CHARTA LEARNING · LESSON NOTES

The balance sheet

CFA Level I · Financial Statement Analysis

You will learn: Read a balance sheet: its elements, the current and non-current split, how assets are measured and securities classified, how goodwill arises and is tested, and the common-size balance sheet.

Running example: Worked examples follow one made-up company, Kestrel Outdoor Gear ($ millions). Year end: current assets 400 (cash 80, marketable securities 60, receivables 120, inventory 140), non-current assets 600 (property, plant and equipment 480, goodwill 100, other 20), current liabilities 200, non-current liabilities 400, equity 400.

1. Elements and the accounting equation

- The balance sheet is a photograph on one date and says nothing about what happened during the year. Assets are resources the company controls, from past events, expected to bring future benefit. Liabilities are present obligations, from past events, expected to be settled by giving up resources.
- Equity is what is left for the owners: share capital (money paid in) plus retained earnings (profit kept). Everything owned was paid for by lenders or owners, so the equation always balances and every deal keeps it in balance.
- Book value (equity on the sheet) is not market value. Assets sit at old cost, and self-built brands, designs and customer loyalty are largely unrecorded because the spending was expensed. The sheet records cost, not valuation.

Assets = liabilities + equity; equity = assets − liabilities

KESTREL: THREE DEALS, THEN BOOK VERSUS MARKET

Start		**1,000 = 600 + 400**
Borrow $50m cash from a bank		**1,050 = 650 + 400**
Buy $30m of stock on credit		**1,080 = 680 + 400**
Earn and keep $20m profit in cash		**1,100 = 680 + 420**
Market value (50m shares at $18)	50 × 18	**$900m**
Market value ÷ book value	900 ÷ 400	**2.25**

Watch out: Treating equity as measured separately, or as market value.

2. Current and non-current

- An asset is current if expected to be realised (sold, used or collected) within the operating cycle or twelve months, whichever is longer; a liability is current if due within that period. The operating cycle runs from buying stock to collecting cash. The rest is non-current.
- Working capital (an amount, the cushion) and the current ratio (a multiple) are built from the split. A ratio above one means a positive cushion.
- A broken covenant (a promise to the lender) with no waiver at the balance sheet date lets the lender demand repayment, so the debt is current even if due in years.
- Under IFRS only a right to delay payment for twelve months, in place at the balance sheet date, keeps debt non-current. A plan to refinance is not a right.

Current ratio = current assets ÷ current liabilities; working capital = current assets − current liabilities

KESTREL: $120M OF LONG-TERM DEBT BECOMES CALLABLE

Current ratio before	400 ÷ 200	**2.00**
New current liabilities	200 + 120	**$320m**
New current ratio	400 ÷ 320	**1.25**
Working capital	400 − 320 (was 200)	**$80m**
Sorting	receivables 40 days, stock 100 days, loan due in 11 months	**current**
Sorting	warehouse 20 years, bond due in 6 years	**non-current**

Watch out: Assuming current always means twelve months; believing a loan you expect to refinance can stay non-current.

3. How assets are measured

- Historical cost is what was paid. Amortised cost is cost adjusted over time. Fair value is the price in an orderly sale now. One balance sheet mixes all three, so total assets adds different bases and the components matter more than the total.
- Fair value is ranked by reliance on judgement. Level 1: a quoted price in an active market for the identical asset. Level 2: other observable inputs. Level 3: unobservable inputs such as management's own model. The further down, the more to question.
- Amortised cost uses the effective interest method (IFRS and US GAAP): interest income = opening carrying amount × market yield, and the difference from the coupon adjusts the carrying amount.
- Under the IFRS revaluation model (a choice for a class of property), assets are shown at fair value with the gain in other comprehensive income (OCI). US GAAP keeps cost less depreciation.

> **Depreciation = (cost − salvage value) ÷ life; interest income = opening carrying amount × effective rate**

KESTREL: MACHINE, BOND AND LAND

Machine ($80m, 8 years, salvage 8): depreciation	(80 − 8) ÷ 8	**$9m a year**
Carrying amount after 3 years	80 − 27	**$53m (fair value 62; gap 9)**
Bond (face 100, coupon 4, bought 95.67, yield 5%): year 1 income	95.67 × 5%	**$4.78m**
Carrying amount end of year 1	95.67 + (4.78 − 4.00)	**$96.45m**
Land cost 20, worth 140: IFRS revaluation	140 − 20	**assets 1,120, equity 520**
Asset turnover at cost / revalued	1,500 ÷ 1,000; 1,500 ÷ 1,120	**1.50 / 1.34**

4. Classifying investment securities

- US GAAP debt securities, classified on purchase by intent. Held to maturity: carried at amortised cost, price changes appear nowhere. Trading: fair value, unrealised gains and losses go to net income. Available for sale: fair value, unrealised gains and losses go to OCI, a separate part of equity.
- IFRS 9 classifies debt by business model and cash flows. Hold and collect: amortised cost (like held to maturity). Collect and sell: fair value through OCI (like available for sale). Otherwise: fair value through profit or loss (like trading).
- Equity shares: fair value with changes in income under US GAAP. IFRS is the same, but a company may irrevocably elect OCI for shares not held for trading. The same bond can give different reported income depending on the label.

KESTREL: THREE IDENTICAL BONDS (COST $100M, COUPON $4M, YEAR END PRICE $104M)

Held to maturity	carrying 100	**income 4**
Trading	carrying 104, gain 4 in net income	**income 8**
Available for sale	carrying 104, OCI +4	**income 4**
Gap in reported income	8 − 4	**$4m**

5. Goodwill

- Goodwill arises only when one company buys another: price paid minus the fair value of the identifiable net assets (including nameable intangibles such as brands and customer lists, less liabilities, all at fair value on the purchase date). Internally generated goodwill is never recognised.
- Goodwill is not amortised. It is tested for impairment at least once a year. IFRS tests a cash generating unit: carrying amount against recoverable amount, the higher of fair value less costs of disposal and value in use. The loss hits goodwill first, then other assets.
- US GAAP tests a reporting unit: carrying amount against fair value, with the loss capped at goodwill. Impairment is never reversed under either. It is a non-cash charge, often signalling an overpriced acquisition. Read the reconciliation and test assumptions; many analysts strip goodwill out to compare firms.

Goodwill = price paid − fair value of identifiable net assets

KESTREL BUYS 100% OF TRAILHEAD FOR $260M

Identifiable net assets	300 − 120	**$180m**
Goodwill	260 − 180	**$80m**
IFRS: recoverable amount	higher of 140 and 150	**$150m**
IFRS impairment loss	260 − 150	**$110m (goodwill 80, other assets 30)**
US GAAP: excess 260 − 150 = 110, capped	smaller of 110 and 80	**$80m**
Kestrel goodwill share	100 of 1,000 assets; 100 of 400 equity	**10%; 25%**

6. The common-size balance sheet

- Divide every line by total assets so each becomes a slice of the whole and firms of any size, or one firm across years, can be compared. Assets add to 100%, and liabilities plus equity add to 100% too.
- Balance sheet items are stocks, so the result describes structure (what the firm owns and how it is financed). Speed is measured by activity ratios.
- The common-size sheet raises the flag; activity ratios such as days of inventory then show how serious it is.

Common-size % = line item ÷ total assets × 100

KESTREL'S ASSET SLICES AND YEAR ON YEAR (ASSETS 800 LAST YEAR, 1,000 NOW)

Cash and securities / receivables / inventory	140, 120, 140 ÷ 1,000	**14% / 12% / 14%**
Plant / goodwill / other	480, 100, 20 ÷ 1,000	**48% / 10% / 2%**
Equity share	400 ÷ 1,000	**40% (60% debt and other liabilities)**
Inventory share, last year to now	80 ÷ 800; 140 ÷ 1,000	**10.0% to 14.0% (+4.0 points)**
Receivables share		**10.0% to 12.0% (+2.0 points)**
Growth: inventory vs total assets		**75% vs 25%: flag**

Key takeaways

- Assets = liabilities + equity; equity is the leftover at book values, not market value.
- Current means realised or settled within the longer of the operating cycle and twelve months.
- A broken covenant with no waiver makes debt current; hoping to refinance is not a right.
- Items are measured at cost, amortised cost or fair value (levels 1 to 3), so total assets mixes bases.
- Held to maturity shows no price changes, trading sends them to income, available for sale to OCI.
- Goodwill = price paid − fair value of identifiable net assets; tested for impairment, never reversed. Common size divides by total assets.

Quick check

1. Assets 750, liabilities 480. What is equity?
   Answer: 750 − 480 = 270.
2. Price paid 500, fair value of identifiable net assets 430. Goodwill?
   Answer: 500 − 430 = 70.
3. Inventory 90, total assets 600. Common-size inventory?
   Answer: 90 ÷ 600 = 15%.

Summary notes for the Charta whiteboard lesson. Examples use made-up figures. Watch the full lesson at charta-learning.com.