1. Company A constructs and trades mechanical equipment. Data in Table are extracted from the Income Statement (by Function) of the Company (published in March 2019 and related to the fiscal year 2018).

COMPANY A (2018)	
Revenues [k€]	25,000
Other Operating Income [k€]	1,000
Financial Income [k€]	30
Financial Interests [k€]	90
Cost of Sales [k€]	12,000
R&D Expenses [k€]	1,500
Marketing Expenses [k€]	2,000

On top of this, you know that Company A signed in January 2018 a 2 years contract with Company B, for Sales Distribution services. The cost amounts to 700 k€ for 2018 and they will be paid ex-post by the end of June 2019. On the base of the AVAILABLE data, it is TRUE that: ***(4 Points)***

A. Gross Profit = 13,000 k€; EBIT = 10,500 k€
B. Gross Profit = 13,000 k€; EBIT = 9,800 k€
C. Gross Profit = 14,000; EBIT = 9,740 k€
D. Gross Profit = 12,300; EBIT = 10,440 k€

Solution (data in k€)

Revenues	25,000
- Cost of Sales	12,000
GROSS PROFIT	**13,000**
- R&D Expenses	1,500
- Marketing Expenses	2,000
- Distribution Services	700
Other Operating Income	1,000
EBIT	**9,800**

2. You are trying to calculate the value of ROE of a Company Alpha for 2018, a company operating in the renewables industry, but you do not have access to the financial statements. You were able to gather just the following information:

- Total Assets = 150 mln €
- Total (Current and Non-Current) Liabilities = 70 mln €
- Asset Turnover Ratio (AT) = 2
- Corporate tax rate = 40%
- ROS (or "EBIT margin") = 10%

- Financial Incomes = 2 mln €
- Financial Expenses = 7 mln €

On the basis of these data, it is TRUE that: ***(4 Points)***

A. ROE (2018) = 18.75%
B. ROE (2018) = 12.5%
C. ROE (2018) = 7.5%
D. None of the previous answers is true

Solution:
Equity = 150 (total assets) – 70 (total liabilities) = 80 mln €
*Revenues = 150 (total assets) * 2 (asset turnover ratio) = 300 mln €*
*EBIT = 300 (Revenues) * 10% (ROS) = 30 mln €*
EBT = 30 (EBIT) + 2 (Financial Incomes) – 7 (Financial Expenses) = 25 €
*Net Profit = 25 (EBT) – [25 (EBT) * 0,4 (Effective Tax Rate)] = 15 €*
*ROE = (15 / 80) * 100% = 18.75%*

3. According to IFRS10, an investor (A) exerts control over an investee (B) if the following conditions are verified: ***(2 Points)***

A. A has the majority of the voting rights of B and relevant activities of B are directed through voting rights
B. A has power over B, A has rights over positive or negative returns of B and acts as an agent
C. A has power, A has rights over variable returns and acts as a principal
D. A has the majority of voting rights of B, relevant activities of B are directed through voting rights,and A has rights over positive or negative returns of B

4. Consider the following data about company ABC Ltd:

All data are in [k€]	**2018 (actual)**	**2019 (budgeted)**
Depreciation and Amortization	100	200
Account Receivables	75	100
Account Payables	100	50
Inventories	25	100
Repayment of Debt	-	1,300
Properties, Plants and Equipment	1,000	2,000
EBIT	2,500	3,000
Financial Expenses	200	200

The corporate tax rate is 30%. The budgeted Free Cash Flow to Firm and Free Cash Flow to Equity for 2019 are respectively 950k€ and -490k€.

How would FCFF and FCFE change if the company decided to factor (with recourse) 50% of the account receivables budgeted for 2019 with a commission of 20%? ***(4 Points)***

A. FCFF and FCFE would be respectively 1,000 k€ and -450 k€
B. FCFF and FCFE would be respectively 993 k€ and -447 k€
C. FCFF and FCFE would be respectively 1028 k€ and -412 k€
D. FCFF and FCFE would be respectively 993 k€ and -490 k€

Solution

		[K€]
	EBIT	3,000
+	Depreciation and Amortization	200
-	Delta Net working capital	150
-	Delta CapEx	1,200
-	Taxes (EBIT)	900
	FCFF	**950**
-	Net Financial Expenses	140
-	Delta Debt	1300
	FCFE	**-490**

With the factoring:

EBIT = 3,000 – (0,5*100) * 0,2 = 2,990 k€
Taxes (EBIT) = 2,990 * 0,3 = 897 k€
Delta RECEIVABLES = 50 – 75 = -25 k€
Delta NWC = -25 + 75 – (-50) = 100 k€

	EBIT	2,990
+	Depreciation and Amortization	200
-	Delta Net working capital	100
-	Delta CapEx	1,200
-	Taxes (EBIT)	897
	FCFF	**993**
-	Net Financial Expenses	140
-	Delta Debt	1300
	FCFE	**-447**

5. The equity value of a company is 256,780 €. The company was able to reach such a value due to a boost in revenues (historical growth rate 5.6%), operating costs for 307,440€) and a perfect management of receivables, inventories and payables so that the NWC is null over years, operating in a country where tax rate is stable at 25%. Further, with no debts with banks and a bond issued for a value of 132,000 €, the company shines for its 56,720 € of cash. Finally, the policy of the entrepreneur has always been (and will continue to be) to have no tangible/intangible assets but to rent any long-term asset which might be useful.

Considering a WACC of 6% and a cost of equity of 8% constant over an infinite time horizon, which of the following alternatives is correct? ***(4 points)***

A. The enterprise value of the company is 181,500€
B. The EV of the company is 332,060€
C. (Financial) debts are null
D. There are no sufficient data to calculate CAPEX

6. Considering the previous exercise, find a proper solution for the company to improve BOTH the enterprise and the equity value: ***(2 points)***

A. Opt for a capital increase
B. Ask for a loan
C. Opt for factoring
D. Abandon the *just in time* policy

7. Productivity indicators: ***(2 points)***

A. are always referred to one production factor (ex: labour)
B. are sometimes calculated as a ratio between financial figures
C. are always externally oriented
D. are always calculated as a ratio between non-financial figures

8. The financial consultant is working on the initial public offering for a successful company in the chemical industry - Lieber. The company is operating on the emerging market for the last 5 years. The growth of company during the last year exceeded 22%. The risks diminished after the company returned the loan of 100 K€ and got B+ rating. The tax rate of the year is 30%.

Extract from Lieber balance sheet and income statement

Lieber - Data 31 Dec. 2018		**€**
Balance Sheet	Cash & Cash equivalents	20,000
	Long term business loan	150,000
	Short term loans	50,000
Income Statement	Sales	650,000
	EBITDA	350,000
	D&A	65,000

Information about comparable companies

Company	**A**	**B**	**C**	**D**	**E**	**F**
Industry	Chemicals	Chemicals	Drugs	Chemicals	Chemicals	Healthcare
Risk	A-	C	B+	B+	B+	B+
Growth rate	23%	15%	24%	22%	10%	25%
Cash	40 K€	10 K€	25 K€	15 K€	80 K€	100 K€
EBIT	600 K€	600 K€	800 K€	550 K€	500 K€	700 K€
E	300 K€	270 K€	350 K€	250 K€	175 K€	145 K€

P	730 K€	700 K€	820 K€	820 K€	450 K€	800 K€

Choose best 3 comparable companies and calculate Lieber's price per share knowing that total number of shares to be issues is 100 K and Net Earnings are equal to 199,5 k€.
(4 points)

A. Around 5,36 € per share
B. around 17,48 € per share
C. around 5,52 € per share
D. it is not possible to calculate price per share with the available data

Solution

Company	***A***	***B***	***C***	***D***	***E***	***F***
Industry	*Chemicals*	*Chemicals*	*Drugs*	*Chemicals*	*Chemicals*	*Healthcare*
Risk	*A-*	*C*	*B+*	*B+*	*B+*	*B+*
Growth rate	*23%*	*15%*	*24%*	*22%*	*10%*	*25%*
Cash	*40 K€*	*10 K€*	*25 K€*	*15K€*	*80 K€*	*100 K€*
EBIT	*600 K€*	*600 K€*	*800 K€*	*550 K€*	*500 K€*	*700 K€*
E	*300 K€*	*270 K€*	*350 K€*	*250 K€*	*175 K€*	*145 K€*
P	*730 K€*	*700 K€*	*820 K€*	*820 K€*	*450 K€*	*800 K€*

P/E = ((730 / 300) + (820 / 350) + (820 / 250))/ 3 = 2,69
P = E(P/E) = 199,5 * 2, 69 = 535,737 K€*
Price per share = 535,737 K€ / 100.000 = 5,36 € per share

9. Market-based transfer pricing is considered optimal under many circumstances, but:
(2 Points)

A. When there are short-run fluctuations in the market prices, this may lead to suboptimal long-run decisions for the company
B. A great deal of management effort is wasted in negotiating the price with market operators
C. Since market prices are available also to competitors, there is a privacy issue
D. The supplier division has not idle capacity, and this may lead to a suboptimal behavior

10. Which accounting-based indicators are typically used at the operational level for reporting purposes? ***(2 Points)***

A. ROE and EVA
B. EBITDA/EBIT of the responsibility centers
C. Cost and revenues that responsibility centers can be accountable for
D. None, at the operational level only Value Proxies are considered