ACCOUNTING, FINANCE AND CONTROL

MULTIPLE CHOICE TEST

Call September 5th, 2023

QUESTION 1A – (3 POINTS)

You have available the following data about the Sunshine Fashion company, an Italian fashion brand specialized in the production and commercialization of clothes and accessories for women. You have the following data, taken from the 2022 annual report:

- Cost of Goods Sold = 60,000 k€
- EBT = 15,000 k€
- Financial expenses = 5,000 k€
- Financial revenues = 4,000 k€
- Inventories of raw materials (01/01/2022) = 1,200 k€
- Inventories of raw materials (31/12/2022) = 1,800 k€
- Net profit = 10,000 k€
- Other operating income = 2,500 k€
- Selling, Marketing, Administrative, and General Expenses = 10,000 k€
- Trade receivables (01/01/2022) = 5,000 k€
- Trade receivables (31/12/2022) = 30,000 k€

Knowing that there are no other financial expenses and financial incomes other than those reported above, based on the information available, what is the EBIT MARGIN of the company in the year 2022?

A. Around 21.77%
B. Around 17.18%
C. Around 19.16%
D. None of the other answers

SOLUTION

Answer C is correct.

To compute the EBIT Margin, the Revenues and the EBIT are needed.
EBIT is computed from the inversed formula of EBT.
EBT = EBIT – Net Financial Expenses → EBIT = EBT + Net financial expenses
Net financial expenses = financial expenses - financial revenues = 5,000 – 4,000 = 1,000 k€

EBIT = EBT + Net financial expenses = 15,000 € + 1,000 € = 16,000 k€

To compute Revenues, the format of the Income Statement by Destination/Function must be used. With the inversed formula, Revenues are equal to:

EBIT = Revenues – COGS – period costs + other operating income
➔ Revenues = EBIT + COGS + period costs – other operating income
= 16,000 + 60,000 + 10,000 – 2,500 = 83,500 k€

Therefore, the EBIT MARGIN = EBIT / Revenues = 16,000 k€ / 83,500 k€ = 19.16%

Answer A is wrong because it fails to include period costs (i.e., Selling, Marketing, Administrative, and General Expenses) in the calculation of Gross Profit.

➔ Revenues = EBIT + COGS– other operating income

= 16,000 + 60,000 – 2,500 = 73,500 k€

Therefore, the EBIT MARGIN = EBIT / Revenues = 16,000 k€ / 73,500 k€ = 21.77% ≠ 19.16%

Answer B is wrong because the sign in the formula of EBIT is wrong.

EBIT = EBT + Net financial expenses = 15,000 k€ - 1,000 k€ = 14,000 k€

EBIT = Revenues – COGS – period costs + other operating income

➔ Revenues = EBIT + COGS + period costs – other operating income

= 14,000 + 60,000 + 10,000 – 2,500 = 81,500 k€

Therefore, the EBIT MARGIN = EBIT / Revenues = 14,000 k€ / 81,500 k€ = 17.18% ≠ 19.16%

Answer D is wrong because answer C is correct.

QUESTION 1B – (3 POINTS)

Regarding the Sunshine Fashion company, you have these additional data about the year 2022:

- Consumption of raw materials = 40,000 k€
- Current assets = 36,000 k€
- Current bank loans = 8,200 k€
- Current bonds = 2,700 k€
- Current mortgage loans = 2,000 k€
- Current ratio = 1.25
- Non-current bank loans = 10,000 k€
- Non-current bonds = 5,500 k€
- Non-current mortgage loans = 1,800 k€
- Other current financial liabilities = 500 k€
- Trade payables are not known but are NOT negligible. Trade payables are the only current non-financial liabilities. No other payables exist except for those with suppliers of raw materials.
- VAT = 0%

Based on these data (and those provided in the previous exercise), how many days are needed on average by the Sunshine Fashion company to collect payables? In the calculation, consider 365 days per year and that payables refer only to purchases of raw materials.

A. Around 139 days
B. Around 159 days
C. Around 91 days
D. Around 141 days

SOLUTION

Letter A is correct. The DPO is computed as Trade Payables / Purchases of raw materials*365 days.

To compute the numerator:
Current ratio = current assets / current liabilities → current liabilities = 36,000 k€ / 1.25 = 28,800 k€.
Current liabilities = current financial liabilities + current non-financial liabilities, where trade payables are the only current non-financial liabilities.

- Current financial liabilities = Current bank loans + Current bonds + Current mortgage loans + other current financial liabilities = 8,200 + 2,700 + 2,000 + 500 = 13,400 k€.
- Trade payables = Current liabilities – Current financial liabilities = 28,800 k€ - 13,400 k€ = 15,400 k€

To compute the denominator:
Purchases of raw materials and components: Consumption of raw materials + Variation of inventories of raw materials and components (f-i).
Purchases of raw materials = 40,000 + 1,800 – 1,200 = 40,600 k€

DPO = (Trade payables/Purchased of raw materials) * 365= (15400 €/ 40,600 €) * 365 = 138.45 days → The DPO is around 139 days.

Letter B is incorrect because it fails to include current mortgage loans in the calculation of trade payables. In addition, it considers only the Consumption of raw materials at the denominator of DPO.

Current financial liabilities = Current bank loans + Current bonds + other current financial liabilities = 8,200 + 2,700 + 500 = 11,400 k€.
Trade payables = 28,800 k€ - 11,400 k€= 17,400 k€.
DPO = (Trade payables/Consumption of raw materials) *365 = (17,400 k€/40,000k€)*365= 158.775 days → Around 159 days.

Letter C is wrong. It considers the non-current bonds in the calculation of trade payables. In addition, it considers only the Consumption of raw materials at the denominator of DPO.

Current financial liabilities = Current bank loans + Current bonds + Current mortgage loans + other current financial liabilities + non-current bonds = 8,200 + 2,700 + 2,000 + 500 + 5,500 = 18,900 k€.
Trade payables = Current liabilities – Current financial liabilities = 28,800 - 18,900 = 9,900 k€
DPO = (Trade payables/ Consumption of raw materials) *365= (9,900 k€/40,000 k€)*365 = 90.33 days → Around 91 days.

Letter D is wrong. It considers only the Consumption of raw materials at the denominator of DPO, without the adjustment of inventories.

- Trade payables = 15,400 k€

Consumption of raw materials = 40,000 k€
DPO = (trade payables / consumption of raw materials) * 365 = (15,400 k€ / 40,000 k€) *365 = 140.525 days → Around 141 days

QUESTION 2A – (3 POINTS)

It is July 2023. You are required to estimate the cost of equity (ke) of Coco&Co company, an unlisted Italian company that operates mainly in Italy, using the CAPM approach. The following data about the Coco&Co company for the year 2023 are available:

- D (financial liabilities) = 300 M€
- Equity = 150 M€
- Corporate tax rate = 40%

You have also the following information about three listed companies that have been selected after checking the relevant parameters as comparable companies:

Company name	Beta levered	D (financial liabilities)	Equity	Corporate tax rate
Ru	1.3	400 M€	140 M€	35%
Getto	1	200 M€	80 M€	40%
Vento	0.9	240 M€	144 M€	40%

You know also the following 10-year Government Bond Yields:

- Germany: 0.10%
- Italy: 0.42%
- United States: 0.31%

Finally, there are available the following market indexes:

- FTSE MIB: 6.1%
- EUROSTOXX 50: 8.0%
- NASDAQ: 4.4%

Based on the information available, what is the value of ke for Coco&Co for the year 2023?

A. About 5.93%
B. About 7.66%
C. About 5.84%
D. None of the previous answers is correct

SOLUTION

	bl	D	E	tc	bu
Ru SPA	1,3	400	140	35%	0,455
Ghetto SPA	1	200	80	40%	0,4
Vento SPA	0,9	240	144	40%	0,45
				average	0,435
	bu avg	D	E	tc	bl
Coco&Co	0,435	300	150	40%	0,957

Ke = rf + bl * (rm – rf) = 0.1% + 0.957* (6.1% – 0.1%) = 5.84%

Wrong solutions:
A The tax shield is not included in the calculation of the ke
B The wrong rm has been selected for the calculation of ke
D This answer is false because answer C is correct

QUESTION 2B – (3 POINTS)

Still concerning the Coco&Co company, you have the following estimations for the year 2024:

- Delta receivables (i-f) = 1,200 k€
- Delta inventories (i-f) = - 2,000 k€
- Delta payables (f-i) = 4,500 k€
- D&A = 1,850 k€
- FCFF = 2,140 k€
- Corporate tax rate = 40%

You also know that in 2024:

- The company will acquire on 01/01/2024 a new equipment for 20,000 k€, which will have an expected fiscal life of 20 years. Half of the costs will be paid in 2024 and the remaining part will be paid in 2026.
- In 31/12/2024, the company will purchase a new patent for 3,000 k€; while 2,000k€ will be paid the same day, 1,000 k€ will be paid in 2025.
- The company will dispose a plant, generating a positive cash inflow of 7,000 k€ fully received in 2024.

What is the expected EBIT for the year 2024?

A. 11,650 k€
B. -5,350 k€
C. 2,650 k€
D. None of the previous answers is correct

SOLUTION
Delta NOWC = delta receivables (f-i) + delta inventories (f-i) – delta payables (f-i) = -3,700 k€
Delta Capex = Investments – disposals = (20,000 k€/2) + 2,000 k€ - 7,000 k€ = 5,000 k€
EBIT = (FCFF + delta Capex + delta NWC – D&A) / (1-tc) = 2,650 k€
Wrong solutions:
A wrongly computed Capex
B wrongly computed NWC
D is false since C is correct

QUESTION 3A – (3 POINTS)

KL is an unlisted company that produces tools for machining processes. The company was established in 1978 and is in its maturity stage. In the following, you can find some data about KL related to the last financial report (year 2022):

- FCFE = + 46 M€
- EBIT = +68 M€
- Depreciation & Amortisation (D&A) = 16 M€

- D/E (where D = Financial Liabilities) = 1.45
- Revenues = 250 M€
- Growth rate (revenues) year on year: + 4.2%
- Book Value of Equity = 95 M€

Recently, a financial analyst estimated the Enterprise Value (EV) of the company at 456.40 M€. To get to this result, the analyst started collecting some financial data about the following 6 companies (data refer to the year 2022):

	A	B	C	D	E	F
Revenues (M€)	200	80	180	500	240	220
EBITDA (M€)	+74	+15	+60	+180	+100	+90
D/E	1.5	1.8	1.3	1.2	1.4	2.5
Net Profit (M€)	+32	+8	+25	+65	+35	+ 42
Growth rate	+5.4%	+16%	+4%	-0.20%	+6%	+7.20%
EV (M€)	407.00	105.00	312.00	630.00	560.00	715.00

Based on the above information, what was the set of comparable companies that the financial analyst used to estimate the EV of KL?

A. A, C, E, and F
B. A, B, C, and E
C. A, C, and E
D. A, D, and E

SOLUTION
The only way to estimate EV is by using the asset-side approach (there isn't enough data to use the equity-side approach). Theoretically speaking in this case three multiples could be used, based respectively on: 1) Revenues; 2) EBIT; 3) EBITDA. The first one is not suitable, since the company is a well-established company operating in a manufacturing industry. As for the second, the value of EBIT of comparables is not available, so it cannot be used, either. So the correct multiple is the one based on EBITDA.
The value of the multiple for KL is:
EV/EBITDA = 456.40/(68+16) = 456.40/84 = 5.43
Looking at possible comparables, looking at parameters such as dimension (proxy: revenues), growth rate, and risk (proxy: D/E), the most similar companies (to KL) are A, C, and E. If we compute the value of the multiple of EBITDA of these three companies we get respectively 5.5, 5.2, and 5.6 → average value: 5.43. So, the correct answer is C.
Wrong solutions:
A includes company F, which is characterized by a significantly higher value of D/E
B includes company B, which is characterized by a significantly higher value of the growth rate
D includes company D instead of company C. But company D is characterized by a much larger size, and by a negative growth rate

QUESTION 3B – (3 POINTS)

Considering all the data made available about KL in the previous exercise, let's suppose now to estimate EV using an Equity-side multiple. You have the following additional data available concerning the set of comparable companies:

	A	B	C	D	E	F
Market Cap (M€)	320.00	96.00	236.25	455.00	343.00	336

You also know the following information about KL:

- Financial Liabilities are 75% of Total Liabilities
- Cash and Cash Equivalents = 12.79 M€
- Net Profit = 36.00 M€

What would be, in this case, the value of EV of KL?

A. 475.96 M€
B. 460.21 M€
C. 521.88 M€
D. None of the other answers

SOLUTION
The only way to estimate the Equity Value of KL is by using a multiple of Net Profit. There is no information about Book Value or FCFE for the comparable companies.
The average value of the multiple of Net Profit for comparables (A, C, and E) is 9.75. Applying this value to the Net Profit of KL you get 351.00 M€.
To compute EV we need also the value of the NFP for KL. Starting from the value of D/E it is possible to compute the value of D (= Financial Liab) = 1.45 * E (= Book Value, see text ex 3a) = 137.75 M€.
Then NFP = FL – Cash & Cash Equivalents = 137.75 – 12.79 = 124.96 M€.
So, EV = E + NFP = 351 + 124.96 = 475.96 M€
The correct answer is the letter A.
Wrong answers:
B) wrong set of comparables (it also includes F)
C) NFP is computed using Total Liab (instead of Fin Liab)
D) wrong because A is correct.

QUESTION 4 – (2 POINTS)
The Bye company is a multinational company made up of 2 Business Units: Alfa and Beta. Alfa produces and markets household cleaners by exploiting the efficiency of the production plants and competing on economies of scale. Beta offers specialist consultancy services on how to reduce the environmental impact of chemical production by exploiting the distinctive skills of its consultants. The Chief Financial Officer (CFO) of Bye is interested in evaluating the performance of the two Business Units (BUs). Which of the following statements is CORRECT?

A. The CFO should evaluate the performance of the two BUs using as the main performance indicator their total costs, including the cost of the Chief Executive Officer (CEO).
B. The CFO should evaluate the performance of the two BUs using the EBIT margin of the two Bus without allocating the cost of the CEO because the calculation of the EBIT margin only considers the product costs and not the period costs
C. The CFO should evaluate the performance of the two BUs using as a main performance indicator the total operating costs of the two BUs, without including the cost of the CEO because the BUs are not directly responsible for her/his cost
D. None of the other answers

SOLUTION

Answer A is wrong because BUs cannot be properly evaluated based on their cost: the performance of a BU is typically assessed using accounting-based indicators built on EBIT as they can control both revenues and costs.
Answer B is wrong because the calculation of EBIT requires consideration of both product costs and period costs (refer to the income statement by destination/function).
Answer C is wrong because BUs cannot be properly evaluated based on just their operating costs: the performance of a BU is typically assessed using accounting-based indicators built on EBIT as they can control both revenues and costs.
Answer D is correct

QUESTION 5 – (2 POINTS)

The Managing Board of a company needs different indicators to govern the company. Which of the following statements is CORRECT?

A. The Managing Board should prefer non-financial indicators because they offer timely (and early) signals that allow the company to react to external changes
B. The Managing Board should use value-based indicators because they are more easily measurable and avoid measurement ambiguity compared to non-financial indicators.
C. The Managing Board should prioritize accounting-based indicators since they are directly calculated from financial statements, which are evaluated by shareholders and analysts.
D. None of the other answers is correct

SOLUTION
The Managing Board should prefer indicators that maximize the long-term orientation and completeness of the factors considered. Non-financial indicators are long-term oriented, but they don't offer a complete picture, and therefore the answer A is wrong. Accounting-based indicators are short-term oriented and not comprehensive, and therefore the answer C is wrong. The value-based indicators are long-term oriented and comprehensive, but their measurability is low, which is why the answer B is wrong. The other answers are wrong, the correct answer is D.

QUESTION 6 – (2 POINTS)

Delta company has two Business Units (BUs): A and B. BU A produces a component that is used by BU B in the assembly of product XY. The transfer price for the component is currently set at 100 € per unit. BU A incurs a full product cost of 80 € per unit to manufacture this component. BU B sells product XY to the external market at 300 € per unit. Which of the following statements is CORRECT?

A. The gross profit per unit for BU B for product XY is equal to 200 € per unit
B. If BU A would reduce the transfer price for the component to 90 € per unit, all other data being equal, the EBIT of BU A will increase by 10 € per unit times the number of components sold to BU B
C. If BU A would increase the transfer price for the component to 110 € per unit, all other data being equal, the EBIT of Company Delta will increase by 10 € per unit times the number of components sold by BU A to BU B
D. None of the other answers is correct

SOLUTION

A. It is WRONG because data about all other product costs incurred by BU B to manufacture product XY are not disclosed in the text and the full product cost per unit of product XY is surely higher than the single cost for the component sold by BU A
B. It is WRONG because the transfer price is a revenue for BU A and if the transfer price is reduced, other data being equal, the EBIT of Division A will decrease
C. It is WRONG because the transfer price does not impact the EBIT of the Delta company, the higher revenue for BU A would be compensated by the higher cost for BU B, with a null effect once consolidated
D. CORRECT because none of the other answers is correct

QUESTION 7 – (2 POINTS)

Which of the following statements about value drivers is CORRECT?

A. The mathematical formula used to measure value drivers (e.g., environmental friendliness, customer satisfaction, etc.) might differ for companies competing in the same business area.
B. Value drivers are typically based on accounting data that allow to determine cash inflows and cash outflows over time.
C. Value drivers cannot be used for evaluating the performance of a cost center because they capture mainly revenue generation.
D. None of the other answers is correct.

SOLUTION

A. It is CORRECT, because value drivers are earlier signals of value generation, and even if two companies compete in the same business area, they might decide independently what is the most correct formula to measure value drivers to better inform decision-makers inside the company.
B. This answer is WRONG because a large part of value drivers is made by non-financial indicators whose calculation is not based on accounting data (e.g., customer satisfaction, environmental protection, time to market, etc.).
C. It is WRONG because value drivers can indeed be used to evaluate the performance of cost centers.
D. It is WRONG because B is correct

QUESTION 8 – (2 POINTS)

Which of the following statements about the difference between bank loans and bonds is CORRECT?

A. While bonds are issued exclusively by Governments, bank loans are typically granted by financial institutions.
B. While bonds have a specific maturity date, bank loans do not have a specific maturity date
C. While bonds have exclusively fixed interest rates, bank loans can have either fixed or floating interest rates
D. None of the other answers is correct

SOLUTION

A. Answer A is WRONG because bonds are issued by either Governments or corporations
B. Answer B is WRONG because either bonds or bank loans have a fixed maturity that is contractually defined

C. Answer C is WRONG because both bonds and bank loans can have either fixed or floating interest rates
D. Answer D is CORRECT because none of the other answers is correct

QUESTION 9 – (2 POINTS)

With reference to the consolidation of financial statements of controlled companies, which of the following statements is CORRECT?

A. To be qualified as a “Subsidiary”, the “Parent” must hold 100% of its equity shares
B. The consolidation process of the Financial Statements of two companies merely consists of the line-by-line summing up of their Financial Statements
C. The consolidated Balance Sheet excludes those Assets that are not owned by the Group
D. None of the other answers is correct

SOLUTION

A is wrong since a company could be qualified as a subsidiary even when the parent company holds less than 100% of its equity shares
B is wrong since there are many other steps before the line-by-line summing up of the items of the financial statements (for example, the pre-consolidation adjustments)
C is wrong since all the assets are reported
D is correct