

Universität Siegen

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Exam "International Financial Markets"
Summer Semester 2012
(2nd Exam Period)

Solution

Available time: 60 minutes

For your attention:

1. The exam is made up of 9 pages (including this cover page). Please check and see if the exam you are holding is **complete**.
2. For your answers, use the designated spaces. Should these not suffice, use the backside of the pages. Answers written in pencil will not be scored.
3. Additional materials you may use for the exam: a non-programmable calculator.
4. ATTENTION: Variables used in this exam refer to the same magnitudes as in the lecture. Thus, if you use the same symbol for a variable as we did in the lecture, you do not have to define the variable any further.

Question	1	2	3	4	5	Sum	Mark
Points achievable	7	11.5	11	18	12.5	60	
Points achieved							

Problem 1: Financial System

The ultimate objective of the financial system is to help increase the welfare of the individuals.

a) In order to do so, the system should fulfill certain tasks. Please name these tasks. [4 points]

Solution:

- support consumption choices (2)
- support the production of consumption goods (2)

- or:
- support the real economy (2)
 - by facilitating transactions (2)

b) Please indicate how the financial system achieves its tasks. [3 points]

Solution:

- Provide financial assets (1.5)
and facilitate their use (1.5)
- or: provide payment system (1.5)
and stores of value (1.5)

Problem 2: Financial Integration

a) Please define "financial integration" from a static point of view. [3.5 points]

Solution:

Situation without discrimination between agents on the basis of their nationality (location)
(1.5) (1) (1)

or:

situation where all potential market participants face the same business conditions
(0.5) (1) (1) (1)

or:

situation where all potential market participants have equal access to the market
(0.5) (1) (1) (1)

or:

situation where all potential market participants have equal opportunities
(0.5) (1) (1) (1)

b) In addition to public (government) action, there are other drivers of financial integration. Please name two of these and either briefly indicate their underlying idea or give an example. [8 points]

Solution:

- market forces (or: market participants): (2)

by carrying out cross-border transactions, (1)
market participants push forward financial integration (1)

or: if they benefit from financial integration,
market participants will take action to promote financial integration

or: example: lending abroad (or: borrowing abroad)
leads to the law of one price

- collective private action (or: market conventions): (2)
 - creation of a common cross-border network (1)
 - because of network externalities (1)

or one of the following examples: EURIBOR; EONIA; SEPA; EUREPO

- technological development: (2)
 - leads to reductions of information and transportation costs (1)
(or: transaction cost)

 - and thus stimulates cross-border transactions (1)

Problem 3: Regulation

There are several objectives underlying financial-system regulation.

- a) One objective is to promote the efficiency of the financial system. Please define this objective. [5 points]

Solution:

Efficiency is given when

the sum of all gains (1)

from

(i) lending, (1)

(ii) payment systems (1)

(iii) trade in risk (1)

is maximized (1)

Or:

the available financial resources are allotted in a way that the potential returns are maximized (5 points)

b) Explain how regulation contributes to achieving efficiency in the financial system.
[3 points]

Solution:

To promote efficiency, regulation should try to ensure that the following criteria are fulfilled:

- (i) transaction costs are at a minimum, (1)
- (ii) pricing is competitive, and (1)
- (iii) markets are integrated. (1)

c) Besides efficiency, there are three other objectives for the regulation of the financial system. Which are these? [3 points]

Solution:

- (i) Stability (1)
- (ii) Consumer protection (1)
- (iii) Social policy (1)

Problem 4: Arbitrage in the Forex Market

We are given the following quotes between the US-dollar (\$), the British Pound [£], and the Japanese Yen (¥):

Barclays Bank: 1.4570 [\$/£]

Industrial Bank: 128.17 [¥/\$]

Midland Bank: 183.00 [¥/£]

a) Ignoring bid-ask spreads, please check whether there is an arbitrage opportunity by comparing quotes of the British Pound in terms of the US dollar [\$/£]. [5 points]

Solution:

$$\frac{\overset{(1)}{183.00}}{\underset{(1)}{128.17}} = \underset{(1)}{1.4278}$$

As this quote from the "triangular" market is different from Barclay's quote, (1)
there is an arbitrage opportunity. (1)

b) Arbitrage is based on the principle "buy low, sell high".

b₁ How can we buy the pound at a low price? Please name the necessary transactions in words or indicate them with the help of arrows (→). [3 points]

Solution:

- buy yen with dollars (or: buy yen from Industrial Bank)
(0.5) (0.5) (0.5)

- buy pounds with yen (or: buy pounds from Midland Bank)
(0.5) (0.5) (0.5)

Or:

dollar → Yen → pound
(1) (1) (1)

b₂ How will the transactions in b₁ change the corresponding quotes of the involved banks? [4 points]

Solution:

- Industrial Bank reduces its Yen/Dollar rate (2)

or: Yen/Dollar rate will fall below 128.17

- Midland Bank raises its Yen/Pound rate (2)

or: Yen/Pound rate will rise above 183.00

c) How much arbitrage profit can you make if you have 1,000,000 dollars available for this purpose? (Please express the profit in dollars.) [6 points]

Solution:

- with 1,000,000 dollars, we can buy $1,000,000 [\text{\$}] / 1.4278 [\text{\$/\pounds}] = 700,382.51 [\text{\pounds}]$ (2)

or: 1,000,000 dollars exchanged to 128,170,000 Yen (1)

128,170,000 Yen exchanged to 700,382.51 pounds (1)

- the pounds are exchanged into $700,382.51 [\text{\pounds}] \cdot 1.4570 [\text{\$/\pounds}] = 1,020,457.32 [\text{\$}]$ (2)

- profit: 20,457 [\$] (2)

Problem 5: Market Participants in the FX Market

We may classify market participants in the FX market into two broad categories: "foreign exchange dealers" and "other participants".

- a) What is the characteristic feature of "foreign exchange dealers"? [2.5 points]

Solution:

Buy and sell (or: trade) currencies permanently
(1) (0.5) (1)

- b) Please indicate very briefly two ways how they earn an income from currency dealing.

[4 points]

Solution:

- from the bid-ask spread (2)
- from short-term speculation (2)
- from arbitrage (2)

- c) Please name and briefly explain their function from the market's point of view. [4 points]

Solution:

- they act as market makers (or: they provide liquidity to the market) (2)
- by being ready to act as a counterparty on an ongoing basis (2)
(or: by allowing for a permanent possibility to buy and sell currencies)

- d) Who, specifically, are the "foreign exchange dealers"? [2 points]

Solution:

- large financial institutions (1)
- specialised currency dealers (1)