PERINVO

Financial Ratios & Analysis Guide

1. Profitability Ratios

Gross Profit Margin

Formula: Gross Profit ÷ Revenue × 100

Description: Measures how much of the revenue remains after covering the cost of goods sold.

Usage: Evaluates production efficiency and pricing strategy.

Example: Gross Profit = 40,000 / Revenue = 100,000 → 40%

Analysis: >30% Excellent, 20–30% Good, <20% Needs review.

Net Profit Margin

Formula: Net Income ÷ Revenue × 100

Description: Shows how much of the revenue turns into actual profit after all expenses.

Usage: Indicates overall profitability and cost control.

Example: Net Income = 10,000 / Revenue = 100,000 → 10%

Analysis: >10% Strong, 5–10% Acceptable, <5% Weak.

Operating Margin

Formula: (Gross Profit - Operating Expenses) ÷ Revenue × 100

Description: Represents profit from core operations excluding taxes and interest.

Usage: Measures operational efficiency.

Example: (40,000 - 15,000) ÷ 100,000 = 25%

Analysis: >15% Excellent, 8–15% Good, <8% Needs improvement.

Return on Assets (ROA)

Formula: Net Income ÷ Total Assets × 100

Description: Indicates how efficiently assets are used to generate profits.

Usage: Helpful for comparing different sized companies.

Example: 10,000 ÷ 200,000 = 5%

Analysis: >5% Excellent, 3–5% Fair, <3% Poor.

Return on Equity (ROE)

Formula: Net Income ÷ Shareholder's Equity × 100

Description: Shows the return on the owner's invested capital.

Usage: Important to assess investment attractiveness.

Example: 15,000 ÷ 100,000 = 15%

Analysis: >15% Excellent, 8–15% Acceptable, <8% Weak.

Return on Investment (ROI)

Formula: Net Income ÷ Investment × 100

Description: Measures profitability relative to invested capital.

Usage: Used to assess project or investment effectiveness.

Example: 10,000 ÷ 80,000 = 12.5%

Analysis: >10% Excellent, 5–10% Moderate, <5% Inefficient.

2. Liquidity Ratios

Current Ratio

Formula: Current Assets ÷ Current Liabilities

Description: Measures the company’s ability to cover short-term obligations using current assets.

Usage: To assess short-term financial health.

Example: 100,000 ÷ 50,000 = 2.0

Analysis: >2.0 Excellent, 1.5–2.0 Good, <1.5 At risk of liquidity issues.

Quick Ratio

Formula: (Current Assets - Inventory) ÷ Current Liabilities

Description: Measures ability to meet short-term liabilities without relying on inventory.

Usage: Useful for liquidity without stock.

Example: (100,000 - 30,000) ÷ 50,000 = 1.4

Analysis: ≥1.0 Good, 0.8–1.0 Acceptable, <0.8 Risk of liquidity shortage.

Cash Ratio

Formula: Cash & Equivalents ÷ Current Liabilities

Description: Indicates how well short-term obligations can be met with cash alone.

Usage: Used in financial emergency evaluations.

Example: 25,000 ÷ 50,000 = 0.5

Analysis: ≥0.5 Strong, 0.3–0.5 Fair, <0.3 Weak cash position.

3. Efficiency Ratios

Asset Turnover

Formula: Revenue ÷ Total Assets

Description: Shows how efficiently assets are used to generate revenue.

Usage: To assess asset utilization.

Example: 200,000 ÷ 250,000 = 0.8

Analysis: >1.0 High efficiency, 0.7–1.0 Moderate, <0.7 Inefficient use.

Inventory Turnover

Formula: COGS ÷ Average Inventory

Description: Indicates how many times inventory is sold during the year.

Usage: To assess inventory management.

Example: 120,000 ÷ 15,000 = 8

Analysis: ≥8 Efficient, 5–8 Fair, <5 Slow moving stock.

Days Inventory Outstanding

Formula: 365 ÷ Inventory Turnover

Description: Shows how long inventory stays before being sold.

Usage: To measure inventory turnover period.

Example: 365 ÷ 8 = 45.6 days

Analysis: <45 Excellent, 45–60 Acceptable, >60 Too slow.

4. Leverage Ratios

Debt to Equity

Formula: Total Liabilities ÷ Shareholder's Equity

Description: Indicates how much debt is used relative to equity.

Usage: To assess financial structure and risk.

Example: 150,000 ÷ 100,000 = 1.5

Analysis: <1 Low risk, 1–2 Acceptable, >2 High risk.

Debt Ratio

Formula: Total Liabilities ÷ Total Assets

Description: Shows the portion of assets financed through debt.

Usage: To evaluate debt dependency.

Example: 150,000 ÷ 300,000 = 0.5

Analysis: <0.5 Strong, 0.5–0.7 Moderate, >0.7 Risky.

Interest Coverage

Formula: EBIT ÷ Interest Expense

Description: Measures how easily interest payments are covered by operating profit.

Usage: To evaluate ability to meet debt interest.

Example: 50,000 ÷ 10,000 = 5

Analysis: ≥3 Comfortable, 2–3 Moderate, <2 Risk of default.

5. Market Ratios

Earnings Per Share (EPS)

Formula: Net Income ÷ Shares Outstanding

Description: Profit earned per outstanding share.

Usage: To assess profitability per share.

Example: 100,000 ÷ 50,000 = 2

Analysis: ≥2 Strong, 1–2 Average, <1 Low.

Price to Earnings (P/E)

Formula: Market Price ÷ EPS

Description: Indicates how much investors pay for $1 of earnings.

Usage: To evaluate stock valuation.

Example: 40 ÷ 2 = 20

Analysis: <20 Undervalued, 20–30 Fair, >30 Overvalued.

Dividend Yield

Formula: (Dividends ÷ Market Price) × 100

Description: Return received by investors from dividends.

Usage: Important for income-focused investors.

Example: 1 ÷ 40 × 100 = 2.5%

Analysis: >3% Attractive, 2–3% Reasonable, <2% Low yield.

6. Trend Analysis

Revenue Growth

Formula: CAGR = [(Final ÷ Initial)^(1 ÷ Years)] - 1

Description: Annual growth in revenue over time.

Usage: To evaluate long-term performance.

Example: 100,000 → 150,000 over 3 years = 22.5%

Analysis: >15% Excellent, 5–15% Moderate, <5% Weak or Negative.

Net Income Growth

Formula: Same as CAGR but for Net Income

Description: Measures improvement in profitability.

Usage: To check earnings sustainability.

Example: 10,000 → 18,000 over 2 years = 34.2%

Analysis: >20% Strong, 10–20% Moderate, <10% Needs review.

ROA Trend

Formula: Annual ROA change (%)

Description: Tracks efficiency of assets over time.

Usage: To monitor operational effectiveness.

Example: 5% → 6% = 20% improvement

Analysis: >2% Good, 0–2% Neutral, <0% Declining.

ROE Trend

Formula: Annual ROE change (%)

Description: Shows changes in return to shareholders.

Usage: To evaluate investor value.

Example: 10% → 12%

Analysis: Same as ROA trend.

Profit Margin Trend

Formula: Net Income ÷ Revenue over years

Description: Indicates if profitability is stable or improving.

Usage: To assess pricing and cost control.

Example: 10% → 12%

Analysis: >1% Up is good, Flat is stable, Down needs attention.

Liquidity Trend

Formula: Current Ratio over years

Description: Indicates short-term financial health trend.

Usage: To track liquidity risks.

Example: 1.4 → 1.6

Analysis: Up = better; Down = monitor or adjust working capital.