BUS.AL21 Ratio Analysis: Liquidity, Efficiency and Gearing Ratios

AQA 7132 · Calculators not allowed · about 65 minutes

Total Marks

Name: ______________________________ Date: ____ / ____ / ______

Answer ALL questions in the spaces provided. Show your working for every calculation. The fictional business GreenTech Components and its financial extracts are used throughout this pack.

1 Which one of the following is the correct formula for the current ratio used to assess short-term liquidity for a business such as GreenTech Components?

- ☐ A) Current assets / Current liabilities
- ☐ B) Current liabilities / Current assets
- ☐ C) (Current assets - Inventory) / Current liabilities
- ☐ D) Non-current liabilities / (non-current liabilities + equity) x 100

(Total for Question 1 is 1 mark)

2 State the formula for the acid test (quick) ratio used to assess immediate liquidity for GreenTech Components.

(Total for Question 2 is 1 mark)

3 State the formula for the gearing ratio, expressed as a percentage, for GreenTech Components.

(Total for Question 3 is 1 mark)

4 State the formula for inventory turnover (times per year) commonly used in efficiency analysis for a business such as GreenTech Components.

(Total for Question 4 is 1 mark)

5 State the formula for receivable days (trade receivables days) used to assess collection efficiency at GreenTech Components.

(Total for Question 5 is 1 mark)

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6 State the formula for asset turnover (times) used to assess how efficiently a business uses total assets to generate revenue.

(Total for Question 6 is 1 mark)

7 GreenTech Components, a fictional small manufacturer, has the following extracts from its financial statements for the year ended 31 December:

Statement of financial position (extract, £)
Non-current assets: 300,000
Current assets: 120,000 (Inventory 40,000; Trade receivables 30,000; Cash 50,000)
Current liabilities: 60,000 (includes trade payables 25,000)
Non-current liabilities: 80,000
Equity: 220,000
Income statement (extract, £)
Revenue (sales): 400,000
Cost of sales: 240,000
Using these figures, calculate the following ratios for GreenTech Components. Show your working and give units where appropriate.
(a) Current ratio
(b) Acid test ratio
(c) Inventory turnover in times per year (use average inventory = 35,000 pounds)
(d) Receivable days
(e) Gearing ratio as a percentage

(a) Calculate the current ratio for GreenTech Components. Show your working. **(2)**

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(b) Calculate the acid test ratio for GreenTech Components. Show your working. **(2)**

....

(c) Calculate inventory turnover in times per year using cost of sales 240,000 pounds and average inventory 35,000 pounds. Show your working. **(3)**

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(d) Calculate receivable days for GreenTech Components using trade receivables 30,000 pounds and revenue 400,000 pounds. Show your working. **(3)**

....

(e) Calculate the gearing ratio for GreenTech Components and give your answer to one decimal place. Show your working. **(2)**

(Total for Question 7 is 12 marks)

8 Explain what a current ratio of 2.0, as calculated for GreenTech Components, suggests about the company's short-term liquidity. Give up to two developed points.

(Total for Question 8 is 3 marks)

9 Using your inventory turnover result, explain one implication of GreenTech Components having an inventory turnover of about 6.86 times per year for its operational efficiency.

(Total for Question 9 is 3 marks)

10 Explain one concern and one positive drawn from receivable days of 27 days and payable days of 38 days for GreenTech Components' cash flow management.

(Total for Question 10 is 3 marks)

11 Calculate the asset turnover for GreenTech Components using revenue 400,000 pounds and total assets 420,000 pounds. Show your working and give the answer to two decimal places.

(Total for Question 11 is 2 marks)

12 Explain briefly what an asset turnover of about 0.95 times suggests about GreenTech Components' use of its asset base to generate revenue.

(Total for Question 12 is 3 marks)

13 Analyse what the set of ratios calculated for GreenTech Components (current ratio 2.0; acid test 1.33; inventory turnover 6.86 times; receivable days 27; payable days 38; asset turnover 0.95; gearing 26.7%) collectively suggest about the company's liquidity, operational efficiency and financial risk. Use figures in your answer.

(Total for Question 13 is 6 marks)

14 Evaluate the financial performance and financial risk of GreenTech Components using the ratios calculated in this pack. In your evaluation consider the balance between liquidity, efficiency and gearing, and give a justified overall judgement about the business's financial position and vulnerability to shocks. Use the figures given throughout the pack.

(Total for Question 14 is 9 marks)

Mark scheme · BUS.AL21 Ratio Analysis: Liquidity, Efficiency and Gearing Ratios

Question 1

- **B1** A cao
- **Answer: A**

Question 2

- **B1** acid test = (current assets - inventory) / current liabilities cao
- **Answer: (Current assets - inventory) / Current liabilities**

Question 3

- **B1** gearing = (non-current liabilities / (non-current liabilities + equity)) x 100 cao
- **Answer: (Non-current liabilities / (Non-current liabilities + Equity)) x 100**

Question 4

- **B1** inventory turnover = cost of sales / average inventory cao
- **Answer: Inventory turnover = Cost of sales / Average inventory**

Question 5

- **B1** receivable days = (trade receivables / revenue) x 365 days cao
- **Answer: (Trade receivables / Revenue) x 365**

Question 6

- **B1** asset turnover = revenue / total assets cao
- **Answer: Asset turnover = Revenue / Total assets**

Question 7

- (a) **M1** current ratio formula and substitution seen: 120,000 / 60,000
- (a) **A1** 2.0 cao
- **(a) Answer: 2.0**
- (b) **M1** acid test formula and substitution seen: (120,000 - 40,000) / 60,000
- (b) **A1** 1.33 cao (or 4/3)
- **(b) Answer: 1.33**
- (c) **M1** formula and substitution seen: 240,000 / 35,000
- (c) **M1** calculation showing 6.857... or similar
- (c) **A1** 6.86 times cao
- **(c) Answer: 6.86 times**
- (d) **M1** formula and substitution seen: (30,000 / 400,000) x 365
- (d) **M1** intermediate calculation seen: 0.075 x 365 = 27.375
- (d) **A1** 27 days cao
- **(d) Answer: 27 days**
- (e) **M1** formula and substitution seen: (80,000 / (80,000 + 220,000)) x 100
- (e) **A1** 26.7% cao
- **(e) Answer: 26.7%**

Question 8

- **B1** identifies that a ratio of 2.0 means current assets are twice current liabilities
- **B1** develops point, e.g. this suggests the company should be able to meet short-term obligations comfortably
- **B1** additional development, e.g. however excess current assets could include inventory which may not be immediately convertible, so liquidity might be overstated
- **Answer: A current ratio of 2.0 means current assets are twice current liabilities, suggesting GreenTech Components should be able to meet short-term obligations comfortably. However some current assets are inventory, which may not be quickly converted to cash, so the apparent liquidity may be overstated.**

Question 9

- **B1** identifies that 6.86 times means inventory is sold and replaced about seven times a year
- **B1** develops point, e.g. this indicates reasonably brisk stock movement reducing holding costs
- **B1** additional link, e.g. but if turnover is too high it could risk stockouts, or if too low it indicates overstocking and higher storage costs
- **Answer: An inventory turnover of about 6.86 means stock is sold and replaced roughly seven times a year, indicating reasonably brisk stock movement which helps reduce holding costs. However very high turnover risks stockouts, while lower turnover would suggest overstocking and higher storage costs.**

Question 10

- **B1** identifies a positive: receivable days of 27 means customers pay relatively quickly
- **B1** develops positive: faster collections improve cash flow and reduce need for external finance
- **B1** identifies a concern: payable days of 38 indicate the firm waits longer to pay suppliers, which could strain supplier relationships
- **Answer: A positive is that receivable days of 27 indicate customers pay relatively quickly, improving GreenTech Components' cash flow and reducing reliance on external finance. A concern is payable days of 38 show the firm delays paying suppliers, which could harm supplier relationships or lead to stricter credit terms.**

Question 11

- **M1** formula and substitution seen: 400,000 / 420,000
- **A1** 0.95 times cao
- **Answer: 0.95 times**

Question 12

- **B1** identifies that 0.95 times means revenue is slightly less than total assets per year
- **B1** develops point that asset use is moderate, not highly efficient
- **B1** links to implication, e.g. could indicate significant investment in assets that are not fully utilised
- **Answer: An asset turnover of about 0.95 means the company generates slightly less revenue than the value of its assets each year, indicating moderate efficiency. This suggests assets are not being used to their fullest potential and there may be scope to improve utilisation or divest underused assets.**

Question 13

- **B1** states a liquidity point using figures, e.g. current ratio 2.0 and acid test 1.33 show good short-term liquidity
- **B1** develops liquidity point, e.g. acid test above 1.0 indicates sufficient quick assets excluding inventory to meet liabilities
- **B1** states an efficiency point using figures, e.g. inventory turnover 6.86 times and receivable days 27 show reasonable inventory movement and fast collections
- **B1** develops efficiency point, e.g. combined with payable days 38 this suggests the firm converts stock to cash faster than it pays suppliers, aiding working capital
- **B1** states a risk/solvency point using figures, e.g. gearing 26.7% indicates moderate reliance on long-term debt
- **B1** develops risk point, e.g. gearing under 30% suggests limited financial risk from debt but asset turnover 0.95 suggests assets could be better used to improve returns

Question 14

- **Level 1** (1-3): Makes simple or descriptive comments about one or two ratios with little use of the pack's figures and no clear judgement on financial performance or risk.
- **Level 2** (4-6): Provides a balanced discussion that uses several of the pack's ratios and figures to consider both strengths and weaknesses, but the overall judgement is only partially justified.
- **Level 3** (7-9): Weighs evidence from liquidity, efficiency and gearing ratios, uses the pack's figures to support analysis of performance and risk, and reaches a clear, justified overall judgement about the company's financial position and vulnerability to shocks.
- **Indicative content:**
  - Liquidity: current ratio 2.0 and acid test 1.33 indicate the company has a comfortable buffer to pay short-term liabilities; the acid test above 1.0 is especially reassuring since it excludes inventory.
  - Efficiency: inventory turnover 6.86 times and receivable days 27 show reasonably efficient stock management and quick collections which support cash flow, while asset turnover 0.95 suggests assets generate slightly less revenue than their value, indicating room to improve asset utilisation.
  - Working capital dynamics: receivable days 27 compared with payable days 38 implies the firm collects cash faster than it pays suppliers, improving short-term cash availability and reducing need for external working-capital finance.
  - Gearing and risk: gearing 26.7% shows moderate use of long-term debt, implying limited vulnerability to interest-rate rises or refinancing risk; gearing below about 30% is typically seen as conservative.
  - Overall judgement: the firm displays healthy short-term liquidity and efficient working-capital management that reduce immediate financial risk, while moderate gearing limits long-term financial vulnerability. However, moderate asset turnover suggests potential to improve returns on investment, and management should monitor supplier relationships given relatively long payable days. The company appears financially stable but could aim to increase asset productivity to improve profitability further.