

Universität Siegen

Fakultät III – Wirtschaftswissenschaften
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Exam "International Financial Markets"
Summer Semester 2016
(1st Exam Period)

Solution

Available time: 45 minutes

For your attention:

1. Please do **not** directly write your answers into this problem set. Use the set of solution pages.
 2. Please do **not** use a **pencil**.
 3. Additional materials you may use for the exam: a non-programmable calculator.
 4. **ATTENTION:** The names for variables have the same meaning as in the lecture. Insofar as you also use the same symbols for the variables as we did in the lecture you will not have to define these any further.
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Question	1	2	3	4	Sum	Mark
Points achievable	10	5	11	19	45	
Points achieved						

Problem 1: The Financial System

- a) Please briefly characterize "real assets" and "financial assets" and give an example of each one. [6 points]

Solution:

Real assets: - are used in production (or: generate income) (2)

- example: buildings, machinery, land (1)

Financial assets:

- claims on real assets (or: on the income they generate) (2)

Or: distribute income

- example: stocks, bonds, loans, ... (1)

- b) The financial system should collect savings and provide producers with the financial means that they need to invest in productive equipment. To achieve this, the financial system has to accomplish the "transformation of size" and the "transformation of maturity".

Please explain one of these "transformations". [4 points]

Solution:

- size: bridge the gap (1)
between volumes of funds (1)
needed by the borrowers/investors (1)
and provided by savers/lenders (1)

- maturity: bridge the gap (1)
between two periods: (1)
period during which borrowers/investors need funds (1)
period for which savers/lenders offer funds (1)

Problem 2: Exchange Rate

We are in the euro area. The exchange rate between the US-Dollar and the euro has increased from 1.0 [\$/\$] to 1.30 [\$/\$].

- a) Does the above quotation show the direct rate of the US dollar or its indirect rate? [1 point]

Solution: indirect (1)

- b) Has the euro appreciated or depreciated against the dollar? By which percentage rate? Please show your calculation of that percentage rate. [4 points]

Solution: appreciated (1)

$$\begin{array}{r} \begin{array}{r} \begin{array}{r} \begin{array}{r} (0,5) \\ 1,30 \end{array} \\ \hline \begin{array}{r} (0,5) \\ 1,00 \end{array} \\ \begin{array}{r} (0,5) \\ 1,00 \end{array} \end{array} \\ \begin{array}{r} (0,5) \\ - \end{array} \\ \begin{array}{r} (0,5) \\ 1,00 \end{array} \end{array} = \begin{array}{r} (1) \\ 0,30 \end{array} \text{ (oder : 30\%)}$$

Problem 3: Spot Rate, Forward Rate, and FX Swap

The spot dollar to pound exchange rate is 1.100 [\$/\$]. The twelve-month forward rate is 1.210 [\$/\$].

- a) Is the dollar trading at a discount or at a premium relative to the pound in the forward market? Please briefly explain your answer. [5 points]

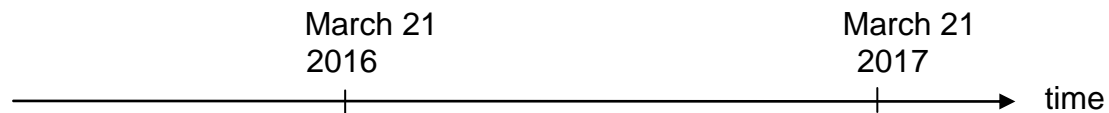
Solution:

- forward price of the pound is higher than its spot price (2)

→ pound is trading at a forward premium (1)

- therefore, the dollar is trading at a forward discount (2)

- b) The American Investment Bank Goldman Sachs desires a pound asset exposure for the duration of one year in the amount of one million pounds while being short of an equivalent amount of dollars. The swap period starts on March 21, 2016. Please indicate the cash flows Goldman Sachs wants to do. [Please copy the following graph in your answer sheet and complete it there. Do not indicate the payments directly here in this problem set!!] [6 points]



Goldman:

£

\$

Solution:



Goldman:

£

1,000,000
(1)

- 1,000,000
(1) (1)

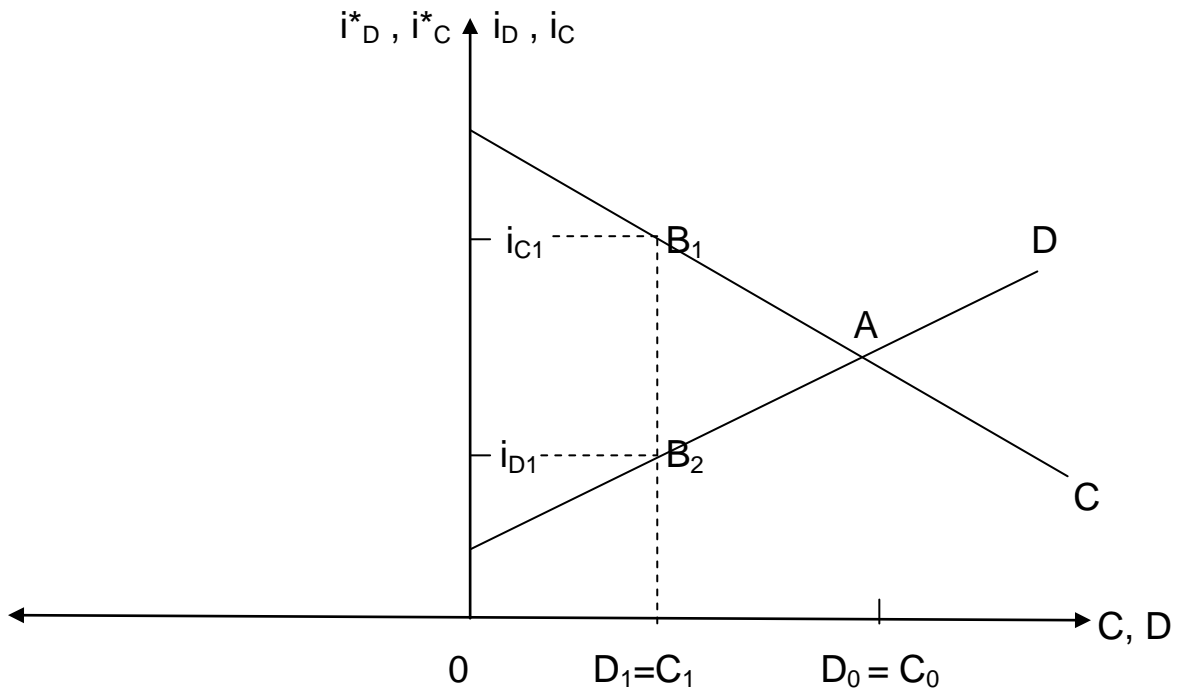
\$

- 1,100,000
(1) (1)

1,210,000
(1)

Problem 4: Domestic Money Market and Euro Money Market

We look at a currency for which a domestic money market as well as an offshore market (Euro market) exist. The right-hand part of the following graph shows the domestic market while the left-hand part is designated to visualize the offshore segment. The credit demand curve is designated as C while the credit supply curve (deposit) curve is called D.



a) Please interpret point A.

[3 points]

Solution:

Equilibrium (1)

if there were no intermediation costs (2)

(or: no transaction costs; or: no information costs)

b) Please interpret the situation described by points B₁ and B₂, including the difference between the interest rates i_{C1} and i_{D1} .

[5 points]

Solution:

Equilibrium with intermediation costs (2)

(or: transaction costs; or: information costs)

Costs are reflected (1)

in bid-ask spread (2)

(or: in spread between deposit rate and credit rate)

c) With respect to interest rates and transaction volume, compare the situation in B_1 and B_2 to the situation in A. [3 points]

Solution:

- transaction volume is lower (1)
- credit rate is higher (1)
- deposit rate is lower (1)

d) In the left part of the graph, please illustrate the offshore market (Euro money market): [8 points]

- denote the supply curve as D^* and the demand curve as C^*
- denote the interest rates as i^*_{C1} and as i^*_{D1}
- transaction volume (credit volume) as T^* .

Solution:

