Universität Siegen

Fakultät III – Wirtschaftswissenschaften
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Exam “International Financial Markets”
Summer Semester 2019
(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.

Question	**1**	**2**	**3**	**4**	**Sum**	**Mark**
Points achievable	14	7	10.5	13.5	45	
Points achieved						

Problem 1: Money

a) We consider a person A who wants to sell a shirt and buy a bottle of wine of equal value. There is no general accepted means of payment.

a_1 Please name and describe <u>one</u> way how A can affect the trade. [6 points]

Solution:

- double coincidents of wants: (2)

  find a person B that wants the shirt and sells the wine
  (1) (1) (1) (1)

- chain of exchanges: (2)

  - sell the shirt to a person C that pays with, e. g., shoes (2)
  - then sell the shoes to a person D who wants shoes and sells the wine (2)

ATTENTION: maximum 6 points!

a_2 Please name and describe <u>one</u> difficulty of the way of trading in a_1. (No more than 30 words.) [4 points]

Solution:

- high search costs (or: information costs): (2)

  difficult to find trading partners with suitable desires of exchange (2)

- high transportation costs: (2)

  in the case of a chain of exchanges, (1)
  A must transport the shirt to C and the shoes to D (1)

ATTENTION: maximum 4 points!

b) Now, we assume a world with money. Please explain how the international payment system should be organized such that transactions are facilitated between countries. [4 points]

Solution:

the national currencies should be easily exchangeable; (2)

if possible, countries should have a common currency (2)

Problem 2: Exchange Rates

The spot exchange rate of the euro in terms of the dollar is 1.50 [$/€]. The twelve-month forward rate is 1.65 [$/€].

a) Is the euro trading at a forward discount or at a forward premium? Please briefly explain your answer. [3 points]

Solution:

- euro is traded at a forward premium (1)
- reason: forward rate exceeds spot rate (0.5) (1) (0.5)

b) Please calculate the absolute and the relative forward discount or premium of the euro. Please show your calculations. [4 points]

Solution:

Absolute: 1 .65 (0.5) – (0.5) 1.50 (0.5) = 0.15 (0.5)

Relative: 0.15 (0.5) / (0.5) 1.50 (0.5) = 0.10 (0.5) (or: = 10 %)

Problem 3: Arbitrage

Here are some quotes of the US dollar in terms of the Romanian lei, [RON/USD]:

Bank A: 5.00 - 5.20

Bank B: 4.90 - 5.00

Bank C: 5.10 - 5.15

a) Please carefully interpret the rate 5.00 of bank A. [2.5 points]

Solution: A pays 5.00 RON for one US dollar (or: per US dollar)
(1) (0.5) (0.5) (0.5) (0.5)

b) Given the above rates of banks A, B, and C, a trader wants to make an arbitrage profit. For that purpose, he has 1000 Romanian lei available. Please explain his arbitrage transactions and calculate his profit in terms of RON. [8 points]

Solution:

- with 1000 RON, buy dollars at B to obtain 1000 [RON] / 5.00 [RON/USD] = 200 [USD]
(0.5) (0.5) (0.5) (0.5) (0.5) (0.5)

- sell the 200 dollars to C to obtain 200 [RON] x 5.10 [RON/USD] = 1020 [RON]
(0.5) (0.5) (0.5) (0.5) (0.5) (0.5)

- profit: 1020 – 1000 = 20 [RON]
(0.5) (0.5) (0.5) (0.5)

Problem 4: Reference Rates

a) What is the purpose/use of a reference rate? [2.5 points]

Solution: Basis (or: reference) for rates of debt instruments
(1) (0.5) (1)

b) Please name <u>two</u> characteristics that a reference rate should have. [4 points]

Solution:

- reflect general market conditions (2)

- rate the best borrower has to pay (2)
- be established in the most liquid market segment (2)

ATTENTION: maximum 4 points

c) Please name <u>two</u> reference rates in the money market of the euro area and explain <u>one</u> of them. [7 points]

Solution:

- EURIBOR ; EONIA
  (1) (1)
- EURIBOR:
  - rates at which banks are able to borrow from other banks
    (1) (1)
  - calculated daily (1)
  - maturities: from one month to twelve months (1)
  - calculated as an average of the rates communicated by a panel of banks
    (1) (1)
- EONIA:
  - rate at which banks are able to borrow from other banks
    (1) (1)
  - calculated daily (1)
  - maturity: overnight (1)
  - calculated as an average of the rates communicated by a panel of banks
    (1) (1)

ATTENTION: maximum 7 points