Case Study – Time is Money

Question Appeared in: ModelOff 2014 Round 2

Time Allocated: 35 minutes

INTRODUCTION

Note: This question should be read along with the accompanying workbook

You work in the business development team of ETech, a technology company that primarily operates out of Europe and prepares its financial statements in Euros.

ETech has a comprehensive corporate model that you use to analyse the impact of any potential acquisitions. The corporate model is prepared in Euros on a nominal basis therefore any acquisition analysis needs to be converted to nominal Euros to correctly interface with the corporate model.

ETech has been approached by JL Goodward, a well-known investment banking firm on behalf of their client GEE, a conglomerate. GEE is looking to divest its technology division and has put a sale process in place. Your mangers and board of directors are excited by the prospect of acquiring GEE's technology division and have requested entry into the sales process.

With all the legal formalities out of the way, JL Goodward sends you an Information Memorandum ('**IM**') to assist you with preparing your Indicative Bid. In the IM you have been provided with management's forecast performance of the business.

The forecast includes sales, opex and capex in real US$ and the opening balance of the two classes of tax assets in US$. You are instructed to ignore all other assets and liabilities for the purpose of preparing your Indicative Bid. Furthermore you are instructed to make the following assumptions:

- GEE's effective tax rate is 40%. Tax is calculated on the last day of the year and paid immediately. Corporate tax will continue to be payable within the US.
- That all cash flows (Sales, Opex, Capex etc) happen on the last day of the year.
- Depreciation for Tax and Accounting is done using:
    - For Class A assets, the double declining balance method over 5 years.
    - For Class B assets, the straight line method over 4 years. Assume the opening balance has not yet been depreciated and will be depreciated over 4 years starting in 2015.

In order to prepare your bid, you have talked to your tax advisors, investment committee and ETech's management. Based on these discussions, you have settled on the following assumptions relevant to your valuation:

- There are no cross border implications from the acquisition;
- You will discount pre financing, post-tax nominal US$ cash flows using a 10% rate in order to value the assets as at 31 December 2014;
- The spot exchange rate as at the valuation date will be 1.31 US$ per 1 Euro;
- You are provided with a real US$:Euro exchange rate and told that it has been calculated as a notional exchange rate that can be used to convert directly between real US$ and real Euro. **Hint:** Do not use these rates to directly convert between nominal US$ and nominal Euro.
- You have formed a view on inflation for both the US$ and Euro, included in the provided workbook.

QUESTIONS

Question 1

What is the nominal US$:Euro exchange rate in year 7?

a. 1.297

b. 1.308

c. 1.312

d. 1.324

Question 2

What is Revenue in Year 2 in nominal Euros?

a. 740m

b. 745m

c. 1,214m

d. 1,220m

Question 3

What is the Depreciation for both asset classes combined in Year 6 in nominal Euros?

a. 268.3m

b. 269.0m

c. 270.7m

d. 271.5m

Question 4

What is Net Profit Before Tax (Net Income) in Year 4 in nominal Euros?

a. 44.4m

b. 44.8m

c. 45.2m

d. 45.6m

Question 5

What is the Tax Expense in Year 8 in nominal Euros?

a. 76m

b. 78m

c. 80m

d. 82m

Question 6

Using the NPV function, what is the Present Value as at 31 December 2014 of the first 10 years of cash flow in nominal Euros?

a. 515m

b. 519m

c. 522m

d. 523m

Question 7

If the Present Value calculation from the previous question is done using the XNPV function instead of the NPV function, by how many Euros does the Present Value decrease due to this change? Pick the closest answer.

a. 179,000

b. 180,000

c. 181,000

d. 182,000

Answers

1	D
2	A
3	B
4	A
5	C
6	B
7	C