

GROSS MARGIN AS PROFITABILITY MEASURE: CAVEAT INVESTOR

Introduction

Gross margin is a popular measure of corporate profitability. Investors use it to compare the financial performance of companies in the same industry. In this note we point out the problems that can arise when using the ratio in intercompany comparisons and how they can be overcome.

Definition

Gross margin is usually defined as gross profit expressed as a percentage of revenue. Gross profit is the excess of revenue – from the sale of goods and services – over the cost of those sales.

Gross margin	=	Gross profit	%	Revenue
		[Revenue - Cost of sales]		

Gross margin shows, for retailers, the profit margin at a store's check-out, that is, the percentage of revenue remaining after deducting the cost of merchandise sold. For manufacturers, it shows the profit margin at the factory gate, that is, the percentage of revenue remaining after deducting the production costs of goods sold.

In each case, the cost of sales (or cost of goods sold) represents the unavoidable cost of operations. Other operating costs such as marketing, administration and research and development costs are discretionary: management can choose how much of the company's resources to spend on them. By contrast, merchandise (production) costs are non-discretionary: the retailer (manufacturer) must incur them in order to make the sale.

Problems with GM as a profitability measure

Gross margin is clearly a valuable tool for understanding a company's financial performance. However, investors encounter problems when trying to use it. First, a company may not disclose cost of sales so the ratio cannot be calculated. Second, there is no standard definition of cost of sales. A company may include other costs besides merchandise or production costs in the line item 'cost of sales'. Third, companies may differ in the way they account for the costs within cost of sales. Thus, even if they define cost of sales in the same way, the cost of sales numbers are not comparable. Finally, structural differences may undermine gross margin as a profitability measure. Companies within the same industry may pursue different strategies in the production and marketing of their products, affecting the balance sheet as well as the income statement. We explore each of these problems in more depth below.

- *Cost of sales not disclosed.* In order for investors to calculate gross margin, a company must disclose the cost of sales. Companies that classify operating costs by their *function* (ie merchandising or production, sales, administration) report the cost of sales in the breakdown of costs on the face of the income statement. However, companies that classify operating costs by their *nature* (ie materials, personnel costs, depreciation) do not show the cost of sales on the income statement – and it cannot be calculated in the absence of additional disclosures.

Exhibit 1 Classifying operating costs by nature: (A) airline; (B) machine tool maker			
(A) Wizz Air		(B) DMG Mori	
Consolidated Income Statement (extract)		Consolidated Income Statement (extract)	
<i>FY 2023</i>	<i>Year to 31 Mar</i>	<i>FY 2022</i>	<i>Year to 31 Dec</i>
	<i>in €mn</i>		<i>in €mn</i>
Passenger ticket revenue	2,025	Sales revenues	2,366
Ancillary revenue	1,871	Other operating income	115
Total operating revenues	3,896	Changes in finished goods	
Staff costs	374	and work in progress	24
Fuel costs (incl. exceptional income)	1,954	Own work capitalised	11
Distribution & marketing	92	Cost of materials	-1,329
Maintenance materials & repairs	237	Personnel costs	-566
Airport, handling & en-route charges	963	Depreciation, amortisation	
Depreciation & amortisation	601	and impairment losses	-81
Other operating expenses, net	141	Other operating expenses	-322
Total operating expenses	-4,362	Operating profit	217
Operating loss	-466		:
	:		

Sources: Wizz Air Holdings, Annual Report & Accounts 2023; DMG Mori AG, Annual Report 2022.

Exhibit 1 shows two examples of operating costs classified by nature. Wizz Air is a low-cost European airline based in Hungary. For companies in sectors such as transport, accommodation, education, healthcare, revenue is generated by providing services rather than goods. It is customary for service providers to classify costs by nature rather than function. Investors find this cost breakdown more helpful. Note the significance of 'fuel costs' and 'airport, handling and en-route charges' in Wizz Air's FY2023 operating expenses.

DMG Mori is a German-Japanese machine tool maker. Most of its international competitors classify operating costs by function. However, German manufacturing companies have traditionally classified operating costs by nature and EU company law and international accounting standards (which DMG Mori applies in its consolidated accounts) permit them to do so. It is not possible for a reader of DMG Mori's financial statements to calculate its cost of sales as the operating costs it identifies (materials, personnel, depreciation and other) combine those incurred on the factory floor and those arising in non-production departments such as sales and administration.

- *No standard definition of cost of sales.* Accounting regulations do not specify how the cost of sales number should be calculated. Under IFRS and US GAAP, companies have discretion over how cost of sales is determined. A retailer may include costs other than the cost of merchandise sold. For example, major UK supermarket chains such as Tesco and Sainsbury's include store costs in the cost of sales number. Similarly, a manufacturer may include costs other than the production cost of the goods sold in the period. Examples are certain distribution costs, product warranty costs and amortisation of production-related intangibles such as capitalised development costs. Without a breakdown of costs included in cost of sales, it becomes difficult to make intercompany comparisons of gross margin.

- *Accounting differences.* Most listed companies prepare their consolidated accounts according to international or US accounting standards (IFRS or US GAAP). Even in countries such as China and India that have not formally adopted IFRS, national standards usually follow them closely. However, despite attempts to align IFRS and US GAAP, differences remain. The most significant for the purposes of gross margin calculation is in the measurement of inventories – and, by extension, the cost of sales. Rather than identifying specific inputs and their costs with specific outputs, a company can assume production costs flow through inventory according to a standard formula. Under US GAAP, the formulas allowed are FIFO (the first costs in are the first costs out), LIFO (last in, first out), or an averaging method (e.g. moving average, weighted average). LIFO is banned under IFRS.

Many US companies assume a LIFO cost flow for part or all of their inventories. (This is permitted so long as cost flow methods are applied consistently.) There are tax advantages from doing so. US tax authorities allow firms to measure cost of sales on a LIFO basis in their tax returns so long as they do so in their published accounts. When input prices are rising (and inventory levels are steady or growing), more recent, higher costs enter cost of sales sooner under LIFO than under the other two methods, depressing gross profit and taxable income. Other things equal, in inflationary times a LIFO-using US company will report lower profit margins than a non-US competitor that must measure cost of sales (and inventories) on a FIFO or average basis. However, it will enjoy higher after-tax cash flows.¹

- *Structural differences.* Companies classified as being in the same industry rarely produce and sell the same goods and services. The products they sell may be from more than one industry or sector and have different underlying profit margins. Take China's BYD and USA's Tesla as examples. Both companies are portrayed as electric vehicle (EV) makers. But this is an oversimplification. Almost a quarter of BYD's 2022 revenues are from the manufacture and sale of mobile handset components. Moreover, its auto division – responsible for the balance of 2022 revenues – makes internal combustion engine- and hybrid-powered as well as pure electric vehicles. By contrast, Tesla's auto division produces only EVs. Its non-auto operations (energy generation and storage) contribute less than 5% of its total 2022 revenues.² In both cases, margins on their EV sales are higher than those on their non-EV sales.

Differences in production activities can also impede gross margin comparisons. A company that outsources much of the production work may do so to reduce its fixed cost base. Managers often explain the decision to outsource production as a way of converting fixed costs (the depreciation and related costs of production equipment) to variable costs (the cost of bought-in semi-finished or finished goods). But gross margins are likely to be lower as a result of outsourcing. The supplier will set the price of the outsourced good to cover its own fixed costs – and a mark-up for profit, as well. In fact, a company may justify bringing production *in-house* in order to “increase margins”. This was one of the reasons given by the CEO of an Italian fashion company, for ‘insourcing’ the production of apparel and footwear components.³

¹ For an illustration of the impact of the three cost flow assumptions on corporate financial statements, see T. Sutton (2022), *Corporate Financial Reporting: an International Perspective*, chapter 8, pp 215-218.

² BYD Company Ltd, *Annual Report 2022*; Tesla, Inc, *Form 10-K 2022*.

³ A. Biondi, ‘Can Golden Goose go beyond hit sneakers?’, *Financial Times*, 16/17 December 2023. In an interview with the *FT*, Silvio Campara, the CEO of Golden Goose, also pointed to the benefits of more secure supply and improved quality that would flow from the acquisition of a supplier's factories.

Overcoming gross margin's flaws as profitability measure

When investors encounter problems comparing companies' gross margin, there are two ways they can deal with them. They can adjust the numbers in the gross margin calculation drawing on information in the notes to the companies' financial statements. Alternatively – and the only option if gross margin cannot be adjusted, they can compare companies' financial performance using a broader measure of profitability. We look at each of these solutions in turn.

(A) *Adjust numbers using information in the notes to the accounts.*

Investors must adjust gross profit to ensure comparability if companies define or account for cost of sales differently.

The first step is to make sure the same costs enter the cost of sales calculation. Companies usually disclose in the notes how cost of sales is calculated. They may provide a breakdown of the number if it includes costs other than production costs (or merchandise costs, in the case of a retailer). Companies that apply IFRS are required to disclose "the amount of inventories recognised as an expense during the period".⁴ (There is no such disclosure requirement under US GAAP.) Exhibit 2 shows the adjusted 2022 gross margin of Nestlé and Unilever, two multinational food and consumer goods companies, where Nestlé's adjusted cost of sales is based on inventories expensed in the year and Unilever's excludes distribution costs.

Exhibit 2 Adjusted gross margin, based on standardised cost of sales		
	Nestlé Group	Unilever Group
<i>FY 2022</i>	<i>Year to 31 Dec</i>	<i>Year to 31 Dec</i>
	<i>in CHF mn</i>	<i>in €mn</i>
Sales	94,424	60,073
Inventories expensed in year (Nestlé)	49,889	
Cost of sales, less distribution costs (Unilever)		32,119
Other (Nestlé) / Distribution (Unilever)	<u>1,856 *</u>	<u>3,787</u>
Cost of sales, reported	<u>-51,745</u>	<u>-35,906 **</u>
Gross profit	<u>42,679</u>	<u>24,167</u>
Gross profit, adjusted	<u>44,535</u>	<u>27,954</u>
Gross margin (%)	45.2	40.2
Gross margin, adjusted (%)	47.2	46.5
* 'Other costs' comprise cost of royalties to third-party licensors for use of intellectual property, amortisation of certain intangible assets and maintenance & depreciation of equipment used in sales process.		
** of which: Distribution costs		3,787
Production costs		3,995
Raw materials, packaging & goods purchased for resale		26,360
Other		1,764
Source: Nestlé Group, <i>Annual Report 2022</i> ; Unilever Group, <i>Annual Report & Accounts 2022</i>		

⁴ IASB, *IAS 2 Inventories*, paras. 36 (d). Note that, since companies applying IFRS measure inventories in the same way, the inventories they expense in a period are also measured on a comparable basis.

Both companies prepare their consolidated financial statements according to IFRS. Each classifies operating costs by function. Nestlé discloses ‘inventories expensed in the year’ in the notes to its consolidated accounts (note 6 on inventories). Unilever does not disclose this amount directly. Instead, it provides a breakdown of its consolidated cost of sales (note 3 on operating profit) that enables readers to calculate ‘inventories expensed in the year’ indirectly. The effect of the adjustments is to narrow Nestlé’s gross margin outperformance over Unilever in 2022 from five to less than one percentage point.

The next step is to adjust companies’ financial statements for any differences in the accounting methods used. As mentioned earlier, companies applying US GAAP can assume a LIFO cost flow

Exhibit 3 Adjustment of LIFO cost of sales to FIFO		
Deere & Company		
FY 2022	Year to 30 Oct in \$bn	
Consolidated income statement (extract)		
Net sales		47.92
Cost of sales		
Reported	-35.34	
Adjustment to FIFO *	<u>0.39</u>	
Adjusted cost of sales		<u>-34.95</u>
Gross profit, adjusted		12.97
		:
* 57% (54%) of end-Oct '22 (end-Oct'21) inventories are valued at LIFO. LIFO reserve (excess of FIFO value over reported amount) increases from 2.11 to 2.50 over year (<i>note 13</i>).		
	End-October	
	2022	2021
Inventories, reported	8.50	6.78
LIFO reserve	<u>2.50</u>	<u>2.11</u>
Inventories, at FIFO	<u>11.00</u>	<u>8.89</u>
Source: Deere & Company, Form 10-K 2022		

when measuring inventories and cost of sales but those applying IFRS cannot. The difference between LIFO- and FIFO-based costs of sales can have a material impact on gross profit when the rate of increase of input prices is high.

Deere, a large US manufacturer of agricultural and construction equipment, measures around half of its inventories on a LIFO basis (see Exhibit 3). To compare its gross margin with that of IFRS-using companies, we must adjust its cost of sales to FIFO. Deere provides this information in the notes to its accounts. If it had measured all of its inventories at FIFO, they would have been \$2.5bn greater at end-October 2022, against \$2.11bn greater at end-October 2021. Thus, its 2022 all-FIFO cost of sales would have been \$0.39bn less (the increase in

LIFO reserve over the financial year) than the reported amount of \$35.34bn. As a result, its adjusted gross margin (on an all-FIFO basis) is 27.1%, up from 26.3% using reported numbers.

The adjustment of cost of sales to FIFO has only a small impact on Deere’s 2022 gross profit. Despite the 18% increase in LIFO reserve in the 2022 financial year – which reflects the high rate of increase of input prices that year, the company’s gross profit is only 3% greater on an all-FIFO basis. The main reason for the small impact is the low ratio of inventories to cost of sales. Deere turns over its inventory comparatively quickly. Stocks – of materials, work in progress and finished goods – were on its premises for a little over 100 days on average in 2022.

A company’s cost flow method is not the only source of difference between US GAAP and IFRS. Do other differences have a material impact on corporate revenues and expenses and thus undermine comparisons of gross margins? A simple way to answer this question is to compare the numbers of a company that prepares two sets of consolidated financial statements – under both US GAAP and IFRS. One company that does this is CNH Industrial. The company makes agricultural and construction equipment sporting Italian (Fiat) and US (Case, New Holland) names. It is a *bona fide* multinational company: incorporated in the Netherlands, with head office in the UK, and its shares listed on both the Euronext Global Equity Market and the New York Stock Exchange.

Exhibit 4 CNH Industrial: Gross & EBIT margins under IFRS & US GAAP, 2022 & 2021				
Industrial Activities* <i>in \$mn</i>	IFRS		US GAAP	
	<i>Year to 31 Dec</i>		<i>Year to 31 Dec</i>	
	<i>2022</i>	<i>2021</i>	<i>2022</i>	<i>2021</i>
Net revenues	21,541	17,835	21,541	17,802
Cost of sales	-16,789	-14,134	-16,797	-14,109
Gross profit	4,752	3,701	4,744	3,693
Selling, general & administrative costs	-1,435	-1,295	-1,445	-1,288
Research & development costs	-881	-677	-866	-642
Adjusted earnings before interest & tax (EBIT)**	2,436	1,729	2,433	1,763
Gross margin (%)	22.1	20.8	22.0	20.7
Adjusted EBIT margin (%)	11.3	9.7	11.3	9.9
* Comprising two industrial segments (Agriculture and Construction) plus corporate functions. Remainder of group comprises Financial Services segment.				
** CNH discloses Adjusted EBIT under IFRS (Operating Review p. 70) & US GAAP (note 28) of Annual Report (EU-IFRS) 2022. Adjusted EBIT excludes restructuring expenses & certain non-recurring items.				
Sources: CNH Industrial N.V., <i>Annual Report (EU-IFRS) 2022</i> ; CNH Industrial N.V., <i>Form 10-K 2022</i>				

Exhibit 4 shows the gross profit and adjusted operating profit of CNH's 'Industrial Activities' segments in 2022 and 2021. The numbers are taken from the company's 2022 annual report and Form 10-K filed with the SEC. (The profit margin ratios are derived.) The company prepares the consolidated financial statements in its annual report according to IFRS and the same statements in Form 10-K according to US GAAP.⁵

The differences between CNH Industrial's IFRS and US GAAP numbers are small in both years.⁶ Although this is one company's experience, it is likely to apply to other non-financial companies – certainly at the gross profit level – as recognition and measurement rules relating to revenues and cost of sales (apart from the LIFO inventory method) are similar under the two accounting regimes.

(B) *Compare financial performance using broader measure of profitability*

Investors must use a broader measure of profitability if cost of sales – or an equivalent number – is not available or there are structural differences between the companies being compared.

As we saw earlier, companies that classify operating costs by nature do not report cost of sales on the income statement. As a result, gross margin cannot be calculated. Where a company prepares its accounts according to IFRS, it should disclose, in the notes, the inventories expensed in the year, a number that is equivalent to cost of sales. Unfortunately, many companies that claim to follow IFRS do not disclose this number. Where one or more of the companies being compared classifies costs by nature, investors must use *operating profit* – either gross (ie excluding depreciation and amortisation) or net – if they wish to compare the companies' return on sales.

⁵ The company refers to its IFRS statements as EU-IFRS to make clear that the accounting standards it applies are those adopted by the EU. For an explanation of the adoption process, see T. Sutton (2022), *Financial Reporting: an International Perspective*, chapter 15, pp. 503-4.

⁶ The differences relate mainly to the accounting for development costs and for defined benefit pension and healthcare plans. There are also minor differences in the presentation of certain revenues. The company assumes a FIFO cost flow when measuring cost of sales under US GAAP (and IFRS).

Exhibit 5 Operating margin: alternative profit margin when cost of sales is not available			
	The Hershey Company		Lindt & Sprüngli Group
Accounting standards applied	US GAAP		IFRS
Operating costs classified by:	Function		Nature
Cost flow assumption	LIFO & FIFO		FIFO
<i>FY 2022</i>	<i>Year to 31 Dec in \$mn</i>		<i>Year to 31 Dec in CHF mn</i>
Net sales	10,419		Sales 4,970
Cost of sales	-5,921		Other income 28
Adjustment from LIFO to FIFO	26	-5,895	Changes in inventories 77
Gross profit, adjusted		4,524	Cost of materials -1,755
Selling, marketing & administrative expense	-2,236		Personnel expenses -1,008
Business realignment costs	-2		Operating expenses -1,295
			Depreciation, amortisation & impairment -273
Operating profit		2,286	Operating profit 745
Gross margin (%)		43.4 *	Gross margin (%) not available **
Operating margin (%)		21.9 *	Operating margin (%) 15.0

* 53% of end-2022 inventories valued at LIFO. LIFO reserve increased by 26 in 2022 (note 19).
 ** Lindt does not disclose cost of inventories expensed in year.

Sources: The Hershey Co.: *Form 10-K 2022*; The Lindt & Sprüngli Group: *Annual Report 2022*

Exhibit 5 compares the operating margins of two chocolate confectionery makers, US-based Hershey and the Swiss company Lindt & Sprüngli. Hershey applies US GAAP, Lindt IFRS. Lindt classifies operating costs by nature. It does not disclose the inventories expensed in the year in the notes to its 2022 accounts so it is not possible to calculate the gross profit on its sales. As a result, investors must use a more inclusive profit margin – operating margin – when comparing the two companies' return on sales. Hershey's operating margin is almost 50% higher than Lindt's in 2022. Note that we have adjusted Hershey's cost of sales to an all-FIFO basis to improve comparability. We assume, based on CNH's 2022 numbers, that other differences between US GAAP and IFRS have a minor impact on the two companies' 2022 operating results.

Gross margin and operating margin are deficient as measures of profitability where there are structural differences between companies within an industry. Such differences can arise because firms pursue different business models. They may sell a different range of products, serve different markets or use different production methods. The balance sheet as well as the income statement is likely to be affected. In these circumstances, 'return on capital employed' (ROCE) is a more appropriate measure of profitability. ROCE is the product of operating margin and net operating assets (NOA) turnover. NOA turnover is the ratio of revenue to net operating assets (operating assets, net of operating liabilities). It indicates the capital intensity of a company's operations.

Return on capital employed (ROCE)	=	Operating margin	x	Net operating assets turnover
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Exhibit 6 Return on capital employed: broad measure of operating profitability			
		NH Hotel Gp.	Whitbread
<i>Financial year to:</i>		<i>31 Dec. 2022</i>	<i>2 Mar. 2023</i>
No. of hotels, end-year		350	891
No. of rooms, end-year		54,820	92,500
Average rooms / hotel		157	104
<i>Income statement (extract)</i>		<i>€mn</i>	<i>£mn</i>
Revenue	(A)	1,722	2,625
Operating profit (excl. investment income)	(B)	261	503
<i>Balance sheet, end-year (extract)</i>			
Financial debt		611	993
Lease liabilities		1,896	3,958
less: Cash and cash equivalents		-302	-1,165
Other financial assets		-37	0
Equity method investments		-42	-48
Debt, net of financial assets & investments		2,126	3,739
Group equity		901	4,114
Capital employed (Net operating assets)	(C)	3,027	7,853
<i>of which: PPE & leased assets, at net book value</i>		<i>3,062</i>	<i>8,059</i>
Return on capital employed (pre-tax) (%)	(B)/(C)	8.6 %	6.4 %
Operating margin (%)	(B)/(A)	15.2 %	19.1 %
Net operating assets turnover (times)	(A)/(C)	0.569 x	0.334 x
<i>Operating statistics (Whitbread: UK hotels only)</i>			
Revenue per available room (RevPAR)	€ 74.40/ £ 63.41		£ 59.45
Occupancy rate	60.9 %		82.7 %
Average daily room rate	€ 122.20/ £104.15		£ 71.84
<i>Source: NH Hotel Group, Consolidated Annual Accounts 2022; Whitbread, Annual Report & Accounts 2022/23</i>			

Exhibit 6 shows financial and operating data drawn from the 2022 accounts of two large hotel chains, Spain's NH Hotel Group and Whitbread, a UK company. Both companies prepare their accounts according to IFRS. Both classify operating costs by nature, a common practice among hotel chains. The two companies have different business models, however. NH has 350 hotels, mostly in Spain, Germany, Italy and the Benelux countries. It shares eight brands with Minor Hotels, its Singapore-based parent. The brands range from mid-market to luxury establishments. By contrast, 840 of Whitbread's 891 hotels are in the UK and the balance in Germany. 'Premier Inn', a mid-market chain, is its principal brand in both countries. Whitbread also has a number of restaurant chains in the UK. To ensure high quality of service, it undertakes many services including distribution in-house: for example, over 99% of its room bookings flow through its website. NH, in common with many hotel chains, relies heavily on third-party agents such as Booking.com.

The differences in the two chains' business models have financial statement effects. Whitbread earns higher margins than NH: its 2022 operating margin is four percentage points higher than NH's. By carrying out services in-house, it captures the profit on them that would otherwise accrue to an outside supplier. However, it carries far more assets relative to revenue than NH which results

in a much lower net operating assets turnover in 2022 (0.33 against NH's 0.57). As a result, its (pre-tax) return on capital employed in 2022 is only 6.4%, two percentage points lower than NH's.⁷

Why is Whitbread so assets-heavy? Two reasons stand out from the numbers in exhibit 6. First, Whitbread's hotels are smaller than NH's. At the end of the 2022 financial year, the average hotel in its estate has 104 rooms while the average NH hotel is 50% larger, at 157 rooms. Large hotels enjoy economies of scales: they can generate more sales per unit cost of fixed assets.

Second, it generates less revenue per available hotel room. It is not surprising that, as a mid-market hotel, its average daily room rate is lower than that reported by NH which has higher price-point hotels in its estate. Whitbread's lower room rate enables it to fill more of its rooms on a consistent basis, as reflected in an occupancy rate of almost 83%, over 20 percentage points higher than NH's occupancy rate. However, the higher occupancy rate in 2022 is not enough to offset the £32 difference in room rates. As a result, its RevPAR (£59.45 in 2022) is 6% less than NH's (£63.41).⁸ (Note that RevPAR is the product of the average daily room rate and the occupancy rate.) In sum, Whitbread's low NOA turnover is largely the result of real estate and marketing policies – investment in mid-size hotels and promotion of one mid-market brand – made by management.⁹

Conclusion

In analysing a company's financial performance – over time and across firms in the same industry, investors look first at the company's profit margins and its gross margin, in particular. Where companies within an industry follow a similar business model, their net operating assets (NOA) turnover ratios are unlikely to differ markedly. Moreover, unless there are wide swings in revenues over the economic cycle, NOA turnover will be relatively constant during that period. Among the profit margin ratios (gross, operating, net) the investor can use in their analysis, gross margin has special appeal. It shows the core profit the business generates on its sales – at the check-out (retailer) or at the factory gate (manufacturer).

Investors may encounter problems when trying to calculate gross margin, however. First, a company may not disclose gross profit, a key constituent of the ratio. If a company classifies operating costs by nature, it will not disclose cost of sales and thus gross profit cannot be calculated. Second, gross profit numbers where available may not be comparable. Companies may define cost of sales differently. They may include other costs in addition to the production (or merchandise) costs of the goods sold. Although companies that apply IFRS are required to disclose, in the notes to the accounts, the inventories expensed in the period, a cost of sales number that is comparable across firms, many do not do so.

Investors are forced to use alternative measures of profitability if comparable gross profit numbers cannot be calculated. Their first choice is operating margin, a profit margin ratio that includes all operating costs in the numerator. However, if the companies being compared pursue different business models, investors should use return on capital employed (ROCE) in their analysis. ROCE is a broader profitability measure that captures both balance sheet and income statement effects of management's production and marketing decisions.

⁷ Both companies' ROCE is low. 2022 was a recovery year, after the losses sustained during the 2020-21 pandemic.

⁸ The euro-sterling conversion assumes the average euro-sterling exchange rate in 2022 is £0.8523:€1.

⁹ Other factors may also contribute to Whitbread's lower NOA turnover. The company owns (or leases) all the hotels it operates. By contrast, NH manages, on behalf of third-party owners, a small number of the hotels carrying its brand names. It generates fee income (included in its 'Revenue' number) but the assets of the managed hotels do not appear on its balance sheet.