



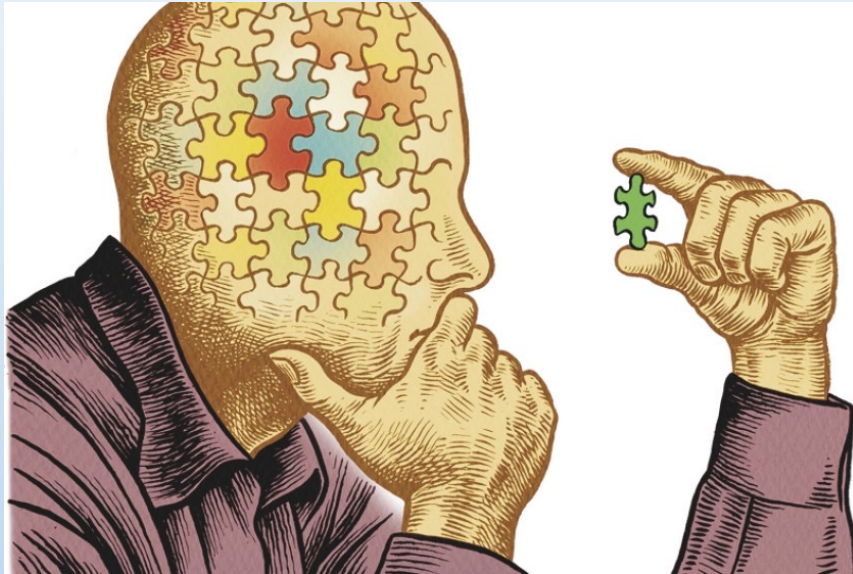
BSc Accounting and Finance

Offer Holders session

Wednesday 27 April 2022



Why is accounting important?



- Or is it important at all?
- Important because accounting
 - produces a social good: ???
 - What sort of information?
 - Does anyone **need** those information? If yes, who needs or wants or uses those information?
 - For what purpose?

Financial accounting

Published financial statements are designed primarily to provide information that is useful to **external** users in making **economic** decisions.

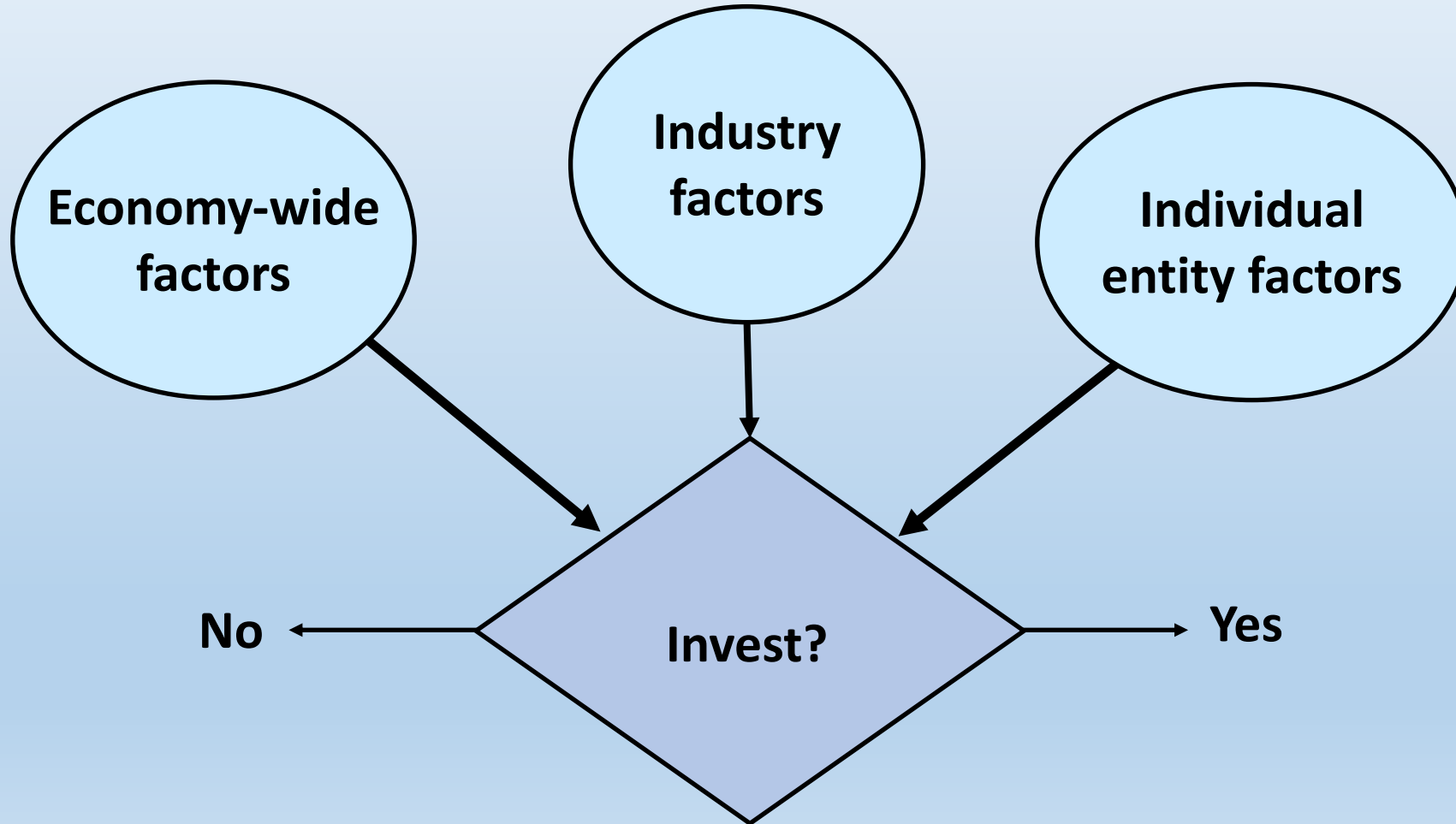
External decision makers could be:

- Existing and potential investors
- Existing and potential creditors/lenders
- Existing and potential suppliers
- Existing and potential employees
- Investment analysts
- Government
- Customers?
- General public/society?

Decisions could be:

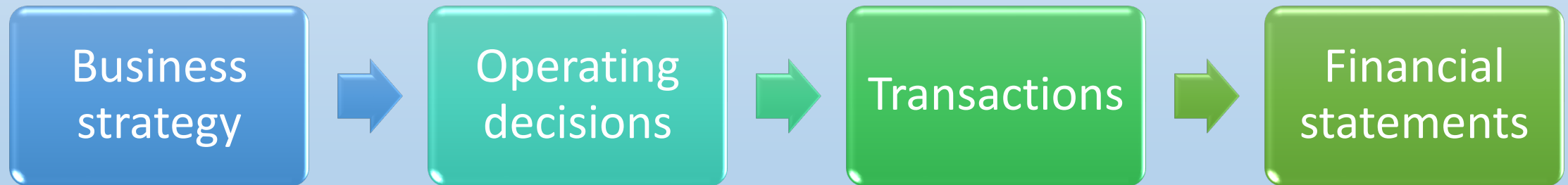
- To assess the accountability of management
- To decide on buy/sell/hold an equity investment
- To assess the security for amounts lent
- To assess the ability of an entity to pay its employees
- To determine tax policies

The investment decision



A company's strategy

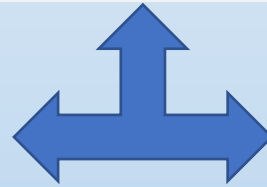
While financial statements reflect transactions, each of those transactions is the result of a company's operating decisions as it implements its business strategy.



Financial statement analysis

Financial statement analysis
is based on comparisons (and benchmarking)

Time-series analysis



Cross-sectional analysis

Information of a
single company is
compared over time

Information of multiple
companies is compared
at a point in time

Ratio analysis

- Ratio analysis helps decision makers **identify significant relationships of items reported in financial statements** and **make more meaningful comparisons**.
- Financial statement analysis involves a lot of judgement, and there are a good number of factors that could affect the interpretation of a ratio.
- The clearer the objective of a financial statement analysis (i.e., with more clearly defined questions that one wants the answers to), the easier it is to choose the most appropriate ratios to compute.
- Ratio analysis gives a snapshot of key areas of an entity's performance (e.g., profitability, operating efficiency, liquidity, market) and often a starting point for further investigation.

Profitability ratios

Profitability ratios focus on **income** (profit/loss) and how it compares to other amounts reported in the financial statements. Often, more than one formula is used in practice for a ratio (why?). Some examples:

- Return on equity
- Return on assets
- Earnings per share
- Net profit margin (which also assesses a business's operating efficiency)

Return on equity (ROE)

$$\text{ROE} = \frac{\text{Net income}}{\text{(average) total ordinary shareholders' equity}}$$

- where **net income** is profit/loss after interest and tax (or net income attributable to ordinary equity holders of the parent company)
- **(average) total ordinary shareholders' equity** is total capital and reserves (or total capital and reserves attributable to the equity holders of the parent company)
- ROE relates **net income generated to** the investment made by the owners.
- Existing and potential investors expect to earn a return on the capital/fund they invest in a company.

Return on assets (ROA)

$$\text{ROA} = \frac{\text{Net income}}{\text{(average) total assets}}$$

- where **net income** is profit/loss after interest and tax (or net income attributable to equity holders of the parent company)
- **(average) total assets** is total non-current assets and total current assets
- This ratio compares **net income** to the total assets used to generate the income.
- ROA measures how well assets have been utilised by an entity/business in generating income.

Earnings per share (EPS)

$$\text{(Basic) EPS} = \frac{\text{Profit/(loss) attributable to ordinary equity holders}}{\text{Weighted average number of ordinary shares outstanding}}$$

Items/terminology	Definitions
Net income or Profit/(loss) attributable to ordinary equity holders	Profit/(loss) after tax, less any amounts accruing to preference shareholders which are accounted for as equity, excluding amounts attributable to non-controlling interests.
Ordinary shares	Equity instruments which are subordinate to all other classes of equity instruments and have the lowest priority of participation in profit for the accounting period.
Weighted average number of ordinary shares outstanding	The number of ordinary shares outstanding at the beginning of the period, adjusted by the number of ordinary shares bought back or issued during the period multiplied by a time-weighting factor.
Time-weighting factor	The number of days that the shares are outstanding as a proportion of the total number of days in the period; a reasonable approximation of the weighted average is adequate in many circumstances.

Net profit margin (NPM)

$$\text{NPM} = \frac{\text{Net income}}{\text{revenue}}$$

- where **net income** is profit/loss after interest and tax (or net income attributable to equity holders of the parent company)
- **revenue** is total sales or income or turnover generated
- This ratio reflects **net income** as a percentage of **sales/revenue**.
- NPM is also a good measure of operating efficiency, but it is not appropriate to use in isolation because it does not consider the resources needed to generate income. It is very difficult (and inappropriate) to compare profit margins for companies in different industries.

Let's apply?

- Your parents have been long-term investors of AstraZeneca and GSK. They are thinking about selling their shares in one of these companies so as to fund your further study.
- Your parents have asked you to help them to decide on which of these companies that they should sell their shares.
- Let's try some basic financial statement analysis to assess these companies' recent financial performance?

Extracts of some accounting data for AZ and GSK

Selected data from consolidated statements of income for the year ended 31 December

	2021	2020	2021	2020
	AstraZeneca		GSK	
	\$m	\$m	£m	£m
Revenue	37,417	26,617	34,114	34,099
Cost of sales	(12,437)	(5,299)	(11,603)	(11,704)
Gross profit	24,980	21,318	22,511	22,395
Operating income	1,056	5,162	6,201	7,783
Finance income	43	87	28	44
Finance costs	(1,300)	(1,306)	(784)	(892)
Profit/(loss) before tax	(265)	3,916	5,442	6,968
Taxation	380	(772)	(346)	(580)
Profit for the year	115	3,144	5,096	6,388
Attributable to:				
Owners of the parent	112	3,196	4,385	5,749
Non-controlling interests	3	(52)	711	639
	115	3,144	5,096	6,388

Extracts of some accounting data for AZ and GSK



Selected data from consolidated statements of financial position as at 31 December

	2021	2020	2021	2020
	AstraZeneca		GSK	
	\$m	\$m	£m	£m
Non-current assets				
Property, plant and equipment	9,183	8,251	9,932	10,176
Others and other investments	69,936	38,934	50,497	50,008
	79,119	47,185	60,429	60,184
Total current assets	26,244	19,544	18,674	20,247
Total assets	105,363	66,729	79,103	80,431
Total current liabilities	(22,594)	(20,307)	(23,670)	(22,148)
Total non-current liabilities	(43,482)	(30,784)	(34,091)	(37,475)
Net assets	39,287	15,638	21,342	20,808
Share capital	387	328	1,347	1,346
Other reserves/(shares premium)	37,171	9,995	5,764	6,486
Retained earnings/(losses)	1,710	5,299	7,944	6,755
Equity attributable to owners of the parent	39,268	15,622	15,055	14,587
Non-controlling interests	19	16	6,287	6,221
Total equity	39,287	15,638	21,342	20,808

Most recent financial statements of case

- [AstraZeneca plc's financial statements for the year ended 31 December 2021](#)
- [GSK plc's financial statements for the year ended 31 December 2021](#)

Ratio analysis (profitability)

	AstraZeneca		GSK	
	2021	2020	2021	2020
Return on Equity (%)				
$\frac{\text{Net income} - \text{NCI}}{\text{Total ordinary share capital} + \text{reserves} + \text{retained profit}} \times 100$				
Return on Assets (%)				
$\frac{\text{Net income} - \text{NCI}}{\text{Total assets}} \times 100$				
Net Profit Margin (%)				
$\frac{\text{Net income}}{\text{Revenue}} \times 100$				
Basic Earnings per share (\$/£)				
$\frac{\text{Net income} - \text{NCI}}{\text{Weighted average number of ordinary shares in issue (m)}}$				

Now, advice/decision time?

- What would be your advice to your parents?
- Or could you give a confident advice based on this exercise?
- Do you think you need more data?
- If yes, what other information do you need?
 - Financial?
 - How about non-financial?
- Any other factors (both financial and non-financial) that you would like to consider?
- How would you present the information to your parents?

Summary

- An overview of the role of financial accounting
- A brief overview of analysis of a company's performance
- A small selection of ratio to analyse company's performance
- How to obtain data to calculate selected ratios
- To consider other issues and the need to do more research
- To think 'outside the box'