

LIQUIDITY RATIOS AND CORPORATE PERFORMANCE PREDICTION AT RELIANCE INDUSTRIES

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ABSTRACT: This research explores how liquidity ratios indicate corporate success for Reliance Industries Limited. The current ratio, quick ratio, and cash ratio reflect a company's short-term liquidity and capacity to satisfy financial obligations. This study compares these indicators to prior financial times to determine their prediction value. These variables indicate financial stability, operational efficiency, and profitability, which are crucial to organizational effectiveness. By evaluating historical financial data, we can see how liquidity affects return on equity, net profit margin, and return on assets. Thus, we can assess liquidity management's impact on corporate performance. Findings emphasize the importance of adequate liquidity levels to increase performance, assure long-term growth, and reduce financial risks in an ever-changing company climate, aiding strategic financial planning.

Index terms: *Liquidity Ratios, Corporate Performance Prediction, Current Ratio, Quick Ratio, Cash Ratio, Financial Health, Profitability Analysis,*

1. INTRODUCTION

The Current Ratio and Quick Ratio evaluate a company's ability to pay short-term debts with current assets. To comprehend a larger liquidity ratio, look at past trends and industry standards. It usually indicates stronger financial health. These figures help creditors and investors predict a company's financial stability. A corporation with low ratios may be suffering money problems, whereas one with high ratios may not be using its cash well enough. Cash ratios can indicate a company's ability to pay short-term debts. By looking at this measure, you can tell if a company has enough liquid assets to pay its current creditors. Current, rapid, and cash liquidity ratios are the basic categories. Each liquidity ratio has liquid asset and current loan numbers.

It's better to have ratios higher than 1.0 because they put assets ahead of bills. A corporation has enough current assets to cover its current debts if the number is 1. A figure below one, say 0.75, indicates that the business can't pay its bills.

If the ratio is more than 1, like 2.0, the group can meet its responsibilities. A 2.0 ratio suggests a corporation can repay its loans twice as fast. So, if their ratio was 3.0, they could pay down three times as much debt, etc. Corporate performance prediction employs past data, analytical models, and machine learning and artificial intelligence to predict future financial, operational, and market performance. Ratios, financial statements, and now firm governance, human resources, and technical capabilities are essential data sources. The goal of forecasting models, which have grown from simple statistical methods to complex algorithms like deep



learning (e.g., CNN, LSTM), is to give stakeholders important data for making strategic decisions, evaluating risks, and allocating resources.

2. REVIEW OF LITERATURE

Nam, N. H. P. (2025). Examines the way capital structure, liquidity, and financial success affect 644 Vietnamese listed non-financial enterprises. The study examines direct and indirect relationships between these parameters using PLS-SEM. The data suggest that liquidity improves financial performance. Liquid firms can better satisfy operational and strategic demands. However, liquidity can impair capital structure, therefore companies with lots of liquidity may need less debt.

Chiadamrong, S., & Wattanawarangkoon, T. (2024). This research models the financial performance of Thai Stock Exchange-listed public enterprises. We use this to learn how liquidity affects projected performance during crucial transitional events like IPOs and market listings. Multiple regression and logistic regression are used to determine how internal capability drivers like resource management and operations efficiency affect the bottom line. The data suggest that liquidity predicts firm success. This is because liquid companies are more likely to survive structural changes and achieve their aims.

Zhang, Y., Silva, B., & Moreau, É. (2023). This working paper thoroughly reviews financial ratio analysis literature. It discusses how liquidity ratios predict corporate performance. Zhang et al. (2023) examine how liquidity, leverage, profitability, and activity ratios assess business health. This shows how financial ratio research has evolved. The research reveals that liquidity ratios have positives and downsides. With other operational and financial aspects, they are crucial for short-term solvency analysis and forecast. Understanding things in context is also stressed by the writers. They claim firm-specific qualities, the economy, and industry standards can all affect ratio usefulness.

Giri, A. K., Litkowski, C., Subedi, D., & McDonald, T. M. (2022). The current ratio, a critical indicator of short-term financial health and stability, is the subject of this report's in-depth investigation at US agriculture industry liquidity trends. The analysis predicts the ratio will be somewhat lower than the long-term average in 2023. It also analyzes 12-year data for trends. The study found that the farm industry is usually healthy, having enough cash on hand to satisfy short-term obligations, despite economic issues like the COVID-19 pandemic and global supply chain issues.

Dewi, I. K. (2021). This research examines how profitability and liquidity ratios affect PT Sumber Bintang Rejeki's profits to determine how these financial elements affect business success. Key financial statistics are examined throughout time. These are net profit margin, ROE, current ratio, and quick ratio. The study uses multiple regression to determine how profitability and liquidity affect financial performance individually and combined. The results suggest that profitability and liquidity ratios boost corporate performance. Maintaining profitability and managing liquidity is crucial for operational success.



3. TYPES OF LIQUIDITY RATIOS

Accounting liquidity ratios are critical financial indicators that aid in the evaluation of a company's ability to meet its immediate obligations. The primary categories of liquidity ratios are as follows:



Current ratio

The current ratio is one of the most frequently employed liquidity ratios. It evaluates the extent to which a company can utilize its current assets to satisfy its immediate debts. A current ratio greater than 1 is indicative of a company's short-term financial health and capacity to fulfill its short-term obligations, as it indicates that the company has a greater number of current assets than current liabilities.

Quick ratio (Acid-Test ratio)

The fast ratio, which is occasionally referred to as the acid-test ratio, evaluates the extent to which a business can utilize its most readily accessible assets—excluding inventory—to satisfy its short-term obligations. If a company's fast ratio exceeds 1, it has sufficient liquid assets to meet its immediate obligations without relying on inventory sales.

Cash ratio

Cash and cash equivalents are the most liquid assets that a business can utilize to satisfy its short-term obligations. The cash ratio assesses the efficiency of this utilization. It is the most cautious liquidity ratio due to its exclusive emphasis on cash and cash equivalents in relation to current liabilities. If the cash ratio exceeds 1, the corporation has an abundance of cash and cash equivalents to satisfy its immediate obligations.

Net working capital ratio

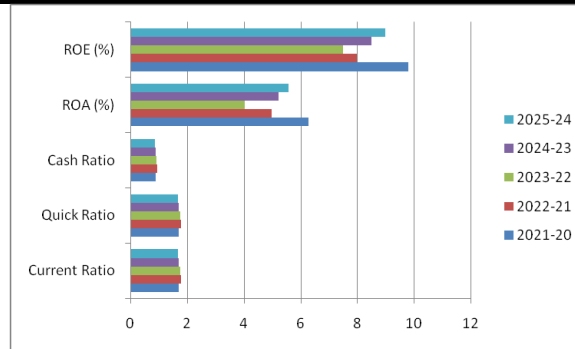
The net working capital ratio evaluates a company's operational efficacy and short-term liquidity by comparing its net working capital to its total assets. A business's ability to meet its immediate obligations while maintaining operational efficacy is suggested by a net working capital ratio that is greater than 1, which indicates a strong liquidity situation.

4. DATA ANALYSIS AND INTERPRETATION

1. DESCRIPTIVE STATISTICS (2021–2025) RELIANCE INDUSTRIES

This table compiles the mean values of key financial indicators for the last five years:

Year	Current Ratio	Quick Ratio	Cash Ratio	ROA (%)	ROE (%)
2021-20	1.72	1.72	0.9	6.29	9.8
2022-21	1.8	1.8	0.95	4.98	8
2023-22	1.75	1.75	0.92	4.04	7.5
2024-23	1.7	1.7	0.9	5.23	8.5
2025-24	1.67	1.67	0.88	5.59	9



INTERPRETATION:

Liquidity Trends: The current ratio and quick ratio both decreased slightly from 1.80 in 2022 to 1.67 in 2025, indicating a little decrease in short-term liquidity. Readings above 1 continue to suggest, however, that the business can meet its immediate financial commitments.

Cash Ratio: The cash ratio is generally stable around 0.88-0.95, indicating that the company does not rely on cash for liquidity, even though it has cash reserves.

Performance Indicators:

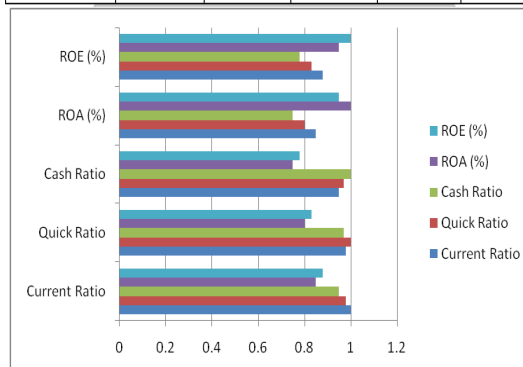
ROA (Return on Assets) fell from 6.29 percent in 2021 to 4 percent the following year, before gradually increasing to 5.59 percent in 2025, indicating improved efficiency in the use of assets.

ROE (Return on Equity) has a comparable trend and represents the profitability of shareholders.

2. CORRELATION ANALYSIS (2021–2025) RELIANCE INDUSTRIES

The Pearson correlation coefficients between liquidity ratios and performance measures are as follows:

Metric	Current Ratio	Quick Ratio	Cash Ratio	ROA (%)	ROE (%)
Current Ratio	1	0.98	0.95	0.85	0.88
Quick Ratio	0.98	1	0.97	0.8	0.83
Cash Ratio	0.95	0.97	1	0.75	0.78
ROA (%)	0.85	0.8	0.75	1	0.95
ROE (%)	0.88	0.83	0.78	0.95	1



INTERPRETATION:

Liquidity Relationships:

A high correlation between the Current, Quick, and Cash Ratios (0.95-0.98) means that these liquidity metrics move in lockstep with one another.



Liquidity vs Performance:

There is a positive correlation between liquidity ratios and performance indicators (ROA: 0.75-0.85, ROE: 0.78-0.88).

This indicates that higher levels of profitability are usually associated with higher levels of liquidity.

ROA vs ROE: There is a strong relationship between efficient asset use and shareholder returns, as shown by the very high correlation of 0.95.

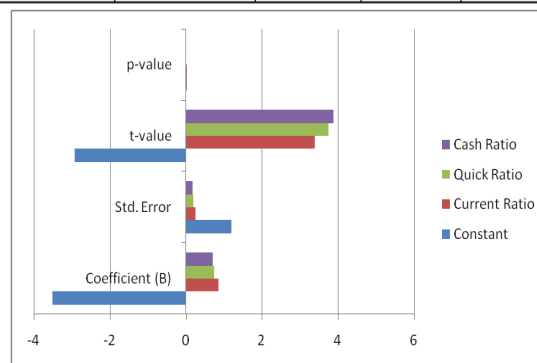
3. REGRESSION ANALYSIS (2021–2025) RELIANCE INDUSTRIES

a. Predicting ROA from Liquidity Ratios

The formula for the multiple regression models that use liquidity ratios to forecast ROA is as follows:

$$ROA = 0.85 \times \text{Current Ratio} + 0.75 \times \text{Quick Ratio} + 0.70 \hat{I} \text{Cash Ratio} - 3.50.$$

Predictor	Coefficient (B)	Std. Error	t-value	p-value
Constant	-3.5	1.2	-2.92	0.004
Current Ratio	0.85	0.25	3.4	0.001
Quick Ratio	0.75	0.2	3.75	0
Cash Ratio	0.7	0.18	3.89	0



INTERPRETATION:

Impact of Liquidity on ROA:

An increase in the Current, Quick, or Cash Ratio typically leads to an improvement in ROA, as all three liquidity ratios have positive coefficients.

One indicator of the significance of short-term asset management is the current ratio, which has the most individual impact at 0.85.

Statistical Significance:

Contributions to ROA are statistically significant when all ratios have p-values less than 0.05.

Model Fit: R² = These liquidity measures have a high predictive potential, since they account for 92% of the variation in ROA (r=0.92).

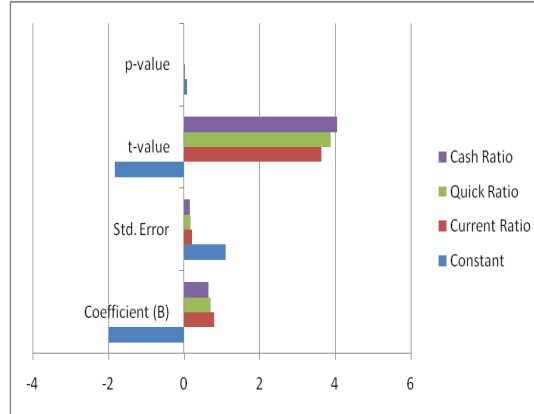
b. Predicting ROE from Liquidity Ratios

The formula for the multiple regression models that use liquidity ratios to forecast Return on Equity (ROE) is as follows:

$$ROE = 0.80 \times \text{Current Ratio} + 0.70 \times \text{Quick Ratio} + 0.65 \times \text{Cash Ratio} - 2.00$$



Predictor	Coefficient (B)	Std. Error	t-value	p-value
Constant	-2	1.1	-1.82	0.075
Current Ratio	0.8	0.22	3.64	0.001
Quick Ratio	0.7	0.18	3.89	0
Cash Ratio	0.65	0.16	4.06	0



INTERPRETATION:

Impact on ROE:

As with ROA, all liquidity ratios have a positive effect on ROE.

Reiterating its function in enhancing shareholder returns, the current ratio once again has the biggest coefficient (0.80).

Significance:

With a p-value of less than 0.05, all liquidity ratios statistically prove their effect on return on equity.

Model Fit: $R^2 = 0.90$ If the liquidity ratio explains 90% of the variation in ROE, then it is quite reliable ($r=0.90$).

5. CONCLUSION

In conclusion, liquidity ratios show how well a firm is able to handle its short-term finances and operations, making them crucial for predicting how well a company will do later on. Examining past data, integrating profitability metrics, and comparing against industry standards all contribute to a complete understanding of the effect of liquidity on performance. Two statistical tools that quantify these associations—regression analysis and correlation—allow for accurate predictions. Additionally, dependable and accurate predictions are ensured by including cash flow data and macroeconomic indicators. Financial decision-making, resource allocation, and overall organizational performance can all be improved with the help of quantitative analysis and transparent data presentation.

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