Applying and adjusting financial statement analysis

Financial Statement Analysis

1 A story: the question comes first

- A folder of accounts answers no question by itself
- Buy the shares? Lend money? Test a rating?
- Each purpose needs different adjustments
- A framework keeps the work tied to the decision

IN THE LESSON

- Imagine a friend hands you a thick folder of accounts and says, tell me about this company.
- You would ask one thing straight away: what do you want to know?
- Are they thinking of buying the shares?
- Lending it money?
- Checking whether its credit rating is fair?
- Each question needs different pages of the folder, different adjustments and different ratios.
- An analyst who skips that question produces a mountain of ratios and no answer.
- A framework is just a habit that stops this happening.
- It makes you start with the purpose and finish with a recommendation, and it keeps the work honest in between.

2 The six steps

Frame and prepare

1 Purpose and context → 2 Collect the data → 3 Process the data

Judge and act

4 Analyse and interpret → 5 Conclude and recommend → 6 Follow up

IN THE LESSON

- Here are the six steps in the order you do them.
- Look at the top row first.
- Step one is the purpose: what is the question, who is asking, and by when.
- Step two is to collect data, from the filings, from industry sources and from management.
- Step three is to process it: adjust the statements, build common size figures, and calculate the ratios.
- Now the bottom row.
- Step four is to analyse and interpret what the processed figures say.
- Step five is to develop conclusions and recommendations, and to communicate them clearly.
- Step six is to follow up, because a view formed in one month can be overturned by the next set of results.

3 Same filings, four different jobs

- Valuation: make peers comparable first
- Credit rating: debt, cash flow and cover
- Leverage: count every debt like item
- Management's story: test each claim against the numbers

IN THE LESSON

- Let us see how the purpose changes the work.
- First, valuing equity against comparables.
- You must make peers comparable before you apply a multiple, so accounting adjustments matter most.
- Second, critiquing a credit rating.
- Now the focus moves to debt, cash flow and cover, including obligations that sit off the balance sheet.
- Third, getting a full view of financial leverage, which means counting every debt like item, not just the borrowings line.
- Fourth, assessing what management says in its discussion of results.
- Here you check each claim against the numbers, and ask whether the story hides a weaker core.

4 The five part DuPont breakdown

ROE = tax burden × interest burden × EBIT margin
× asset turnover × financial leverage

Tax burden	Net income ÷ pretax profit
Interest burden	Pretax profit ÷ EBIT
EBIT margin	EBIT ÷ revenue
Asset turnover	Revenue ÷ total assets
Financial leverage	Total assets ÷ equity

IN THE LESSON

- A favourite tool at the analyse step is the DuPont breakdown.
- Say it as doo pont.
- Return on equity, which is net income divided by equity, is split into five pieces that multiply together.
- The tax burden is net income divided by profit before tax; it shows how much of the profit the tax collector leaves.
- The interest burden is profit before tax divided by E B I T, earnings before interest and tax.
- The E B I T margin is E B I T divided by revenue.
- Asset turnover is revenue divided by total assets.
- Financial leverage is total assets divided by equity.
- Each piece answers a different question, so you can see exactly where a high return comes from.

5 Example 1: is the return really from the core?

Marlow Foods, reported figures (millions)

Tax burden	105 ÷ 140	**0.75**
Interest burden	140 ÷ 160	**0.875**
EBIT margin	160 ÷ 1,000	**16.0%**
Asset turnover	1,000 ÷ 1,400	**0.714**
Financial leverage	1,400 ÷ 700	**2.0**

Product of the five pieces: ROE = 15.0%

IN THE LESSON

- Our running case is a made up firm, Marlow Foods.
- An analyst is asked whether its return on equity comes from its core food business.
- Marlow has revenue of one thousand, E B I T of one hundred and sixty, interest of twenty, and tax of thirty five, so net income is one hundred and five.
- Total assets are fourteen hundred and equity is seven hundred.
- Step by step: tax burden is one hundred and five over one hundred and forty, which is point seven five.
- Interest burden is one hundred and forty over one hundred and sixty, point eight seven five.
- E B I T margin is sixteen per cent.
- Asset turnover is point seven one four.
- Leverage is two.
- Multiply them all and you get fifteen per cent.

6 Example 1 continued: strip out the associate

Marlow Foods, core business only (millions)

Core net income	105 − 40	**65**
Core assets	1,400 − 400	**1,000**
Core equity	700 − 400	**300**
Core EBIT margin	120 ÷ 1,000	**12.0%**
Core ROE	65 ÷ 300	**21.7%**

IN THE LESSON

- Now the twist.
- Forty of that E B I T is Marlow's share of profit from an associate, a company it part owns, and the carrying amount of that investment is four hundred of the assets.
- The analyst asks what the core business alone earns.
- Remove forty from net income to get sixty five.
- Remove four hundred from assets, leaving one thousand, and from equity, leaving three hundred, since the investment is financed by equity.
- Core E B I T is one hundred and twenty, a margin of twelve per cent.
- Core return on equity is sixty five over three hundred, twenty one point seven per cent.
- The associate was dragging the return down, while flattering the margin.
- The headline hid two stories.

7 A story: two bakers, two rulers

- Same business, different accounting choices
- Inventory cost flow, depreciation lives
- Capitalise or expense development costs
- Revenue, goodwill, pension and lease judgements

IN THE LESSON

- Picture two bakers who sell identical loaves.
- One writes down an oven as lasting five years.
- The other says ten.
- Their sales and cash are the same, yet one reports much higher profit.
- Accounting standards leave room for judgement, and judgement shapes comparisons.
- The main choices are these.
- Inventory cost flow: first in first out, weighted average, or last in first out, which only U S G A A P allows.
- Depreciation methods and lives.
- Whether development costs meet the I F R S tests for capitalising.
- Revenue recognition judgements.
- Goodwill impairment assumptions.
- Pension assumptions.
- And lease or consolidation choices.
- Every one moves profit, assets or ratios.

8 Which way does the choice push profit?

Choices that raise reported profit now

Choice	Effect on profit
Longer useful life	Higher
Capitalise development	Higher
Early revenue recognition	Higher
Delay goodwill write down	Higher

IN THE LESSON

- Let us sort the choices by what they do to profit now.
- Read the table row by row.
- A longer useful life spreads the cost thinly, so depreciation is lower and profit is higher.
- Capitalising development cost, instead of expensing it, moves the spending onto the balance sheet, so profit is higher this year.
- Recognising revenue early pulls sales into the current period.
- Delaying a goodwill write down avoids a charge.
- In every row, profit looks better now, but nothing about the cash has changed.
- Note that the costs do not vanish.
- They arrive later, as depreciation, amortisation or a bigger write off.
- An analyst treats these choices as questions to answer, not as facts.

9 The gap was a choice

Operating profit

A: 5 year life	**100**
B: 10 year life	**150**
B on a 5 year life	**100**

Same assets, same cash, one assumption

IN THE LESSON

- Look at the picture.
- Two companies each own five hundred of equipment and earn the same two hundred before depreciation.
- Company A writes its equipment off over five years.
- Its depreciation is one hundred, so its operating profit, the first bar, is one hundred.
- Company B writes it off over ten years.
- Its depreciation is only fifty, so its operating profit, the second bar, is one hundred and fifty.
- Half as much again, for the same business.
- Now put B on a five year life as well.
- The third bar shows one hundred, level with A.
- The gap was never about the customers or the machines.
- It was an assumption about how long the machines last.

10 Example 2: what a multiple does with the choice

Both earn 200 before depreciation; buyer pays 8 × EBIT

A depreciation	500 ÷ 5	**100**
B depreciation	500 ÷ 10	**50**
Value of A	8 × 100	**800**
Value of B	8 × 150	**1,200**
Gap paid for a life	1,200 − 800	**400**

IN THE LESSON

- Now see why a buyer should care.
- Suppose a buyer pays eight times operating profit for either company.
- A depreciates five hundred over five years, so its charge is one hundred.
- B depreciates the same five hundred over ten years, so its charge is fifty.
- Take two hundred of earnings before depreciation and subtract.
- A earns one hundred, B earns one hundred and fifty.
- At eight times, A is worth eight hundred and B is worth twelve hundred.
- The gap is four hundred.
- That is a price paid for believing B's depreciation policy, nothing else.
- A multiple applied to unadjusted earnings capitalises the accounting choice along with the business.

11 Example 3: capitalise or expense?

Each spends 80 on development; 300 earned before it

X: expense all 80	300 − 80	**220**
Y: capitalise over 4 years	300 − 20	**280**
Higher profit for Y	280 − 220	**60**
Extra asset for Y	80 − 20	**60**
Cash spent by each	the same	**80**

IN THE LESSON

- A second choice.
- Two firms each spend eighty on developing a new product, and each earns three hundred before that spending.
- Firm X expenses the eighty at once under its rules, so its operating profit is two hundred and twenty.
- Firm Y meets the I F R S tests for capitalising development cost.
- It puts the eighty on the balance sheet and amortises it over four years, so this year's charge is only twenty and its operating profit is two hundred and eighty.
- That is sixty higher, and sixty more assets, from exactly the same cash.
- Both spent eighty.
- In later years Y's profit will carry the charge that X has already taken.
- Compare their trend, not just this year.

12 Why choices turn into biases

- Biases: meet targets, smooth earnings, protect covenants
- Buyers pay a multiple on flattered profit
- Lenders and boards can be misled too
- Identify, estimate the effect, judge economics or bias

IN THE LESSON

- A choice becomes a bias when it is chosen for its effect rather than its truth.
- Management may want to hit a target, to smooth earnings so that results look steady, or to protect a loan covenant, which is a promise to keep a ratio above a limit.
- Bonuses can add to the temptation.
- Now see who gets misled.
- A buyer paying a multiple pays for the choice.
- A lender setting terms may lend more than the risk deserves.
- A board setting pay may reward an accounting move, not performance.
- So the analyst does three things.
- Identify each choice.
- Estimate its effect on the figures.
- Then decide whether it reflects the economics, or looks like bias.

13 Putting companies on the same footing

- Adjust for differences in standards and methods
- LIFO to FIFO, goodwill, capitalised interest
- Pension deficits and other debt like items
- Keep the balance sheet balanced, and apply tax

IN THE LESSON

- To compare two companies fairly you must make them play by the same rules.
- That is what an adjustment does.
- Compare a U S G A A P company that uses last in first out with a peer on first in first out.
- Add the reserve to inventory.
- Remove goodwill if you want to compare tangible returns.
- Add capitalised interest back to interest expense when you test cover.
- Treat a pension deficit, and other debt like items, as debt.
- And restate a company that capitalises development cost to expense it, if its peer does.
- Each adjustment must keep the balance sheet in balance, and carry tax where it applies.
- Adjusting one side only is the classic mistake.

14 Converting last in first out to first in first out

FIFO inventory = LIFO inventory + reserve
FIFO equity = LIFO equity + reserve × (1 − t)
FIFO cost of sales = LIFO cost of sales − change in reserve

LIFO reserve	FIFO minus LIFO inventory
Tax rate	Rate on the reserve
Inventory	Rises by the full reserve
Equity	Rises by reserve after tax
Cost of sales	Falls by this year's rise

IN THE LESSON

- Here is the one conversion the exam loves.
- Last in first out is written L I F O, and first in first out is F I F O.
- The L I F O reserve is the amount by which F I F O inventory would exceed L I F O inventory.
- It builds up when prices rise.
- To convert, first add the whole reserve to inventory.
- Second, add the reserve times one minus the tax rate to equity.
- The remainder, the reserve times the tax rate, goes to a deferred tax liability.
- Third, cost of sales under F I F O equals cost of sales under L I F O minus the change in the reserve during the year.
- With rising prices, F I F O costs are lower.

15 Example 4: Tessen Metals on a first in first out basis

Tessen Metals: inventory 900, COGS 3,000, equity 1,500

FIFO inventory	900 + 320	**1,220**
FIFO equity	1,500 + 320 × 0.75	**1,740**
Deferred tax liability	320 × 0.25	**80**
FIFO cost of sales	3,000 − (320 − 250)	**2,930**
Inventory turnover	was 3.33	**2.40**

IN THE LESSON

- Now apply it.
- Tessen Metals reports under U S G A A P with last in first out.
- Its inventory is nine hundred, cost of sales is three thousand and equity is fifteen hundred.
- The reserve rose from two hundred and fifty to three hundred and twenty during the year, and tax is twenty five per cent.
- First in first out inventory is nine hundred plus three hundred and twenty, which is twelve hundred and twenty.
- Equity rises by three hundred and twenty times point seven five, which is two hundred and forty, to seventeen hundred and forty.
- The deferred tax liability is eighty.
- Cost of sales falls by the seventy rise in the reserve, to twenty nine hundred and thirty.
- Inventory turnover drops from three point three three to two point four zero.

16 Both sides move by the same amount

Added (millions)

Inventory	**+320**
Equity	**+240**
Deferred tax	**+80**

Assets +320 = equity +240 + deferred tax +80

IN THE LESSON

- Here is why the balance sheet still balances.
- The first bar is the inventory, up by three hundred and twenty.
- That is the part everybody remembers.
- But if you only add that, assets rise with nothing on the other side.
- Look at the next two bars, the claims on those assets.
- Equity rises by two hundred and forty.
- The remaining eighty is the tax that would be due on the extra profit, shown as a deferred tax liability since it has not been paid.
- Two hundred and forty plus eighty is three hundred and twenty, exactly the rise in inventory.
- If your adjusted equity ratios look odd, check that both sides moved by the same amount.

17 Example 5: cover and debt, adjusted

Tessen Metals: EBIT 600, EBITDA 800, debt 1,000

Reported interest cover	600 ÷ 100	**6.00**
Adjusted interest cover	600 ÷ (100 + 40)	**4.29**
Reported debt to EBITDA	1,000 ÷ 800	**1.25**
Debt plus pension deficit	1,000 + 150	**1,150**
Adjusted debt to EBITDA	1,150 ÷ 800	**1.44**

IN THE LESSON

- Two more adjustments for Tessen.
- First, interest cover.
- Tessen expensed one hundred of interest, but capitalised another forty into a new warehouse.
- E B I T is six hundred.
- Reported cover is six hundred over one hundred, six times.
- A lender wants total interest incurred, so the cover is six hundred over one hundred and forty, which is four point two nine.
- Second, leverage.
- Tessen has debt of one thousand and earnings before interest, tax, depreciation and amortisation of eight hundred, so debt to that figure is one point two five.
- It also has an unfunded pension deficit of one hundred and fifty, which is debt in all but name.
- Add it, and the ratio rises to one point four four.

18 A checklist of common adjustments

Adjustment and what moves

Adjustment	What moves
Add LIFO reserve	Assets up
Add back capitalised interest	Cover down
Pension deficit as debt	Debt up
Strip out goodwill	Equity down

IN THE LESSON

- Here is a short checklist to keep beside you.
- Read down the rows.
- Adding the reserve to inventory raises assets, and equity too after tax.
- Adding capitalised interest back to interest expense lowers interest cover, because the true cost of borrowing is larger.
- Treating the pension deficit as debt raises debt.
- Stripping out goodwill lowers equity, which matters when you compare returns on tangible capital.
- Expensing development cost for a company that capitalises it works the same way: lower profit and lower assets.
- Most of these make a company look weaker than reported.
- That is often the point: the reported picture was kinder than the economics.

19 Mistakes to avoid so far

- Ratios that do not answer the question posed
- Comparing across different accounting choices
- Adjusting one side and forgetting the other
- Forgetting the tax on an adjustment

IN THE LESSON

- Time to stop and collect the traps.
- The first is producing ratios without asking which of them answers the question you were given.
- A pile of numbers is not an analysis.
- The second is comparing reported ratios across companies that made different choices, like our two bakers.
- The third is adjusting one side of the statements and forgetting the other, such as adding the reserve to inventory with no change to equity or deferred tax.
- The fourth is forgetting tax.
- An adjustment to profit is worth its after tax amount to the owners.
- Keep these four in mind as we move on to what happens when the rules themselves change.

20 A story: new rules, same cash

- A change in rules can move the numbers
- Cash flows stay exactly where they were
- Trace which numbers move, and which way
- Then judge whether the improvement is real

IN THE LESSON

- Imagine a shop that rents its premises.
- Nothing about the shop changes the day the accounting rulebook does.
- The same rent leaves the bank each month, the same customers walk in.
- Yet the accounts can look different overnight.
- That is the central idea of this section.
- A change in standards, methods or assumptions alters reported numbers without changing cash flows.
- Our task is to trace which numbers move, which way, and by how much.
- Then we decide whether any improvement in a ratio is real.
- The headline example is leases, because a new standard brought them onto the balance sheet.
- After that we look at useful lives and the pension discount rate.

21 Leases: the same rent, two treatments

Lease cost in the lessee's income statement

Standard and lease type	Profit and loss
IFRS lessee, nearly all leases	Dep + interest
US GAAP operating lease	One lease cost
US GAAP finance lease	Dep + interest
Cash paid to the landlord	Unchanged

IN THE LESSON

- Look at the table.
- Under I F R S sixteen, a lessee recognises a right of use asset and a lease liability on the balance sheet for almost every lease.
- In the income statement the single rent charge is replaced by two: depreciation of the asset and interest on the liability.
- Rent no longer sits in operating expenses, so earnings before interest, tax, depreciation and amortisation rise.
- Under U S G A A P, an operating lease is also put on the balance sheet, but the income statement keeps one straight line lease cost within operating expenses, so that measure does not change.
- A U S G A A P finance lease looks like the I F R S treatment.
- In every case, the cash paid to the landlord is unchanged.

22 Example 6: a lease comes onto the balance sheet

Orlen Retail: pays 200 a year for 4 years at 6%

Lease liability	200 × 3.4651	**693.0**
EBITDA	1,000 + 200	**1,200**
Depreciation, year 1	693.0 ÷ 4	**173.3**
Interest, year 1	693.0 × 6%	**41.6**
Operating profit	700 + 200 − 173.3	**726.7**

IN THE LESSON

- Let us work one.
- Orlen Retail, an I F R S reporter, signs a lease paying two hundred a year for four years, discounted at six per cent.
- The annuity factor is three point four six five one, so the lease liability is two hundred times that, six hundred and ninety three.
- Before the standard, rent of two hundred sat in operating costs, leaving earnings before interest, tax, depreciation and amortisation of one thousand and operating profit of seven hundred.
- Now rent is gone, so earnings before those items are twelve hundred.
- Depreciation in year one is six hundred and ninety three over four, one hundred and seventy three.
- Interest is six per cent of the liability, forty two.
- Operating profit becomes seven hundred and twenty seven.

23 Better looking, but the cash is the same

Millions

EBITDA before	**1,000**
EBITDA after	**1,200**
Debt before	**1,500**
Debt after	**2,193**

Debt to EBITDA: 1.50 before, 1.83 after

IN THE LESSON

- Look at the picture.
- The first two bars are earnings before interest, tax, depreciation and amortisation.
- They go from one thousand to twelve hundred, a rise of a fifth, only because rent has been relabelled.
- The next two bars are debt.
- Orlen already had fifteen hundred of borrowings.
- With the new liability of about six hundred and ninety three, debt is twenty one hundred and ninety three.
- So debt to earnings before interest, tax, depreciation and amortisation goes from one point five zero to one point eight three, which is worse.
- And profit before tax, with interest of one hundred on other debt, falls from six hundred to about five hundred and eighty five, because the cost is front loaded.
- Same cash, different story.

24 Example 7: lives and discount rates

Two assumption changes, no change in cash

Depreciation, 5 year life	800 ÷ 5	**160**
Depreciation, 8 year life	800 ÷ 8	**100**
Operating profit rises by	160 − 100	**60**
Pension obligation at 5%	1,000 ÷ 1.05^10	**613.9**
Pension obligation at 6%	1,000 ÷ 1.06^10	**558.4**

IN THE LESSON

- Two quick assumption changes.
- First, useful life.
- A company has eight hundred of equipment depreciated over five years, a charge of one hundred and sixty.
- It lengthens the life to eight years, and the charge falls to one hundred.
- Operating profit rises by sixty with no change in cash, and the earlier years are not restated unless the analyst does it.
- Second, the pension discount rate.
- A single payment of one thousand is owed in ten years.
- Discounted at five per cent it is worth six hundred and fourteen.
- Discount it at six per cent and it is worth five hundred and fifty eight, a fall of about fifty six.
- The obligation shrank, yet the promise did not.
- Restate peers and prior years first, then judge the trend.

25 A story: the house with hidden debts

- Balance sheet: add hidden debt, write down doubtful assets
- Earnings: remove one off gains and charges
- Cash flow: move items to their true category
- Then recompute leverage, cover and cash ratios

IN THE LESSON

- Think of buying a house.
- The seller's sheet says there is a small mortgage.
- Then your surveyor finds an unpaid builder's bill, a loan from a relative, and a roof that needs replacing.
- The true picture of what you are taking on is quite different.
- Adjusting financial statements is the same survey.
- There are three kinds.
- Balance sheet adjustments add pension and other debt like obligations, add any lease liabilities left out of debt, and write down doubtful assets such as goodwill.
- Earnings are normalised by removing one off gains and charges.
- And the cash flow statement is reclassified so each item sits in its true category.
- Then we recompute the ratios.

26 Example 8: Halden Industrial's leverage

Halden Industrial: debt 1,500, equity 1,200, EBITDA 600

Reported debt to EBITDA	1,500 ÷ 600	**2.50**
Adjusted debt	1,500 + 200 + 400	**2,100**
Adjusted EBITDA	600 + 80	**680**
Adjusted debt to EBITDA	2,100 ÷ 680	**3.09**
Equity less goodwill: 900	D/E 1,500÷1,200 → 2,100÷900	**1.25 → 2.33**

IN THE LESSON

- Meet Halden Industrial.
- It reports borrowings of fifteen hundred, equity of twelve hundred, which includes three hundred of goodwill, and earnings before interest, tax, depreciation and amortisation of six hundred, after a lease cost of eighty.
- Reported debt to that earnings figure is two point five zero.
- Now adjust.
- Add an unfunded pension deficit of two hundred, and lease liabilities of four hundred that are outside its borrowings.
- Adjusted debt is twenty one hundred.
- Because leases are now debt, add the lease cost of eighty back, so earnings become six hundred and eighty.
- Adjusted debt to earnings is three point zero nine.
- Strip out goodwill and equity is nine hundred, so debt to equity rises from one point two five to two point three three.

27 Normalised earnings

Normalised earnings = reported net income + charges × (1 − t) − gains × (1 − t)

Reported net income	As the income statement shows
One-off charges	Pre-tax, added back
One-off gains	Pre-tax, taken out
Tax rate	Applied to both

IN THE LESSON

- Now the earnings side.
- Normalised earnings aim to show the profit a company can sustain, not the lucky or unlucky total of one year.
- The rule is: start with reported net income.
- Add back one off charges, but only after tax, so multiply each by one minus the tax rate.
- Subtract one off gains, also after tax.
- A charge of ninety before tax is worth sixty three to shareholders at a thirty per cent rate, so adding back the full ninety would overstate the answer.
- If an item is cyclical, you may also smooth it, for example by averaging over a full cycle.
- The golden rule is symmetry: take out the gains as readily as the losses.

28 Example 9: Halden's sustainable profit

Halden: reported net income 300, tax rate 30%

Charge added back	90 × 0.7	**63**
Gain removed	150 × 0.7	**105**
Normalised earnings	300 + 63 − 105	**258**
Trap: charge only	300 + 63	**363**
Gap between the two	363 − 258	**105**

IN THE LESSON

- Halden's reported net income is three hundred.
- It includes a restructuring charge of ninety and a gain of one hundred and fifty from selling a division, both before tax.
- Tax is thirty per cent.
- The charge, after tax, is ninety times point seven, which is sixty three.
- The gain, after tax, is one hundred and fifty times point seven, one hundred and five.
- Normalised earnings are three hundred plus sixty three minus one hundred and five, which is two hundred and fifty eight.
- That is below the reported three hundred.
- Now see the trap.
- If you only add back the charge, you reach three hundred and sixty three.
- The two answers differ by one hundred and five, exactly the gain you forgot to remove.

29 Take out both, not just one

Net income (millions)

Reported	**300**
Charge only	**363**
Normalised	**258**

Charge only is the trap

IN THE LESSON

- Here are three versions of Halden's profit.
- The first bar is reported, three hundred.
- The second bar is what you get if you add back only the charge, and the number looks fine, three hundred and sixty three.
- It is higher, and it looks like strong underlying earning power.
- But it is wrong, since the sale of a division will not repeat next year.
- The third bar is the honest figure, two hundred and fifty eight, after removing both the charge and the gain.
- An analyst who values Halden on three hundred and sixty three, at ten times earnings, pays over one thousand more than one using two hundred and fifty eight.
- A one sided clean up is a bias of its own.

30 Example 10: cleaning the cash flow statement

Halden: operating cash flow 500

Reported operating cash flow		**500**
Excess pension payment	(200 − 120) × 0.7	**+56**
Receivables sold	remove	**−100**
Adjusted operating cash flow	500 + 56 − 100	**456**

IN THE LESSON

- Last, the cash flow statement.
- Halden reports operating cash flow of five hundred.
- Two items distort it.
- First, the company paid two hundred into its pension plan, when the pension cost for the year was only one hundred and twenty.
- The extra eighty is really repaying a debt, so it belongs in financing.
- After tax at thirty per cent, that is fifty six, and it is added back to operating cash flow.
- Second, Halden sold receivables for one hundred just before year end, which pulled cash forward.
- That is closer to borrowing, so remove one hundred from operating cash flow.
- Adjusted operating cash flow is five hundred plus fifty six minus one hundred, which is four hundred and fifty six.
- A stretched supplier payment would be removed the same way.

31 Recap

- Purpose first, then six steps, then follow up
- Identify choices, estimate their effect, judge bias
- Adjust both sides of the balance sheet, with tax
- Gains and charges both come out; add hidden debt

IN THE LESSON

- Let us pull the threads together.
- Follow the six steps and start with the purpose, because the purpose decides which ratios matter.
- Accounting choices and biases make reported figures hard to compare, so identify each choice, estimate its effect and judge whether it is economics or bias.
- Adjust to the same footing, and keep both sides of the balance sheet in balance, with tax.
- When a standard or an assumption changes, the numbers move and the cash does not, so restate before judging a trend.
- Finally, add hidden debt, normalise earnings by taking out gains and charges alike, and clean the cash flow.
- Then recompute the ratios and reach your conclusion.

32 Try three quick questions

1. LIFO reserve 120, tax 25%. By how much does FIFO equity rise?
   Answer: 120 × 0.75 = 90.
2. A pre-tax one-off gain of 200, tax 30%. Effect on normalised earnings?
   Answer: Subtract 200 × 0.7 = 140.
3. Debt 800, EBITDA 400. Add lease debt 200 and lease cost 50. New ratio?
   Answer: 1,000 ÷ 450 ≈ 2.22 (from 2.00).

IN THE LESSON

- Now try three quick questions yourself.
- Pause after each one.
- Question one.
- A company on last in first out has a reserve of one hundred and twenty, and the tax rate is twenty five per cent.
- By how much does equity rise on a first in first out basis?
- One hundred and twenty times point seven five is ninety.
- Question two.
- Reported net income includes a pre tax gain of two hundred, tax is thirty per cent.
- What is the effect on normalised earnings?
- Subtract two hundred times point seven, which is one hundred and forty.
- Question three.
- Debt is eight hundred and the earnings figure is four hundred.
- A lease liability of two hundred is added to debt, with a lease cost of fifty added back.
- What is the new ratio?
- One thousand over four hundred and fifty, about two point two two.
- Well done.