Analyzing a Firm's Profitability: Exercises

Exercise I: Cherry AG

Facts

Below you find the financial statements of Cherry AG for 20X1.

Balance Sheet	**20X1**
Assets	
Non-current	
Intangibles	3,500
PPE	4,800
Investments in associates	500
Current	
Securities held for trading	1,800
Trade accounts receivables	2,500
Inventory	3,050
Cash and cash equivalents	700
TOTAL	16,850
Equity &Liabilities	
Common Stock	5,000
Retained Earnings	2,450
Total shareholders' equity	*7,450*
Non-current liabilities	
Provisions	670
Long-term debt	3,500
Current liabilities	
Accounts payables	3,750
Short-term debt	1,480
TOTAL	16,850

Income Statement	**20X1**
Sales	**25,000**
Cost of sales	(1,000)
Gross profit	**24,000**
R&D expense	(3,000)
SG&A expense	(2,700)
Other operating income	(200)
Other operating expense	(15,000)
Operating profit (EBIT)	**3,100**
Income from associates	100
Interest income	150
Interest expense	(600)
Profit before tax	**2,750**
Tax expense	(700)
Net income	**2,050**

All (associates) interest income is generated from securities held for trading. All of Cherry's cash holdings are of operating nature.

Task

a) Please, decompose Cherry's RoE using the Advanced DuPont model.
b) Assume that Cherry could take on a new loan at an effective rate of 15%. Assume that the loan would be invested into a project that earns the same rate on return as Cherry's current average operations, would you recommend that Cherry takes on the loan? Please explain briefly.

Exercise II: Two hospitality industry firms

The exhibits below provide you with the financial statements of BestDay Ltd. and SleepFast Inc. *(in million EUR)*.

Both Companies are active in the hospitality industry. They provide lodging and restaurant services in particular, but differ in target segments.

- BestDay Ltd. is a family-owned business, running a luxury hotel resort and offering high-class service and facilities for vacations.
- Compared to SleepFast Inc., BestDay Ltd. aims to ensure a holistic guest experience. They heavily invest in building the hotel brand, offer a variety of daytime activities and cooperate with many local service providers. In this regard, a few years ago BestDay acquired a smaller competitor with a well-established brand in an M&A transaction.
- By contrast, SleepFast Inc. does not need to invest much in advertising, because of its many attractive locations in touristic cities; they observe a steady stream of short-term bookings.
- SleepFast Inc. focuses on a younger clientele of low-budget travelers, staying on average one to two days. They rent most of their accommodations, which are centrally located in busy areas. SleepFast Inc.’s staff also relates to this life-style. Usually students and world-travelers are hired on a short-term contract to look after the rooms and organize bookings.
- BestDay Ltd.'s unique offering is its focus on its fine-dining restaurants, with high-quality regional products, excellent chefs and well-trained service staff. Rather than renting some of the facilities, BestDay Ltd. owns its site to ensure high-quality service in line with the business strategy.
- Most of BestDay Ltd. guests book their stay month in advance, which ensures the planning of the capacity utilization. Additionally, BestDay Ltd. won an exclusive contract with one major travel agency, securing several weeks of golf-tourists, which forms a big part of the yearly revenue and is billed every quarter. Contrarily, SleepFast Inc.’s revenue mainly stems from guests spontaneously looking for a bed booking on average one week in advance.

Tasks

a) Please calculate the following ratios for BestDay Ltd. and SleepFast Inc., respectively. Please explain how differences in the firms’ financial ratios plausibly reflect differences in their business models.
   - Gross profit margin
   - Personnel expenses/Sales
   - EBIT margin
   - PPE turnover
   - Days to collect receivables

b) Please decompose the RoE of BestDay Ltd. and SleepFast Inc. using the Advanced DuPont model.

c) Recently, the Covid-19 Crisis has hit the hospitality industry hard. Bookings had been canceled and touristic travel in most places is not possible. Which company would you expect to be more negatively affected by the developments? Please explain, making references to your financial ratio analyses from part a) and b).

d) Because of the increasing interest in golf-tourism, BestDay Ltd. is considering to open up an own golf course besides its hotel complex. BestDay Ltd. would fully finance the project using a bank loan. Under which conditions would you advise the company to pursue this project? Please discuss. In your answer, please make reference to the drivers of BestDay Ltd.'s ROE from part b).

Exhibits: BestDay Ltd.’s and SleepFast Inc.’s Financial Statements

Balance Sheet		
	BestDay Ltd.	**SleepFast Inc.**
Long Term Assets		
PP&E	7,600	1,140
Intangibles	2,000	
Current Assets		
Inventory	6,250	1,050
Receivables	570	50
Cash	980	1,500
Total assets	**17,400**	**3,740**
Equity	5,325	1,555
Retained earnings	1,250	735
Total equity	**6,575**	**2,290**
Long Term Liabilities		
Bank loan	5,875	1,140
Current Liabilities		
Payables	4,950	310
Total equity and liabilities	**17,400**	**3,740**

Income Statement		
	BestDay Ltd.	**SleepFast Inc.**
Sales	**5,835**	**1,679**
- cost of sales	(930)	(920)
Gross profit	**4,905**	**759**
- SG&A	(1,488)	(160)
- Personnel expenses	(1,975)	(185)
= EBIT	**1,443**	**414**
- net interest expense	(100)	(60)
= EBT	**1,343**	**354**
- tax expense	(174)	(78)
= Net Income	**1,169**	**276**

Exercise III – Advanced DuPont

Facts

You are provided with the following information about Company X (all monetary amounts in '000 €):

- Total equity: 8,450
- Net operating income before tax: 3,500
- Net operating income after tax: 2,722
- Net financing expense before tax: 350
- Return on net operating assets: 20%

Task

Please decompose Company X's RoE using the Advanced DuPont method. You may round your interim results to full numbers.