Exchange Rate Exercise

This short exercise is intended to test your knowledge of exchange rates. It is designed to be used with *Exchange Rate Terminology and Analytics* (HBS case 701-121).

Question 1: Exchange Rate mechanics

You are considering exchanging Swiss Francs (SF) for Japanese Yen (JY). You go to the bank and see the following rates posted:

Swiss Franc/USD: 1.6933 Yen/USD: 115.44

A. What is the JY/SF exchange rate?

a) 68.1746 b) 0.01467 c) 195.4746 d) 117.1333

B. What is the SF/JY exchange rate?

a) 68.1746 b) 0.01467 c) 195.4746 d) 117.1333

C. If the Swiss Franc appreciates by 10%, what would the new JY/SF rate be?

a) 175.927 b) 61.353 c) 74.987 d) 215.022

D. If the Yen lost 25% of its value against the Franc (relative to the figures quoted before question A), what would the new JY/SF rate be?

a) 85.213 b) 51.128 c) 90.888

Professor Robert E. Kennedy prepared this exercise as the basis for class discussion rather than to illustrate either effective or ineffective handling of an administrative situation.

Question 2: Mexican Textiles

Consider a Mexican textile firm that knits sweaters for sale in the United States. The firm incurs total costs of 16 pesos/sweater and sells the sweaters to a U.S. department store for 5 USD/sweater. The exchange rate is 4 peso/USD.

A. What is the firm's markup per sweater as a percentage of revenues?

a) 25% b) 4% c) 31% d) 20%

B. If the peso is devalued 20%, what is the new exchange rate?

a) 3.2 peso/$ b) 5 peso/$ c) 4.8 peso/$ d) 3.33 peso/$

C. If the firm keeps dollar prices and peso costs constant, what is its markup per sweater as a percentage of revenues after the devaluation?

a) 0% b) 4% c) 33% d) 36%

D. If the firm decides to keep its gross margin per sweater constant (at 20%) and expand sales, what would the new dollar price be following the devaluation?

a) $4.00 b) $3.84 c) $3.75 d) $4.25

Question 3:

GM is considering purchasing a electrical components plant located in Hungary. All sales will be to Hungarian customers and denominated in forints. The projected investment and returns are as follows:

- Purchase price: 30 billion forints
- Additional investment required: 50 million USD. All imported equipment priced in USD.
- Projected Hungarian sales: 45 billion forints
- Projected earnings 4.5 billion forints.
- Exchange rate: 300 forints/USD

A. What is the total investment (in dollars)?

a) 10 million b) 100 million c) 90 million d) 150 million

B. Once the plant is up and running, what is the annual percentage return on investment?

a) 10% b) 15% c) 5.6%

C. If the forint is devalued by 25%., what would the new exchange rate be?

a) 375 HF/$ b) 400 HF/$ c) 225 d) 240 HF/$

D. If this 25% devaluation was made after the purchase and additional investments were completed, what would the new ROI be?

a) 7.5% b) 12.5% c) 11.25% d) 18.75%

E. Instead of selling to the Hungarian market, assume that all sales were exports priced in hard currency, and yielding the same 4.5 billion forint earnings (at the original 300 forint/USD exchange rate). If the 25% devaluation described in questions C and D occurred, what would happen to the plant's profit margins?

a) they would rise by about 25%

b) they would fall by about 25%

c) they rise by more than 25%

d) they would call by less than 25%