ADEVA
TRAINING AND CONSULTING

SAMPLE EXTRACT

For demonstration purposes

# Measuring and Explaining Profitability

## Sales and Profitability

# Contents Menu: Measuring and Explaining Profitability

Here are the topics that we will cover in this module.

You can jump to any of these topics by clicking on the headings below, or by using the bookmarks menu in the PDF reader.

## TOPICS

# 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

+/− Net income attributable to non-controlling shareholders

# Measuring Profitability

| MEASURES |
|---|
| • % Breakdown of main costs<br>• Gross profit margin: Gross profit / Sales %<br>• Selling and marketing expenses / Sales %<br>• Administration expenses / Sales %<br>• Research & development / Sales %<br>• Operating profit margin: Operating profit / Sales %<br>• 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.

It is worth noting that 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.

PROFITABILITY MEASURES ACROSS THE FOOD SECTOR
Click here for more information.

 

# Profitability across the food chain

A company's level of gross profit margin often depends upon its ability to minimize 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.

| | Gross Profit Margin GP% | Operating Profit (EBIT) Margin OP% | |
|---|---|---|---|
| Premium Branded Wine and Spirits (Remy Cointreau) | 71% | 28% | Very high margins as premium brands are sold at high prices – as reflected in the GP%; advertising is the largest operating expense. |
| Branded Food Company (Mondelez) | 39% | 17% | Well recognized brands (e.g. Nabisco) sold at a relatively high price point. GP% is lower than Remy as spirits generally have a higher mark up. Advertising is a significant operating expense. |
| Branded Frozen Food producer (Nomad) | 29% | 13% | Well-known brands (e.g. Birds Eye) operating in a competitive segment of the food sector (frozen foods) and competing with own store brands. Margins sensitive to commodity prices and strong buyers. |
| Global Food Processing and Commodity Trading (Archer Daniels Midland) | 7.5% | 6.5% | Thin gross profit margins due to commodity products. However, low operating cost base as reflected in operating profit margin being close to GP%. |
| Food Retailer (Carrefour) | 20% | 2.9% | High overheads (the retail stores) and a very competitive industry which competes on prices results in low profit margins. |

# 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 1-5 to companies 'A, B, C, D and E' in the chart opposite.** Note these are based on 2022 results

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. **Coupang** – the largest e-commerce platform in South Korea

| Company | Gross Profit Margin | Operating Profit (EBIT) Margin | Choose ONE option |
|---|---|---|---|
| A | 16% | 8% | |
| B | 60% | 28% | |
| C | 23% | -1% | |
| D | 26% | 11% | |
| E | 26% | 7% | |

When you are ready, hover your mouse over 'reveal answer'.

Reveal answer

# 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.

FREEPORT MCMORAN
Click here to see an example of operating leverage.

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.

# Operating Leverage

Freeport-McMoran ("FMM"), based in the US, is the world's largest publicly traded copper producer; the company also engages in the mining of gold.

FMM operates mines in North and South America and has operations in the Grasberg minerals district in Indonesia.

Sales increase by **2%** as prices start to rise; EBIT recovers and turns positive again.

Sales further increase by **11%** as prices continue to rise; EBIT increases by **305%**.

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 FMM. This volatility results in increased business risk.

| FYE 31 Dec (USD millions) | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 |
|---|---|---|---|---|---|---|---|
| Sales | 21,438 | 14,607 | 14,830 | 16,403 | 18,628 | 14,402 | 14,198 |
| Change in sales | 2% | (32%) | 2% | 11% | 14% | (23%) | (1%) |
| Gross profit margin % | 26.5% | 2.3% | 10.6% | 26.7% | 27.8% | 9.0% | 17.9% |
| EBIT before non-core items | 4,834 | (407) | 876 | 3,552 | 4,546 | 674 | 1,964 |
| Change in EBIT | (10%) | (108%) | NA | 305% | 28% | (85%) | 191% |
| EBIT margin | 22.5% | (2.8%) | 5.9% | 21.7% | 24.4% | 4.7% | 13.8% |

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

Sales decline by **23%** due to lower copper and substantially lower gold volumes alongside lower copper prices. EBIT margin falls by **85%**.

# Case Study: Michelin Tires

## EXPLAINING PROFITABILITY

### DIRECT AND OPERATING COSTS

- Costs of sales as a % of sales increased in 2022 resulting in a reduced gross profit **margin** despite an increase in **absolute** gross profit.
- Michelin explains that its costs of sales had been impacted by EUR 1,194 million due to increases in its raw materials and related transportation costs as well as a EUR/USD exchange rate effect. This equates to 4.2% of 2022 sales.
- In addition, it states that it costs were also impacted by EUR 1,496 million due to the rise in production and supply chain costs. This equates to a further 5.2% of 2022 sales.

| (in EUR millions) | **2021** | **2022** | 2021 (as % of sales) | 2022 (as % of sales) |
|---|---|---|---|---|
| Sales | 23,795 | 28,590 | | |
| Cost of sales | (16,810) | (21,052) | 70.6% | 73.6% |
| Gross profit | 6,985 | 7,538 | 29.4% | 26.4% |
| Sales and marketing expenses | (1,133) | (1,174) | 4.8% | 4.1% |
| Research & development expenses | (682) | (698) | 2.9% | 2.4% |
| General & adminstrative expenses | (2,137) | (2,244) | 9.0% | 7.8% |
| Other operating income & expenses | (256) | (401) | 1.1% | 1.4% |
| Operating income | 2,777 | 3,021 | 11.7% | 10.6% |

**Source:** Michelin 2022 Registration Document

- Operating costs other than cost of sales declined as a % of sales (from 17.7% in 2021 to 15.8% in 2022) resulting in a smaller reduction in operating income margin compared to gross profit margin.
- Michelin benefited from a favourable price-mix effect during 2022, i.e. a shift towards higher value products, which they state boosted operating income by EUR 3,143 million. This helped to compensate the before mentioned negative operating cost impacts and increased **absolute** gross profit and operating income although the % **margins** declined.

# Case Study: Michelin Tires

## EXPLAINING PROFITABILITY

### OTHER ITEMS

Other operating income & expenses represent a net expense and contain various items including some viewed by management as having "unusual or abnormal characteristics."

Unlike as often seen in other financial statements, management has included those items within this category rather than showing them as separate "non operational" or "non core" items.

| (in EUR millions) | 2021 | 2022 | 2021 (as % of sales) | 2022 (as % of sales) |
|---|---|---|---|---|
| Sales | 23,795 | 28,590 | | |
| Cost of sales | (16,810) | (21,052) | 70.6% | 73.6% |
| Gross profit | 6,985 | 7,538 | 29.4% | 26.4% |
| Sales and marketing expenses | (1,133) | (1,174) | 4.8% | 4.1% |
| Research & development expenses | (682) | (698) | 2.9% | 2.4% |
| General & adminstrative expenses | (2,137) | (2,244) | 9.0% | 7.8% |
| Other operating income & expenses | (256) | (401) | 1.1% | 1.4% |
| Operating income | 2,777 | 3,021 | 11.7% | 10.6% |

**Source:** Michelin 2022 Registration Document

The EUR 145 million year-on-year increase in 2022 was primarily attributable to a EUR 139 million impairment loss on Michelin's assets in Russia and a EUR 13 million provision for restructuring a UK-based conveyor belt business that is highly exposed to Russia. In 2021, this category included a EUR 114 million gain from the partial sale of a group company.

If operating income or expenses include any unusual items – irrespective of whether or not determined by management as "non operational" or "non core" – it is important to understand the nature of such items and to independently determine whether they should be included or excluded from operating profit.

# Case Study: Michelin Tires

## CONCLUSION AND OUTLOOK

### Conclusion

Michelin has managed to increase sales and absolute profitability in 2022, despite a difficult market environment with significantly increased raw material prices as well as production and supply chain costs.

It has managed to achieve this primarily through price increases due to a change in sales mix to higher value added products.

Its direct and operating costs appear to be well controlled as evidenced by having offset most of the gross profit margin decline on the operating profit margin level.

Effective and good cost controls are an important aspect in evaluating any company and its management, in particular in more mature industries/markets.

### Michelin describes its outlook

"In 2023, in a context of strong economic uncertainties, tires markets should remain globally stable compared to 2022 on the three business segments (Passenger car and Light truck, Truck, Specialty).

In this environment, the Group expects an evolution of its volumes sold between -4% and 0% compared to 2022.

The Group also anticipates a significantly negative impact of inflation (raw materials, transportation, energy, labour) on its 2023 results. Further enhancement of its mix and disciplined implementation of its pricing policy are nevertheless expected to have a positive impact on the Group's results and offset the increase in cost inflation factors.

Based on this scenario, Michelin's objectives are to deliver full-year segment operating income in excess of EUR 3.2 billion at constant exchange rates and a free cash flow before M&A of more than EUR 1.6 billion."

**Source:** Michelin 2022 Registration Document

You have now completed this module on

# MEASURING AND EXPLAINING PROFITABILITY

You can return to the main course menu by clicking on the home button below.