CHARTA LEARNING · LESSON NOTES

Company analysis: past, present and future

CFA Level I · Equity Investments

You will learn: Test whether a company's strategy shows up in its numbers, split revenue into drivers, read margins, operating leverage and pricing power, and follow profit through working capital and capital spending to free cash flow and funding.

Running example: Worked examples follow a made-up company, Calder Cycles (road bikes and electric bikes, $ millions, round teaching numbers). Revenue was 190 in year one and 220 in year two; year two gross profit 88 (40%), operating profit 30, capital spending 30. Year three is the forecast.

1. Strategy, moats and position

- A strategy is a plan for winning customers. The analyst checks whether the numbers prove it works and whether rivals can copy it.
- Cost leadership means the lowest cost base, shown as lower unit costs than rivals. Differentiation means a premium for brand, quality or features, shown as higher prices actually paid and usually higher gross margins. Either can be broad or focused on a niche.
- A moat is a lasting advantage: scale (fixed costs spread over more units), network effects, switching costs, patents and licences, and brands. A moat you cannot name is probably not there.
- Position is strength among rivals, customers and suppliers. Five forces: rivalry, new entrants, substitutes, buyer power and supplier power. Add market share, which equals company sales ÷ industry sales. Share gains are worth more than market growth, but gains from discounting alone can vanish.

CALDER, ROAD BIKES AGAINST PEERS (EXAMPLES 1 AND 2)

List price premium	1,200 vs 1,000	**+20%**
Premium after the 10% average discount	1,080 vs 1,000	**+8%**
Gross margin last year	Calder 40%, Ridge 35%	**+5 points**
Industry growth / Calder growth	2,000 ÷ 1,900 − 1; 220 ÷ 190 − 1	**5.3% / 15.8%**
Market share, year one to two	190 ÷ 1,900; 220 ÷ 2,000	**10.0% to 11.0%**

Watch out: Believing the label rather than the numbers; reading the sticker price as the premium (use the price actually paid); mistaking one good year of margin for a moat.

2. Revenue from its drivers

- Split revenue into volume (units sold) and the average price actually received, product by product and region by region, then add up. For a service, use customers × spend per customer.
- The drivers behave differently. Volume depends on demand, market growth, share and capacity; price depends on competition, costs and brand strength. Volume growth is usually the more reliable over many years.
- Growth factors multiply: (1 + volume growth) × (1 + price growth). A price rise that merely passes on costs differs from real pricing power.

Revenue = volume × price, summed over products and regions

CALDER REVENUE BY SEGMENT (EXAMPLES 3 AND 4; VOLUME IN THOUSANDS)

Road bikes, year one	100 × 1,000	**100.0**
E-bikes, year one	60 × 1,500	**90.0**
Road bikes, year two	108 × 1,080	**116.64**
E-bikes, year two	68 × 1,520	**103.36**
Total, year two	116.64 + 103.36	**220.0**
Road bike growth: volume +8.0%, price +8.0%	1.08 × 1.08 − 1	**16.6%**
E-bike volume / price growth	68 ÷ 60 − 1; 1,520 ÷ 1,500 − 1	**13.3% / 1.3%**

3. Margins and operating leverage

- Gross profit is revenue minus cost of goods sold (COGS, the direct cost of what was sold); gross margin is gross profit ÷ revenue. Subtract running costs to reach operating profit (EBIT, earnings before interest and tax); operating margin is operating profit ÷ revenue.
- Fixed costs give high operating leverage: once sales cover them, each extra dollar drops almost entirely into profit. The effect works both ways, widening margins in good times and crushing them in bad.
- A forecaster who scales profit with sales, ignoring fixed costs, is badly wrong in both directions.

Operating leverage = % change in operating profit ÷ % change in revenue

CALDER MARGINS AND LEVERAGE (EXAMPLES 5 AND 6)

Gross profit, year two	220 − 132	**88 (margin 40.0%)**
Operating profit, year two	88 − 58	**30 (margin 13.6%)**
Operating margin, year one	20 ÷ 190	**10.5% (gross margin also 40%)**
Operating leverage	50.0% ÷ 15.8%	**3.17**
If sales fall 10%: profit	198 × 40% − 58	**21.2 (down 29.3%)**
Forecast year three (sales 242, running costs 60)		**profit 36.8 (up 22.7%)**

4. Pricing power

- Pricing power is the ability to raise prices without losing much volume. It comes from moats such as brand, switching costs, patents and scarce supply.
- Test it by watching gross margin through a period of rising input costs: with pricing power the margin stays roughly stable; without it, the margin shrinks. Compare with peers and over a full cycle, and use several shocks and rivals before concluding.

INPUT COSTS RISE 8% FOR BOTH FIRMS (EXAMPLE 7, ROAD BIKES)

Calder cost per bike	600 × 1.08	**648**
Calder gross margin (price raised to 1,080)	(1,080 − 648) ÷ 1,080	**40.0%, unchanged**
Ridge cost per bike (price held at 1,000)	650 × 1.08	**702**
Ridge gross margin	(1,000 − 702) ÷ 1,000	**29.8%, down from 35.0%**

Watch out: Counting every price rise as pricing power: a rise that loses customers is not power, and one that only passes on costs deserves a closer look.

5. From profit to free cash flow

- Growth costs cash. Working capital is money tied up in receivables and inventory, net of payables. It is built from days: receivables = revenue × days ÷ 365; inventory and payables use COGS. Looser credit can lift sales and profit while draining cash.
- Capital spending (capex) against depreciation: above 1 means expanding, near 1 maintaining, below 1 possibly letting assets age. Capex ÷ revenue shows capital intensity. Ask whether new capacity will be filled and what return it earns.
- Free cash flow is the cash left for investors after the business pays for its own growth. If negative, the gap is funded from outside or from cash held.

> **Free cash flow = net profit + depreciation − capex − rise in working capital**

CALDER (EXAMPLES 8 TO 11; RECEIVABLES 45 DAYS, INVENTORY 60, PAYABLES 40)

Working capital, year two	27.1 + 21.7 − 14.5 (220 × 45 ÷ 365; 132 × 60 ÷ 365; 132 × 40 ÷ 365)	**34.4**
Year three, same days (revenue 242)	37.8 − 34.4	**+3.4**
Year three, 60 days to collect	47.7 − 34.4	**+13.4**
Capex ÷ depreciation, years two and three	30 ÷ 18; 35 ÷ 20	**1.67; 1.75**
Net profit, year three	(36.8 − 4.8 interest) × 75%	**24.0**
Free cash flow, rise 3.4 / rise 13.4	24 − 15 − 3.4; 24 − 15 − 13.4	**5.6 / −4.4**

Watch out: Equating profit with cash; ignoring working capital days; reading high capex as good or bad on its own.

6. Financing growth: debt or equity

- A funding gap is met by debt (fixed interest, must be repaid) or equity (new shares or retained profit). The mix is the capital structure.
- More debt raises return on equity in good years, since lenders accept a fixed rate, but the interest is owed in bad years too. Watch interest cover (operating profit ÷ interest expense) and debt to equity. Interest cover below 1 means interest cannot be paid from operating profit.
- Fund long-term assets with long-term money; a mismatch can trigger a crisis. Operating leverage and financial leverage together make profit volatile.
- Past ratios are only a guide: the forecast must fit strategy, drivers, margins, cash needs and funding together.

CALDER: ASSETS 200, DEBT 60 AT 8% (INTEREST 4.8), EQUITY 140, TAX 25% (EXAMPLE 12)

Good year (operating profit 30): return on equity	18.9 ÷ 140	**13.5%**
Good year, equity only	22.5 ÷ 200	**11.25%**
Bad year (operating profit 6): interest cover	6 ÷ 4.8	**1.25**
Bad year: return on equity	0.9 ÷ 140	**0.64%**
Bad year, equity only	4.5 ÷ 200	**2.25%**

Watch out: Treating debt as free because it is cheaper than equity: it adds financial risk and the chance of distress.

Key takeaways

- Test a strategy against the numbers: price actually paid, margin and share against peers, and a nameable moat.
- Revenue = volume × price, by product; growth factors multiply.
- Operating leverage = % change in operating profit ÷ % change in revenue; fixed costs magnify swings both ways.
- Pricing power shows as gross margin holding through cost inflation; confirm with peers and a full cycle.
- Free cash flow = net profit + depreciation − capex − rise in working capital; profit is not cash.
- Debt lifts returns in good years and hurts in bad ones; watch interest cover.

Quick check

1. List price 20% above peers (100), 15% discount. Premium actually paid?
   Answer: 120 × 0.85 = 102, so only 2% above peers.
2. Revenue +10%, operating profit +30%. Operating leverage?
   Answer: 30 ÷ 10 = 3.0.
3. Net profit 50, depreciation 10, capex 30, working capital up 15. Free cash flow?
   Answer: 50 + 10 − 30 − 15 = 15.

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