

2.08 Exchange Rate Calculations

Question 1

An analyst gathers the following information related to the New Zealand dollar (NZD) and the Australian dollar (AUD):

Selected Exchange Rate Information	
Spot exchange rate (NZD/AUD)	1.1800
Arbitrage-free one-year forward exchange rate (NZD/AUD)	1.1974
Dealer offered one-year forward exchange rate (NZD/AUD)	1.1700
New Zealand one-year interest rate	3.0%
Australian one-year interest rate	1.5%

Based on this information, the maximum arbitrage profits (in AUD) are *closest* to:

- A. 0.0120
- B. 0.0238
- C. 0.0276

Question 2

If spot exchange rate quotes are 0.1427 CAD/SEK and 0.1366 CAD/NOK, the no-arbitrage SEK/NOK spot rate is *closest* to:

- A. 0.0195
- B. 0.9573
- C. 1.0447

Question 3

A GBP/USD forward exchange rate quoted at positive forward points *most likely* indicates that GBP:

- A. is expected to appreciate against USD.
- B. is trading at a forward discount relative to USD.
- C. has an interest rate that is lower than the USD interest rate.

Question 4

A currency trader observes the following currency spot exchange rates from two dealers:

Source	Currency	Exchange Rate
Dealer 1	CNY/THB	0.22
Dealer 1	INR/THB	2.35
Dealer 2	INR/CNY	10.75

Based on only this information, the arbitrage profit available per every CNY 1 is *closest* to:

- A. INR 0.0682
- B. INR 0.0064
- C. CNY 0.0682

Question 5

The EUR/GBP spot exchange rate is 1.1650. The EUR one-year interest rate is 0.25%, and the GBP one-year interest rate is 1.50%. The one- year forward exchange rate expressed in forward points is *closest* to:

- A. -143
- B. -115
- C. 145

Question 6

An analyst observes the following exchange rate data:

Selected foreign exchange rate quotes		
Source	Currencies	Spot rate
Market	JPY/EUR	115.85
Market	JPY/USD	106.60
Dealer	EUR/USD	0.9050

Based only on this information, the arbitrage profit (in USD) available for each USD 1.000 invested is *closest* to:

- A. 0
- B. 0.0152
- C. 0.0168

Question 7

The USD/GBP spot rate is 1.3075, and the one-year USD/GBP forward rate is 1.3266. If the one-year USD risk-free interest rate is 4.00%, then the one-year GBP risk-free interest rate is *closest* to:

- A. 2.50%
- B. 2.55%
- C. 5.51%

Question 8

A foreign exchange dealer observes that the USD/EUR spot rate is 1.1733, and the two-month forward rate is 1.1849. Based on this information, the two-month forward points are *closest* to:

- A. 0.0116
- B. 1.1600
- C. 116.0000

Question 9

A currency trader observes the following spot rates involving the Chinese yuan (CNY), Hong Kong dollar (HKD), and Australian dollar (AUD):

	Spot Rate
HKD/CNY	0.1153
HKD/AUD	0.1867

The no-arbitrage AUD/CNY spot rate is *closest* to:

- A. 0.0215
- B. 0.6176
- C. 1.6193

Question 10

The SGD/USD spot rate is 1.4148, and the three-month forward rate is 1.4431. Based on this information, the three-month forward points, expressed as a percentage, are *closest* to:

- A. 1.96
- B. 2.00
- C. 2.83

Question 11

A currency trader observes the following spot exchange rates involving the British pound (GBP), US dollar (USD), and Mexican peso (MXN):

USD/GBP	1.3602
MXN/USD	19.5866

If the trader is quoted 27.2511 for the MXN/GBP rate, the *most appropriate* conclusion is that:

- A. no arbitrage opportunity exists.
- B. the MXN is undervalued relative to the GBP.
- C. risk-free interest rates are higher in Mexico than in the UK.

Question 12

An analyst obtains the following exchange rates among EUR, GBP, and CHF:

If CHF appreciates by 5% versus EUR and EUR appreciates by 2% versus GBP, the no-arbitrage CHF/GBP rate would be *closest* to:

- A. 1.1951
- B. 1.2434
- C. 1.3176

Question 13

Which of the following conditions is *most likely* if the base currency interest rate is lower than the price currency interest rate?

- A. The forward points are positive.
- B. The price currency trades at a forward premium.
- C. The base currency inflation is greater than price currency inflation.

Question 14

The spot rate is 5.5945 BRL/USD when the one-year, risk-free interest rates are 3.5% in Brazil and 2.0% in the US. Based on the arbitrage-free BRL/USD forward rate, the BRL is *most likely* trading at a:

- A. discount to the USD and the forward points are 823.
- B. discount to the USD and the forward points are 811.
- C. premium to the USD and the forward points are -823.

Question 15

The CAD/USD spot rate is 0.7191 and the one-month forward rate is 0.7131. Based on this information, the one-month forward points are *closest* to:

- A. -83
- B. -60
- C. 60

Question 16

An analyst gathers the following spot exchange rate quotes:

CHF/EUR	1.1010
GBP/EUR	0.8602
CHF/GBP	1.2799

The analyst's *most appropriate* conclusion is that the MXN is:

- A. undervalued versus JPY.
- B. fairly valued versus JPY.
- C. overvalued versus JPY.

Question 17

When the price currency is trading at a forward premium to the base currency, it is *most likely* that the:

- A. forward points are positive.
- B. price currency is expected to appreciate against the base currency.
- C. interest rate for the price currency is higher than for the base currency.

Question 18

When the arbitrage-free forward exchange rate is trading lower than the corresponding spot rate, the price currency *most likely*:

- A. is trading at a discount to the base currency.
- B. is expected to depreciate against the base currency.
- C. has an interest rate that is lower than the base currency interest rate.

Question 19

The current spot rate between the Russian ruble and Chinese yuan is 10.5000 RUB/CNY. The Russian annual interest rate is at 7.0% and the Chinese annual interest rate is at 4.0%. The following one-year forward exchange rate quotes are available from foreign exchange dealers:

Available dealer quotes (RUB/CNY)

Dealer 1	10.8029
Dealer 2	10.9100

An arbitrage opportunity is *most likely* offered by:

- A. Dealer 1 only.
- B. Dealer 2 only.
- C. both Dealer 1 and Dealer 2.