

Homework problems for Chapter 15

(## 21, 30, Continuing Case Blades, Inc. ## 1, 2, 3)

- 21. Foreign Divestiture Decision.** Baltimore Co. considers divesting its 6 foreign projects as of today. Each project will last one year. Its required rate of return on each project is the same. The cost of operations for each project is denominated in dollars and is the same. Baltimore believes that each project will generate the equivalent of \$10 million in one year based on today's exchange rate. However, each project generates its cash flow in a different currency. Baltimore believes that interest rate parity (IRP) exists. Baltimore forecasts exchange rates as explained in the table below.
- Based on this information, which project will Baltimore be most likely to divest? Why?
 - Based on this information, which project will Baltimore be least likely to divest? Why?

<u>Project</u>	<u>Comparison of one-year U.S. and foreign Interest rates</u>	<u>Method used to forecast the spot rate one year from now</u>
Country A	The U.S. interest rate is higher than currency A's interest rate	Spot rate
Country B	The U.S interest rate is higher than currency B's interest rate	Forward rate
Country C	The U.S. interest rate is the same as currency C's interest rate	Forward rate
Country D	The U.S. interest rate is the same as Currency D's interest rate	Spot rate
Country E	The U.S. interest rate is lower than Currency E's interest rate	Forward rate
Country F	The U.S. interest rate is lower than Currency F's interest rate	Spot rate

Answer:

- Baltimore will most likely divest from Country E because there is an expectation of depreciation of currency E, this will reduce the cash flows making it less desirable for the parent
 - Baltimore is least likely to divest from Country B because there is an expectation of appreciation of currency B increasing the cash flows for the parent
- 30. Divestiture Decision.** Kylee Co. (a U.S. firm) has a British subsidiary that will generate cash flows of 3 million pounds at the end of each of the next two years. It uses the prevailing spot rate of the British pound of \$1.80 as a forecast of the future value of the pound. Its required rate of return on this business is 16 percent. Kylee just received an offer from a British company who wants to buy the subsidiary for \$8,000,000. Assume that Kylee would not be subject to any tax on the sale.
- Should Kylee Co. sell the business? Show your work.
Answer: $3,000,000 \times \$1.80 / 1.16 = 4,655,172.41$
 $3,000,000 \times 1.8 = 5,400,000 / 1.16^2$
 $4,655,172.41 + 4,013,079 = 8,668,252.08$
No, they shouldn't sell the company for 8,000,000
 - Assume that there is news today that causes Kylee to think that the British pound will strengthen substantially the next two years. Assume the offer price remains unchanged. If Kylee reassesses

whether to divest based on this information, do you think the potential news will increase the net present value of the divestiture (make the divestiture more beneficial for Kylee), reduce the net present value of the divestiture, or have no impact on the estimated net present value of the divestiture? Briefly explain.

Answer: It will increase the NPV of the subsidiary because the company receives the cash flows in pounds so the cash flows will increase with the strength of the British pound.

c. Assume that today the prevailing long-term U.S. risk-free interest rate decreased, and that this has no effect on Kylee's cash flows from operations. Assume the offer price remains unchanged. Do you think this information about the decline in the U.S. risk-free interest rate will increase the net present value of the divestiture, reduce the net present value of the divestiture, or have no impact on the estimated net present value of the divestiture? Briefly explain.

Answer: This will decrease the NPV of the divestiture because the decrease in the interest rate tells me there is an expectation for depreciation which would in turn decrease the cash flows.

<u>Project</u>	<u>Comparison of one-year U.S. and foreign Interest rates</u>	<u>Method used to forecast the spot rate one year from now</u>
Country A	The U.S. interest rate is higher than currency A's interest rate	Spot rate
Country B	The U.S. interest rate is higher than currency B's interest rate	Forward rate
Country C	The U.S. interest rate is the same as currency C's interest rate	Forward rate
Country D	The U.S. interest rate is the same as Currency D's interest rate	Spot rate
Country E	The U.S. interest rate is lower than Currency E's interest rate	Forward rate
Country F	The U.S. interest rate is lower than Currency F's interest rate	Spot rate

Continuing Case Problem: Blades, Inc.

Assessment of an Acquisition in Thailand

Recall that Ben Holt, Blades' chief financial officer (CFO), has suggested to the board of directors that Blades proceed with the establishment of a subsidiary in Thailand. Due to the high growth potential of the roller blade market in Thailand, his analysis suggests that the venture will be profitable. Specifically, his view is that Blades should establish a subsidiary in Thailand to manufacture roller blades, whether an existing agreement with Entertainment Products (a Thai retailer) is renewed or not. Under this agreement, Entertainment Products is committed to the purchase of 180,000 pairs of Speedos, Blades' primary product, annually. The agreement was initially for three years and will expire two years from now. At this time, the agreement may be renewed. Due to delivery delays, Entertainment Products has indicated that it will renew the agreement only if Blades establishes a subsidiary in Thailand. In this case, the price per pair of roller blades would be fixed at 4,594 Thai baht per pair. If Blades decides not to renew the agreement, Entertainment Products has indicated that it would purchase only 5,000 pairs of Speedos annually at prevailing market prices. According to Holt's analysis, renewing the agreement with Entertainment Products and establishing a subsidiary in Thailand will result in a net present value (NPV) of \$2,638,735. However, if the agreement is not renewed and a subsidiary is established, the resulting NPV will be \$8,746,688. Consequently, Holt has suggested to the board of directors that Blades establish a subsidiary

without renewing the existing agreement with Entertainment Products. Recently, a Thai roller blade manufacturer called Skates'n'Stuff contacted Holt regarding the potential sale of the company to Blades. Skates'n'Stuff entered the Thai roller blade market a decade ago and has generated a profit in every year of operation. Furthermore, Skates'n'Stuff has established distribution channels in Thailand. Consequently, if Blades acquires the company, it could begin sales immediately and would not require an additional year to build the plant in Thailand. Initial forecasts indicate that Blades would be able to sell 280,000 pairs of roller blades annually. These sales are incremental to the acquisition of Skates'n'Stuff. Furthermore, all sales resulting from the acquisition would be made to retailers in Thailand. Blades' fixed expenses would be 20 million baht annually. Although Holt has not previously considered the acquisition of an existing business, he is now wondering whether acquiring Skates'n'Stuff may be a better course of action than building a subsidiary in Thailand.

Holt is also aware of some disadvantages associated with such an acquisition. Skates'n'Stuff's CFO has indicated that he would be willing to accept a price of 1 billion baht in payment for the company, which is clearly more expensive than the 550 million baht outlay that would be required to establish a subsidiary in Thailand. However, Skates'n'Stuff's CFO has indicated that it is willing to negotiate. Furthermore, Blades employs a high-quality production process, which enables it to charge relatively high prices for roller blades produced in its plants. If Blades acquires Skates'n'Stuff, which uses an inferior production process (resulting in lower quality roller blades), it would have to charge a lower price for the roller blades it produces there. Initial forecasts indicate that Blades will be able to charge a price of 4,500 Thai baht per pair of roller blades without affecting demand. However, because Skates'n'Stuff uses a production process that results in lower quality roller blades than Blades' Speedos, operating costs incurred would be similar to the amount incurred if Blades establishes a subsidiary in Thailand. Thus Blades estimates that it would incur operating costs of about 3,500 baht per pair of roller blades.

Holt has asked you, a financial analyst for Blades, Inc., to determine whether the acquisition of Skates'n'Stuff is a better course of action for Blades than the establishment of a subsidiary in Thailand. Acquiring Skates'n'Stuff will be more favorable than establishing a subsidiary if the present value of the cash flows generated by the company exceeds the purchase price by more than \$8,746,688, the NPV of establishing a new subsidiary. Thus Holt has asked you to construct a spreadsheet that determines the NPV of the acquisition. To aid you in your analysis, Holt has provided the following additional information, which he gathered from various sources, including unaudited financial statements of Skates'n'Stuff for the last three years:

- Blades, Inc., requires a return on the Thai acquisition of 25 percent, the same rate of return it would require if it established a subsidiary in Thailand.
- If Skates'n'Stuff is acquired, Blades, Inc., will operate the company for 10 years, at which time Skates'n'Stuff will be sold for an estimated 1.1 million baht.
- Of the 1 billion baht purchase price, 600 million baht constitutes the cost of the plant and equipment. These items are depreciated using straight-line depreciation. Thus 60 million baht will be depreciated annually for 10 years.
- Sales of 280,000 pairs of roller blades annually will begin immediately at a price of 4,500 baht per pair.
- Variable costs per pair of roller blades will be 3,500 per pair.
- Fixed operating costs, including salaries and administrative expenses, will be 20 million baht annually.
- The current spot rate of the Thai baht is \$.023. Blades expects the baht to depreciate by an average of 2 percent per year for the next 10 years.
- The Thai government will impose a 25 percent tax on income and a 10 percent withholding tax on any funds remitted by Skates'n'Stuff to Blades, Inc. Any earnings remitted to the United States will not be taxed again in the United States. All earnings generated by Skates'n'Stuff will be remitted to Blades, Inc.
- The average inflation rate in Thailand is expected to be 12 percent annually. Revenues, variable costs, and fixed costs are subject to inflation and are expected to change by the same annual rate as the inflation rate.

In addition to the information outlined above, Holt has informed you that Blades, Inc., will need to manufacture all of the 180,000 pairs to be delivered to Entertainment Products this year and next year in

Thailand. Because Blades previously only used components from Thailand (which are of a lower quality but cheaper than U.S. components) sufficient to manufacture 72,000 pairs annually, it will incur cost savings of 32.4 million baht this year and next year. However, because Blades will sell 180,000 pairs of Speedos annually to Entertainment Products this year and next year whether it acquires Skates'n'Stuff or not, Holt has urged you not to include these sales in your analysis. The agreement with Entertainment Products will not be renewed at the end of next year. Holt would like you to answer the following questions:

1. Using a spreadsheet, determine the NPV of the acquisition of Skates'n'Stuff. Based on your numerical analysis, should Blades establish a subsidiary in Thailand or acquire Skates'n'Stuff?
2. If Blades negotiates with Skates'n'Stuff, what is the maximum amount (in Thai baht) Blades should be willing to pay?
3. Are there any other factors Blades should consider in making its decision? In your answer, you should consider the price Skates'n'Stuff is asking relative to your analysis in question 1, other potential businesses for sale in Thailand, the source of the information your analysis is based on, the production process that will be employed by the target in the future, and the future management of Skates'n'Stuff.

Answer:

Yes there are other factors that should be considered. Things such as the possibility of subsidiaries that are already located in Thailand that could be acquired. There could be more attractive subsidiaries. Also why they are looking to sell. If a company is looking to sell it could be because they see they aren't optimistic about the future. It's also necessary to take into consideration that these predictions could be less than accurate, they are projecting and there are several factors at play that could make the valuation over or under estimated.