

## Exercise 02

A professional services firm intends to project the results of its activity for the 4<sup>th</sup> quarter of 2024. Let's consider the following assumptions:

- No. of Hours = 900
- Fees Charged / Hour = EUR 100
- Variable Costs / Hour = EUR 70
- Total Fixed Costs = EUR 12,000
- Corporate Tax Rate (IRC) = 21%

Additionally, the firm is considering proposals for two mutually exclusive loans (A) and (B), both: (i) in the amount of EUR 24,000 and (ii) for the period between the following value dates: September 30, 2024, and December 31, 2024.

- Loan (A): interest rate = 6.125% with day count = ACT/360
- Loan (B): interest rate = 6.200% with day count = 30/360

- a. Which loan proposal seems to be the best for the firm?
- b. If the 900 planned hours are achieved and the most favourable loan is taken:
  1. What will be the firm's operating income for the 4th quarter?
  2. What will be its net income?
- c. Which of the following events will reduce net income the most?
  1. 10% decrease in the number of hours
  2. 10% decrease in the value of fees charged per hour
  3. 10% increase in the value of variable costs per hour
  4. 10% increase in the value of fixed costs
- d. If the fees charged per hour decline by 10%, what will be the required increase in the number of billed hours for the firm to continue achieving the desired net income?