

ACCOUNTING, FINANCE AND CONTROL 2018-2019

QUICK EXERCISES –

RATIO ANALYSIS & ACCOUNTING BASED INDICATORS

For each question, select the correct answer (only 1 answer is correct)

1. Accounting-based indicators:
 - ☐ Are always in the form of ratio indicators;
 - ☐ Can be indicators about time, quality or productivity;
 - ☒ **Are based on financial statements;**
 - ☐ None of the above.

2. Accounting-based indicators:
 - ☐ Trace specific responsibilities well at all levels in the organizations (even for operational units);
 - ☐ Have a good measurability and long-term orientation;
 - ☒ **Tend to favour short-term oriented actions if compared to Enterprise Value;**
 - ☐ None of the above.

3. The Residual Income (RI) compared to ROI:
 - ☐ Is affected by the so-called “*Denominator Management*” issue;
 - ☒ **Is calculated taking explicitly into account the cost of capital;**
 - ☐ Is less aligned with Enterprise Value and can lead to maximizing cash;
 - ☐ Is less aligned with Enterprise Value thus leading to fewer profits.

4. According to the Financial Leverage formula:
 - ☐ To increase ROE, a company should always try to increase D/E;
 - ☐ If $ROI - r < 0$ and D increases, ROE increases;
 - ☒ **The capital structure of the company has an amplifying effect;**
 - ☐ None of the above.

5. Which of the following sentences on *Reclassification* is TRUE?

- ☐ Balance Sheet Reclassification has the goal of highlighting, among the others, the “Value Added”;
- ☐ Income Statement Reclassification has the purpose of highlighting, among the others, the Net Working Capital;
- ☒ Balance Sheet Reclassification has the purpose of highlighting, among the others, the Net Working Capital (Operating Working Capital);
- ☐ None of the above.

6. If you want to compute the CAPEX COVERAGE RATIO, which Financial Statements and items should you consider?

- ☐ Cash Flow Statement (Cash Flow From Operations) + Balance Sheet (Intangible Assets);
- ☐ Cash Flow Statement (Cash Flow From Operations) + Balance Sheet (Fixed Assets);
- ☐ Cash Flow Statement (Cash Flow From Operations + Net Cash from Investing Activities);
- ☒ None of the above.

7. Knowing the following data, compute the Pay-out Ratio in the year 2017:

| Company A (data in mln €) | 2017 | 2016 |
|--|-------------|-------------|
| <i>EBIT</i> | 10,000 | 7,000 |
| <i>Consolidated Net Income</i> | 6,000 | 4,500 |
| <i>Dividends paid to the parent company's shareholders</i> | 2,000 | 3,000 |
| <i>Dividends paid to minorities</i> | 90 | 80 |

- ☐ Pay-out Ratio 2017 = 0.67
- ☐ Pay-out Ratio 2017 = 0.69
- ☒ Pay-out Ratio 2017 = 0.46
- ☐ Pay-out Ratio 2017 = 0.35

Solution

$$\text{Payout Ratio 2017} = \frac{\text{Dividends Paid}}{\text{Net Income}_{2016}} = \frac{2,000 + 90}{4,500} = 0.46$$

8. Knowing the following data (in k€), calculate the CURRENT RATIO for Company B:

| | |
|--|---------------|
| CURRENT ASSETS | 26,400 |
| Cash and Cash Equivalent | 7,000 |
| Other Fin. Activities held for Trading | 2,000 |
| Other Fin. Activities available for sale | 200 |
| Trade & Other Receivables | 10,000 |
| Inventories | 5,000 |
| Current Tax Assets | 200 |
| Other Current Assets | 2,000 |
| NON CURRENT ASSETS | 70,000 |
| CURRENT LIABILITIES | 30,000 |
| NON CURRENT LIABILITIES | 40,000 |

- ☐ 0.88;
- ☐ 0.66;
- ☐ It cannot be calculated since it is not possible to identify the amount of *Debt with an Explicit Interest Rate*;
- ☐ None of the above.

Solution

$$\text{Current Ratio 2018} = \frac{\text{Current Assets}}{\text{Current Liabilities}} = \frac{26,400}{30,000} = 0.88$$

9. Considering the following data (in k€) from the Balance Sheet of Company C, calculate the Net Working Capital (Operating Working Capital).

| | |
|--|---------------|
| CURRENT ASSETS | 26,200 |
| Cash and Cash Equivalent | 7,000 |
| Other Fin. Activities held for Trading | 2,000 |
| Other Fin. Activities available for sale | 200 |
| Trade & Other Receivables | 10,000 |
| Inventories | 5,000 |
| Other Current Assets | 2,000 |
| NON CURRENT ASSETS | 73,800 |
| CURRENT LIABILITIES | 30,000 |
| Short-term Debts | 17,000 |
| Bonds | 10,000 |
| Trade Payables | 3,000 |
| NON CURRENT LIABILITIES | 40,000 |
| EQUITY | 30,000 |
| Share Capital | 15,000 |
| Reserves | 10,000 |
| Incomes brought forward | 2,500 |
| Income of the period | 2,500 |

- ☐ 12,000 k€;
☐ 26,200 k€;
☐ 30,000 k€;
☐ It cannot be calculated with the available data.

Solution

Net Working Capital 2018 = Receivables + Inventories – Payables = 10,000 + 5,000 – 3,000 = 12,000 k€

10. Considering the following data (in k€) about Company C, calculate the Net Financial Debt.

| | |
|---|---------------|
| CURRENT ASSETS | 26,400 |
| Cash and Cash Equivalent | 7,000 |
| Trade & Other Receivables | 11,000 |
| Inventories | 5,200 |
| Current Tax Assets | 200 |
| Other Current Assets | 3,000 |
| NON CURRENT ASSETS data in mln € | 73,600 |
| CURRENT LIABILITIES | 30,000 |
| Short-Term Debt | 10,000 |
| Bonds | 2,000 |
| Trade Receivables | 3,000 |
| Provisions | 5,000 |
| NON CURRENT LIABILITIES | 40,000 |
| Long-Term Debts | 30,000 |
| EQUITY | 30,000 |
| Capital | 15,000 |
| Reserves | 10,000 |
| Incomes brought forward | 2,500 |
| Income of the period | 2,500 |

- ☐ 35,000 k€;
☐ 33,000 k€;
☐ 5,000 k€;
☐ It cannot be calculated with the available data.

Solution

Net Financial Debt 2018=Bonds + Current Debt+Non Current Debt+Other Financial Current and Non Current Liabilities-Cash
 $2,000 + 10,000 + 30,000 - 7,000 = 35,000 \text{ k€}$

Further Questions & Exercises

11. The denominator of ROI (Return on Invested Capital) can be computed as?

- ☐ TANGIBLE ASSETS – NON FINANCIAL LIABILITIES;
- ☒ TOTAL ASSETS – NON FINANCIAL LIABILITIES;
- ☐ THIRD PART LIABILITIES + EQUITY;
- ☐ None of the above.

12. Considering the following data (in k€) for Company C, calculate EVA.

| | |
|--|---------------|
| CURRENT ASSETS | 26,400 |
| Cash and Cash Equivalent | 7,000 |
| Other Fin. Activities held for Trading | 2,000 |
| Other Fin. Activities available for sale | 200 |
| Trade & Other Receivables | 10,000 |
| Inventories | 5,000 |
| Current Tax Assets | 200 |
| Other Current Assets | 2,000 |
| NON CURRENT ASSETS | 73,600 |
| CURRENT LIABILITIES | 30,000 |
| Short-Term Debts | 12,000 |
| Trade Receivables | 3,000 |
| Provisions | 5,000 |
| NON CURRENT LIABILITIES | 40,000 |
| Long-Term Debts | 30,000 |
| EQUITY | 30,000 |
| Capital | 15,000 |
| Reserves | 10,000 |
| Retained earnings | 2,500 |
| Net Profit of the year | 2,500 |
| | |
| WACC | 7% |
| | |
| EBIT | 14,000 |
| EBT | 3,100 |

- ☐ Around 3,360 k€;
- ☐ Around 4,760 k€;
- ☒ Around 6,250 k€;
- ☐ It cannot be calculated with the available data

Solution

$$\text{Effective Tax Rate} = \frac{EBT - E}{EBT} = 0.19$$

$$\text{Cost of Capital} = 7\%$$

$$\begin{aligned} \text{Invested Capital} &= \text{Equity} + \text{Debt with explicit interest Rate} \\ &= 30,000 \text{ k€} + 12,000 \text{ k€} + 30,000 \text{ k€} = 72,000 \text{ k€} \end{aligned}$$

$$EVA = EBIT (1 - \text{Effective Tax Rate}) - \text{Invested Capital} * \text{Cost of Debt}$$

$$EVA = 14,000 \text{ k€} (1 - 0.19) - 72,000 \text{ k€} * 7\% = 6,250 \text{ mln €}$$

13. Considering the data in Question #10, if the Cost of Capital decreases to 5%, the EVA is:

- ☐ Equal to EVA as calculated above;
- ☒ Around 7,690 k€;
- ☐ Around 6,900 k€;
- ☐ It cannot be calculated with the available data.

Solution

$$\text{Effective Tax Rate} = \frac{EBT - E}{EBT} = 0.19$$

$$\text{Cost of Capital} = 5\%$$

$$\begin{aligned} \text{Invested Capital} &= \text{Equity} + \text{Debt with explicit interest Rate} \\ &= 30,000 \text{ k€} + 12,000 \text{ k€} + 10,000 \text{ k€} = 72,000 \text{ k€} \end{aligned}$$

$$EVA = EBIT (1 - \text{Effective Tax Rate}) - \text{Invested Capital} * \text{Cost of Debt}$$

$$EVA = 14,000 \text{ k€} (1 - 0.19) - 72,000 \text{ k€} * 5\% = 7,690 \text{ k€}$$