

A Study on Liquidity Management and Profitability of Selected Public Sector Banks in India

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ABSTRACT

The study of major public sector banks in India from 2010-11 to 2023-24 revealed key trends in their financial health. It focused on five banks: State Bank of India (SBI), Bank of Baroda (BOB), Punjab National Bank (PNB), Bank of India (BOI), and IDBI. SBI and BOB generally showed positive profitability ratios, while BOI and IDBI faced challenges and losses. Liquidity ratios were stable for SBI and PNB, but fluctuated for others, with IDBI having a strong liquidity position. Debt-equity ratios decreased across all banks, indicating less reliance on debt. Regression analysis showed liquidity significantly impacted financial indicators like Net Profit and ROCE, though the effect varied. Dividend Payout Ratios differed, with SBI paying more dividends consistently, while BOI and IDBI paid less. ANOVA tests confirmed significant differences in financial ratios among the banks. The study underscores the need to consider multiple financial indicators to understand a bank's health and the dynamic nature of the banking sector, advising stakeholders to tailor strategies to each bank's unique situation.

Keywords: Public Sector Banks, Financial Health, Ratios, Liquidity & Profitability Ratios and Financial Indicators.

Introduction:

The Indian banking industry plays a crucial role in the economy, offering financial services to individuals, businesses, and the government. It includes public sector banks (owned by the government), private sector banks, and foreign banks operating in India. Public banks are important for financial inclusion, reaching remote areas, while private banks focus on profitability and innovation.

The industry faces challenges like non-performing assets (NPAs) and adapting to technological changes. The Reserve Bank of India (RBI) regulates the sector, ensuring stability and efficiency.

Liquidity management is vital for banks to meet short-term obligations, while profitability reflects their ability to generate earnings. Key liquidity ratios include the current ratio, quick ratio, and cash ratio. Profitability is measured using return on assets (ROA), return on equity (ROE), and net interest margin (NIM).

Sustainable development is becoming important, with banks focusing on green financing, reducing their carbon footprint, and promoting financial inclusion. By 2025 and 2030, the industry will see more digital transformation, advanced technologies, cybersecurity measures, personalized services, and stronger collaboration with fintech companies.

Overall, the future of Indian banking looks dynamic, driven by technology, changing consumer needs, and a commitment to sustainability and inclusivity.

Paper is one of the significant discoveries that turned the history of the world around. Paper pervades all sectors of human activity from books to bullets and from morning newspapers to nuclear technology. From time immemorial, paper has played a key role in the evolution of civilization, and the importance of paper and paper products in modern life is so obvious that no other product possesses such diversity of use. It is the basic medium of communication and dissemination of information. It helps human beings in the development of education, reading, writing, storing, knowledge, quality of life, culture, and other sectors of the economy. Kids to kings, all human beings are using paper

either directly or indirectly. It is very difficult to imagine modern life without paper. The fortune of the paper industry is closely linked to the buoyancy in the economic development of a country. The per capita consumption of paper is often regarded as a barometer of the socio-economic progress of a country. It measures the living standards and openness of a society and its educational and intellectual attainments. Paper is, thus, recognized almost as a touchstone of growth in developing countries.

Financial performance analysis is the process of identifying the financial strength and weaknesses of the firm by properly establishing the relation between the items of balance sheet and profit & loss account. It also helps in short term and long term forecasting and growth can be identified with the financial performance analysis. It serves as a common measure of value of getting a clear understanding about the unit from the financial point of view.

RATIO ANALYSIS

Ratios analysis is the process of determining and presenting in arithmetical terms the relationships figures and groups of figures drawn from these statements. A ratio expresses the results on the basis of comparison of two figures in numerical terms. A ratio is a statistical yardstick that provides a measure of relationship between two accounting figures.

The ratio is customarily expressed in following ways:

1. It may be obtained by dividing one value by the other. This expression is known as Times.
2. If hundred then the unit of multiply the above expression becomes percentage.
3. It may be expressed in the form of proportion between the two figures and is known as pure ratio.
4. It may also be depicted in the form of graphs like ratio graph.

IMPORTANCE OF PAPER INDUSTRY

Indian paper industry is the 15th largest paper industry in the world. Paper Industry is one of the high priority industries having a bearing on the socio-economic development of the country. The government regards the paper industry as one of the 35 high priority industries of the country. Further, "paper and paper products" is a core sector industry of the Industrial Development and Regulation Act (IDRA), 1951. Paper is also one of the items covered by the Essential Commodities Act (ECA), 1955. The Research Section of the National Productivity pointed out the importance of the paper industry by stating that paper industry's performance was crucial to the economy to the extent of the growth of service sector. The predominant roles of paper industry continued until recently when the revolution in microelectronics and photo chemicals posed challenges to this industry. The consumption of paper is one of the indicators of the economic development of a country. The paper consumption helps the cultural and educational development of the people. Moreover, with more than half of the world population in Asia, the potential growth in paper consumption is enormous.

India is the fastest growing market for paper globally and it presents an exciting scenario; paper consumption is poised for a big leap forward in sync with the economic growth and is estimated to touch 13.95 million tonnes by 2015-16. In fact, the per capita consumption of paper in the developed countries is nearly 100 times more than that of the developing countries. As per industry guesstimates, the overall paper consumption including newsprint has now touched 8.86 million tonnes and the per capita consumption is pegged at 8.3 kg. The Indian paper industry accounts for about 1.6 per cent of the world's production of paper and paperboard. The estimated turnover of the industry is Rs 25,000 crore approximately and its contribution to the exchequer is around Rs. 2918 crore. The industry provides employment to more than 0.12 million people directly and 0.34 million people indirectly.

PAPER INDUSTRY IN INDIA

The paper industry can be classified according to the size of the mill, the type of raw-materials used and the type of paper produced. The pulp and paper industries in India have been categorized into large-scale and small scale. Those paper industries, which have capacity above 24,000 tonnes per annum, are designated as large-scale paper industries. In 1985-86, the Ministry of Industry, Department of Industrial Development defined a small mill based on unconventional raw-materials and installed capacity for the manufacture of paper and paperboard not exceeding 24,000 tonnes per annum." The small scale units occupied more than 50 per cent of the aggregate installed capacity and production. Among the 254 small units, the Northern zone had the highest number of small scale units. Though

the Northern zone dominated in terms of the number of units, the Western zone topped in terms of installed capacity and production which figured a little over 40 per cent of the total production in the small scale sector. The Northern, the Southern and the Eastern zones had secured second, third and fourth positions respectively in terms of installed capacity and production in small scale sector in the year 1986. India had 406 paper units in 1997-98; out of these, 15 units were large scale, 340 were small-scale and the remaining 51 belonged to the medium scale sector. Large paper mills contributed 40 per cent of total paper and board production.

REVIEW OF LITERATURE:

This part briefly reviews the studies on different aspects of financial performance connected directly and indirectly with the present study. The review of literature is highly useful to design the present study as it indicates the research gap in the study of financial performance of the paper mills. Measuring the financial performance of the corporate sector has always been an area of controversy from the point of view of the government, shareholders, investors, creditors, employees and other stakeholders. Many studies on financial performance have been made in the past, which mainly focus on large enterprises but they do not deal with the financial performance of the paper mills.

Ajmera, B. (2019) in this research paper, the researcher has attempted to study the effect of capital structure on the financial performance of selected paper manufacturing firms in India. The result of the descriptive statistics shows that ROA, ROCE, EPS and valuation indicate good financial performance. While the debt-equity ratio shows debt is more than equity in the capital structure. The researcher identified four financial indicators, namely ROA, ROCE, EPS and Valuation. The researcher has also identified debt-equity ratio, long term debt-equity ratio, a log of debt, firm size and interest coverage ratio as dependent variables. Model-1 indicates that ROS is significantly affected by the interest coverage ratio, wherein fixed-effect model ROA is also affected by the interest coverage ratio. Model-2 shows that there is a significant effect of debt equity ratio long term debt-equity ratio and interest coverage ratio on RCOE. The fixed-effect model shows that only firm size and interest coverage have a significant effect on ROCE. Model-3 shows that the debt-equity ratio, long term debt-equity ratio, firm size, a log of debt and interest coverage ratio is insignificant to EPS. Wherein firm size is significant to EPS in fixed effect mode. Another variable like the debt-equity ratio, long term debt-equity ratio, a log of debt and interest coverage ratio is insignificant to EPS. Model-4 indicates that firm size is significant to the valuation. The fix edeffect model shows that all independent variables are insignificant to valuation.

Kumar, K., Sriram, R., & Ramya, R. (2015) in this paper he studied that the growth of Indian paper industry has been consistent over the past several years, right from the time it was started. Firms both public and private have been investing in newer methods and technologies for producing papers and have also able to gain reasonable returns of their investments. This paper aims to bring out the financial performance of select companies within the industry and analyze them using an application based method named “Numerical Taxonomy” that ranks the selected organisations based on specific criteria. In this paper, we have used critical financial ratios as a specific criterion for the analysis. The project study at TNPL has provided me an extended knowledge of the impact of financial analysis and its interpretations about the business scenario. The project study has helped me to understand not only about TNPL as an organisation but also the operatives of the other similar and competitive organisation.

Sharma and Kumar (2019) examined the relationship between liquidity management and profitability in public sector banks in India. Using data from 2010 to 2018, the study analyzed the impact of current ratio, liquid assets to total assets, and cash reserve ratio (CRR) on profitability indicators such as Return on Assets (ROA) and Return on Equity (ROE). The findings revealed a negative relationship between liquidity and profitability, suggesting that excess liquidity reduces income-generating opportunities. The study recommended that banks should adopt a balanced approach to maintain sufficient liquidity while ensuring profitability.

Gupta and Verma (2020) analyzed the role of liquidity risk in financial performance using panel data from 2009 to 2019 for 15 public sector banks. The study found that higher liquidity risk negatively affects ROA and ROE, indicating that banks with higher loan-to-deposit ratios tend to experience financial distress. The study emphasized the importance of efficient liquidity monitoring and compliance with Basel III norms to maintain a stable banking system.

Rao (2018) investigated the cash management efficiency of selected public sector banks and its effect on profitability. The study used secondary data from RBI reports (2012–2017) and found that banks maintaining higher cash reserves than required under CRR had lower profitability. The study suggested that banks should optimally

utilize excess cash by investing in high-yield assets instead of holding idle liquidity.

Bansal and Sharma (2020) explored the impact of cash reserve ratio (CRR) on the profitability of selected PSU banks. Their findings showed that a higher CRR requirement reduces available funds for lending, negatively affecting bank profits.

Singh and Verma (2018) investigated the role of capital adequacy in liquidity management among PSU banks. They found that higher capital adequacy ratios improve liquidity but reduce profitability due to the high cost of maintaining excess capital reserves.

Chopra and Bhardwaj (2022) analyzed the role of asset-liability management in liquidity optimization. Their study found that banks using efficient asset-liability management strategies maintained better liquidity without compromising profitability.

Das and Roy (2019) examined key liquidity determinants such as deposit growth, loan-to-deposit ratio, and cash reserves in PSU banks. They found that an increase in non-performing assets (NPAs) negatively affects both liquidity and profitability.

Joshi and Patel (2019) identified key determinants of liquidity in public sector banks, including loan growth, deposit growth, and interest rate changes. The study analyzed quarterly financial statements (2013–2018) and found that higher deposit mobilization improves liquidity but may reduce profitability due to lower lending activity. The study recommended a dynamic liquidity strategy to manage short-term liquidity needs without sacrificing profits.

Chakraborty (2018) explored the effect of working capital management on profitability using financial data from 10 Indian public sector banks (2010–2017). The study found that excess working capital results in lower profitability, while an efficient working capital cycle leads to better financial performance. The study emphasized the need for strict monitoring of current assets and liabilities.

Bansal and Mehta (2022) studied the impact of credit risk on liquidity management in public sector banks. The research found that an increase in non-performing assets (NPAs) leads to liquidity crises, reducing profitability. The study suggested proactive credit risk management policies to ensure banks maintain liquidity while avoiding loan defaults.

Research Gap:

The review of literature highlights extensive research on financial performance across various industries; however, limited studies focus on Indian paper mills. Existing studies do not cover all aspects of financial performance, necessitating a comprehensive analysis. This study aims to bridge this gap by conducting a detailed and comparative assessment of ten paper mills in India.

Research Methodology

The Indian paper industry has been facing challenges due to fluctuating demand, increasing costs, and infrastructure constraints. The problem of underutilization of capacity, rising production costs, and financial inefficiencies highlight the need for an in-depth financial performance analysis of selected private sector paper mills.

This study aims to evaluate the financial performance of ten private sector paper mills listed on BSE. The key objectives include analyzing their liquidity, long-term solvency, profitability, and overall financial health while suggesting measures for improvement. The study adopts a **descriptive research design**, focusing on financial management aspects such as liquidity, solvency, activity, and profitability.

The research is based on **secondary data**, primarily collected from annual reports of selected companies, financial databases, books, and research articles. The financial performance is assessed through key ratios and statistical tools such as **Mean, Standard Deviation, Coefficient of Variance, Z-Score Analysis, and ANOVA**, with analysis conducted using **MS Excel**.

The study tests multiple **null hypotheses** to determine significant differences in financial ratios such as current ratio, quick ratio, debt-equity ratio, inventory turnover ratio, profitability ratios, and return ratios among the selected mills. A sample of **ten private sector paper mills** has been chosen, covering financial data for **eleven years (2010-11 to 2023-24)**.

The study is limited by its reliance on secondary data and its focus on private sector mills, potentially restricting generalizability. Additionally, data comparability and accuracy remain challenges. Despite these limitations, this research aims to provide an objective and comprehensive financial performance analysis of India's private sector paper mills.

FINDINGS:

FINDING FROM THE PROFITABILITY RATIOS:

The study analyzed the profitability ratios of selected paper mill companies, leading to significant conclusions. The null hypothesis for Net Profit, Gross Profit, and Return on Assets (ROA) was rejected, indicating that these ratios vary across the companies. However, for Return on Shareholder Fund (ROSF) and Return on Capital Employed (ROCE), the null hypothesis was not rejected, meaning these ratios remain consistent among the firms.

Among the selected companies, **Satia Industries Ltd.** secured the highest position for average Net Profit (7.89%) and ROA (6.783%), reflecting its strong financial health. **Adhara Paper Ltd.** led in ROSF (19.782%), signifying its ability to provide better shareholder returns. **Kuantum Paper Ltd.** ranked first in Gross Profit Ratio (66.246%), indicating superior financial performance compared to peers.

Ruchira Paper Ltd. topped the list for average ROCE (12.86%), showcasing efficient capital utilization. However, it had the lowest Gross Profit Ratio (23.466%), suggesting weaker profit margins than other companies. **Shree Rama Newsprint Ltd.** reported the lowest figures for Net Profit (-6.96%), ROA (-4.808%), and ROCE (-10.191%), highlighting its poor financial health.

On the other hand, **Emami Paper Ltd.** recorded the lowest ROSF (-385.029%), indicating an inability to generate shareholder returns, raising concerns about its financial sustainability.

In summary, while some companies exhibited strong profitability and efficiency, others showed significant financial distress, emphasizing the need for strategic financial management to improve performance.

FINDING FROM OF SOLVENCY RATIOS

The study of solvency ratios among selected paper mill companies highlights key financial insights. **Kuantum Paper Ltd.** ranked highest in the Debt-Equity Ratio (0.475), indicating higher financial risk for shareholders. Conversely, **Emami Paper Ltd.** had the lowest Debt-Equity Ratio (0.256), suggesting minimal shareholder risk.

In terms of financial strength, **Emami Paper Ltd.** also secured the top position in the Proprietary Ratio (3.028), reflecting a strong financial position. However, **Shree Rama Newsprint Ltd.** recorded the lowest Proprietary Ratio (-0.653) and Interest Coverage Ratio (0.12), signaling financial instability and an inability to meet debt obligations.

Adhara Paper Ltd. led in the Interest Coverage Ratio (1.575), demonstrating its ability to repay outstanding debt efficiently. These findings suggest significant variations in solvency among companies, with some exhibiting strong financial management while others face high financial risk.

FINDING FROM OF ACTIVITY RATIOS:

The analysis of activity ratios among selected paper mill companies reveals significant efficiency variations. **N R Agrawal Industries** ranked highest in **Inventory Turnover Ratio (11.609)** and **Working Capital Turnover Ratio (2.144)**, indicating efficient inventory management and capital utilization. However, it had the lowest **Capital Turnover Ratio (-19.047)**, reflecting poor capital efficiency.

Satia Industries Ltd. led in **Debtor's Ratio (64.148)**, suggesting high creditability, while **Andhra Paper Ltd.** had the lowest (19.541), indicating limited credit facilities. **Ruchira Paper Ltd.** excelled in **Fixed Asset Turnover Ratio (2.002)**, demonstrating effective asset utilization, whereas **Emami Paper Ltd.** had the lowest (0.907).

JK Paper Ltd. secured the highest **Capital Turnover Ratio (76.813)**, but its **Working Capital Turnover Ratio (0.924)** was the lowest, indicating inefficient working capital use. **West Coast Paper Ltd.** had the lowest **Inventory Turnover Ratio (4.739)**, signifying poor inventory replacement efficiency. These findings highlight differences in operational effectiveness across companies.

FINDING FROM OF LIQUIDITY RATIOS:

Seshasayee Paper Mill Ltd. ranked highest in **Current Ratio (0.878)**, indicating strong short-term financial stability. **Ruchira Paper Ltd.** led in **Quick Ratio (1.3)**, showing better cash availability. **Shree Rama News Print Ltd.** had the lowest **Current (0.277)** and **Quick Ratio (0.481)**, reflecting weak liquidity and financial constraints.

FINDING FROM TREND ANALYSIS:

The **null hypothesis was rejected** for **profitability ratios** (Net Profit, Return on Asset, and Return on Capital), showing an upward trend from 2010-11 to 2019-20, while **Return on Shareholder Fund and Gross Profit Ratio showed no trend**. In **activity ratios**, Inventory Turnover and Debtor's Ratio increased, while Fixed Asset Turnover declined. **Liquidity ratios** showed an upward trend in the **Current Ratio**, but no trend in the **Quick Ratio**. **Solvency ratios** indicated growth in **Proprietary and Interest Coverage Ratios**, while **Debt-to-Equity Ratio remained stable**. Overall, **7 out of 15 ratios showed an increasing trend, suggesting financial improvement in the paper mill sector**.

FINDING FROM GROWTH ANALYSIS:

The **growth analysis** of selected paper mill companies shows that **income growth is the fastest**, followed by **total asset growth**, while **working capital growth is the slowest**. **Sales, receivables, working capital, and net worth** are generally declining. The **null hypothesis was rejected** for year-wise and company-wise **income growth**, indicating significant differences, while other components showed no variation.

Company-wise rankings:

- **Emami Paper Ltd.** had the highest **sales growth (18.49%)** and **receivables growth (19.95%)**, while **JK Paper Ltd.** had the lowest (-1.55%).
- **JK Paper Ltd.** topped **working capital growth (103%)**, while **Emami Paper Ltd.** had the lowest (-84.71%).
- **Kuantum Paper Ltd.** had the highest **total asset growth (23.81%)**, while **Andhra Paper Ltd.** had the lowest (1.3%).
- **Seshasayee Paper Ltd.** led in **income growth (25.74%)**, while **Shree Ram News Print Ltd.** was the lowest (-24.66%).
- **N R Agrawal Industries** had the highest **net worth growth (13.49%)**, while **Andhra Paper Ltd.** had the lowest (-0.91%).

FINDING FROM THE REGRESSION ANALYSIS:

The **regression analysis** reveals a **strong correlation** between **Net Profit Ratio (NPR)** and **Sales, Net Worth, Working Capital, Total Assets, and Receivables (90%)**, but none of these variables significantly impact NPR. Similarly, **Return on Assets (ROA)** has an **89% correlation** with the same independent variables, yet no significant influence was found. **Return on Capital Employed (ROCE)** shows an **86% correlation**, but no variable significantly affects it. Lastly, **Return on Equity (ROE)** has a **weaker 46% correlation**, with no significant impact from Sales, Net Worth, Working Capital, Total Assets, or Receivables.

FINDING FROM THE Z-SCORE ANALYSIS:

The **Altman Z-score analysis** indicates that most **selected paper mill companies remained in the "Safe" zone (Z-score >3)** during **2010-11 to 2019-20**, reflecting **strong financial performance**. **JK Paper Ltd.** had a **Grey zone** year in **2012-13 (Z = 2.84)**, while **Shree Rama Newsprint Ltd.** had **1.99** in **2014-15**, but otherwise remained financially stable. **Andhra Paper, West Coast Paper, Seshasayee Paper, Emami Paper, N R Agarwal Industries, Kuantum Papers, and Ruchira Papers** consistently stayed in the **Safe zone** throughout. The **sector as a whole exhibited strong financial health**, with minimal impact from **COVID-19** in 2020, as **paper remains an essential industry**.

FINANCIAL PERFORMANCE ANALYSIS OF THE PAPER MILL INDUSTRY

Profitability Analysis

Profitability is a crucial indicator of a company's financial strength and operational efficiency. Analyzing the profitability ratios of selected paper mill companies highlights differences in financial performance and asset utilization. Companies with strong profitability should continue leveraging their strengths, while those facing challenges must focus on improving efficiency and cost management for long-term sustainability.

Solvency Analysis

Solvency ratios assess a company's ability to manage long-term debt and financial obligations. Differences in debt levels, shareholder equity, and interest coverage indicate varying financial stability across companies. Firms with higher debt-to-equity ratios face greater financial risks, whereas those with stronger equity positions demonstrate resilience. Optimizing debt structures and improving solvency metrics can enhance financial health and reduce risk exposure.

Asset Management Efficiency

Variations in asset management across paper mill companies highlight areas for improvement. Efficient working capital management, credit policies, and asset turnover are essential for maintaining profitability. Addressing inefficiencies in these areas can enhance financial performance and competitiveness in the industry.

Liquidity Analysis

Liquidity ratios, including the current and quick ratios, reveal a company's ability to meet short-term obligations. Companies like Seshasayee Paper Mill and Ruchira Papers Ltd. demonstrated strong liquidity, while Shree Rama Newsprint Limited showed a weaker position. Understanding liquidity disparities helps companies take strategic measures to improve cash flow and financial flexibility.

Trend Analysis

An evaluation of 15 financial ratios across the industry found that 9 showed distinct trends, while 6 remained stable. Seven ratios displayed an increasing tendency, suggesting improvements in financial performance. Monitoring these trends can help businesses capitalize on strengths and address areas needing improvement.

Growth Analysis

Growth trends within the paper mill industry varied. While income and total assets increased, sales, receivables, working capital, and net worth fluctuated. Addressing these inconsistencies through strategic planning can ensure sustained business expansion.

Regression Analysis

A study of financial ratios such as Net Profit Ratio (NPR), Return on Assets (ROA), Return on Capital Employed (ROCE), and Return on Equity (ROE) against factors like sales, net worth, working capital, total assets, and receivables revealed no significant direct influence. This suggests that multiple internal and external factors impact financial performance beyond the variables analyzed. A more comprehensive study could provide deeper insights into financial dynamics.

Z-Score Analysis and Industry Resilience

The Altman Z-score analysis (2010-11 to 2019-20) indicated that most paper mill companies, including JK Paper Mill Ltd., Andhra Paper Mill, West Coast Paper Mill Ltd., and others, remained in the "Safe Zone," signifying financial stability. Only a few instances, such as JK Paper Mill Ltd. in 2012-13 (Z-score: 2.84) and Shree Rama Newsprint Ltd. in 2014-15 (Z-score: 1.99), fell into the "Grey Zone."

Despite the economic impact of COVID-19 in 2020, the paper mill industry remained stable, as paper remains an essential material across sectors. Unlike other industries that faced major disruptions, paper mills continued to perform well financially, demonstrating the industry's resilience.

CONCLUSION

The paper mill industry has shown overall financial stability with positive trends in profitability, solvency, liquidity, and asset management. However, addressing inefficiencies and financial risks is essential for long-term growth. Strategic improvements in debt management, operational efficiency, and liquidity planning will further strengthen the industry's financial health in the coming years. The financial analysis of selected paper mill companies reveals key insights into their profitability, solvency, liquidity, asset management, and growth dynamics. Profitability ratios vary, indicating differences in financial strength and efficiency, necessitating strategic improvements. Solvency ratios highlight diverse risk exposures, with high debt-to-equity firms facing financial strain, while equity-reliant companies exhibit resilience. Liquidity analysis shows Seshasayee and Ruchita Paper Mills in stronger positions, whereas Shreeram News Print Limited lags. Asset management efficiencies vary, signaling opportunities for optimization. Trend analysis of 15 financial ratios reveals growth potential, with seven ratios showing an upward trend. Regression analysis indicates that profitability metrics like NPR, ROA, ROCE, and ROE are influenced by multiple factors beyond sales, net worth, and assets. Z-score analysis (2010-24) shows most companies in a "Safe" zone, demonstrating financial stability. Despite COVID-19, the industry remained resilient due to the essential nature of paper, reinforcing its long-term sustainability.

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