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Original Research

Financial Performance Analysis Using Ratios

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Abstract

This article presents a comprehensive overview of financial performance analysis using ratios, detailing types, methods, and key applications. By examining well-established ratio categories, illustrating key calculations, and interpreting comparative data, the study provides both theoretical context and practical insight for business leaders, investors, and students. The analysis is supported with tables, graphs, and essential references for scholarly use.

Keywords: Financial ratio analysis | Profitability ratios | Liquidity ratios | Solvency ratios | Efficiency ratios

INTRODUCTION

Financial ratios are essential tools for assessing a company's health and performance. By condensing large sets of financial statement data into standardized indicators, ratios make it possible to evaluate profitability, liquidity, solvency, efficiency, and market valuation. Such measurements help internal stakeholders (management, employees) and external parties (investors, creditors, analysts) make informed decisions and benchmark firms within or across industries^{[1][2][3]}.

Understanding Financial Ratios

Financial ratios are calculated by dividing one financial metric by another, typically using values drawn from a firm's balance sheet, income statement, or cash flow statement. Their main strengths include simplification, comparability, and trend analysis over periods or against benchmarks^{[2][3]}.

Why Use Ratio Analysis?

- **Performance Evaluation:** Identify strengths, weaknesses, and trends.
- **Decision-Making:** Foundation for credit, investment, and operational strategies.
- **Benchmarking:** Compare against industry peers or historical performance.
- **Early Warning:** Spot emerging risks or inefficiencies.

Major Categories of Financial Ratios

Financial ratios are typically grouped into five or six key categories^{[2][3][4]}:

Category	What It Measures	Key Ratios
Profitability	Ability to generate profit	Gross Margin, Net Margin, ROA, ROE
Liquidity	Ability to meet short-term obligations	Current Ratio, Quick Ratio, Cash Ratio
Solvency/Leverage	Long-term financial stability/credit risk	Debt/Equity, Debt/Assets, Interest Coverage
Efficiency/Activity	Asset use and operational effectiveness	Inventory Turnover, Asset Turnover
Market Value	Market-based metrics for valuation	P/E Ratio, EPS, Dividend Yield

1. Profitability Ratios

These indicate how effectively a company turns sales into profits.

- **Gross Profit Margin** = (Gross Profit / Revenue) × 100
- **Net Profit Margin** = (Net Profit / Revenue) × 100
- **Return on Assets (ROA)** = Net Income / Total Assets
- **Return on Equity (ROE)** = Net Income / Shareholder Equity

2. Liquidity Ratios

Assess the firm's cash position and short-term solvency.

- **Current Ratio** = Current Assets / Current Liabilities
- **Quick Ratio** = (Current Assets – Inventories) / Current Liabilities

- **Cash Ratio** = Cash and Equivalents / Current Liabilities

3. Solvency (Leverage) Ratios

Measure long-term debt risk.

- **Debt-to-Equity Ratio** = Total Debt / Shareholder Equity
- **Debt Ratio** = Total Debt / Total Assets
- **Interest Coverage** = EBIT / Interest Expense

4. Efficiency Ratios

Evaluate asset management and cycle efficiency.

- **Asset Turnover** = Sales / Total Assets
- **Inventory Turnover** = Cost of Goods Sold / Average Inventory
- **Receivables Turnover** = Net Credit Sales / Average Receivables

5. Market Value Ratios

- **Price/Earnings (P/E) Ratio** = Share Price / Earnings per Share
- **Earnings Per Share (EPS)** = Net Income / Average Shares Outstanding

Applications: Interpreting Financial Ratios

Comparative Analysis

Ratios gain context when reviewed over time or against competition. Analyzing trends highlights improvement or deterioration in financial condition^{[1][2]}.

Example: Comparative Ratio Table

Ratio	Year 1	Year 2	Year 3	Industry Avg.
Current Ratio	1.4	1.6	1.8	1.7
Net Profit Margin	6%	8%	7.5%	8%
Debt/Equity Ratio	0.9	1.0	0.8	0.7
Inventory Turnover	4.2	4.7	5.1	4.8

This illustration shows steady improvement in liquidity and efficiency.

VISUALIZING FINANCIAL RATIOS

Graphs and charts commonly display trends, peer comparisons, or category breakdowns.

Example Graph: Company vs. Industry Averages (Liquidity Ratios)

A bar graph could show a company's current and quick ratios versus industry norms, highlighting strengths or weaknesses in liquidity management.

Example Chart: Profitability Trend

A line chart plotting ROA and ROE over five years highlights earnings quality and capital efficiency progression.

Importance in Performance Measurement

- **Identifies Causes:** Pinpoints operational, structural, or strategic issues (declining margins, rising debt, etc.).
- **Supports Valuation:** Market ratios help investors set fair value for stocks^[5].
- **Creditworthiness:** Lenders scrutinize solvency and coverage ratios before extending loans^[2].
- **Strategic Direction:** Guides management in operational and financial decision-making.

Limitations of Financial Ratio Analysis

While fundamental, ratios have notable constraints:

- **Window Dressing:** Management can temporarily influence ratios through accounting choices.
- **Lack of Context:** Ratios alone may ignore economic factors, competitive changes, or one-off events.
- **Industry Variations:** Norms vary significantly between industries, making cross-industry comparisons less meaningful.
- **Comparability:** Inconsistent accounting policies impair direct comparison.

Case Study: Kumbakonam Central Co-Operative Bank

A study using five years of ratio data for KCCB found that liquidity, profitability, and solvency ratios provided critical insight into the bank's financial direction, with visualization used for clarity. The analysis identified operational bottlenecks and improvement areas, enabling targeted corrective action^[4].

Practical Recommendations

- Always evaluate ratios in context (industry, company history, and economic climate).
- Use a dashboard of ratios—no single measure suffices.
- Combine quantitative (ratios) and qualitative (management, market trends) analysis for robust conclusions.

CONCLUSION

Ratio analysis remains one of the most effective, objective tools for assessing financial performance. By leveraging a comprehensive ratio framework, businesses and investors can identify strengths, weaknesses, and opportunities for improvement. However, ratios are not infallible; context, qualitative insights, and benchmarking are vital components of sound analysis^{[2][3][4]}.