CHARTA LEARNING · LESSON NOTES

Financial reporting and the analysis framework

CFA Level I · Financial Statement Analysis

You will learn: Explain why companies report and investors analyse, tell accrual from cash accounting, read the four statements and the audit opinion, and apply the six step analysis framework.

Running example: Worked examples follow one made-up company, Kestrel Foods ($ millions). Year: revenue 1,000, cost of goods sold 600, running costs 150, depreciation 50, interest 20, tax 25%, net income 135, operating cash flow 125.

1. Reporting versus analysis

- Financial reporting gives outsiders (investors, lenders) useful information on performance, financial position (what the company owns and owes at a date) and cash flows. Managers prepare it under accounting standards (IFRS or US GAAP), and an independent auditor gives an opinion on it.
- Analysis takes that information, with other evidence on the industry and economy, and reaches a decision: lend, invest, acquire or give credit. Preparing, auditing and analysing are three different jobs.
- Standards bind the preparer, who may use permitted estimates such as asset lives. The analyst is not bound and may restate figures onto a common basis to compare firms fairly. No rule is broken and the auditor need not approve.

TWO OVENS, ONE BASIS (OVEN LINE COSTING 250, PROFIT BEFORE DEPRECIATION 250 FOR BOTH)

Kestrel depreciation (5 years)	250 ÷ 5	**50**
Marlow depreciation (10 years)	250 ÷ 10	**25**
Marlow reported operating profit	250 − 25	**225**
Marlow on Kestrel's life	250 − 50	**200**

Watch out: Thinking the analyst may only use the reported numbers.

2. Accrual versus cash accounting

- Cash basis records income when cash is received and costs when cash is paid. Accrual basis recognises revenue when it is earned (goods or service delivered) and expenses when incurred, matched to the revenue they helped create. IFRS and US GAAP both require accrual accounting.
- Timing gaps create receivables (earned, not collected), payables (incurred, not paid), unearned revenue (cash received early, a liability) and depreciation (a cost with no cash payment in the year).
- Net income is the accrual view and operating cash flow the cash view. Accruals = net income − operating cash flow − investing cash flow. Divide by average net operating assets (operating assets less operating liabilities) for the accruals ratio. A high or rising ratio is a warning sign.
- Accrual accounting describes the year better, but judgement behind it can flatter, so cash is the check. A steady firm turns profit into cash; a flashy firm may leave profit sitting in receivables.

Accruals = NI − CFO − CFI; accruals ratio = accruals ÷ average net operating assets

KESTREL ON BOTH BASES

Prepaid contract: revenue this year	12 × 3 ÷ 12 (paid 1 Oct, year end 31 Dec)	**3**
Unearned revenue (liability)	12 − 3	**9**
Profit on a cash basis	940 − (600 + 150 + 20 + 45)	**125**
Net income, accrual basis	from the income statement	**135**
Bridge to operating cash flow	135 + 50 − 80 + 20	**125**
Accruals	135 − 125 − (−100)	**110**

Watch out: Reading a large profit as proof of cash.

3. The four statements and the notes

- Income statement: performance over a period (revenue, expenses, profit). Balance sheet (statement of financial position under IFRS): what the company owns and owes at one date. Cash flow statement: cash from operating, investing and financing activities. Equity statement: how the owners' stake moved through profit, dividends and new shares.
- The balance sheet rests on assets = liabilities + owners' equity. Equity is money put in plus profits kept. Every transaction keeps it in balance.
- The statements link: net income flows into equity, closing equity and closing cash appear on the balance sheet. An error in one statement shows up in another.
- Under US GAAP interest paid is an operating item; under IFRS it may be placed in financing.
- The notes give policies, estimates, segments, contingencies (possible obligations) and subsequent events (after year end, before issue). Management commentary is useful but usually unaudited. Read numbers and notes together.

> **Assets = liabilities + owners' equity**

KESTREL STATEMENTS ($ MILLIONS)		
Gross profit	1,000 − 600	**400**
Operating profit	400 − 150 − 50	**200**
Net income	(200 − 20) − 45 tax at 25%	**135**
Total assets	(90 + 180 + 100) + 550	**920**
Liabilities + equity	(90 + 250) + (300 + 280)	**920**
Change in cash	125 − 100 − 35	**−10 (100 to 90)**
Closing equity	480 + 135 − 35	**580**

4. The audit and its four opinions

- Management prepares the statements. An independent auditor gives an opinion on whether they are fairly presented, in all material respects, under the standards. Assurance is reasonable, not absolute: an audit is not a guarantee against fraud and not a forecast of survival.
- Unmodified (unqualified): fairly presented, the clean report. Qualified: fair except for a specific item. Adverse: not fairly presented as a whole. Disclaimer: the auditor could not gather enough evidence to form a view. Qualified, adverse and disclaimer are modified opinions and red flags.
- Ask what the problem is (misstatement or scope limitation) and how widespread. Confined to one item of either kind: qualified. Pervasive misstatement: adverse. Pervasive scope limitation: disclaimer. Adverse means the auditor knows the statements are wrong; a disclaimer means the auditor cannot tell.
- A misstatement is material if it could change a reader's decision. Key audit matters (critical audit matters in the US) show where judgement was greatest; they are not findings of error. An emphasis paragraph leaves the opinion as is. A going concern note warns of doubt about survival.

MATERIALITY ILLUSTRATION (5% OF PROFIT BEFORE TAX 180)		
Threshold	5% × 180	**9**
Receivables overstated by 4	below 9	**unlikely to change the opinion**
Inventory overstated by 30	above 9	**expect a modified opinion**
Net income if corrected	(180 − 30) × 75%	**112.5**
Share of profit at stake	22.5 ÷ 135	**16.7%**

Watch out: Believing a clean audit means no error or fraud; mixing up adverse, disclaimer and qualified.

5. The six step analysis framework

- Steps: 1 state the purpose and context; 2 collect the data; 3 process the data (ratios, common-size statements, where each line is a share of revenue); 4 analyse and interpret; 5 develop and communicate conclusions and recommendations; 6 follow up.
- Step one decides everything because purpose decides which figures matter: a bank on a five year loan looks at cash cover, a supplier giving 60 days credit at liquidity, a ten year shareholder at earning power, a takeover bidder at the whole business.
- Follow up compares conclusions with what happened, reveals bias in your own assumptions and feeds new information back into step one, so the framework is a loop. It is not an audit: nobody gives assurance over the analyst's conclusions.
- The finding is a question, not a number: Kestrel can comfortably service its debt, but receivables are growing about four and a half times faster than sales, so ask why.

KESTREL FOR A LENDER

Gross / operating / net margin	400, 200, 135 ÷ 1,000	**40% / 20% / 13.5%**
Revenue growth (last year 900)	1,000 ÷ 900 − 1	**11.1%**
Receivables growth	180 ÷ 120 − 1	**50%**
Current ratio	370 ÷ 90	**4.1**
Debt to equity	250 ÷ 580	**0.43**
Interest cover	200 ÷ 20	**10 times**
Cash flow to net income	125 ÷ 135	**0.93**

Key takeaways

- Reporting informs outsiders; analysis decides, and may adjust for management's choices.
- Accrual: revenue when earned, expenses when incurred. Profit is not cash, so compare it with operating cash flow.
- Accruals = net income − operating cash flow − investing cash flow; a high or rising ratio is a warning.
- Four linked statements (income, balance sheet, cash flow, equity) plus the notes.
- Four audit opinions: unmodified, qualified, adverse, disclaimer. The assurance is reasonable, not a guarantee.
- Six steps: purpose first, follow up last, and it is a loop.

Quick check

1. Customer pays 24 on 1 July for 12 months. Year end 31 Dec. Revenue now and unearned?
   Answer: 24 × 6 ÷ 12 = 12 revenue. 12 unearned.
2. Net income 80, operating cash flow 30. Profit-to-cash gap, and what to do?
   Answer: 80 − 30 = 50. Ask why profit is so far ahead of cash.
3. Auditor cannot get enough evidence about the records as a whole. Opinion?
   Answer: A disclaimer of opinion.