

FACTFILE: GCE PROFESSIONAL BUSINESS SERVICES

UNIT AS 3: FINANCIAL DECISION MAKING – RATIO ANALYSIS FOR DECISION MAKING



Learning Outcomes

Students should be able to:

- identify and explain different types of ratios a business could use to determine:
 - Profitability or Performance;
 - Liquidity;
 - Gearing;
 - Financial Efficiency; and
 - Shareholder Earnings;
- calculate, analyse and interpret ratios to determine:
 - Profitability or Performance, including gross and net profit margin, and return on capital employed (ROCE);
 - Liquidity, including current ratio;
 - Gearing;
 - Financial Efficiency, including trade payables and receivables; and
 - Shareholder Earnings, including earnings per share and return on equity; and
- use the outcomes of ratio analysis based on financial statements for decision making.

Evaluate the benefits and limitations of ratio analysis for financial decision making;

- make recommendations for improvements based on the outcomes of ratio analysis.



Ratio Analysis

A method which analyses financial statement information with reference to a series of key ratios covering important elements of the financial position of a business.

Given that all businesses are required to produce summary statements periodically (usually on an annual basis), this tends to be the most common source of information enabling a consultant to undertake such an analysis.

Income Statement – summarises income/ expenses and details the profits/losses made by the business in the accounting period.

Statement of Financial Position – details in summary format, the financial position of the business.



Accounting

Key Accounting Ratios**Profitability or Performance Ratios:****Return on Capital Employed (ROCE):**

$$\frac{\text{Net Profit}}{\text{(Total Assets – Current Liabilities)}} \times 100\% = x\%$$

Analysis of changes are a result of:

- Increase/decrease in net profit – e.g. this may have fallen due to falling sales revenues
- Increase/decrease in total assets and/or current liabilities – e.g. increase in trade payables

Gross Profit Margin:

$$\frac{\text{Gross Profit}}{\text{Sales Revenues}} \times 100\% = x\%$$

Analysis of changes are a result of:

- Increase/decrease in gross profit – e.g. this may have increased due to lower cost of sales;
- Increase/decrease in sales revenues – e.g. this may have increased due to an increase in sales quantities.

Net Profit Margin:

$$\frac{\text{Net Profit}}{\text{Sales Revenues}} \times 100\% = x\%$$

Analysis of changes are a result of:

- Increase/decrease in net profit – e.g. this may have increased due to cost reductions;
- Increase/decrease in sales revenues – e.g. this may have increased due to an increase in sales quantities.

Liquidity Ratios:**Current Ratio:**

$$\frac{\text{Current Assets}}{\text{Current Liabilities}} = x: 1$$

Analysis of changes are a result of:

- Increase/decrease in current assets – e.g. inventories may have increased as a result of bulk purchasing during the year;
- Increase/decrease in current liabilities – e.g. trade payables may have increased in order to fund the bulk buying of inventories.

Gearing Ratio:

$$\frac{\text{Non-Current Liabilities}}{\text{Total Equity + Non-Current Liabilities}} \times 100 = x\%$$

Analysis of changes are a result of:

- Increase/decrease in non-current liabilities (debt capital) – e.g. a bank loan may have increased to fund a new project
- Increase/decrease in equity capital – e.g. an increase in profit may yield an increase in capital

Financial Efficiency Ratios:**Trade Payables Ratio:**

$$\frac{\text{Trade Payables}}{\text{Cost of Sales}} \times 365 = x \text{ days}$$

Analysis of changes are a result of:

- This ratio shows how efficiently the business is when paying for its credit purchases within the agreed time period of 30, 60 or 90 days. If trade receivables are slow in being paid then the business will be short of cash and therefore affect the prompt paying of supplier accounts;
- To discover the time taken for the business to pay its debts to its payables (suppliers);
- To assess whether the business is in danger of defaulting on the debts it owes;
- Increase/decrease of days which has been determined by the credit purchasing from suppliers by the business and therefore affecting its credit terms, for example, 30, 60 or 90 days;
- Increase/decrease in the cost of sales will affect the number of days due to the amount of stock purchased during and stock which remains in the business at the end of the year.

Trade Receivable Ratio:

$$\frac{\text{Trade Receivables}}{\text{Sales Revenue}} \times 365 = x \text{ days}$$

Analysis of changes are a result of:

- This ratio shows how efficiently a business is collecting in its credit sales within the designated time frame of 30, 60 or 90 days agreed by between the business and the customer. Failure to do so will have an effect on the cash flow within the business;
- To discover the time taken for the trade receivables (customers) to pay their debts to the business;

- To assess whether individual receivables are possibly going to become bad debts;
- Increase/decrease in days will mean that trade receivables/credit customers are paying promptly or taking longer than the required number of days to pay their accounts;
- Increase/decrease in the sales revenue will have an effect on the number of days it takes the customers to settle their accounts.

Shareholder Ratios:

Earnings Per Share:

$$\frac{\text{Profit after tax}}{\text{Number of ordinary shares}} = \text{x pence}$$

Analysis of changes are a result of:

- This ratio is used to indicate the performance of the company;
- Increase/decrease in the profit level will have an effect on the earnings per share allowing the end result to be higher (if profit increases) and lower (if profit decreases);
- Increase/decrease in the number of ordinary shares will have an effect on the earnings per share showing that the company is performing in a satisfactory way or not according to the percentage achieved at the end of the financial year/period.

Return on Equity:

$$\frac{\text{Profit after tax}}{\text{Equity}} \times 100 = \text{x \%}$$

Analysis of changes are a result of:

- This ratio examines how the company is performing in relation to its ordinary shareholder contributions;
- Increase/decrease will determine the percentage return on the investment of the equity (contribution by the ordinary shareholders). An increase will mean that a good investment has been made and with a decrease the investment has not been as fruitful for the sum invested by the shareholders;
- Increase/decrease in the equity (amount invested) by the shareholders can have an effect on the percentage return at the end of the financial year which will determine the level of satisfaction by the shareholder/company on the monies invested at that time.

Benefits of Ratio Analysis for financial decision making:

- Provides a consultant with an opportunity to scrutinise key aspects of the financial position of a client business;
- Highlights areas for further investigation.

Limitations of Ratio Analysis for financial decision making:

- Underlying financial statement information is historical based and tends to date quickly – any subsequent ratio analysis will thus be out of date with a short period of time;
- Underlying financial statement information may be ‘window dressed’ or manipulated to create an impression of strong/good financial performance and thus may be misleading, thus any subsequent ratio analysis undertaken by be unreliable;
- Different versions of ratios may be applied and yield different results/interpretations.





Revision Questions

1. Explain what is meant by the term 'Ratio Analysis'.
2. Evaluate the extent to which ratio analysis is useful to four different stakeholder groups for decision making purposes.



Sources for further study

www.bbc.co.uk/news/business

www.investni.com/news/index.html

www.tutor2u.net

Hall, D et al. (2010), Business Studies, 4th Ed.

McAree, D., (2009), Top 5 Things To Do At A-Level Business Studies.

McAree, D., (2009), 3 Best Things To Do At A-Level Business Studies.

McAree, D., (2010), 4 Minutes To Pass A-Level Business Studies.

Mottershead, A, et al., (2015), Business for A Level, (pp. 218-222; 262-278), Hodder Education, London, UK.

APPENDIX 1: CASE STUDY

Example 1: Final Accounts and Ratio Analysis based on the accounts of a sole trader

Income Statement of S Grant Services for year ending 31st December 2017

		£	£
Sales Revenue			195,000
Opening Inventory		4,200	
Add Purchases		<u>154,000</u>	
		158,200	
Less Closing Inventory		<u>5,200</u>	
Cost of Sales (Goods Sold)			<u>153,000</u>
Gross Profit			42,000
Less Expenses			
Wages and Salaries		15,000	
Interest payments		600	
Rent		9,400	
Electricity		<u>5,000</u>	<u>30,000</u>
Net Profit			<u>12,000</u>

Statement of Financial Position of S Grant Services as at 31st December 2017

			£
Non-Current Assets			
Premises			120,000
Fixtures and Fittings			4,000
Vehicles			<u>8,000</u>
Total Non-Current Assets			132,000
Current Assets			
Inventory			5,200
Trade Receivables			1,900
Cash			<u>150</u>
Total Current Assets			<u>7,250</u>
Total Assets			<u>139,250</u>
Equity			
Capital			70,000
Add Net Profit			<u>12,000</u>
			82,000
Less Drawings			<u>5,000</u>
Closing Capital			77,000
Non-Current Liabilities			
Bank Loan			<u>60,000</u>
Total Non-Current Liabilities			60,000
Current Liabilities			
Trade Payables			1,500
Bank Overdraft			<u>750</u>
Total Current Liabilities			<u>2,250</u>
Total Equity and Liabilities			<u>139,250</u>

Ratio Analysis - Worked Example:**S Grant Services**

$$\begin{aligned} \text{ROCE:} &= \frac{\pounds 12000}{(\pounds 139250 - \pounds 22250)} \times 100\% \\ &= \frac{\pounds 12000}{\pounds 137000} \times 100\% \\ &= 8.8\% \end{aligned}$$

$$\begin{aligned} \text{Net Profit Margin:} &= \frac{\pounds 12000}{\pounds 195000} \times 100\% \\ &= 6.2\% \end{aligned}$$

$$\begin{aligned} \text{Current Ratio:} &= \frac{\pounds 7250}{\pounds 2250} \\ &= 3.2:1 \end{aligned}$$

$$\begin{aligned} \text{Gearing Ratio:} &= \frac{\pounds 60000}{(\pounds 77000 + \pounds 60000)} \times 100\% \\ &= \frac{\pounds 60000}{\pounds 137000} \times 100\% \\ &= 43.8\% \end{aligned}$$



Case Study

Case Study - Commentary:

As an adviser working to a professional business services firm, the following commentary could be documented:

Financial Statements:

- S Grant Services Net Profit is £12,000 for the period. S Grant Services appears to be operating as a profitable business, although like many other businesses, for decision making purposes, it would be wise to keep expenses under review and reduce costs in order to improve profitability, particularly the actual cost of making sales and salaries/wages for example.
- S Grant Services has invested a substantial amount of money in non-current assets (e.g. premises, fixtures/fittings and vehicles), in addition to money tied up in inventories. A small amount of cash is recorded however a bank overdraft is noted. For decision making purposes, it is worth noting that the business has been financed mainly by owner's capital (a net investment totalling £77000) and debt (loan). The inventories are the largest amount of the current assets held which might be of concern, not only as it ties up a large amount of cash, but it could be a financial risk if the inventories don't sell quickly to release the cash back into the business – both of these will impact future decision making.

Ratio Analysis:

- In terms of deciding to continue with the investment in this business, the ROCE for S Grant Services business is 8.8% which is high compared to most standard investments (e.g. bank account deposit accounts), but may be considered low in the context of the amount of money invested in the business and size of sales revenues.
- The Net Profit Margin for S Grant Services business is 6.2%. In decision making terms, this is quite low relative to the sales revenues figures reported and would suggest that costs are too high. The key decision is to investigate this matter further to see if costs can be reduced, e.g. in terms of actual costs of sales and/or expenses incurred – to improve profitability.
- The Current Ratio for S Grant Services business is 3.2:1 which requires a review and key decisions to be made regarding funding - suggesting that the business is solvent (i.e. can pay its debts from short term funds). It is also in excess of the notional benchmark of 2:1 for this ratio. One reason could be the high amount of money tied up in closing inventories – as noted, this is risky if the business is experiencing difficulties selling the goods, or it could be a small quantity of high-value items. As an adviser, I would advise the client to keep this under review - the very low cash balance coupled with a bank overdraft balance might be indicative of future liquidity problems and poor cash flows in the business and should be monitored as more decisions will be required to effectively manage this issue.
- In terms of financial decision making, the Gearing Ratio for S Grant Services business is 43.8%, which is high, although lower than the notional benchmark of 50%, indicative of a high proportion of debt finance being employed to fund the business – as indicated by the £60,000 loan balance. It might be a good decision to reduce the amount of this debt in future, as it would also reduce interest payments (and thus increase profits).
- Overall, this business is profitable, solvent and yields a return for the owner, however key financial decisions are required in respect of gearing – the business is exposed to greater financial risk through high levels of financial gearing.