**1. Company A works in the premium mobility sector: it designs, manufactures and sells worldwide luxury cars, while also managing and selling mobility services.**

**You have access to the following data from the last Annual Report**

*Table 1 Company A 2018*

| **Company A (2018)<br>Data in mln €** | |
|---|---|
| Other operating income | 600 |
| Other operating expenses | 900 |
| Cost of Goods Sold | 70,000 |
| Change in trade receivables (2018-2017) | 90 |
| Change in trade payables (2018-2017) | -700 |
| Change in inventories (2018-2017) | 600 |
| Selling and General Administrative Expenses | 10,000 |
| D&A of other tangible, intangible and investment assets | 5,000 |
| Financial expenses | 500 |
| Financial incomes | 400 |
| Income Taxes | 3,000 |
| EBT | 10,000 |
| Net Profit | 7,000 |

**On the base of the AVAILABLE data, it is TRUE that:** ***(4 Points)***

A. Gross Profit = 24,010 k€; EBIT = 10,100 k€
B. Gross Profit = 20,200 k€; EBIT = 9,900 k€
C. Revenues = 90,400 k€; Gross profit = 20,400 k€
D. Revenues = 94,010; Gross Profit = 25,400 k€

*Solution (data in k€)*
*Based on the available data, EBIT and Gross Profit can be recnstructed starting from Net Profit.*
*Financial Position = 400 mln€ - 500 mln € = - 100 mln €*
*EBIT = EBT – Financial position = 10,000 mln€ + 100 mln€ = 10,100 mln€*
*Gross Profit = EBIT + Selling and General Administrative Expenses + Other operating Expenses – Other Operating Income = 10,100 mln€ + 10,000 mln€ +900 mln €- 600 mln € = 20,400 mln €*
*Revenues = Gross Profit + Cost of sales = 20,400 mln € + 70,000 mln € = 90,400 mln €*

2. **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 |
| 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€. The budgeted Capex for 2019 is 1,200k€, including 100k€ related to a new equipment bearing a depreciation of 10k€.**

**How would FCFF and FCFE change if the company decided to rent the new equipment instead of buying it? Consider that Company ABC Ltd would pay a rent of 20k€ per year. Assume there are no additional costs.** ***(4 Points)***

A. FCFF would be 1,033 k€
B. FCFF would be 1,043 k€
C. FCFF would be 1,053 k€
D. None of the above

*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 rent:

EBIT = 3,000 + 10 – 20 = 2,990 k€

Taxes (EBIT) = 2,990 * 0,3 = 897 k€

| | | |
|---|---|---|
| | EBIT | 2,990 |
| + | Depreciation and Amortization | 190 = 200-10 |
| - | Delta Net working capital | 150 |
| - | Delta CapEx | 1,090 = 1,200 – 100 -10 |
| - | Taxes (EBIT) | 897 |
| | **FCFF** | **1,043** |

**3. Considering a manufacturing company, which of the following items of costs are included in the Manufacturing Costs Budget?** ***(2 Points)***

A. Selling and marketing expenses
B. Administrative expenses (Administration, Finance and Control)
C. Research expenses
D. None of the above

**4. The CEO of Company ALFA extracted the following data from 2018 financial statements:**

- **EBIT = 120,000 €;**
- **TOTAL LIABILITIES = 1,200,000 €;**
- **EQUITY = 400,000 €;**
- **ROE = 3.5%;**
- **s = 0,8.**

**The CEO is satisfied of the results achieved, because ROA was expected = 5,5%.**

**What was the expected value of ROE in case of ROA = 5,5%, being all other values in the leverage formula confirmed?** ***(4 Points)***

A. – 2,9 %
B. – 4,5%
C. + 3,5%
D. – 10,9%

Solution

ROA =120/ (1200+400)
ROE = [ROA + D/E * (ROA - r)] *s
0,035 = [0,075 + 1200/400 * (0,075 - r)] *0,8
- r = (0.035/0.8 - 0.075 - 3*0.075) / 3
- r = -0,085416667
Expected ROA = 0,055
ROE = [0,055 + 1200/400 * (0,055 - r)] *0,8 = -2,9%

**5. The US-based startup Cashme is looking for new funds and is preparing its pitch for institutional investors. Such investors may support the internationalization of the company, which was not part of the strategy in these years. As part of the presentation, they have to estimate the cost of capital. Based on all the data reported, which of the alternatives is the WACC of Cashme (use always two digits in computations)?** ***(4 Points)***

| Comparable companies | Levered Beta | Debt [M$] | Market Cap [M$] | Corporate Tax rate |
|---|---|---|---|---|
| CompCo 1 | 1.40 | 800 | 350 | 32% |
| CompCo 2 | 1.50 | 950 | 490 | 36% |
| CompCo 3 | 1.55 | 900 | 330 | 33% |
| CompCo 4 | 1.30 | 830 | 450 | 35% |

**Cashme Balance Sheet (data in k$)**

| | | | |
|---|---|---|---|
| Net Working Capital | 20.0 | Bond | 70.2 |
| Fixed Assets | 85.5 | Equity | 35.3 |

**Cashme Profit and Loss (data in k$) – almost constant over years**

| | |
|---|---|
| Sales | 18 |
| OpEx | -8.3 |
| EBITDA | 9.7 |
| Depreciation and amortization | -2.5 |
| EBIT | 7.2 |
| Financial Expenses | -3.5 |
| EBT | 3.7 |
| Taxes | -1.0 |
| Earnings | 2.7 |

**Market data**

| **Indexes** | | **Risk free** | |
|---|---|---|---|
| DAX (German) | 5.0% | German | 0.1% |
| EUROSTOXX | 6.2% | Italian | 1.0% |
| DOW JONES | 7.0% | US | 0.8% |

A. No available data for the cost of the debt
B. 4.84%
C. 5.70%
D. 9.79%

Solution:
Beta unlevered (Comp Co 1, 2, 3, 4) = 0.55 / 0.67 / 0.55 / 0.59 -> average: 0.59
Beta levered = 0.59*(1+(1-27%)*70.2/35.3) =1.45
Ke = 0.8%+1.45*(7%-0.8%)=9.79%
WACC = =5.70%

**6. Institutional investors during the pitch pointed out that Cashme has some problems in managing the liquidity. The answer of the CEO and the CFO was mainly related to the fact that they were wrong, as CAPEX are null and receivables, payables and inventories days are stable over years.**

**However, the bond is at maturity and it has to be repaid in full to bondholders.**

**Which of the following could be a proper answer to investors?** ***(2 Points)***

A. "The FCFFs of the company will be negative for the year, but thanks to the internalization plan we will suddenly solve the situation".
B. "The FCFEs of the company will be negative for the year, but thanks to the internalization plan we will do investments in fixed assets and suddenly solve the situation".
C. The FCFFs of the company will be negative for the year, but we are going to issue a new bond to replace the current one".
D. None of the above answers is correct

**7. The introduction of a transfer pricing systems based on full standard cost plus mark up:** ***(2 Points)***

A. Can have an effect of the taxes paid by the selling unit, when the selling and the buying units are two different legal entities.
B. Has always a fiscal effect on both the selling and the buying units.
C. Can have a fiscal effect on the buying unit, even if the selling and the buying units are not two different legal entities.
D. Does not have a fiscal effect.

**8. What is true regarding a Balance Scorecard?** ***(2 Points)***

A. When designing a BSC, it is important to keep the exact balance across all the four perspectives, which means that the number of indicators in each perspectives must be the same.
B. The financial perspective must include, beside traditional accounting measures, indicators on the effectiveness of the general marketing strategy of short term orientation.
C. The internal perspective influences the learning perspective; hence the design must take into account the causal relationship between the two.
D. The starting point for designing a BSC is the identification and operationalization of the strategy

**9. Piadina is a privately owned business that owns a number of small restaurants. The owner of the firm is considering an offer to sell the firm and has asked for your help in evaluating the offer. The financial statements of the firm for the most recent year is reported below:**

| **Income statement (31.12.2018)** | **$** |
|---|---|
| *Revenues* | 5,000,000 |
| *Operating expenses excluding DA* | 3,500,000 |
| *Interest expenses* | 300,000 |

**The owner provided you some additional information:**

- **she did not pay herself a salary last year but believes that $ 200,000 would be a reasonable salary for a general manager**
- **closest comparable competitors on the market have the following figures**

| **Competitors (31.12.2018)** | **Competitor 1** | **Competitor 2** |
|---|---|---|
| **EV [$]** | 27,400,000 | 18,300,000 |
| **EBITDA [$]** | 4,000,000 | 3,000,000 |
| **# restaurants** | 30 | 17 |

**You have additionally found information about restaurant businesses and their performance in the last two years.**

| ***Industry Name*** | ***# firms*** | **2017** | | **2018** | |
|---|---|---|---|---|---|
| | | **EV/EBITDA** | **EV/EBIT** | **EV/EBITDA** | **EV/EBIT** |
| Services | 48 | 7.86 | 12.66 | 7.92 | 14.56 |
| Restaurant/Dining: | | | | | |
| Medium | 78 | 13.79 | 24.41 | 12.07 | 22.53 |
| Big | 14 | 10.57 | 27.65 | 13.45 | 29.09 |
| Grocery & Food | 52 | 5.20 | 7.41 | 6.01 | 8.53 |

**What are you completely confident to recommend to the owner of Piadina?** ***(4 Points)***

A. Do not sell the company if the price of the offer is lower than 9.7 $m
B. Sell the company if the EV of the offer is at least 8.4 $m
C. Sell the company if the price of the offer is at least 8.4 $m
D. Wait for any decision, being 2018 industry multiples higher than 2017

***Solution***

EV/EBITDA comp1 = 6.85
EV/EBITDA comp2 = 6.1
Av EV/EBITDA = (6.85+6.1)/2 = 6.475
EBITDA Piadina = 1.3m (=5-3.5-0.2)
EV Piadina = 6.475 * 1.3 = 8.4 m$

A. The value here reported is higher than the minimum based on comparable companies, thus can be considered fair and the owner should sell
B. ok
C. we have no information about the financial structure and data allow only asset side valuation. One cannot be confident with “price”, can be under/over estimated
D. 2018 industry multiples are not always higher than 2017 (restaurant – medium) and this indication is not per se an indicator of higher valuations in the future (e.g. the ebitda of the company can decrease so the value)

**10. When presenting a consolidated statement of financial position, the non-controlling interest is:** ***(2 points)***

A. presented separately within the non-current liability section;
B. presented as a separate component of total assets and total liabilities;
C. presented separately within the equity section;
D. shown as a separate portion of net assets.