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TRAINING AND CONSULTING

SAMPLE EXTRACT

For demonstration purposes

Measuring and Explaining Profitability

Corporate and Commercial Credit - FSA

Profitability

In assessing the profitability of a business, it is important to understand:

1. Have profits fallen / increased in line with the change in sales?
2. Are changes in margins driven by sales or costs?
3. Which of these costs might be fixed?
4. To what degree has the company controlled the key operating costs?
5. Which ratios have improved or worsened over the period? What is the business reason for the change?
6. How do the margins compare to peers? What are the reasons for any differences?
7. What is the outlook?

Sales

− Costs of goods sold (COGS)

= Gross Profit

− Operating expenses

= Operating Profit

− Financial and other incomes and expenses

= Net profit before tax

− Tax expense

= Net profit (loss) after tax

Measuring Profitability

Measures
• % Breakdown of main costs • Gross profit margin: Gross profit / Sales % • Selling and marketing expenses / Sales % • Administration expenses / Sales % • Research & development / Sales % • Operating profit margin: Operating profit / Sales % • EBITDA margin: EBITDA / Sales %

Financial ratios can be used to gain further insight into the company's performance; however, ratios alone rarely provide the 'answer'. They merely highlight whether a change has occurred. The reasons for any change should be investigated to understand the underlying business reasons.

A wide variety of factors can cause movement, such as:

- Changes in the company's product mix that require different sales and distribution methods.
- A new advertising campaign to support a product launch.
- An increase in fuel costs related to distribution, etc.

Indeed for some costs a decrease in spending might be cause for concern (e.g. Research and development) as they can be critical to the future success of the company.

Click here to see an example of profitability measures across companies in the food sector.

Example: Profitability across the food chain

A company's level of gross profit margin often depends upon its ability to minimise manufacturing costs, the bargaining power of both buyers and suppliers and how much value it adds to the goods and services it sells. Operating profit margins depend on the ability to control costs, but also on the level of expenses needed to support the operations of the business, e.g. advertising, research, etc.

This chart, based on real companies across the food chain, demonstrates this point.

Hover your mouse over each company in the table to reveal more information.

	Global Food Processing and Commodity Trading (Archer Daniels Midland)	**Premium Branded Wine and Spirits** (Remy Cointreau)	**Branded Food Company** (Mondelez)	**Food Processing and Distribution** (Bonduelle)	**Food Retailer** (Carrefour)
Gross Profit Margin GP%	6.4%	63%	40%	27.5%	22%
Operating Profit (EBIT) Margin OP%	2.5%	23%	15%	4.5%	2.8%

Exercise: Income Statement Margins

Building expectations about levels of profitability for companies in different sectors

The level of profitability in a company depends on several factors, including the competitive nature of the industry, the value added the company provides as well as the company's cost base.

Match the companies labelled 1-4 to companies 'A, B, C, D and E' in the chart opposite.

1. Pernod Ricard – produces and distributes premium wines and spirits
2. Rexel - specialises in the distribution of electrical supplies to professional users
3. Michelin - one of the four largest tire manufacturers in the world
4. Autoliv - the world's largest supplier of safety equipment to the automobile market
5. Flex - the second largest global electronics manufacturing services company to original equipment manufacturers

Company	Gross Profit Margin	Operating Profit (EBIT) Margin	Choose ONE option
A	18%	8%	Choose one
B	62%	28%	Choose one
C	25%	4%	Choose one
D	29%	11%	Choose one
E	6%	2%	Choose one

Reveal answers

Fixed vs Variable Costs

A company's cost structure will typically consist of both fixed and variable costs.

- Fixed costs are those that remain the same regardless of sales volume / output (e.g. the cost of renting premises).
- Variable costs change with sales volumes (e.g. costs of raw materials used in the production process) or can be reduced quite easily and quickly (e.g. advertising expenses).

Based on the relationship of these costs, each company will have **a break-even point** at which sales revenues equal costs.

- If sales revenues fall below break-even point, the company will suffer a loss whereas sales above this point will be profitable.

Where the element of fixed costs is high as a proportion of total costs, the business is said to have **high operating leverage** or operational gearing.

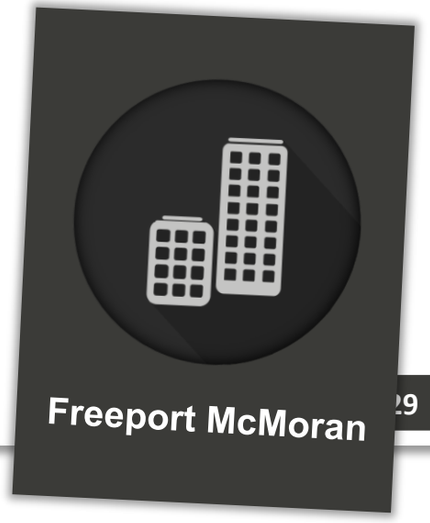
$$\frac{\text{Fixed Costs}}{\text{Total Costs}} = \text{Operating Leverage}$$

While companies do not usually report which of their costs are fixed and which are variable, the analyst should form a view as to the degree of operating leverage - as this, alongside other factors, will influence the interpretation of the results.

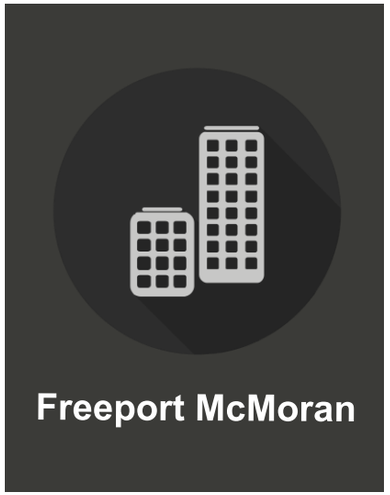
Some costs may be a combination of fixed and variable - for example, employees who are paid a bonus or commission based on productivity in addition to a base salary, and, consequently the distinction is not always straightforward.

Examples of businesses with high operating leverage include airlines and hotels. These businesses have a relatively high break-even point – they incur a substantial level of costs regardless of the volumes that they sell. This typically means that when sales fall during a downturn, profits fall even further.

Click the card to view an example of operating leverage.



Example: Operating Leverage



Freeport-McMoran, based in the US, is the world's largest publicly traded copper producer; the company also engages in the mining of gold and molybdenum. Freeport-McMoran operates mines in North and South America and has operations in the Grasberg minerals district in Indonesia through its subsidiary, PT Freeport Indonesia.

Companies with **low** operating leverage usually have relatively stable gross profit margins as COGS generally comprises costs that vary directly with volumes sold. Conversely, this measure is likely to be much more volatile for a business with high operating leverage, such as Freeport-McMoran. This volatility results in increased business risk.

FYE 31 Dec (USD Millions)	Yr1	Yr2	Yr3	Yr4	Yr5	Yr6
Sales	21,438	14,607	14,830	16,403	18,628	14,402
Change in sales	2%	(32%)	2%	11%	14%	(23%)
Gross profit margin %	26.5%	2.3%	10.6%	26.7%	27.8%	9.0%
EBIT before non-core items	4,834	(407)	876	3,552	4,546	674
Change in EBIT	(10%)	(108%)	NA	305%	28%	(85%)
EBIT margin	22.5%	(2.8%)	5.9%	21.7%	24.4%	4.7%

Sales increase by 2% as prices rise; gross margin recovers to 10.6% and the company reports positive EBIT

Sales increase by a further 11% as prices rise – EBIT increases by 305% and the EBIT margin to 21.7%.

Sales decline by 32% due to lower volumes and substantially lower copper prices; EBIT declines by 108% resulting in an operating loss. The EBIT margin turns negative.

Sales decline by 23% due to lower copper and substantially lower gold volumes alongside lower copper prices; gross margin falls to 9% and the EBIT margin to 4.7%

Case Study: Michelin Tires

Explaining profitability

Direct and Operating Costs

- Michelin states that "the rise in the cost of raw materials used in production had a €153 million adverse impact (including c €30 million customs duties)." This equates to 0.6% of sales.
- Despite this, the overall increase in cost of sales as a percentage of sales was only 0.3% as it was able to offset some of these increased costs by charging higher prices while also benefitting from a change in product mix.
- It also reported tight control over other major expenses – sales and marketing and research and development.
- The net effect was a very slight decrease in the operating income margin before non-recurring items.

(in € millions)	***Yr1***	**Yr2**	*Change Yr1/ Yr2*	*Yr1 (as % of net sales)*	*Yr2 (as % of net sales)*
Net Sales	*22,028*	24,135	9.6%		
Cost of sales	*(15,517)*	(17,053)	9.9%	70.4%	70.7%
Gross profit	*6,511*	7,082	8.8%	29.6%	29.3%
Sales and marketing expenses	*(1,267)*	(1,380)	8.9%	5.8%	5.7%
Research & development expenses	*(648)*	(687)	6.0%	2.9%	2.8%
General & adminstrative expenses	*(1,816)*	(1,987)	9.4%	8.2%	8.2%
Other operating income & expenses	*(5)*	(19)	280.0%	0.0%	0.1%
Operating income before non-recurring items	*2,775*	3,009	8.4%	12.6%	12.5%
Non-recurring items	(225)	(318)	41.3%	1.0%	1.3%
Operating income	2,550	2,691	5.5%	11.6%	11.1%

Source: Michelin Registration Document

NOTES

A space for your thoughts

Type your notes into the boxes below. Click the ‘return’ icon to go back to the last page you visited.

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