An Investment Project Evaluation

International Project Week 2015
Investment Project

Simulate the business plan covering the activities and accounts for the detailed description of the financial part of the plan, which shall include the project’s cash flows and provide the cash flow analysis based on the theoretical material.
The Beer Bar

- Target group: students, etc.
- Bar’s location: historic district of Nordhausen
- Opening hours
  - Mondays: closed
  - Tuesdays-Thursdays: 7pm-midnight
  - Fridays-Saturdays: 6pm-3am
  - Sundays: 7pm-midnight
The bar’s costs ($C_0$) - nonrecurring costs

- Nonrecurring costs = all costs incurred before opening for business ($\Sigma 100,000\text{€}$)

- To cover these costs: credit over 100,000€ (2% interest rate compounded annually)
Bar’s costs
-running costs (C−)

- 70.000-95.000€ annually
  - Rent: 1000€ monthly (80m²)
  - Staff: 5000€ monthly
    - 3 employees paid at min. wage (8,50€)
    - (all together) working 45h/week [9,1h a day aprox.]; 300 days a year = 2730h paid 8,50 an hour = 23250annually (=1500€ monthly)
  - Gema: music = 225€ annually
    TV= 190€ annually (per TV) - if we’re putting up 3 TVs: 570€ (annually)
  - Beverages, taxes, insurance
Bar’s income ($C^+$)

<table>
<thead>
<tr>
<th>year</th>
<th>guests daily</th>
<th>guests annually</th>
<th>income per Person daily</th>
<th>income per Person annually</th>
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<tr>
<td>1</td>
<td>30</td>
<td>9.000</td>
<td>20</td>
<td>180.000</td>
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<td>34</td>
<td>10.000</td>
<td>20</td>
<td>200.000</td>
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<tr>
<td>3</td>
<td>41</td>
<td>12.500</td>
<td>20</td>
<td>250.000</td>
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<td>4</td>
<td>50</td>
<td>15.000</td>
<td>20</td>
<td>300.000</td>
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<td>50</td>
<td>15.000</td>
<td>20</td>
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Cash flows

<table>
<thead>
<tr>
<th></th>
<th>C^-</th>
<th>C^+</th>
<th>C</th>
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<tbody>
<tr>
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<tr>
<td></td>
<td>515000</td>
<td>1230000</td>
<td>715000</td>
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</tbody>
</table>
Project evaluation

- BV = C₀ + C₁ + C₂ + C₃ + C₄ + C₅ =
  100.000 + 110.000 + 125.000 + 170.000 + 205.000 + 205.000 = **715.000** (€)

- TP = l + \( \frac{|C₁ + C₂ + \cdots + Cₙ|}{cl+1} \) = 1 + \( \frac{100.000}{110.000} \) = **1.9**
Project evaluation

\[ PV_{in}(T) = \sum_{i=1}^{n} C^+ t_i \prod_{j=0}^{i-1} (1 + i(t_j))^{-m_j \Delta t_j} + 1 = 180.000 \frac{1}{1.02^2} + 200.000 \frac{1}{1.02^3} + 250.000 \frac{1}{1.02^4} + 300.000 \frac{1}{1.02^5} = 1,153,157.80 \]

\[ PV_{out}(T) = \sum_{i=1}^{n} C^- t_i \prod_{j=0}^{i-1} (1 + i(t_j))^{-m_j \Delta t_j} + 1 = 100.000 + 70.000 \frac{1}{1.02} + 75.000 \frac{1}{1.02^2} + 80.000 \frac{1}{1.02^3} + 95.000 \frac{1}{1.02^4} + 95.000 \frac{1}{1.02^5} = 489,910.64 \]

\[ NPV(r) = PV_{in}(T) - PV_{out}(T) = 1,153,157.80 - 489,910.64 = 663,247.16 \]

\[ NPV(0) = 12.5 \quad (125\%) \]
Project: Beer Bar

- TP = 1.9
- BV = 715,000
- NPV = 663,247.61
- IRR = 125%

- The project is profitable!
Thank you for your attention!

Group: Anett Schmeichel; Julius Böttcher; Daniel Schneider; Cosimo Martina; Miriam Prescher