SOLUTIONS FOR SESSION 3: FX EXPOSURE AND THE MANAGEMENT OF FX EXPOSURE

1. **Economic exposure**

   The Walt Disney Company built an amusement park in France that opened in 1992. How do you think this project, EuroDisney, affected Disney's overall operating exposure? Explain.

   ANSWER: The typical first reaction is that the Walt Disney Company's economic (operating) exposure may have increased, since this new park would generate revenue in French francs (now euros), which may someday be converted to US dollars. If the French currency weakens against the dollar, the revenue will be converted to fewer dollars.

   However, keep in mind that Walt Disney was already affected by movements in the French franc and other major currencies before this park was built. When major currencies weaken against the dollar, foreign tourism decreases and Walt Disney's business in the US declines. By having a European amusement park, it may be able to offset the declining US business during strong dollar cycles, since more European tourists may go to the Disney park in France during these periods. Overall, the economic value of Disney may be <u>less</u> exposed to exchange rate movements because of the EuroDisney amusement park.

2. **Hedging a payable**

   Assume the following information:

   90-day US interest rate = 16% (annualized)
   90-day Malaysian interest rate = 12% (annuialized)
   90-day forward rate of Malaysian ringgit = $.400
   Spot rate of Malaysian ringgit = $.404

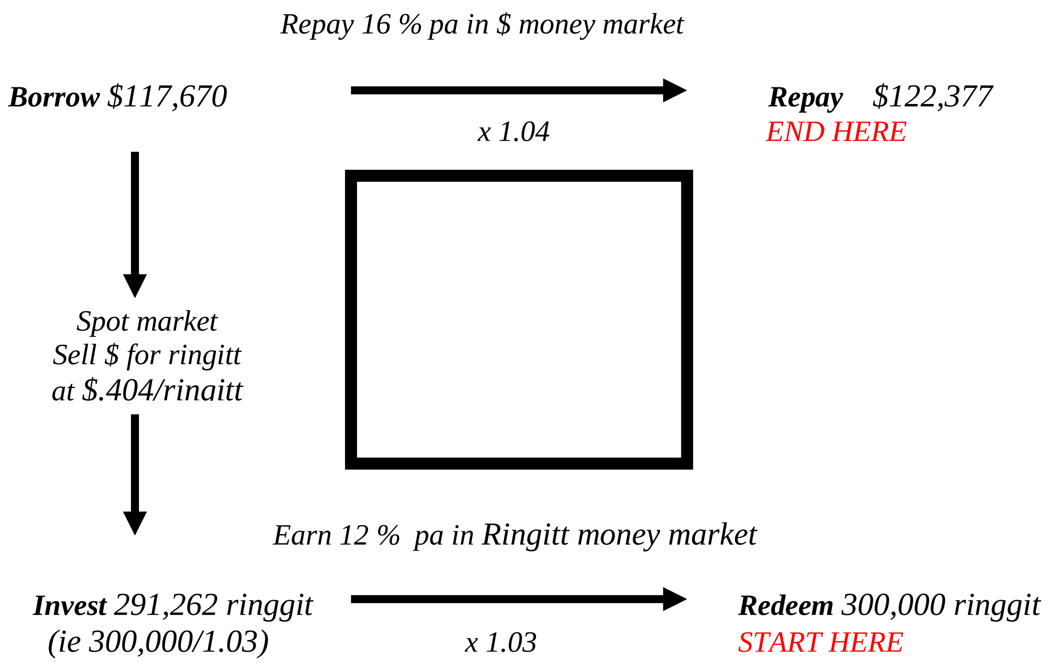
   Assume that the Santa Barbara Company from the US will need 300,000 ringgit in 90 days. It wishes to hedge this payables position. Would it be better off using forward hedge or money market hedge? Substantiate your answer with estimated costs for each type of hedge.

   ANSWER:

   - *Forward hedge: in 90 days the firm will pay out 300,000 ringgit × $.400 =* ***$120,000***
   - *Money market hedge:*
     1. *Invest 300,000/1.03 = 291,262 ringgit now in a Malaysian deposit that will accumulate to 300,000 ringgit in 90 days.*
     2. *This implies that the number of US dollars to be borrowed now is:*
        291,262 ringgit × $.404 spot = $117,670.
     3. *If this amount is borrowed today, the firm will need:*
        $117,670 × 1.04 = ***$122,377*** *to repay the loan in 90 days.*

   - *In comparison, the firm will only pay out $120,000 in 90 days if it uses the forward hedge. Thus, it should use the* ***forward hedge****.*

BOX ILLUSTRATION:



3. **Hedging a receivable**

Assume the following information:

180-day US interest rate = 16% (annualized)
180-day British interest rate = 18% (annualized)
180-day forward rate of British pound = $1.50
Spot rate of British pound = $1.48

Assume that Riverside Corporation from the US will receive 400,000 pounds in 180 days. Would it be better off using a forward hedge or a money market hedge?

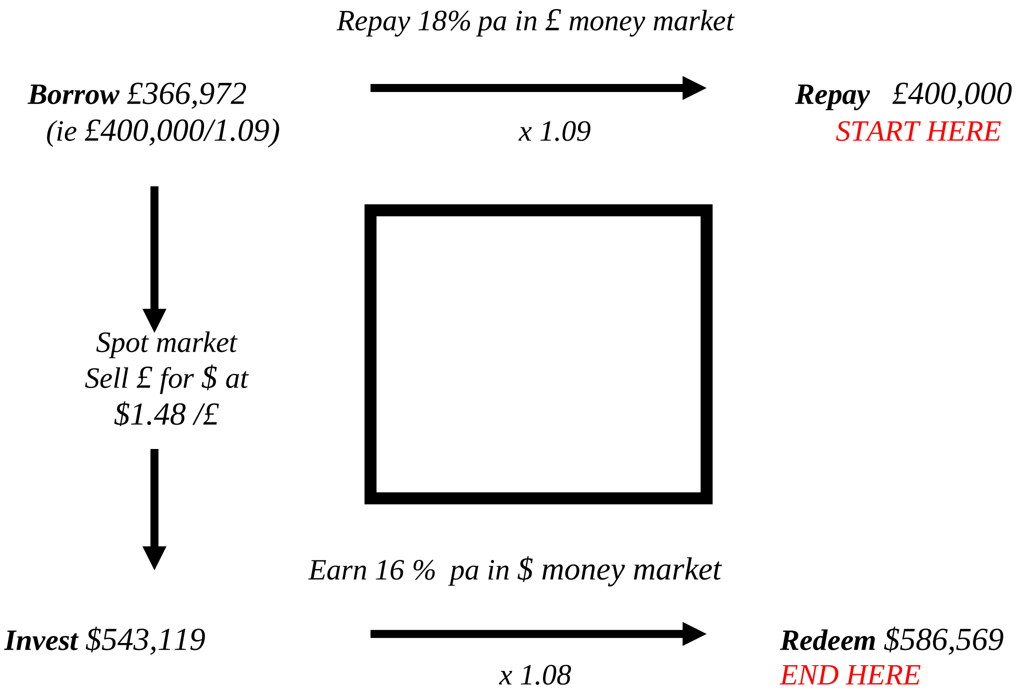
ANSWER:

- *Forward hedge: in 180 days the firm will receive 400,000 ($1.50) =* ***$600,000***
- *Money market hedge:*

  1. *Borrow £400,000/1.09 = £366,972 to be converted to US dollars and invested in the US.*
  2. *The £400,000 received in 180 days will pay off this loan.*
  3. *The £366,972 borrowed is converted to £366,972 × $1.48 spot = $543,119*
  4. *When invested at 8% interest this will accumulate to be worth about* ***$586,569****.*

- *In comparison, the firm will receive $600,000 in 180 days using the forward hedge. Thus, it should use* ***the forward hedge****.*

BOX ILLUSTRATION:



4. Baltimore Inc. is a US-based MNC that obtains 10 percent of its supplies from European manufacturers. Sixty percent of its revenues are due to exports in Europe, where its product is invoiced in euros. Explain how Baltimore Inc. could attempt to reduce its economic exposure to exchange rate fluctuations in the euro.

   ANSWER:

   - *Baltimore Inc. could reduce its operating exposure by shifting some of its US expenses to Europe.*
   - *This may involve shifting its sources of materials or even part of its production process to Europe.*
   - *It could also reduce its European revenue but this is probably not desirable.*