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A Study On Finanacial Risk Analysis With The Special Reference To Financial Risk In Azeotrop Pvt Ltd.

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Abstract: This study examines the financial risks faced by Azeotrop Pvt. Ltd., The main purpose of the study is to understand how financial risks affect the company's performance and to suggest ways to manage them. Two main tools were used: correlation analysis to study the relationship between different financial factors, and comparative balance sheet analysis to compare financial data over the past 10 years. The results show a strong connection between the company's assets and its profits, meaning the business depends heavily on its assets to make money. However, there are weak links between revenue and profit, which may point to cost or tax-related issues. The balance sheet comparison shows ups and downs in the company's financial position, reflecting periods of growth and reduction. Overall, the study highlights the need for the company to use its assets more effectively, control expenses, manage taxes better, and plan financially for the future to stay strong and successful.

Key Words: Financial Risk, Correlation, Comparative Balance Sheet.

I. INTRODUCTION

Financial risk analysis is the process of identifying, assessing, and mitigating potential financial risks that could impact an organization's financial stability and performance. It involves evaluating financial data, market trends, and other factors to minimize risk and ensure long- term sustainability.

Financial risk analysis is a critical process that helps organizations identify, assess, and mitigate potential financial risks that could impact their financial stability and performance. This process involves evaluating financial data, market trends, and other factors to identify potential financial risks, assessing the likelihood and potential impact of each identified risk, prioritizing risks based on their likelihood and potential impact, and developing strategies to mitigate or manage identified risks.

II. REVIEW OF LITERATURE

Woo et al. (2020) explored credit risk in shipping and logistics industries using financial ratio models such as Altman's Z-score. They highlighted the relevance of equity and liquidity ratios in predicting risk levels. Marhavilas et al. (2011) reviewed and classified risk assessment methods into qualitative, quantitative, and hybrid techniques, noting that quantitative methods are most prevalent due to their reliability in financial contexts.

Joshi (2025) demonstrated the integration of Generative AI in financial modeling, showing its potential in enhancing model accuracy and regulatory compliance. Wei et al. (2024) utilized Transformer models for multimodal financial risk prediction, combining structured and unstructured data for a holistic view. Wang et al. (2024) applied Natural Language Processing (NLP) techniques to financial documents, identifying risks with higher precision.

These studies support the relevance of adopting both conventional financial analysis tools and advanced AI-driven models to identify and mitigate risks effectively. However, for practical business applications, foundational techniques such as correlation and comparative analysis continue to play a critical role, especially in SME and mid-size organizations. This research bridges the theoretical and practical aspects by applying these techniques to real financial data from an HVAC firm.

III. OBJECTIVES OF THE STUDY

Primary Objective:

- To study the impact of financial risk analysis on the performance of AZEOTROP Pvt. Ltd.

Secondary Objectives:

- To examine the underlying factors contributing to financial risks.
- To conduct a comparative analysis of balance sheets across multiple periods to identify significant changes in financial position and potential risk indicators.
- To examine the relationships between key financial variables using correlation analysis to uncover patterns and risk dependencies.
- To assess the impact of financial risk factors on overall business performance and financial health.

IV. RESEARCH METHODOLOGY

This analytical study is based on secondary data from the financial statements of AZEOTROP Pvt. Ltd. covering the period from 2015 to 2024. Research involves systematically gathering, analyzing, and interpreting data to answer questions or solve problems. It aims to generate new knowledge, support decision-making, and challenge existing theories across various fields.

AREA OF STUDY

The research was conducted at AZEOTROP PRIVATE LIMITED, CHENNAI, from January to may 2025.

V. ANALYSIS AND INTERPRETATION

The analysis focuses on two major components: correlation analysis and comparative balance sheet analysis.

Correlation Analysis:

The correlation matrix revealed a very strong positive relationship (r = 0.967) between total assets and profit after tax, indicating that the company's profitability grows with asset expansion. This also implies a potential risk if asset deployment is inefficient, as unproductive assets can become liabilities. A weak negative correlation (r = -0.264) between revenue and profit suggests inefficiencies, possibly due to rising expenses or poor pricing strategies. Additionally, a low correlation (r = 0.100) between profit before and after tax indicates that tax obligations significantly affect net profits, which can be an area for strategic financial planning.

Comparative Balance Sheet:

A year-wise comparative balance sheet review from 2015 to 2024 indicated the following trends:

- **2023-2024:** Significant reduction in total liabilities (-26.05%) and total assets (- 16.82%), reflecting financial consolidation. The company likely focused on repaying debts and streamlining operations.
- **2021-2022:** Decrease in liabilities and current assets suggests strategic downsizing or cost-control initiatives, possibly in response to market challenges or decreased demand.
- **2020-2021:** Increase in both liabilities and assets, showing a period of expansion. New investments were likely made in infrastructure and operations.
- **2019-2020:** Significant cut in assets and liabilities indicates restructuring, possibly following a challenging fiscal period.

VI. FINDINGS

- Asset growth positively influences profitability, but inefficient asset usage may pose risks, especially when investments are not aligned with returns.
- Revenue growth does not always correlate with profit, indicating operational inefficiencies and potential pricing or cost management issues.
- The company shows variability in short-term and long-term liability management, revealing inconsistencies in financial planning.
- Cost controls and better tax planning are essential for improving net margins, as tax obligations significantly impact the bottom line.
- The company exhibits patterns of reactive strategy rather than proactive financial planning, limiting long- term resilience.
- In some periods, capital work-in-progress and investments grew, suggesting innovation and growth intentions, though not always matched with financial performance.

VII. SUGGESTION

- The company should review its revenue streams to identify products or services with low margins. Enhancing pricing strategies and eliminating weak offerings can help increase profit from sales. Better alignment between income and expenses will improve overall profitability.
- Make payment rules for suppliers more consistent. Don't delay payments too much, as it can affect relationships and trust

VIII. CONCLUSION

From the study we conclude that over the ten years periods, the AZEOTROP PRIVATE LIMITED (CHENNAI). The financial analysis reveals that the company's profitability is strongly tied to its asset base, reflecting efficient resource utilization and low- risk investment behavior. However, weak correlations between revenue and profit, along with poor alignment of liabilities with returns, highlight the need for better cost control and financial structuring. To address these issues, the company should prioritize high-ROI asset investments, conduct a thorough cost and margin analysis, and reevaluate how debt is being used to fund growth. Implementing tools like a financial dashboard and embedding risk analysis into strategic planning will support better decision- making. Overall, with targeted financial reforms and smarter asset utilization, the company can strengthen profitability and sustain long-term financial health.

IX. REFERENCES

JOURNAL REFERRED:

- Marhavilas, P. K., Koulouriotis, D., & Gemeni, V. (2011). Risk analysis and assessment methodologies in the work sites: On a review, classification and comparative study of the scientific literature of the period 2000–2009. Journal of Loss Prevention in the Process Industries, 24(5), 477-523.
- Beaver, W. H., Correia, M., & McNichols, M. F. (2011). Financial statement analysis and the prediction of financial distress. Foundations and Trends® in accounting, 5(2), 99-173.
- Gowda, A. K., Vikas, B., & Charithra, C. M. (2024). Analysis of Financial Performance of JK Tire & Industries Ltd. Using DuPont Analysis.
- Woo, Su-Han, Min-Su Kwon, and Kum Fai Yuen. "Financial determinants of credit risk in the logistics and shipping industries." Maritime Economics & Logistics 23.2 (2021): 268-290.
- Danda, Ramanakar Reddy, et al. "Harnessing Big Data and AI in Cloud-Powered Financial Decision-Making for Automotive and Healthcare Industries: A Comparative Analysis of Risk Management and Profit Optimization." (2024).
- Wang, W., Ding, J., & Zhou, Y. (2024). Transmission risk of stock price fluctuations among industries in complex financial networks.
- Joshi, S. (2025). The synergy of generative AI and big data for financial risk: Review of recent developments. IJFMR- International Journal for Multidisciplinary Research, 7(1).
- Marmo, L., Cavallero, D., & Debernardi, M. L. (2004). Aluminium dust explosion risk analysis in

metal workings. Journal of Loss Prevention in the Process Industries, 17(6), 449-465.

- Pizzuto, F., & Venezia, E. (2018). Are catastrophe bonds effective financial instruments in the transport and infrastructure industries? Evidence and review from international financial markets. Business and Economic Horizons, 14(2), 256-267.
- Wei, Y., Xu, K., Yao, J., Sun, M., & Sun, Y. (2024). Financial Risk Analysis Using Integrated Data and Transformer- Based Deep Learning. Journal of Computer Science and Software Applications, 4(7), 1-8.
- Santomero, A. M., & Babbel, D. F. (1997). Financial risk management by insurers: An analysis of the process. Journal of risk and insurance, 231-270.

Websites Referred:

- http://www.researchgage.net>publication
- https://www.risk.net
- https://www.oecd.org/finance
- https://www.imf.org/en/Publications/CR