Financing Pattern of Reliance Industries Ltd.

This paper analyses the financing pattern of Reliance Industries Ltd. over five years (2010-2014), focusing on the impact of debt and equity on its performance. The study uses ratio analysis to examine the firm's long-term solvency and ability to meet financial obligations. The findings reveal that the company maintains a balanced capital structure, with external and internal equity contributing equally to its financial stability(Tiwari & Parray, 2014).

2.8 Accounting Variables and Capital Structure of Oil Companies in India

The restructuring of European industry has significant implications for financial stability, mainly due to artificially low interest rates, which created a "bubble" in the durables sector. This bubble's collapse led to the deepest recession in the American and European economies since 1929. The belief that interest rates can be adjusted at will to influence aggregate investment and demand should be reconsidered for global financial stability. The subprime crisis resulted from long-standing underlying forces influenced by shifts in relative prices, interest rates, and profit rates, with financial markets operating globally through various contracts and agreements. (Tsionas, 2014).

2.9 Financial Performance Analysis of Reliance Industries Ltd.

The paper uses financial statements such as the Income Statement and Balance Sheet to conduct a financial performance analysis of Reliance Industries Limited (RIL) over five years from 2017-18 to 2021-22. The analysis assesses the company's strengths and weaknesses and predicts future profits while identifying necessary corrective measures. By employing ratio and trend analysis, the study evaluates RIL's financial position, highlights areas of weakness, and suggests improvements to achieve optimal financial ratios. Data was gathered from annual reports, the company's website, published articles, and other reliable sources. The study also acknowledges limitations related to primary data sources, data analysis tools, and the study's periodicity (Konwar, 2023).

2.10 Research Gap

Several gaps remain in the existing literature, focusing on financial performance, stability, and capital structures.

First, the absence of a cross-sectoral approach remains a challenge and issue for study. It should be noted that specific studies have been conducted about Kharkiv machine-building companies, Nigerian banks, and Reliance Industries Ltd. These studies offered interesting conclusions but integrated them into their sectors only—not for global cross-industry applications.

Second, some studies sought to investigate the significance of intellectual capital in financial stability but could not adequately address the impact's variability amidst clusters of enterprises. The impact of intellectual capital on an organization is of varying significance, and a more rigorous examination is required.

Third, about financial crises and corporate-level financing, greater focus has been paid to emerging markets. However, the key question of how capital structure heterogeneity impacts the firm's ability to withstand expenditure shocks has not been answered. A multi-country study on capital structure optimization between industrial and emerging markets could best address the question.

Finally, the multi-pronged systematic gaps of knowledge revolving around a firm's leverage in ratios from Return on Equity (ROE) to Diluted Earnings Per Share (EPS) yield shocking results that warrant protection. Such phenomena can be further appreciated when companies like Reliance Industries Ltd are studied in depth. As articulated, these companies further complicate the problem with the negative correlation between the existing risk in return on investment and financial surpluses when

analyzed in scrutinized detail. This ironically overturns previously accepted financial hypotheses.

Lastly, research is scant on middle frameworks surrounding this gap regarding microfinance institutions (MFIs) compared to larger corporations. Microfinance institutions in Rwanda especially showcase excessive debt that is detrimental to their financial performance and guides any rational framework for structuring capital.

From this gap, understanding the connection between capital structures and financial performance at the elementary stages, along with asset productivity, will yield relevance in both spheres: industry and academia.

2.11 Conclusion

The studies collectively explore various aspects of financial stability and performance across different contexts. They include assessing how intellectual capital impacts financial stability in Kharkiv's machine-building sector, showing positive but variable effects depending on the enterprise cluster. The analysis of Nigerian banks reveals that a balanced mix of debt and equity enhances financial performance. Additionally, Reliance Industries Ltd.'s financial performance from 2017-2022 highlights strengths and weaknesses, with significant positive relationships between financial leverage and specific profitability metrics but no broad impact on overall profitability. Risk analysis for Reliance Industries shows increased risk, mainly from operating activities, and a negative correlation with returns. Financial crises impact corporate financing and expenditure more severely in emerging markets, while artificially low interest rates in Europe led to significant economic instability. Finally, the

study on Rwandan MFIs finds that heavy Reliance on debt undermines financial sustainability.

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CHAPTER 3

DATA ANALYSIS

3.1 Introduction

The chapter presents the analysis of data collected to explore the influence of capital structure on financial stability in Reliance Industries Ltd. The analysis incorporates various statistical tools to comprehensively understand the financial dynamics observed over the 13-year study period from 2011 to 2024. Descriptive statistics, including mean, median, standard deviation, and coefficient of variation, summarise and measure the variability within the dataset. Skewness and kurtosis are applied to evaluate the distribution characteristics of the financial variables.

Trend analysis is conducted to identify patterns and shifts in key financial metrics, such as owners' equity, liabilities, assets, and Income. Furthermore, regression analysis determines the relationship between capital structure components and financial stability. By analyzing these relationships, the study aims to uncover how changes in debt, equity, and other financial elements influence the company's ability to maintain financial stability. Collectively, these methods provide valuable insights into the strategic financial management of the sample company over the selected period.

The study was conducted with the following objective:

1. Analyze the trend of Current Assets and Fixed Assets.
2. Analyze the trend of Owners' Equity, Long-Term Liabilities and Current Liabilities.

3. Analyze the Total Income and Earnings Before Tax (EBT) trend.
4. Analyze the Total Current Assets and Working Capital trend.
5. Analyze the trend of Earnings Before Tax (EBT) and Market Value (MV).
6. The influences of capital structure on financial stability.

3.2 Summary Statistics

The summary statistics highlight key financial trends of the sample company from 2011 to 2024. Measures like mean, median, and standard deviation reveal consistent growth in assets and equity, with moderate liability variability. Skewness and kurtosis indicate stable distributions, reflecting effective financial management and resource allocation.

3.2.1 Capital Structure

Table 3.1 shows the summary statistics of the capital structure of the selected company for the 13 years.

Table 3.1

Summary Statistics: Capital Structure

Variable	Mean	Median	SD	C.V.	Skewness	Ex. Kurtosis
Owner's Equity	3E+05	3E+05	1E+05	0.4048	0.1296	-1.507
General Reserve	2E+05	2E+05	62309	0.3272	-0.4229	-1.276

Long Term Liability	1E+05	1E+05	65354	0.4935	0.3580	-1.308
Current Liability	2E+05	2E+05	81091	0.4887	0.4426	-0.771
Total Liability	3E+05	3E+05	1E+05	0.4641	0.2511	-1.221
Total Asset	6E+05	6E+05	3E+05	0.4313	0.0724	-1.640
Total Current Asset	2E+05	1E+05	58642	0.3686	0.7380	-0.777
Total Fixed Asset	5E+05	5E+05	2E+05	0.4865	-0.0301	-1.466

Source: Secondary Data, Gretl Output

Interpretation:

Owner's Equity

The sample company has consistently shown owner's equity over time, with a mean and median of ₹300,000 reflecting stability and minimal deviation. The moderate variability (SD: ₹100,000, C.V.: 0.4048) indicates steady performance. A slight positive skewness (0.1296) indicates occasional higher values, while the platykurtic nature (excess kurtosis: -1.507) suggests fewer extreme fluctuations. These metrics highlight effective management and financial stability.

General Reserve

The general reserve remained stable, with a mean and median of ₹200,000 and low variability (SD: ₹62,309, C.V.: 0.3272),

indicating minimal changes. Slight negative skewness (-0.4229) shows lower-than-average reserves were slightly more common, while the platykurtic distribution (excess kurtosis: -1.276) reflects limited outliers. This suggests prudent reserve management, with occasional dips tied to strategic needs.

Long-Term Liability

Reliance's long-term liabilities were consistent, with a mean and median of ₹100,000. Moderate variability (SD: ₹65,354, C.V.: 0.4935) suggests some fluctuations, while slight positive skewness (0.3580) indicates occasional increases, likely due to strategic investments. The platykurtic nature (excess kurtosis: -1.308) highlights fewer extreme deviations, reflecting controlled management of long-term obligations.

Current Liability

Current liabilities were steady, with a mean and median of ₹200,000. Moderate fluctuations (SD: ₹81,091, C.V.: 0.4887) suggest occasional variability, while positive skewness (0.4426) points to occasional spikes, likely from operational demands. The platykurtic distribution (excess kurtosis: -0.771) highlights fewer extreme deviations, showing controlled short-term liability management.

Total Liability

Total liabilities remained consistent, with both mean and median at ₹300,000. Moderate variability (SD: ₹100,000, C.V.: 0.4641) indicates manageable fluctuations, while slight positive skewness (0.2511) suggests occasional increases. The negative kurtosis (-1.221) reflects fewer extreme values, indicating stable financial management of liabilities.

Total Asset

company's total assets showed consistent growth, with a mean and median of ₹600,000. While variability was significant (SD: ₹300,000), the relative variation (C.V.: 0.4313) remained manageable. Near-symmetric skewness (0.0724) indicates balanced growth, and negative kurtosis (-1.640) reflects limited extreme values. This suggests strategic investments and controlled asset expansion.

Total Current Asset

Total current assets grew steadily, with a mean of ₹200,000 and a median of ₹100,000, reflecting some variability. Low variability (SD: ₹58,642, C.V.: 0.3686) and positive skewness (0.7380) highlight occasional spikes, likely from short-term liquidity management. Negative kurtosis (-0.777) suggests stability, emphasizing effective management of operational needs.

Total Fixed Asset

Fixed assets remained stable, with the mean and median at ₹500,000. Moderate variability (SD: ₹200,000, C.V.: 0.4865) reflects occasional fluctuations due to capital expenditures and depreciation. The near-symmetric skewness (-0.0301) and platykurtic kurtosis (-1.466) indicate balanced and controlled fixed asset management, supporting Reliance's infrastructure and operations.

Overall Observations:

- **Stability:** The data suggests consistent financial management across equity, liabilities, and assets over the 13 years.
- **Growth:** The steady asset growth reflects the company's long-term strategic investments.
- **Risk Management:** Low variability in reserves and liabilities indicates sound risk management practices.
- **Skewness & Kurtosis:** Skewness and negative kurtosis across variables point to relatively stable distributions with fewer extreme values, demonstrating controlled financial metrics.

3.2.2 Altman Z-Score

The Altman Z-Score is a financial model used to assess the likelihood of a company going bankrupt based on several key financial ratios. It combines profitability, leverage, liquidity, solvency, and activity ratios to produce a score that can be used to predict a company's financial health. There are different versions of the Z-score based on the type of company (e.g., private, public, manufacturing). The most commonly used Z-score formula is for publicly traded manufacturing firms.

Altman Z-Score Formula:

$$\text{Altman Z-Score} = 1.2A + 1.4B + 3.3C + 0.6D + 1.0E$$

Where:

- A = working capital / total assets
- B = retained earnings / total assets

- $C = \text{earnings before interest and tax} / \text{total assets}$
- $D = \text{market value of equity} / \text{total liabilities}$
- $E = \text{sales} / \text{total assets}$

Table 3.2 shows the data collected from the sample company's financial statements, which are required for calculating the financial stability represented by Altman Z-Score. In the tables below (Tables 3.2 and 3.3), WC stands for Working Capital, TA stands for total Assets, GR stands for general Reserve, EBT stands for earnings before Tax, MV stands for market Value, TL stands for total Liability, and TI stands for total Income.

Table 3.2

Components of Altman Z-Score

YEAR	WC	TA	GR	EBT	MV	TL	TI
2011	25393	284719	84000	25242.24	457.24	133170	251222
2012	63456	295140	100000	25750	375.53	129044	336096
2013	60690	318511	118000	26284	355.69	138491	368295
2014	39767	367583	135210	27818	384.58	170492	399053
2015	24851	397785	153210	29468	430.94	181609	337797
2016	-32495	457720	175210	36016	430.24	217536	240740
2017	-46545	546746	200000	40777	481.29	258433	273750
2018	-66735	617525	225000	45725	754.37	302878	313555
2019	-49094	775745	255000	47367	1032.06	370423	394323

2020	-143586	968912	255000	44561	1211.75	544328	365421
2021	8932	873673	258410	22908	1739.68	399190	279887
2022	21416	878674	224062	46786	2109.6	407147	459247
2023	28656	890565	226549	54118	2308.02	411471	553020
2024	22611	959643	256549	55273	2507.78	444547	560070

Source: Secondary data

Interpretation:

In this adaptation of the Altman Z-Score formula, a few modifications were made due to the unavailability of certain financial metrics. Instead of using EBIT (Earnings Before Interest and Taxes), we use EBT (Earnings Before Taxes) as a proxy, as EBIT was not provided in the available data. Additionally, we use Total Income for Sales, as it is the closest available metric reflecting the company's total revenue. Lastly, instead of Retained Earnings, we have opted to use General Reserve, as it serves a similar purpose in the company's financial structure. These changes ensure that the Z-Score calculation remains feasible while utilizing available financial data to assess the company's financial health.

Table 3.3 shows the summary statistics of Altman Z-Score.

Table 3.3**Summary Statistics: Altman Z-Score**

Variable	MEAN	MEDIAN	SD	C.V.	SKEWNESS	EX. KURTOSIS
GR	2E+05	2E+05	62309	0.327	-0.4229	-1.2760
TL	3E+05	3E+05	1.4E+05	0.464	0.2511	-1.2212
TA	6E+05	6E+05	2.7E+05	0.431	0.0724	-1.6397
TI	4E+05	4E+05	1.0E+05	0.275	0.7284	-0.4048
EBT	37721	38396	11404	0.302	0.1279	-1.4655
MV	1041.3	617.83	796.19	0.765	0.7901	-0.9709
WC	-3048.8	22014	57511	18.86	-1.0483	0.4673
AZ	1.3854	1.1996	0.4730	0.341	0.5169	-0.9933

Source: Secondary data, Gretl Output

Total Income

Income was stable, with a mean and median of ₹400,000. Moderate variability (SD: ₹100,000, C.V.: 0.2753) and slight positive skewness (0.7284) highlight occasional income spikes, while platykurtic kurtosis (-0.405) indicates limited extreme values, reflecting steady earnings.

EBT (Earnings Before Tax)

EBT averaged ₹37,721, with moderate variability (SD: ₹11,404, C.V.: 0.3023). Slight positive skewness (0.128) shows occasional

higher earnings, and platykurtic kurtosis (-1.466) indicates consistent earnings with fewer extreme deviations.

Market Value

The market value averaged ₹1,041.3 but showed high variability (SD: ₹796.19, C.V.: 0.7646). Positive skewness (0.7901) reflects occasional high values, while platykurtic kurtosis (-0.971) indicates limited outliers, highlighting significant fluctuations over time.

Working Capital

Working capital averaged ₹3,048.8, with high variability (SD: ₹57,511, C.V.: 18.864). Negative skewness (-1.048) indicates that most years had negative working capital, while leptokurtic kurtosis (0.467) suggests occasional extreme values, reflecting high volatility.

Altman Z-Score

The average Z-Score of 1.3854 indicates moderate bankruptcy risk, with a low median (1.1996) signalling financial distress. Moderate variability (SD: 0.473, C.V.: 0.3414), positive skewness (0.517), and platykurtic kurtosis (-0.993) highlight occasional more substantial years but consistent moderate risk.

Interpretation of the Z-Score:

- $Z > 2.99$: The company is considered in the "safe zone" with a low risk of bankruptcy.
- $1.81 < Z < 2.99$: The company is in a "grey area" where financial stress may be a concern, but bankruptcy is not imminent.

- $Z < 1.81$: The company is in the "distress zone," with a high risk of bankruptcy.

3.3 Trend Analysis

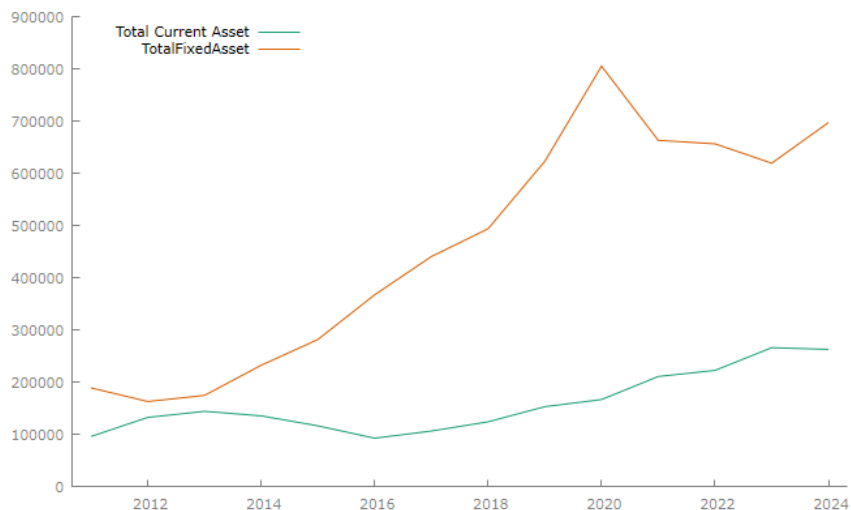
Trend analysis evaluates historical data to identify patterns or trends that can predict future movements or behaviours. It is commonly used in finance, marketing, and technology to guide decision-making and strategic planning. This trend analysis is carried out for the first five objectives of the research.

3.3.1 Key Growth Patterns, Asset Allocation Dynamics, and Structural Changes

Figure 3.1 shows the trend of the sample company's current and fixed assets for the last 13 years, which shows key Growth Patterns, asset allocation dynamics, and Structural Changes.

Figure 3.1

Trend of Current Asset and Fixed Asset



Source: Gretl Output

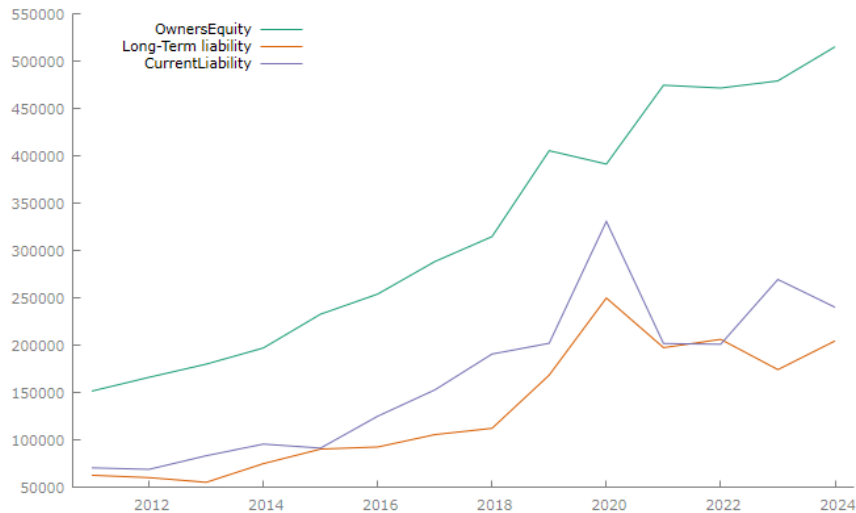
The data represents the trends in Total Current Assets (TCA) and Total Fixed Assets of the sample company from 2011 to 2024. Over this period, TCA shows a generally upward trajectory, beginning at ₹95,877 crore in 2011 and reaching a peak of ₹265,932 crore in 2023 before slightly decreasing to ₹262,625 crore in 2024. However, there were notable fluctuations, including a decline between 2015 and 2016, before recovering in later years. On the other hand, Total Fixed Assets grew consistently, starting at ₹188,842 crore in 2011 and climbing sharply to ₹805,045 crore in 2020, reflecting substantial capital investment. In subsequent years, fixed assets showed minor variability, ending at ₹697,018 crore in 2024. These trends highlighted the company's strategy of significant investment in long-term assets, while the fluctuations in TCA suggest varying liquidity management or operational strategies over time.

3.3.2 Financial Stability, Capital Structure, and Debt Management

Figure 3.2 shows the trend of the sample company's owners' equity, long-term liabilities, and current liabilities over the last 13 years, which evaluates financial stability, capital structure, and debt management over time.

Figure 3.2

Owners' Equity, Long-Term Liabilities and Current Liabilities



Source: Gretl Output

The data illustrates the trends in Owners' Equity, Long-Term Liabilities, and Current Liabilities of the sample company from 2011 to 2024. Owners' equity consistently increased, starting at ₹151,540 crore in 2011 and reaching ₹515,096 crore in 2024, signifying the company's strengthening financial foundation. Long-term liabilities fluctuated, beginning at ₹62,686 crore in 2011, peaking at ₹249,802 crore in 2020, and then declining to ₹204,533 crore by 2024, suggesting a potential shift in financing strategies or repayment of debt. Current liabilities showed an upward trend, increasing from ₹70,484 crore in 2011 to ₹240,014 crore in 2024, with significant surges in 2020 and 2023. This data reflects the company's substantial equity growth, fluctuating but with considerable Reliance on long-term debt and a growing base

of short-term obligations, indicating a balance between asset growth and Liability management.

3.3.3 Growth Patterns, Profitability Changes, and Financial Performance.

Figure 3.3 shows the trend of Total Income and Earnings Before Tax (EBT) for the sample company over the last 13 years, which identifies growth patterns, profitability changes, and financial performance insights over time.

Figure 3.3

Total Income and Earnings Before Tax (EBT)



Source: Gretl Output

The table overviews the organization's financial performance, focusing on Net Sales (equivalent to Total Income) and Earnings Before Tax (EBT) from 2011 to 2024. Over this period, Net Sales show significant growth, increasing from 251,222 in 2011 to 560,070 in 2024, with some fluctuations along the way. Notable declines in Net Sales occurred in 2015, 2016, and 2021, likely

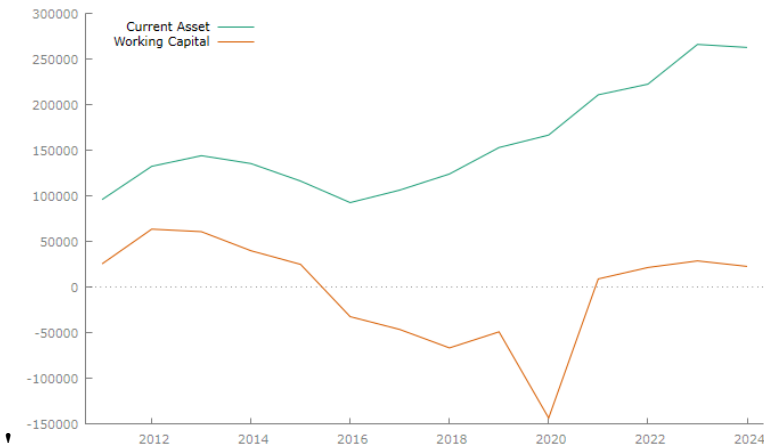
reflecting external challenges or operational adjustments. Despite these dips, the organization demonstrated resilience with substantial recoveries in subsequent years, particularly in 2022 and 2023. EBT follows a similar trajectory, rising steadily from 25,242.24 in 2011 to 55,273 in 2024, indicating consistent improvements in profitability. However, years like 2020 and 2021 saw declines in EBT despite relatively high Net Sales, which could indicate increased costs or reduced efficiency during those periods. The data reflects long-term revenue generation and profitability growth, highlighting the organization's ability to recover and sustain financial strength.

3.3.4 Liquidity, Operational Efficiency, and Financial Health

Figure 3.4 shows the sample company's Total Current Assets and Working Capital trend for the last 13 years, which assesses liquidity, operational efficiency, and financial health over time.

Figure 3.4

Trend of Total Current Assets and Working Capital



Source: Gretl output

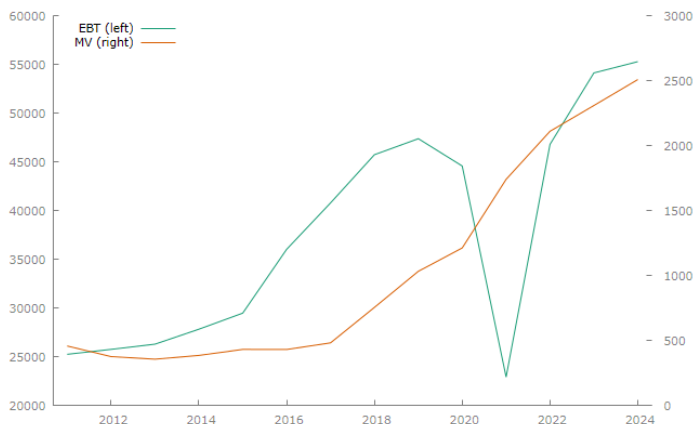
Total Current Assets (TCA) have shown steady growth from ₹95,877 crore in 2011 to ₹262,625 crore in 2024, with only minor fluctuations. However, working capital (WC) has been highly volatile, with several years of negative values, indicating that current liabilities often exceed current assets. For example, WC fell to ₹-143,586 crore in 2020, while even in favourable years, it remained inconsistent, such as ₹63,456 crore in 2012 but only ₹22,611 crore in 2024. Despite the rise in TCA, financial stability is challenged by fluctuating WC, highlighting liquidity management issues that may undermine the benefits of increasing assets.

3.3.5 Assess Profitability, Market Performance, and Valuation Dynamics.

Figure 3.5 shows the trend of earnings before Tax (EBT) and market value (MV) of the sample company for the last 13 years. This helps assess profitability, market performance, and valuation dynamics over time.

Figure 3.5

Trend of EBT and Market Value (MV)



Source: Gretl Output

This table highlights the relationship between the Earnings Before Tax (EBT) and Market Value (MV) of the sample company from 2011 to 2024. Over this period, EBT demonstrates a steady upward trend, growing from 25,242.24 in 2011 to 55,273 in 2024, indicating consistent improvements in profitability. Meanwhile, the Market Value (MV) has shown an even more dramatic increase, rising exponentially from 457.24 in 2011 to 2,507.78 in 2024. The sharp rise in MV, particularly after 2018, suggests significant investor confidence and increased company valuation, potentially driven by improved operational performance, strategic growth initiatives, or market conditions. Notably, despite fluctuations in EBT in specific years, such as a decline in 2020 and 2021, the MV continues to climb, reflecting long-term optimism from investors. This data underscores the organization's growing financial health and strong market position.

3.3.5 The Influences of Capital Structure on Financial Stability

Regression analyses determine the influential relationship between the independent and dependent variables.

This study employs the Ordinary Least Squares (OLS) method to analyze the influence of capital structure on financial stability in a sample company. OLS, a widely used statistical tool for regression analysis, is applied to estimate the relationships between key financial variables such as debt, equity, liabilities, and financial stability metrics. The method ensures accurate estimation by minimizing the sum of squared residuals, providing insights into how variations in the capital structure components impact the firm's financial stability. This approach is critical in

understanding the financial dynamics of the sample company over the 13 years from 2011 to 2024.

The following hypothesis is formulated for this analysis:

H₀ 1 Capital structure does not have a significant influence on financial stability.

3.3.5.1 Ordinary Least Squares (OLS) Analysis

Ordinary Least Squares (OLS) is a statistical method used to estimate the relationships between a dependent variable and one or more independent variables. It is a type of linear regression analysis that minimizes the sum of the squared differences (errors) between observed and predicted values.

$$\text{Equation: } Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \dots + \beta_k X_k + \epsilon$$

Where,

- Y is the dependent variable (Financial Stability).
- X₁, X₂, ..., X_k are the independent variables (Owners' Equity, Long-term Liability, Current Liability, Total Fixed Asset, Total Current Asset).
- β_0 is the intercept.
- $\beta_1, \dots, \beta_k$ are the coefficients representing the impact of each independent variable on the dependent variable.
- ϵ is the error term, which represents the unexplained variation in Y.

Table 3.4 shows how capital structure affects financial stability.

Table 3.4

Model 1: OLS, using observations 2011-2024

Ind.Variables	coefficient	std. error	t-ratio	p-value	Sign.
const	2.00062	0.0789646	25.34	6.31E-09	***
Owner's Equity	-6.06428e-06	1.95E-06	-3.114	0.0144	**
Long term liability	-3.57025e-06	2.93E-06	-1.220	0.2573	
Current Liability	-3.48532e-06	1.81E-06	-1.925	0.0904	*
Total Fixed Asset	1.93E-06	2.08E-06	0.9281	0.3805	
Total Current Asset	9.51E-06	2.26E-06	4.202	0.003	***

Source: Gretl output

- *** (Triple star): Significant at 1% level ($p < 0.01$)
- ** (Double star): Significant at 5% level ($p < 0.05$)
- * (Single star): Significant at 10% level ($p < 0.10$)

This OLS regression shows how the independent variable (Capital Structure) affects the dependent variable (Financial Stability).

Owner's Equity

Owners' equity has a slight negative impact on the dependent variable, suggesting that as Owners' Equity increases, the dependent variable slightly decreases. This effect is statistically significant at the 5% level ($p = 0.0144$), meaning there is strong evidence that the relationship is not due to chance.

Total Current Asset

Total Current Asset has a clear positive impact on the dependent variable, indicating that the dependent variable increases significantly as Total Current Asset increases. This effect is highly significant at the 1% level ($p = 0.003$), showing strong confidence in the positive relationship.

Long-term Liability

Long-term Liability shows a small negative effect on the dependent variable, implying that the dependent variable slightly decreases as it increases. However, this result is not statistically significant ($p = 0.2573$), indicating no firm evidence of an impact.

Current Liability

Current Liability has a small negative effect on the dependent variable, which slightly decreases as Current Liability increases. This effect is marginally significant ($p = 0.0904$), suggesting a weak but possible relationship.

Total Fixed Asset

Total Fixed Assets show a small positive effect on the dependent variable, increasing slightly as Total Fixed Assets increase. However, the result is not statistically significant ($p = 0.3805$), implying it likely has no substantial influence.

Constant

The constant represents the baseline value of the dependent variable when all independent variables are zero. This value is positive and highly significant ($p = 6.31\text{E-}09$), indicating strong confidence that it is meaningfully different from zero.

Key Takeaways:

- Owners' Equity (negative) and Total Current Assets (positive) are significant drivers.
- Other factors like long-term Liability and total fixed assets do not have strong effects.
- Hence, hypothesis H0 1 is partially rejected.

3.4.2 Evaluation of Model Fit:

Table 3.5 shows the ordinary least square Regression Results for the sample company over the past 13 years of data.

Table 3.5

Diagnostics for OLS Regression Model

Statistic/Metric	Value	Statistic/Metric	Value
Mean dependent var	1.385	S.D. dependent var	0.473
Sum squared resid	0.130	S.E. of regression	0.128
R-squared	0.955	Adjusted R-squared	0.927
F(5, 8)	364.611	P-value(F)	3.27E-09
Log-likelihood	12.882	Akaike criterion	-13.764

Schwarz criterion	−9.930	Hannan-Quinn	−14.119
Rho	−0.066	Durbin-Watson	1.8460

Source: Gretl Output

R-squared and Adjusted R-squared:

- R-squared is 0.955257, indicating that the independent variables in the model explain 95.53% of the variation in the dependent variable.
- Adjusted R-squared is 0.927293, which accounts for the number of predictors and provides a slightly more conservative measure of fit.

F-statistic and P-value(F):

- The F-statistic is 364.6105, with a p-value of 3.27E-09, showing that the overall model is highly significant and that the predictors collectively explain the variance in the dependent variable.

Autocorrelation (rho and Durbin-Watson):

- Durbin-Watson is 1.846045, close to 2, suggesting no firm evidence of autocorrelation in the residuals.
- Rho is −0.066310, supporting the same conclusion.

Key Takeaways

- The model explains most of the variation in the dependent variable (high R-squared).
- The overall fit of the model is significant (F-statistic).
- The residuals appear to have no serious autocorrelation issues (Durbin-Watson near 2).

- Information criteria indicate that this model is likely well-suited to the data.

3.4.3 Checking Assumptions:

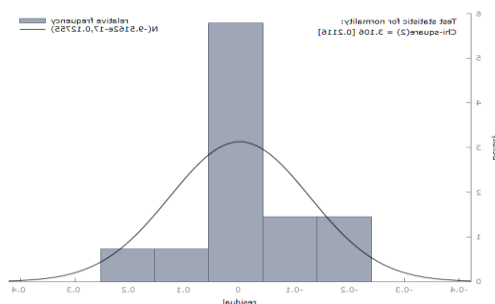
The Ordinary Least Squares (OLS) regression's reliability is based on the OLS assumptions' satisfaction. OLS assumptions are Linearity of the relationship, Independence of errors (no autocorrelation), Homoscedasticity (constant variance of errors), Normality of errors, No perfect multicollinearity among independent variables, Correct model specification (no omitted variables), Exogeneity (independent variables uncorrelated with errors), and Random sampling of observations. Violating these assumptions can lead to incorrect conclusions, poor predictions, and misinterpreting results.

Normality Residual

Normality of residuals means that the errors (differences between actual and predicted values) in a model should follow a normal distribution. This is important for accurate statistical testing. Figure 3.6 shows the normality of residuals from the regression model.

Figure 3.6

Normality residual



Source: Gretl Output

The residuals are centred around zero, with most values (57.14%) falling in a narrow range near zero (-0.042423 to 0.056326). The remaining residuals are spread across the tails, with minor frequencies at the extremes. A test for normality shows no evidence to reject the assumption that the residuals are normally distributed ($p = 0.21159$). This suggests that the model's predictions are generally accurate and unbiased.

The histogram shows the distribution of residuals from the regression model. Most residuals are near zero, indicating that the model's predictions closely align with observed values. The shape aligns with the standard distribution curve overlay, suggesting the residuals are approximately normal. A chi-square test confirms this, with a test statistic of 3.106 and a p-value of 0.2116, meaning the normality assumption cannot be rejected. This supports the validity of the regression model.

Heteroskedasticity

White's test for heteroskedasticity OLS, using observations 2011-2024 ($T = 14$), gave the following results.

Dependent variable: $\hat{u}^2$

Unadjusted R-squared = 0.898083

Test statistic: $TR^2 = 12.573163$,

with p-value = $P(\text{Chi-square}(10) > 12.573163) = 0.248525$

Interpretation

- The p-value (0.248525) exceeds the standard significance level (e.g., 0.05 or 0.10).
- We do not have sufficient evidence to reject the null hypothesis of homoscedasticity.

- There is no evidence of heteroskedasticity in the model.

Model Fitness Insight

- Since the homoscedasticity assumption holds, the OLS regression results are reliable.
- The coefficients are unbiased and efficient, accurately representing the relationship between variables.
- The standard errors, confidence intervals, and hypothesis tests derived from the model are valid.

Discussion of the Results

The analysis highlights the critical role of Total Current Assets (TCA) and Working Capital (WC) in driving financial stability (AZ) alongside other variables like Owners' Equity, Current Liabilities, and Long-term Liabilities. The OLS model shows TCA as a highly significant driver of financial stability ($p = 0.003$, positive coefficient of $9.50745e-06$). This indicates that higher current assets enhance liquidity and flexibility, enabling the company to meet short-term obligations and maintain operational continuity. Over the 13-year period, Total Current Assets (TCA) showed steady growth, with only a minor dip in 2024, reflecting overall effective liquidity management.

While TCA improved over time, the Working Capital (WC) fluctuated significantly, with multiple periods of negative values. These negative WC periods indicate liquidity pressures. Such imbalances strained the company's short-term financial stability. Despite WC fluctuations, the company's ability to recover and maintain positive WC in recent years demonstrates resilience and adaptability in managing short-term resources. Negative WC periods highlight challenges in balancing current liabilities

against assets, requiring better short-term liability management to ensure consistent stability. The company has shown resilience in recovering WC and maintaining stable financial performance, particularly in the latter years of the study period.

CHAPTER 4

FINDINGS, RECOMMENDATIONS, AND CONCLUSION

4.1 Introduction

Chapter 4 presents an in-depth analysis of the study's findings, offering actionable recommendations and drawing conclusions based on the influence of capital structure on Reliance Industries' financial stability over 13 years (2011–2024). This chapter aligns the study objectives with observed outcomes, focusing on key trends in assets, liabilities, equity, Income, and market value. The research objectives aimed to analyze the trends of Current and Fixed Assets, Owners' Equity, Long- and Short-Term Liabilities, Total Income, Earnings Before Tax (EBT), and Market Value (MV). Additionally, the study examined the relationship between these financial components and overall stability using robust statistical models.

The findings reveal consistent growth in assets and Income, reflecting strategic investments and sound financial management. While Total Current Assets positively influenced financial stability, Owners' Equity showed a significant but negative impact, highlighting potential trade-offs in capital structure. Liabilities and Fixed Assets had minimal influence, indicating effective long-term resource allocation and debt management. Statistical analysis confirmed the reliability of the regression model, with 95.53% of financial stability variance explained by the selected variables. These insights underscore the importance of maintaining a balanced capital structure, efficient short-term

asset management, and strategic financial decisions to sustain growth and stability in a dynamic market environment.

The study was conducted with the following objective:

1. Analyze the trend of Current Assets and Fixed Assets.
2. Analyze the trend of Owners' Equity, Long-Term Liabilities and Current Liabilities.
3. Analyze the Total Income and Earnings Before Tax (EBT) trend.
4. Analyze the Total Current Assets and Working Capital trend.
5. Analyze the trend of Earnings Before Tax (EBT) and Market Value (MV).
6. The influences of capital structure on financial stability.

4.2 Major findings

Analyzing the sample company's financial performance over the 13 years from 2011 to 2024 provides valuable insights into its capital structure, asset management, and financial stability. Key findings reveal consistent total assets, earnings, and market value growth driven by strategic investments and robust financial planning. While the company effectively managed liabilities and general reserves, occasional current assets and liabilities fluctuations reflected dynamic operational strategies and market responsiveness.

The study highlights the significant influence of capital structure on financial stability, with Total Current Assets positively impacting stability, while Owners' Equity exhibited a negative correlation. Statistical analysis confirmed the robustness of the

results, underscoring Reliance Industries' ability to maintain financial balance through efficient asset allocation, debt management, and resilience against market challenges. These findings collectively emphasize the company's long-term focus on sustainable growth and financial stability.

4.2.1 Capital Structure

1. Owner's equity remained stable with a mean and median of ₹300,000, low variability (SD: ₹100,000, C.V.: 0.4048), and minimal fluctuations, demonstrating strong financial stability.
2. The general reserve showed minimal fluctuations (SD: ₹62,309, C.V.: 0.3272) with a slight tendency toward lower-than-average values (skewness: -0.4229), highlighting prudent financial management.
3. Total liabilities averaged ₹300,000 with moderate variability (SD: ₹100,000, C.V.: 0.4641) and occasional increases (positive skewness: 0.2511), reflecting effective balancing of financial obligations.
4. Total assets consistently grew (mean and median: ₹600,000) with significant but controlled fluctuations (SD: ₹300,000, C.V.: 0.4313) and limited outliers, driven by strategic investments.
5. The market value showed substantial fluctuations (SD: ₹796.19, C.V.: 0.7646), with occasional spikes (skewness: 0.7901), highlighting market sensitivity and Reliance on external factors.
6. Working capital averaged -₹3,048.8 with high volatility (C.V.: 18.864), frequent negative values (skewness: -1.048),

and occasional extreme deviations, pointing to operational challenges.

7. The average Altman Z-Score of 1.3854 indicates moderate financial distress, with a low median of 1.1996 and relatively consistent performance (C.V.: 0.3414).
8. Income remained stable (mean and median: ₹400,000) with low volatility (C.V.: 0.2753), occasional income spikes (skewness: 0.7284), and few extreme deviations.
9. Fixed assets showed minimal fluctuations (SD: ₹200,000, C.V.: 0.4865) and a balanced distribution (skewness: -0.0301), reflecting consistent capital investments and infrastructure management.
10. Earnings Before Tax averaged ₹37,721 with moderate variability (C.V.: 0.3023), occasional higher earnings (skewness: 0.128), and limited extreme deviations, showing steady profitability.

4.2.2 The Trend of Current Assets and Fixed Assets.

11. TCA steadily increased from ₹95,877 crore in 2011 to a peak of ₹265,932 crore in 2023.
12. A slight decrease occurred in 2024, with TCA standing at ₹262,625 crore.
13. Notable fluctuations occurred, particularly a decline between 2015 and 2016, followed by a recovery in later years.
14. These fluctuations indicate changes in liquidity management or operational strategies.

15. Total Fixed Assets grew consistently, starting at ₹188,842 crore in 2011 and sharply increasing to ₹805,045 crore in 2020.
16. After the sharp growth period, Total Fixed Assets showed relatively minor fluctuations in the later years, reflecting more stable asset management post-2020.

4.2.3 Trend of Owners' Equity, Long-Term Liabilities and Current Liabilities.

17. Total Current Assets (TCA) showed an upward trend from ₹95,877 crore in 2011 to ₹265,932 crore in 2023, reflecting consistent growth.
18. There were notable fluctuations in TCA, including a decline between 2015 and 2016, indicating potential operational challenges or changes in liquidity management strategies.
19. TCA slightly decreased in 2024 to ₹262,625 crore, marking a slight dip after its peak in 2023. This suggests possible adjustments in working capital or short-term assets.
20. Total Fixed Assets grew significantly from ₹188,842 crore in 2011 to ₹805,045 crore in 2020, reflecting Reliance's focus on long-term capital investment.
21. In subsequent years, Total Fixed Assets showed minor variability, ending at ₹697,018 crore in 2024, suggesting a more stabilized and controlled approach to asset expansion.

4.2.4 Trend of Total Income and Earnings Before Tax (EBT).

22. Net Sales showed significant growth, rising from ₹251,222 crore in 2011 to ₹560,070 crore in 2024, despite occasional fluctuations and declines in 2015, 2016, and 2021.

23. The declines in Net Sales in 2015, 2016, and 2021 likely reflect external challenges or operational adjustments, though the organization recovered strongly in subsequent years, particularly in 2022 and 2023.
24. EBT followed a similar upward trend, increasing from ₹25,242 crore in 2011 to ₹55,273 crore in 2024, indicating consistent improvements in profitability over time.
25. EBT declined in 2020 and 2021 despite high Net Sales, possibly due to increased costs or reduced operational efficiency.
26. The data reflects long-term growth in Net Sales and EBT, showing the organization's ability to recover from setbacks and maintain financial strength.

4.2.5 Trend of Total Current Assets and Working Capital

27. Total Current Assets (TCA) showed consistent growth from ₹95,877 crore in 2011 to ₹262,625 crore in 2024, with only minor fluctuations, including a dip in 2024.
28. Working Capital (WC) fluctuated significantly, with multiple years showing negative values, such as ₹-143,586 crore in 2020, indicating liquidity challenges.
29. Even during years with positive WC, values were inconsistent, ranging from ₹63,456 crore in 2012 to ₹22,611 crore in 2024.
30. While TCA grew steadily, fluctuating WC, especially with negative values in several years, limited the ability to ensure financial stability.

31. The presence of negative WC in multiple years highlighted challenges in managing liquidity efficiently, potentially offsetting the positive impact of growing TCA.

4.2.6 Trend of EBT and Market Value (MV).

32. Earnings Before Tax (EBT) showed steady growth from 25,242.24 in 2011 to 55,273 in 2024, indicating consistent profitability improvements.
33. Market Value (MV) sharply rose from 457.24 in 2011 to 2,507.78 in 2024, reflecting increased investor confidence.
34. The exponential growth in MV, especially after 2018, suggests that improved operational performance, strategic initiatives, and favourable market conditions played a key role.
35. Despite fluctuations in EBT, including declines in 2020 and 2021, the MV continued to rise, showing long-term investor optimism.

4.2.7 Influences of Capital Structure on Financial Stability

36. Owners' equity hurts financial stability, statistically significant at the 5% level ($p = 0.0144$). Its negative coefficient suggests higher Owners' Equity might dilute returns or financial flexibility.
37. Total Current Assets positively and significantly impact financial stability at the 1% level ($p = 0.003$). They are a strong driver of financial stability, reflecting the importance of short-term assets in maintaining stability.
38. Despite growth in Total Current Assets, the company faced periods of negative Working Capital (e.g., 2016, 2020),

highlighting challenges in balancing assets and liabilities. However, gradual improvements in WC indicate resilience.

39. Total Current Assets increased from ₹95,877 crore in 2011 to ₹265,932 crore in 2023, demonstrating consistent growth in short-term resources, which played a key role in managing liquidity and operations.
40. Current liabilities show a marginally significant negative relationship with financial stability ($p = 0.0904$), suggesting that high liabilities occasionally strained short-term financial health.
41. Long-term liabilities do not significantly impact financial stability ($p = 0.2573$), showing that the company effectively manages its long-term debt without affecting short-term performance.
42. Despite fluctuations in Total Income and Earnings Before Tax (EBT) in years like 2015, 2016, and 2020, the company showed resilience through substantial recoveries, stabilizing its financial health by improving Working Capital and leveraging current assets.
43. The company's investment strategy in Total Fixed Assets and Current Assets indicates a focus on long-term growth through capital investments while actively managing short-term liquidity to maintain financial stability.

4.3 Suggestions

1. Strengthen liquidity management by maintaining a strong position in Total Current Assets and optimizing working capital.

2. Improve alignment between current assets and liabilities through better inventory control and faster receivables collection to address negative working capital periods.
3. Reduce short-term borrowing and negotiate better credit terms to minimize the negative impact of current liabilities on financial stability.
4. Balance Owners' Equity with debt and retained earnings to maintain financial flexibility without over-reliance on shareholder funds.
5. Continue strategic investments in fixed assets while ensuring they do not compromise liquidity or short-term financial health.

4.4 Conclusion

This study highlights the critical relationship between capital structure and financial stability in the sample company over the 13 years from 2011 to 2024. Through a comprehensive analysis of trends in assets, liabilities, equity, Income, and profitability, the findings demonstrate that key components of the capital structure significantly influence financial stability. Total Current Assets emerged as a strong positive driver of financial stability, emphasizing the importance of short-term asset management in maintaining liquidity and operational efficiency. Conversely, Owners' Equity exhibited a significant negative impact, suggesting that higher equity levels may dilute returns or reduce financial flexibility. Long-term and Current Liabilities and Fixed Assets showed minimal influence, reflecting Reliance Industries' effective debt and resource management strategies.

The statistical robustness of the regression model underscores the reliability of these findings, with over 95% of the variation in financial stability explained by the independent variables. The study also confirmed that the underlying assumptions of the Ordinary Least Squares (OLS) method, such as normality, homoscedasticity, and the absence of autocorrelation, were met. These results highlight the importance of maintaining a balanced capital structure, optimizing short-term assets, and managing equity to ensure financial resilience. Overall, Reliance Industries' financial strategies have supported consistent growth and stability, demonstrating resilience in the face of market challenges and strategic adaptability to sustain long-term success.

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APPENDIX

Table of data used for analysis

Components of Altman Z-Score

YEAR	WC	TA	GR	EBT	MV	TL	TI
2011	25393	284719	84000	25242.24	457.24	133170	251222
2012	63456	295140	100000	25750	375.53	129044	336096
2013	60690	318511	118000	26284	355.69	138491	368295
2014	39767	367583	135210	27818	384.58	170492	399053
2015	24851	397785	153210	29468	430.94	181609	337797
2016	-32495	457720	175210	36016	430.24	217536	240740
2017	-46545	546746	200000	40777	481.29	258433	273750
2018	-66735	617525	225000	45725	754.37	302878	313555
2019	-49094	775745	255000	47367	1032.06	370423	394323
2020	-143586	968912	255000	44561	1211.75	544328	365421
2021	8932	873673	258410	22908	1739.68	399190	279887
2022	21416	878674	224062	46786	2109.6	407147	459247
2023	28656	890565	226549	54118	2308.02	411471	553020
2024	22611	959643	256549	55273	2507.78	444547	560070

Source: <https://www.ril.com/investors/financial-reporting>