

# Exercise Handbook

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# Exercise 1

Fill in the cross rates in the table below:

	A	B	C	D	E
A	—	5.2			
B		—			
C			—		9.5
D			6	—	
E	4.5				—

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## Exercise II

Fill in the cross rates in the table below:

	<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>E</b>
<b>A</b>	—	4.5			
<b>B</b>		—		2	
<b>C</b>	3.05		—		
<b>D</b>				—	5
<b>E</b>					—

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## Exercise III

Given the following bid-ask quote:

	<b>Bid</b>	<b>Ask</b>
$\frac{A}{B}$	220	240

At what exchange rate will:

- ▶ Mr. Smith purchase A?
- ▶ Mr. Brown sell A?
- ▶ Mrs. Green purchase B?
- ▶ Mrs. Jones sell B?



## Exercise IV

Consider the following bid-ask quotes:

	<b>Bid</b>	<b>Ask</b>
$\frac{A}{B}$	1.35	1.37
$\frac{A}{C}$	0.71	0.76

Please find the  $\frac{B}{C}$  bid-ask quote (**intermediate computations**).

Now suppose that another market maker publishes the following quotes for the  $\frac{B}{C}$  rate:

	<b>Bid</b>	<b>Ask</b>
$\frac{B}{C}$	0.575	0.579

Would there be arbitrage opportunities? If so, how would you exploit them (assuming you have 100B at your disposal)?

## Exercise V

Fill in the table below (please, **show all the relevant computations**):

	<b>Bid</b>	<b>Ask</b>
$\frac{CZJ}{GBP}$	35.10	35.17
$\frac{DKK}{GBP}$	9.004	9.009
$\frac{EUR}{GBP}$	1.2066	1.2069
$\frac{NOK}{GBP}$	12.1526	12.153
$\frac{DKK}{EUR}$		
$\frac{EUR}{EUR}$		
$\frac{NOK}{GBP}$		
$\frac{CZJ}{GBP}$		

Once you have filled in the table above, answer the questions below:

- ▶ Find the bid-ask spread for the  $\frac{EUR}{GBP}$  quote.
- ▶ How much would you lose if you converted 1500 NOK into CZJ, then into EUR and finally back into NOK?

## Exercise VI

True or false? **Please, explain.**

- ▶ If a country has a BOP deficit, the total of each BOP sub-account is negative.
- ▶ The current account is a record of all trade in goods and services, while the capital account is a record of portfolio investment and unilateral transfers.
- ▶ Under a fixed exchange rate regime, if a country's private sector sells abroad more than it purchases, the central bank must sell foreign exchange.
- ▶ All errors and omissions in the BOP are a result of black market transactions

