2.6 Ratios and their limits

Name: _____ Class: _____ Date: _____ **Total: 21 marks**

KEY WORDS gross margin • current ratio • return on equity

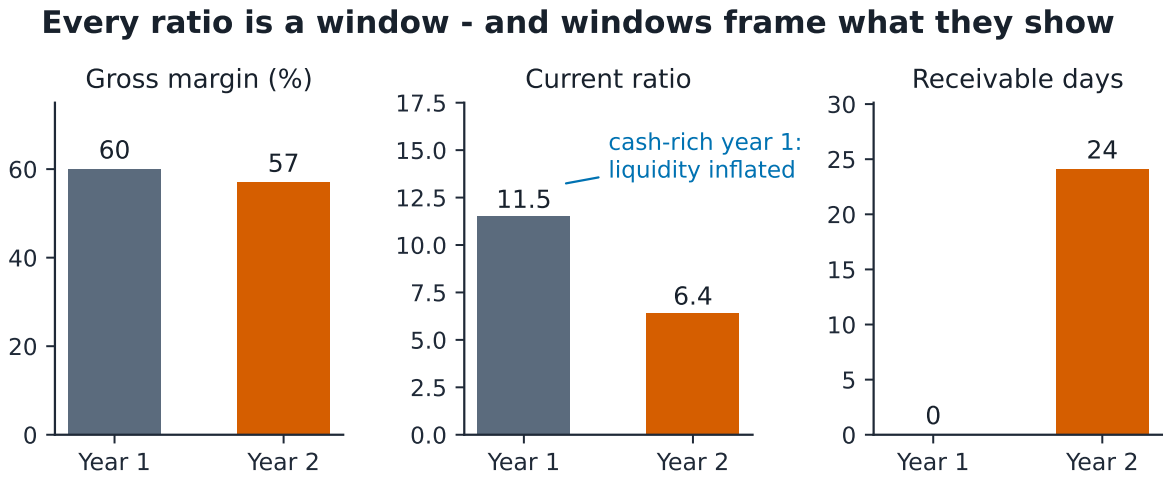
Objective

Compute margins, liquidity, gearing and return; read them against time, peers and definitions; and state honestly when a ratio cannot answer.

1 Key knowledge and worked examples

■ The core set, defined

Gross margin = gross profit ÷ revenue. **Current ratio** = current assets ÷ current liabilities. **Gearing** = debt ÷ (debt + equity). **Return on equity** = profit ÷ equity. Each is a question about pricing, cover, funding or return.



Every ratio is a window – and windows frame what they show

■ Worked example. Nimbus reads its year 1

Gross margin 93,600/156,000 = 60.0%; current ratio 64,000/5,550 = 11.5 (idle cash, not excellence); gearing 15,000/63,370 = 23.7%; the year-1 ROE of 58.7% is meaningless – a year of trading over a day-old capital base.

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2 Practice

2.1 Nimbus year 2: revenue 182,000, cost of sales 78,300, profit 30,100, equity 58,470, loan 10,000. Compute gross margin, operating margin and gearing. [4]

2.2 Year 2 receivables are 12,000 and inventory 4,400. Compute receivable days and inventory days, and read them against the 24-day credit term. [3]

2.3 A rival bakery posts a 68% gross margin. State the three questions you ask before calling it better than Nimbus's 57%. [3]

3 Exam-style questions

3.1 A second café chain, one store, five years old: revenue 124,000, cost of sales 52,080, profit 21,440, equity 48,000 (all earned, no new capital), loan 0, receivables 8,200, inventory 3,100, cash 20,000, payables 5,200. Compute gross margin, operating margin, current ratio, receivable days, inventory days and ROE; then say which ONE ratio is most distorted by being a single year and why. [8]

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3.2 "Nimbus's current ratio fell from 11.5 to 6.4 – liquidity is deteriorating." Give the reading that the numbers actually support. [3]

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Solutions

2.1

- Gross margin = (182,000 − 78,300)/182,000 = 103,700/182,000 = 57.0%.
- Operating margin = 30,100/182,000 = 16.5%.
- Gearing = 10,000/(10,000 + 58,470) = 14.6%.

2.2

- Receivable days = 12,000/182,000 × 365 = 24.1 days.
- Inventory days = 4,400/78,300 × 365 = 20.5 days.
- 24.1 against a 24-day term: collection is on target – the ratio checked against its own definition answers its question.

2.3

- Product mix and definition: is that margin on the same cost contents?
- Peers and price position: premium retail vs wholesale changes what margin means.
- Time: one year or five? A trend beats a level.

3.1

- Gross margin = (124,000 − 52,080)/124,000 = 58.0%.
- Operating margin = 21,440/124,000 = 17.3%.
- Current ratio = (20,000 + 8,200 + 3,100)/5,200 = 6.0.
- Receivable days = 8,200/124,000 × 365 = 24.1 days.
- Inventory days = 3,100/52,080 × 365 = 21.7 days.
- ROE = 21,440/48,000 = 44.7%.
- Most distorted by a single year: ROE – profit is one year, equity is five years of retained earnings; average equity or a multi-year return is the honest read.

3.2

- Year 1's 11.5 was not strength: £64,000 of current assets against £5,550 of bills meant raised-but-idle cash.
- The fall to 6.4 reflects cash being USED (dividend 20,000, loan repaid 5,000) while receivables rose – the balance moved toward working assets.
- Supported reading: liquidity normalised from abnormal; watch receivable days (24.1, on term) as the real credit signal.

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