

Scenario

Pens Plus is considering a contract with a stationary wholesaler for Pens Plus to produce and sell to the wholesaler. The terms of the contract call for delivery of 2 million pens in each of the first two years and 3 million pens in each of the next three years. The required plant and equipment costs AED5,250,000 and would be fully depreciated (straight-line) over the 5-year life of the contract. All costs are variable and estimated to be AED0.35 per pen. Each pen will be sold to the wholesaler for AED1.05. The pens will be delivered monthly in equal volumes. After receiving the pens, the wholesaler will take 3 months to pay for them. Inventories take up 10% of variable cost while accounts payable are 20% of variable cost.

The company pays taxes at a 40% rate and has a discount rate of 10%. Should Pens Plus agree to the contract?

Hint: Start by filling out the key assumptions table based on the description above. Continue by completing the cash flow table using the question marks using the information above. Then complete the black questions marks by using the information you used. Some further hints are provided in the boxes below.

Key Assumptions and Result

| | | | | |
|------------------------------|---------|------------------------------|-----------|-----|
| Variable Cost (AED per unit) | 0.35 | CapEx (Year 0 AED) | 5,250,000 | NPV |
| Price (AED per unit) | 1.05 | Receivables (% of sales) | 25% | IRR |
| Tax Rate | 5250000 | Inventory (% of variable cos | 10% | |
| Discount Rate | 10% | Payables (% of variable cos | 20% | |

| AED / Year | 0 | 1 | 2 | 3 | 4 | 5 |
|------------------|-------------|-----------|-----------|-----------|-----------|-----------|
| Units | | 2 | 2 | 3 | 3 | 3 |
| Revenue | | 2,100,000 | 2,100,000 | 3,150,000 | 3,150,000 | 3,150,000 |
| Variable Cost | | 700,000 | 700,000 | 1,050,000 | 1,050,000 | 1,050,000 |
| Depreciation | | 1,050,000 | 1,050,000 | 1,050,000 | 1,050,000 | 1,050,000 |
| Operating Income | | 350,000 | 350,000 | 1,050,000 | 1,050,000 | 1,050,000 |
| Taxes | | 140,000 | 140,000 | 420,000 | 420,000 | 420,000 |
| NOPAT | 0 | 210,000 | 210,000 | 630,000 | 630,000 | 630,000 |
| Depreciation | 0 | 1,050,000 | 1,050,000 | 1,050,000 | 1,050,000 | 1,050,000 |
| NWC Increase | 455,000 | 0 | 227,500 | 0 | 0 | 0 |
| CapEx | 5,250,000 | 0 | 0 | 0 | 0 | 0 |
| FCF | (5,705,000) | 1,260,000 | 1,032,500 | 1,680,000 | 1,680,000 | 1,680,000 |

NWC Calculation

| | | | | | | |
|---------------------|---|---------|---------|---------|---------|---------|
| Accounts Receivable | | 525,000 | 525,000 | 787,500 | 787,500 | 787,500 |
| Inventory | | 70,000 | 70,000 | 105,000 | 105,000 | 105,000 |
| Accounts Payable | | 140,000 | 140,000 | 210,000 | 210,000 | 210,000 |
| NWC Level | 0 | 455,000 | 455,000 | 682,500 | 682,500 | 682,500 |
| NWC Increase | 0 | 455,000 | 0 | 227,500 | 0 | 0 |

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