

ROCE and gearing: which gym is in better shape?

Teacher guidance and answers | Original TBS classroom practice

Use this lesson after students have met the statement of financial position and the idea of capital employed. Students calculate ROCE and gearing for two gyms, read the ratios from a lender's and an investor's point of view, test how a loan or a share issue changes the ratios and advise on financing an expansion. The tasks are planned to take about 55 minutes and have not been trialled in a classroom. The minutes include brief answer checking but not handing out materials or a full plenary; allow about 65 minutes in the timetable. Suited to Year 13 classes studying Edexcel 9BS0 Theme 3.

Curriculum fit

Pearson Edexcel Level 3 Advanced GCE in Business (9BS0), Specification Issue 1, September 2014, Theme 3, section 3.5.2 Ratio analysis (printed page 24): (a) calculate gearing and return on capital employed (ROCE), (b) interpret ratios to make business decisions, (c) the limitations of ratio analysis. Checked against the archived Issue 1 specification; please confirm the specification for your cohort with your exams officer. This is a TBS lesson, not a Pearson resource; it is not endorsed by Pearson and uses no Pearson exam questions or mark schemes.

Conventions: capital employed = total equity + non-current liabilities; gearing uses non-current liabilities over capital employed. Some textbooks use other versions (for example net debt); accept a clearly stated alternative. As a rough guide, gearing above 50% is often called high. All figures are fictional. The answers are indicative teaching guidance only. There is no official mark tariff, level descriptor or AO allocation for these tasks and no grade claim is made.

Lesson plan (about 55 minutes of tasks, estimated)

Stage	Minutes	What happens
Starter: which term?	5	Match three descriptions.
Task 1: calculate	10	Capital employed, ROCE and gearing for two gyms.
Task 2: two points of view	10	Pairs: bank manager and investor.
Task 3: loan or shares?	12	Ratios after each financing option.
Task 4: limitations	6	Two limitations of ratio analysis.
Task 5: decide	8	Written advice.
Exit ticket	4	Two quick calculations.
Total	55	

45-minute version: starter 4, Task 1 8, Task 2 8, Task 3 10, Task 4 4, Task 5 7, exit ticket 4. Ask for about 60 words in Task 5. This timing has not been trialled. The 45 minutes are task time only, so in a real 45-minute period, with handing out and feedback, move the exit ticket to homework.

Answers: starter, Task 1 and Task 2

Indicative guidance for teachers. This is not an exam board mark scheme and carries no marks or grades.

Starter: (i) gearing; (ii) capital employed; (iii) ROCE.

Task 1	PulseFit	Ironworks Gym
Capital employed	$900 + 600 = \text{£}1,500\text{k}$	$400 + 600 = \text{£}1,000\text{k}$
ROCE	$180 / 1,500 \times 100 = 12.0\%$	$150 / 1,000 \times 100 = 15.0\%$
Gearing	$600 / 1,500 \times 100 = 40.0\%$	$600 / 1,000 \times 100 = 60.0\%$

Task 2, bank manager: PulseFit is safer to lend to; only 40% of its long-term finance is borrowed, against 60% for Ironworks, which is highly geared: both owe £600k, but Ironworks has much less equity behind its loans.

Task 2, investor: Ironworks earns more on the money invested (ROCE 15.0% against 12.0%), but its high gearing means more of its profit goes on interest and it is riskier if profits fall or interest rates rise.

Common errors: using total equity alone as capital employed; dividing by operating profit; reading high gearing as "more profitable".

Answers: Task 3, Task 4 and Task 5

After the expansion (£000)	Option L: loan	Option S: shares
Total equity	900	$900 + 500 = 1,400$
Non-current liabilities	$600 + 500 = 1,100$	600
Capital employed	2,000	2,000
ROCE	$240 / 2,000 \times 100 = 12.0\%$	$240 / 2,000 \times 100 = 12.0\%$
Gearing	$1,100 / 2,000 \times 100 = 55.0\%$	$600 / 2,000 \times 100 = 30.0\%$

Task 3a: $6\% \times £500k = £30k$ a year. Task 3b: ROCE uses operating profit (before interest) and capital employed (loans plus equity). Both are the same under either option (£240k and £2,000k), so ROCE is 12.0% either way.

Task 4, accept any two linked to the case: ratios use past figures, but the new sites are forecasts; they show nothing about quality, location or customer loyalty; a single year may be unusual; the businesses may use different accounting policies; what counts as "high" gearing depends on the industry and interest rates.

Task 5: indicative guidance

A well supported answer chooses an option, uses figures and a limitation. Example response (not a mark scheme): I would advise Option S. Both options give the same ROCE of 12.0%, so the choice is about risk. A loan would raise gearing from 40.0% to 55.0% and add £30k of interest a year, which must be paid even if the new sites do badly. A share issue would cut gearing from 40.0% to 30.0% and adds no interest, although the current owners give up some control and future profits. However, the £240k profit is only a forecast, so PulseFit should test what happens if the sites earn less.

Students may advise the loan if they argue the owners want to keep control and 6% is affordable from £240k of operating profit; credit that if supported by figures. Do not award a grade or percentage from these tasks.

Answers: exit ticket

Capital employed = $180 + 120 = \text{£}300\text{k}$. a. ROCE = $45 / 300 \times 100 = 15.0\%$. b. Gearing = $120 / 300 \times 100 = 40.0\%$; it is not highly geared, because less than half (often taken as 50%) of its long-term finance is borrowed.

Sources and limits

Curriculum source: Pearson Edexcel Level 3 Advanced GCE in Business specification, Issue 1, September 2014, Theme 3, section 3.5.2 (printed page 24). The specification verifies the topic scope only. The businesses, figures, timings and guidance are original TBS teaching design.