Dorchester ltd mini case solution

Economics, Money

Dorchester Ltd is a famous high-quality chocolate maker based in the United Kingdom. Through its facilities in the United Kingdom, Dorchester manufactures candies that it sells throughout Western Europe and North America (United States and Canada). Dorchester has been struggling with supplying the United States with their demand of 390, 000 pounds (with 5% annual growth rate) of candies. Due to limited production capacity, only 65, 000 pounds per year of candies are supplied throughout that region. The company deems that an additional manufacturing facility situated in the U. S would easily supply Dorchester’s product throughout the entire U. S. market and Canada. The current spot exchange rate is US$1. 50/GBP, while the U. S is predicting a 3% inflation rate and 5% for the U. K.

Dorchester’s expansion possibility to the United States will cost them US$7, 000, 000 to build a factory. This would allow Dorchester to fulfill all 390, 000 pounds expected demand and its profit per pound would increase from US$4. 305 to US4. 400. The factory has planned to operate for seven years, at that time, the United States Internal Revenue Service considers the factory fully depreciated with straight-line depreciation, but Dorchester’s management suggests that the remaining equipment can be sold for US$2, 000, 000.

Should Dorchester choose to invest in the new U. S factory, they plan to pay it off with a combination of equity capital and debt. The company would borrow at most £2, 000, 000 (US$3, 000, 000): the Unites States local community would be able to provide US$1, 500, 000 debt at 7. 75% coupon rate annually; or they can issue a bond for Pounds Sterling at 10. 75% annually coupon rate, or 9. 5% Eurodollar bond for USD at 9. 5% annually

coupon rate. To optimize the borrowing cost, they should borrow $1, 500, 000 from the local community, and raise $1, 500, 000 with Pound Sterling bond issue.

Should Dorchester go ahead with the project or not? Here are the solutions to our judgment.

Table showing the Operating Cash Flows demonstrating the Spot Rate, Pounds sold, Price, Expenses (per lb), Profit (per lb), taken to consideration the cash flows of both dollars and pounds along with the loss of sales values equating the OCF.

Table showing the calculations of Present Value of the After-Tax Operating Cash Flows

Table showing the Present Value of the Depreciation Tax Shields indicating the plant is depreciated using a straight-line method over 7 years and we are discounting at 10. 75% as our cost of debt because it reflects the rate at which we borrow pounds at and the overall riskiness of the debt.

Table showing Present Value of Concessionary Loan Payments, we used the borrowing rate of 7. 75% and then multiplied that by the amount outstanding at the beginning of the year to calculate the interest on the loan. For example, in year one, the amount of interest is equal to $1. 5 multiplied by 7. 75%, in year 2, it is equal to $1. 285 by 7. 75% and so on.

Table showing Present Value of the Interest Tax Shields, it is noted that the fisher equation proves that it is more cost effective to go with a domestic bond issue because the cost of borrowing is lower.

Table showing the calculations of APV

Our decision is to go ahead with the project.