

# Financial Statement Analysis — Workbook

This workbook turns the course into hands-on analysis of a real set of financial statements. Pick one company you care about, an investment candidate, a competitor, an acquisition target, or your own business, and pull its three statements for the last three to five years. Work through each section as you progress: dissect the income statement, judge the balance sheet, reconcile profit to cash, and assemble it all into the ratios and the go or no-go decision. The templates are built to be filled in with your company's own figures and reused every reporting period.

## The Income Statement: Measuring Performance

Read the P&L as a waterfall, separate the operating engine from financing and tax, and prove you understand why profit is not cash.

### Exercise: Walk the Income Statement Waterfall

Open your chosen company's most recent annual income statement and trace it line by line from the top to the bottom, computing each margin as you go. The goal is to see exactly where each sales dollar is consumed.

- What is total revenue, and what is cost of goods sold? Compute gross profit and gross margin (gross profit divided by revenue).
- What are the operating expenses (SG&A, R&D, etc.)? Compute operating income (EBIT) and operating margin.
- What are interest expense and income tax? Compute net income and net profit margin, and explain the gap between operating income and net income.
- Does the gross margin fit the business model (e.g. above 70 percent for software, 20 to 30 percent for a grocer)? If it does not fit, what would you investigate?

### Worksheet: Three-Year Common-Size Income Statement

Express every income-statement line as a percentage of revenue for three consecutive years so margin drift becomes visible. Fill the percentage for each year and note the direction of travel.

Revenue (always 100% — anchor line)

---

Cost of goods sold (% of revenue) — Year 1 / Year 2 / Year 3

---

Gross profit / gross margin (%) — Year 1 / Year 2 / Year 3

---

Operating expenses / SG&A (% of revenue) — Year 1 / Year 2 / Year 3

---

Operating income / EBIT margin (%) — Year 1 / Year 2 / Year 3

---

Interest expense (% of revenue) — Year 1 / Year 2 / Year 3

---

Net income / net margin (%) — Year 1 / Year 2 / Year 3

---

Direction of gross margin (improving / flat / eroding)

---

Direction of operating margin (improving / flat / eroding)

---

One-line conclusion: is the operation getting more or less efficient?

---

### Exercise: EBITDA Reality Check

Compute EBITDA and then pressure-test it against the cash the business really keeps, so you do not mistake EBITDA for free cash. Use the same company's statements.

- Starting from operating income, add back depreciation and amortization. What is EBITDA, and what is the EBITDA margin?
  - How large is annual capital expenditure (from the cash flow statement)? Is depreciation a fair stand-in for the cash the company must reinvest, or is real capex much higher?
  - If a buyer valued this business at 6x EBITDA, what is that enterprise value, and does the free cash flow justify that price?
  - In your own words, what is management not showing you if they emphasize EBITDA instead of net income or free cash flow?
- 

### Checklist: Income Statement Reading Standards

- I always note the period the statement covers before reading any number
- I compute gross, operating, and net margin, not just the dollar figures
- I separate the operating engine (EBIT) from financing (interest) and tax
- I check that gross margin is consistent with the company's business model
- I compare operating-expense growth against revenue growth to test for operating leverage
- I treat EBITDA as a proxy for earning power, never as spendable cash

## The Balance Sheet: Measuring Financial Position

Confirm the accounting equation, judge the capital structure and liquidity, and stress-test whether the business can pay its bills now and later.

### Exercise: Prove the Equation and the Cushion

Take the most recent balance sheet and verify it balances, then size up the owners' equity cushion relative to the debt that sits in front of it.

- What are total assets, total liabilities, and total equity? Confirm that Assets equals Liabilities plus Equity.
  - What fraction of total assets is financed by debt versus equity? Is this a conservative or a leveraged capital structure?
  - How much of total assets is goodwill or other intangibles? If that were impaired to zero, how much equity would remain?
  - Does the asset mix fit the business model (asset-heavy manufacturer vs. asset-light software)? What stands out?
-

### Worksheet: Liquidity and Solvency Ratio Card

Compute the core balance-sheet ratios for your company and record each next to its benchmark so weaknesses stand out immediately. Use current-period figures.

Current assets / current liabilities (dollars)

---

---

Current ratio = current assets / current liabilities — benchmark roughly 1.5 to 2.0

---

---

Inventory (dollars)

---

---

Quick ratio = (current assets minus inventory) / current liabilities — benchmark near 1.0

---

---

Working capital = current assets minus current liabilities (dollars)

---

---

Total liabilities / total equity (dollars)

---

---

Debt-to-equity ratio = total liabilities / total equity — compare to industry norm

---

---

Operating income (EBIT) and interest expense (dollars)

---

---

Interest coverage = EBIT / interest expense — benchmark comfortably above ~3

---

---

Verdict: can it pay near-term bills (liquidity) and survive its debt (solvency)? (yes / watch / no)

---

---

### Worksheet: Three-Year Common-Size Balance Sheet

Express each balance-sheet line as a percentage of total assets across three years to reveal shifts in capital structure and asset mix over time.

Cash and equivalents (% of total assets) — Year 1 / Year 2 / Year 3

---

---

Accounts receivable (% of total assets) — Year 1 / Year 2 / Year 3

---

---

Inventory (% of total assets) — Year 1 / Year 2 / Year 3

---

---

Property, plant and equipment (% of total assets) — Year 1 / Year 2 / Year 3

---

---

Goodwill and intangibles (% of total assets) — Year 1 / Year 2 / Year 3

---

---

Current liabilities (% of total assets) — Year 1 / Year 2 / Year 3

---

---

Long-term debt (% of total assets) — Year 1 / Year 2 / Year 3

---

---

---

Total equity (% of total assets) — Year 1 / Year 2 / Year 3

---

Direction of leverage (rising / flat / falling)

---

One-line conclusion on whether the balance sheet is strengthening or weakening

---

### Checklist: Balance Sheet Reading Standards

- I verify that Assets equals Liabilities plus Equity on every statement
- I assess the capital structure (debt vs. equity) before judging risk
- I separate current from non-current to compute working capital and liquidity
- I discount goodwill and soft intangibles when sizing the real equity cushion
- I read liquidity ratios against the industry, not against a fixed absolute
- I read leverage and interest coverage together, never in isolation

## The Cash Flow Statement and How the Three Connect

Read cash by source, reconcile net income to operating cash flow, isolate free cash flow, and trace one transaction through all three statements.

### Exercise: Diagnose the Cash Flow Pattern

Read your company's cash flow statement by its three sections and interpret what the pattern of signs reveals about the company's stage and health.

- What is cash from operating activities, and is it positive and consistent across the last three years?

---

- What is cash from investing (mainly capex), and what does its size say about how much the business must reinvest?

---

- What is cash from financing — is the company raising money (debt/equity) or returning it (repayments, dividends, buybacks)?

---

- Which stage does the sign pattern suggest (mature: +operating / -investing / -financing, vs. surviving on financing)? Is operating cash funding the business, or is borrowing?

### Worksheet: Profit-to-Cash Reconciliation and Free Cash Flow

Rebuild operating cash flow from net income using the indirect method, then compute free cash flow. This shows exactly where profit did or did not become cash.

Net income (dollars)

---

Plus: depreciation and amortization (non-cash add-back)

---

Minus: increase in accounts receivable (sales not yet collected)

---

Minus: increase in inventory

---

Plus: increase in accounts payable (bills not yet paid)

---

Equals: cash flow from operations (CFO)

---

---

CFO minus net income gap (dollars) — and the main driver of that gap

---

Minus: capital expenditures (capex)

---

Equals: free cash flow (FCF)

---

FCF as a percent of revenue, and the three-year FCF trend (rising / flat / falling)

---

### Worksheet: Trace One Transaction Through Three Statements

Use the worked example of a 1,000 dollar credit sale of a product that cost 600 dollars to make, then redo it with a real transaction from your company (e.g. a financed equipment purchase). Fill the effect on each statement.

Transaction described in one line

---

Income statement effect: revenue change

---

Income statement effect: expense/COGS change

---

Income statement effect: net income change

---

Balance sheet effect: which asset(s) change and by how much

---

Balance sheet effect: which liability or equity change keeps it balanced

---

Cash flow statement effect: operating adjustment(s)

---

Net cash effect today (and when cash actually arrives or leaves)

---

### Checklist: Cash Flow Reading Standards

- I read cash from operations first and weight it most heavily
- I reconcile net income to operating cash flow and explain every large adjustment
- I watch receivables and inventory swings as the usual reasons profit is not cash
- I compute free cash flow (operating cash flow minus capex), not just net income
- I interpret the three-section sign pattern to judge the company's stage
- I confirm ending cash on the cash flow statement matches the balance sheet cash line

## From Statements to Decisions: Ratios, Quality, and Judgment

Standardize and benchmark the statements, decompose returns with DuPont, run the earnings-quality cross-checks, and convert it all into a decision.

### Exercise: Decompose Return on Equity with DuPont

Break the company's ROE into its three drivers so you can explain why the return is what it is and whether it was earned or borrowed.

- What is ROE (net income divided by shareholders' equity)?  
\_\_\_\_\_
- Compute the three DuPont drivers: net profit margin (net income / revenue), asset turnover (revenue / total assets), and the equity multiplier (total assets / equity). Do they multiply back to ROE?  
\_\_\_\_\_
- Which driver is doing most of the work — operating quality (margin and turnover) or leverage (the equity multiplier)?  
\_\_\_\_\_
- If ROE looks strong mainly because of a high equity multiplier, how would a downturn expose that? Is this return durable?  
\_\_\_\_\_

### Worksheet: Profitability and Efficiency Scorecard

Compute the key performance ratios and benchmark each against a direct competitor and the industry average (e.g. from RMA Annual Statement Studies or IBISWorld). Flag where the company leads or lags.

Net profit margin (%) — company / competitor / industry  
\_\_\_\_\_

Return on assets (%) — company / competitor / industry  
\_\_\_\_\_

Return on equity (%) — company / competitor / industry  
\_\_\_\_\_

Gross margin (%) — company / competitor / industry  
\_\_\_\_\_

Inventory turnover (COGS / average inventory) — company / industry  
\_\_\_\_\_

Days sales outstanding (avg receivables / daily revenue) — company / industry  
\_\_\_\_\_

Asset turnover (revenue / total assets) — company / industry  
\_\_\_\_\_

Strongest ratio vs. peers (and why it is a competitive advantage)  
\_\_\_\_\_  
\_\_\_\_\_

Weakest ratio vs. peers (and the likely cause)  
\_\_\_\_\_  
\_\_\_\_\_

One-line read on overall profitability and efficiency  
\_\_\_\_\_  
\_\_\_\_\_

## Exercise: Run the Earnings-Quality Red-Flag Scan

Cross-check the three statements for the warning signs that profit is being flattered. Score each flag and form a view on whether the earnings are real.

- Over three years, does cumulative operating cash flow roughly track cumulative net income, or does profit run well ahead of cash?

---
- Are accounts receivable or inventory growing materially faster than revenue?

---
- Is profit propped up by one-time gains, asset sales, or unusual items rather than the core operation?

---
- Are debt rising and interest coverage falling, and is goodwill large enough that an impairment could erase real equity? Overall, are these earnings high or low quality?

---

## Checklist: Decision-Readiness Checklist

- I have built common-size and three-to-five-year trend views, not a single snapshot
- I benchmarked the key ratios against direct competitors and the industry, not in a vacuum
- I decomposed ROE with DuPont to separate operating quality from leverage
- I ran the earnings-quality cross-checks and compared net income to operating cash flow
- I framed the conclusion to my actual role (lender vs. equity investor vs. supplier)
- I can state a clear go / no-go judgment and defend it from the statements

## Your Action Plan

1. Choose one company and pull its income statement, balance sheet, and cash flow statement for the last three to five years from its annual report or filing.
2. Build a three-year common-size income statement and balance sheet so margin drift and capital-structure shifts become visible at a glance.
3. Walk the income statement waterfall, computing gross, operating, and net margin, and confirm each fits the business model.
4. Verify the balance sheet balances, then compute the current, quick, debt-to-equity, and interest-coverage ratios against their benchmarks.
5. Reconcile net income to operating cash flow with the indirect method and isolate free cash flow (operating cash flow minus capex).
6. Trace one real transaction through all three statements to confirm you understand how they articulate as a single system.
7. Compute the profitability and efficiency ratios and benchmark them against a direct competitor and the industry average.
8. Decompose return on equity with the DuPont framework to see whether returns come from operating excellence or from leverage.
9. Run the earnings-quality red-flag scan, comparing net income to operating cash flow and watching receivables, inventory, debt, and goodwill.
10. Write a one-page conclusion framed to your actual decision (lend, invest, or extend credit) with a clear, defensible go or no-go call.













