Study Questions  
(with Answers)  

Lecture 13  
Exchange Rates  

Part 1: Multiple Choice  

Select the best answer of those given.  

1. The statement “the yen rose today from 121 to 117” makes sense because  
   a. The U.S. gains when Japan loses.  
   b. These numbers measure yen per dollar, not dollars per yen.  
   c. These numbers are indexes, defined relative to a base of 100.  
   d. These numbers refer to time of day that the change took place.  
   e. The yen is a reserve currency.  

   Ans: \[ b \]  

2. The price at which one can enter into a contract today to buy or sell a currency 30 days from now is called a  
   a. Reciprocal exchange rate.  
   b. Effective exchange rate.  
   c. Exchange rate option.  
   d. Forward exchange rate.  
   e. Multilateral exchange rate.  

   Ans: \[ d \]  

3. Forward exchange rates are useful for those who wish to  
   a. Protect themselves from the risk that the exchange rate will change before a transaction is completed.  
   b. Gamble that a currency will rise in value.  
   c. Gamble that a currency will fall in value.  
   d. Exchange currencies at a point in time in the future.  
   e. All of the above.  

   Ans: \[ e \]
4. According to the Purchasing Power Parity theory, the value of a currency should remain constant in terms of what it can buy in different countries of

a. Bonds
b. Stocks
c. Goods
d. Labor
e. Land

*Ans: c*

5. Suppose the following facts (not all of which are relevant to the answer):
- Yesterday the exchange rate between the British pound and the US dollar was 2.00 £/$.
- The interest rate in the U.S. is 6% per year.
- The rate of inflation in the U.K. is 1% per year.
- The public expects the exchange rate tomorrow to be 1.92 £/$.
- The rate of inflation in the U.S. is 3% per year.
- The interest rate in the U.K. is 5% per year.
- The U.S. bilateral trade deficit with the U.K. is 2% of U.S. GDP.

Then according to the asset theory of exchange rate determination, the exchange rate today should be approximately

a. 1.92 £/$
b. 1.96 £/$
c. 1.98 £/$
d. 2.00 £/$
e. 2.02 £/$

*Ans: a*

6. Based on the supply and demand model of the exchange rate, which of the following should cause the Philippine peso to appreciate?

a. Concern abroad over the safety of Philippine toy exports.
b. An increase in remittances from Philippine workers abroad to their families at home.
c. Repayment by the Philippine government of its debt to the IMF.
d. Increased imports by Philippine consumers of electronics made in Taiwan.
e. An increase in Philippine savings that is used to purchase financial assets in Europe.

*Ans: b*
Part II: Short Answer

Answer in the space provided.

1. The table at the right shows hypothetical values for the consumer price indexes (CPI) of the U.S., the U.K., and Japan in 2004 and 2008. Their currencies are also indicated as the dollar ($), pound (£), and yen (¥) respectively. Suppose that exchange rates in 2004 were

\[
\begin{align*}
2004: & \quad $/£ = 1.60, \quad ¥/$ = 100, \\
& \quad ¥/£ = 160
\end{align*}
\]

a. Calculate the following exchange rates for 2004:

\[
\begin{align*}
2004 & \quad £/$ = \underline{\phantom{0.00}} \quad \text{Ans: 0.625} \\
& \quad ¥/$ = \underline{\phantom{0.00}} \quad \text{Ans: 0.01} \\
& \quad £/¥ = \underline{\phantom{0.00}} \quad \text{Ans: 0.00625}
\end{align*}
\]

b. Calculate the following exchange rates for 2008, assuming that the Purchasing Power Parity Theory holds:

\[
\begin{align*}
2008 & \quad $/£ = \underline{\phantom{0.00}} \quad \text{Ans: 1.68} \\
& \quad ¥/$ = \underline{\phantom{0.00}} \quad \text{Ans: 90} \\
& \quad ¥/£ = \underline{\phantom{0.00}} \quad \text{Ans: 152}
\end{align*}
\]

Explanation: The PPP theory says that the value of a country’s currency relative to another will depreciate at a rate equal to the difference between its own rate of inflation and that of the other country (appreciating, of course, if the other country’s inflation is higher). Therefore, in this problem each country’s currency relative to another will, according to PPP, rise in value by the percentage that the other country’s prices rose, minus the percentage that its own prices rose. For the $/£ rate, since US prices rose \((120−100)/100=20\%\) and UK prices rose \((230−200)/200=15\%)\), the pound should rise in value by \(20−15=5\%\) relative to the dollar, from 1.60 $/£ to 1.68 $/£. Similarly, the ¥/$ rate should rise by the difference between Japan’s inflation (10\%) and US inflation (20\%), meaning that the dollar should fall by 10\% from 100 ¥/$ to 90 ¥/$. The ¥/£ rate likewise should fall by the difference between the UK’s inflation and Japan’s, 15−10=5\%, from 160 ¥/£ to 152 ¥/£.
2. For each of the following changes, represent the change by an appropriate shift of the supply and/or demand curves for currency shown at the right. Then record whether the indicated currency appreciates or depreciates as a result of the change, by circling the appropriate word.

a. A new model of Jeep, made in America, is successful in sales to Germany (taken here to be still using the Deutsche Mark (DM)).

The DM appreciates

$\text{DM depreciates.}$

Ans: $D_s$ shifts right,

$\text{DM depreciates.}$

b. Japan reduces its interest rate compared to the U.S., causing investors to sell Japanese bonds and buy U.S. bonds.

The $\$$ appreciates

$\text{depreciates}$

Ans: $S_y$ shifts right and/or $D_y$ shifts left,

$\text{$ appreciates.}$

c. Germans, unhappy with monetary unification, transfer their bank balances to the U.K.

The £ appreciates

$\text{depreciates}$

Ans: $S_{DM}$ shifts right, £ appreciates.

$\text{£ appreciates.}$
3. Define and explain the difference between the following pairs of terms:

a. Spot market  
   Forward market  
   *Ans:* The spot market involves transactions in the present; the forward market involves contracts today for transactions that will take place in the future.

b. Interest rate arbitrage  
   Covered interest arbitrage  
   *Ans:* Interest rate arbitrage is the transfer of funds to another currency to take advantage of a higher interest rate. Covered interest arbitrage is the same thing, accompanied by a forward-market transaction to protect against changes in exchange rates.

c. Real exchange rate  
   Nominal exchange rate  
   *Ans:* The nominal exchange rate is expressed in units of one currency per unit of the other. A real exchange rate adjusts this for changes in price levels in both currencies.

4. Each term in the following list is essentially a synonym for another in the same list. Identify these pairs by putting the letter of the synonym in the blank provided.

<table>
<thead>
<tr>
<th>Term</th>
<th>Means essentially the same as</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. appreciation</td>
<td>i</td>
</tr>
<tr>
<td>b. supply of foreign currency</td>
<td>g</td>
</tr>
<tr>
<td>c. law of one price</td>
<td>m</td>
</tr>
<tr>
<td>d. dirty float</td>
<td>k</td>
</tr>
<tr>
<td>e. floating exchange rate</td>
<td>n</td>
</tr>
<tr>
<td>f. devaluation</td>
<td>l</td>
</tr>
<tr>
<td>g. demand for domestic currency</td>
<td>b</td>
</tr>
<tr>
<td>h. pegged exchange rate</td>
<td>j</td>
</tr>
<tr>
<td>i. revaluation</td>
<td>a</td>
</tr>
<tr>
<td>j. fixed exchange rate</td>
<td>h</td>
</tr>
<tr>
<td>k. managed float</td>
<td>d</td>
</tr>
<tr>
<td>l. depreciation</td>
<td>f</td>
</tr>
<tr>
<td>m. purchasing power parity</td>
<td>c</td>
</tr>
<tr>
<td>n. flexible exchange rate</td>
<td>e</td>
</tr>
</tbody>
</table>