

Universitat de Barcelona

3rd course: Financial Management

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Exercises 6: International financial sources

1. On September 30, 2015, Dolphin Incorporated negotiated a 1,000,000 euros, two-year loan from a German bank. The annual interest on the loan is 2%. Dolphin makes annual interest payments on September 30. Dolphin will repay the loan principal on September 30, 2017. Dolphin prepares December 31 year-end financial statements in U.S. dollars.

Determine the effective cost (in U.S. dollars) of the borrowing negotiated by Dolphin International, using the following exchange rates for one euro?

- September 30, 2015\$0,110
- December 31, 2015 \$0,115
- September 30, 2016\$0,130
- December 31, 2016 \$0,135
- September 30, 2017\$0,160

2. Atlanta Company needs to raise 400.000 euros and it decides to ask for a loan in dollars: The features of the loan are the following;
 - Maturity: 2 years
 - Fixed interest rate of 4%
 - Repayment method: even amortization payments
 - Exchange rate when the loan is granted: \$1,25/€
 - a. Calculate the effective cost of the loan, supposing that at the end of each year the exchange rate was \$1,20/€ and \$1,15/€.
 - b. Calculate the effective cost of the loan, supposing that at the end of each year the exchange rate was \$1,30/€ and \$1,35/€.
 - c. If the company pays a tax rate of 30%, what would be the effective cost after taxes in each case (a and b).
3. Company needs a 4 year-loan of 1.000.000 euros and it is considering two alternatives:
 - ❖ A loan in euros with a fixed interest rate of 5%, amortized through even annual periodic payments. The loan has an initial fee of 1% of its nominal amount.
 - ❖ A loan in dollars with a fixed interest rate of 4%, amortized through even annual amortization payments. The loan has an initial fee of 1% of its nominal amount. At the moment, the loan was granted the exchange rate was \$1,2/€.

- a. Calculate the effective cost (before taxes) of the loan, supposing that the accumulated annual depreciation of the euro is 0,05€/€.
- b. Calculate the effective cost (before taxes) of the loan, supposing that the accumulated annual depreciation of the dollar is \$0,05/€.
- c. If the company pays a tax rate of 30%, what would be the effective cost after taxes in each case (a and b).