CHAPTER 14

CURRENCY EXCHANGE RATES

1. (A) **0.6196.**

    Explanation

    For currency cross rate calculations, the recommended approach is to set up the given rates such that cross-multiplying will result in the exchange rate the question is asking for. In this case, GBP/USD = GBP/CAD x CAD/USD.

    GBP/CAD = 1 / 2.5207 = 0.3967

    CAD/USD = 1 / 0.6403 = 1.5618

    GBP/USD = 0.3967 x 1.5618 = 0.6934

    Alternatively, USD/CAD 0.6403 x CAD/GBP 2.5207 = USD/GBP 1.6140, and GBP/USD = 1 / 1.6140 = 0.6196.

    (Study Session 4, Module 14.1, LOS 14.d)

    Related Material

    SchweserNotes - Book 1

2. (B) **greater than the 3-month JPY interest rate.**

    Explanation

    $$\frac{\text{forward}_{JPY/GBP}}{\text{spot}_{JPY/GBP}} = \frac{(1 + \text{interest rate}_{JPY})}{(1 + \text{interest rate}_{GBP})}$$. If the no-arbitrage forward JPY/GBP rate is less than the spot rate, the interest rate for JPY must be less than the interest rate for GBP.

    (Study Session 4, Module 14.2, LOS 14.f)

    Related Material

    SchweserNotes - Book 1

3. (B) **1.3989 USD/EUR.**

    Explanation

    Each "point" is 0.0001. Thus, +12.4 points would add 0.00124 to the spot exchange rate: 1.2749 + 0.00124 = 1.27614.

    For Further Reference:

    (Study Session 4, Module 14.2, LOS 14.e)

    CFA® Program Curriculum, Volume 2, page 431

    Related Material

    SchweserNotes - Book 1

4.   (C)   forward exchange rate.

Explanation

A forward exchange rate specifies the amount of two currencies that will be exchanged at a specific point of time in the future. A transaction that uses the spot exchange rate is one that would occur immediately. A real exchange rate is one that has been adjusted for the relative inflation rates in two countries, and could be referring to an exchange rate that prevails at any given time.

(Study Session 4, Module 14.1, LOS 14.a)

Related Material

Schweser Notes - Book 1

5.   (B)   138.44 JPY/GBP.

Explanation

The calculation is as follows:

$$\frac{F_{JPY/GBP}}{JPY/GBP} = \frac{S_{JPY}}{GBP} = \frac{\left(1 + i_{Japan}\right)}{\left(1 + i_{Great\ Britain}\right)}$$

$$= 138.78 = \frac{\left(1 + 0.0125/2\right)}{\left(1 + 0.0175/2\right)}$$

$$= 138.44$$

(Study Session 4, Module 14.2, LOS 14.h)

Related Material

Schweser Notes - Book 1

6.   (A)   appreciated and Canadians will find U.S. goods cheaper.

Explanation

The CAD is now more expensive in terms of USD, and thus it has appreciated. Therefore, each CAD yields more USD than before, and Canadians are able to purchase more U.S. goods with each CAD, making U.S. goods relatively cheaper.

(Study Session 4, Module 14.1, LOS 14.c)

Related Material

Schweser Notes - Book 1

7.   (B)   1.3425, and the USD is at a forward premium.

Explanation

For an exchange rate quoted to four decimal places, each forward point represents 0.0001. The 6-month forward exchange rate is 1.3500 - 0.0075 = 1.3425 USD/EUR. The USD is expected to appreciate against the EUR and is trading at a forward premium.

(Study Session 4, Module 14.2, LOS 14.g)

Related Material

Schweser Notes - Book 1

8.   (B)   1.3333.

Explanation

For the Level I CFA exam, we quote foreign exchange rates as units of the price currency per one unit of the base currency. Here we are given MXN/USD = 8 and PLN/USD = 6, and we are asked to calculate MXN/PLN.

The cross rate MXN/PLN = MXN/USD x USD/PLN, which equals 8 x 1/6 = 1.3333.

(Study Session 4, Module 14.1, LOS 14.d)

Related Material

SchweserNotes - Book 1

9.   (B)   6.452 CNY/CAD.

Explanation

The calculation is as follows:

$$\frac{F_{CNY/CAD}}{} = \frac{S_{CNY/CAD}}{} = \frac{(1 + i_{China})}{(1 + i_{Canada})}$$

$$= 6.444 = \frac{(1 + 0.030/4)}{(1 + 0.025/4)}$$

$$= 6.452$$

(Study Session 4, Module 14.2, LOS 14.h)

Related Material

Schweser Notes - Book 1

10.   (C)   Sufficient elasticities of export and import demand.

Explanation

Under the elasticities approach the elasticities of demand for exports and imports are the key to moving a country's balance of payments towards surplus. The absorption approach considers capital flows as well as goods flows. Under this approach, domestic expenditure relative to income must decrease to move the balance of trade towards surplus. Decreasing domestic expenditure relative to income is equivalent to increasing domestic savings, and an increase in savings relative to the current level of domestic investment will also move the balance of payments towards surplus under the absorption approach.

(Study Session 4, Module 14.3, LOS 14.j)

Related Material

Schweser Notes - Book 1

11. **(A)** **may fluctuate around the peg rate.**

Explanation

In a conventional fixed peg arrangement, a country pegs its currency within a margin of ±1 % versus another currency or a basket that includes the currencies of its major trading or financial partners. Market-determined exchange rates are a characteristic of an independently floating exchange rate regime.

For Further Reference:

(Study Session 4, Module 14.3, LOS 14.i)

CFA® Program Curriculum, Volume 2, page 439

Related Material

Schweser Notes - Book 1

12. **(B)** **1.2481.**

Explanation

The one year forward is 1.1132 + (1349/10,000) = 1.2481.

(Study Session 4, Module 14.2, LOS 14.e)

Related Material

Schweser Notes - Book 1

13. **(A)** **0.79 BDE/TOL.**

Explanation

The real exchange rate is calculated as 0.75 BDE/TOL x 110/105 = 0.79 BDE/TOL.

For Further Reference:

(Study Session 4, Module 14.1, LOS 14.a)

CFA® Program Curriculum, Volume 2, page 406

Related Material

Schweser Notes - Book 1

14. **(B)** **Absorption approach.**

Explanation

The absorption approach to analyzing how to improve a trade deficit suggests that in the absence of excess capacity in the economy, currency devaluation provides only a temporary improvement in a country's trade deficit that will reverse after the decrease in real domestic wealth from the currency depreciation is restored. It also concludes that a long-term improvement in the trade deficit requires either an improvement in the fiscal deficit or an increase in the excess of domestic savings over domestic investment.

(Study Session 4, Module 14.3, LOS 14.j)

Related Material

Schweser Notes - Book 1

15. (B) **elasticity of demand for imports and exports.**

Explanation

The Marshall-Lerner condition is an outcome of the elasticities approach to analyzing the balance of trade. It suggests that depreciation or devaluation of a currency is more likely to narrow a country's trade deficit if domestic demand for imports and foreign demand for the country's exports are more elastic. The absorption approach to analyzing the balance of trade implies that national saving must increase relative to domestic investment for a currency devaluation to narrow a trade deficit, which in turn depends on whether the economy is producing at maximum capacity (full employment or potential GDP) when the devaluation occurs.

(Study Session 4, Module 14.3, LOS 14.j)

Related Material

Schweser Notes - Book 1

16. (B) **J-curve effect.**

Explanation

The J-curve refers to a graph of the effect of currency depreciation on the trade balance over time. In the short run, a trade deficit may increase because current import and export contracts may be fixed in foreign currency units over the near term, and only reflect the exchange rate change over time. In the long run, currency depreciation should decrease a trade deficit.

(Study Session 4, Module 14.3, LOS 14.j)

Related Material

Schweser Notes - Book 1

17. (A) **have close substitutes.**

Explanation

According to the elasticities approach, the more elastic the demand for imports or exports, the greater the effect on the balance of trade from currency depreciation. Demand is more elastic for imports or exports when they are primarily goods with close substitutes, luxury goods, or goods that represent a large proportion of a consumer's spending.

(Study Session 4, Module 14.2, LOS 14.h)

Related Material

Schweser Notes - Book 1

18. (C) **premium of 1% to the GHI.**

Explanation

The EUR is at a forward premium to the GHI because the EUR/GHI forward rate is less than the EUR/GHI spot rate. The base currency, GHI, is at a forward discount of forward/spot - 1 = 4.2800 / 4.3250 - 1 = -1.04%. The EUR is at a forward discount to the DEF and a forward premium to the JKL.

(Study Session 4, Module 14.2, LOS 14.g)

Related Material

Schweser Notes - Book 1

19. (A)   Japan is less than in the eurozone.

Explanation

If the quote is in terms of JPY per EUR, this implies that the JPY is expected to appreciate relative to the EUR. There will be no arbitrage opportunity only if the interest rate in Japan is lower than the interest rate in the eurozone.

(Study Session 4, Module 14.2, LOS 14.f)

Related Material

Schweser Notes - Book 1

20. (B)   0.6431.

Explanation

The one year forward rate is 0.6243 x (1 + 0.03016) = 0.6431.

(Study Session 4, Module 14.2, LOS 14.e)

Related Material

Schweser Notes - Book 1

21. (C)   insurance companies.

Explanation

Real money accounts are foreign exchange buy-side investors that do not use derivatives. Many mutual funds, pension funds, and insurance companies can be classified as real money accounts. Hedge funds typically use derivatives. Central banks usually do not act as investors in foreign exchange markets but may intervene in foreign exchange markets to achieve monetary policy objectives.

(Study Session 4, Module 14.1, LOS 14.b)

Related Material

Schweser Notes - Book 1

22. (B)   Appreciated by 5.1 %.

Explanation

Because the exchange rates are quoted with the EUR as the base currency, the percentage change is simply 103.00 / 98.00 - 1 = 5.1%. The increase in the quoted JPY/EUR exchange rate means it now requires 5.1% more JPY to purchase one EUR. Thus, the EUR has appreciated by 5.1% against the JPY.

Related Material

Schweser Notes - Book 1

23. (A)   are equal to changes in the real exchange rate.

Explanation

The real interest rate = the nominal interest rate x ratio of consumption basket (or index) price levels in both countries. Assuming no price changes, the real exchange rate has remained the same as the nominal interest rate during the period.

You can think of the ratio of the consumption basket (or index) price levels in two countries as the bracketed portion of the Fisher relation for two countries. Here is the Fisher relation for two countries:

$$\frac{\left(1 + R_{nominalA}\right)}{\left(1 + R_{nominalB}\right)} = \frac{\left(1 + R_{realA}\right)}{\left(1 + R_{realB}\right)}\frac{\left[1 + E\left(inflation_A\right)\right]}{\left[1 + E\left(inflation_B\right)\right]}$$

Here is the ratio of the consumption basket (or index) price level in two countries.

$$\frac{\left[1 + E\left(inflation_A\right)\right]}{\left[1 + E\left(inflation_B\right)\right]}$$

If inflation in A is 10% and inflation in B is 0%, the ratio of consumption basket (or index) price levels is 1.1. If inflation in both countries is 0%, the ratio of consumption basket (or index) price levels is 1 and the nominal interest rate = the real interest rate. If the nominal interest rate = the real interest rate, changes in the nominal exchange rate = changes in the real exchange rate.

(Study Session 4, Module 14.1, LOS 14.a)

Related Material

SchweserNotes - Book 1

24. **(C)** floating exchange rates.

Explanation

When exchange rates are managed within crawling bands, the margin around a target exchange rate increases over time. This technique is sometimes used in a transition from fixed exchange rates to freely floating exchange rates.

(Study Session 4, Module 14.3, LOS 14.i)

Related Material

Schweser Notes - Book 1

25. **(A)** is less than spot MNO/PQR.

Explanation

Based on the no-arbitrage relationship between spot rates, forward rates, and interest rates, if the interest rate for the base currency is greater than the interest rate for the price currency, the forward exchange rate is less than the spot exchange rate.

For Further Reference:

(Study Session 4, Module 14.2, LOS 14.f)

CFA® Program Curriculum, Volume 2, page 432

Related Material

Schweser Notes - Book 1

26. (B) 4.0000.

Explanation

Invert the first quote to read USD/GBP 0.5000. Then, 0.5000 x 8.0000 = 4.0000 MXN/GBP.

(Study Session 4, Module 14.1, LOS 14.d)

Related Material

Schweser Notes - Book 1

27. (C) target zone.

Explanation

This exchange rate regime is best described as a target zone, or a system of pegged exchange rates within horizontal bands. A target zone allows wider exchange rate fluctuations than a conventional fixed peg arrangement, which typically limits the permitted range to within 1% of the pegged exchange rate. Management of exchange rates within crawling bands allows the percentage deviation from the pegged exchange rate to increase over time.

(Study Session 4, Module 14.3, LOS 14.i)

Related Material

SchweserNotes - Book 1

28. (C) 1.2055.

Explanation

The 90-day forward CHF/EUR exchange rate is 1.2025 x 1.0025 = 1.20551. The EUR is at a forward premium to the CHF.

(Study Session 4, Module 14.2, LOS 14.e)

Related Material

Schweser Notes - Book 1

29. (B) nominal exchange rate.

Explanation

The nominal exchange rate is quite simply the price of one currency relative to another. It is the quote observed in currency markets.

(Study Session 4, Module 14.1, LOS 14.a)

Related Material

Schweser Notes - Book 1

30. (B) 1.5762.

Explanation

Forward USD/GBP = spot USD/GBP x (1 + U.S. interest rate) / (1 + UK interest rate)

= 1.5775 x [(1 + 0.015/12) / (1 + 0.025/12)] = 1.5762

(Study Session 4, Module 14.2, LOS 14.h)

Related Material

Schweser Notes - Book 1

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31. (C) EUR has appreciated 2.19% relative to the CNY.

Explanation

The percentage change in the CNY value of one EUR is (8.3378 / 8.1588) - 1 = 0.0219. The EUR has appreciated 2.19% relative to the CNY. This is not the same as CNY depreciating by 2.19% relative to the EUR. The percentage change in the CNY is [(1 / 8.3378) / (1 / 8.1588)] - 1 = -0.0215 = -2.15%.

(Study Session 4, Module 14.1, LOS 14.c)

Related Material

Schweser Notes - Book 1

32. (C) depreciation of 9.2%.

Explanation

To correctly calculate the percentage change in AUD relative to GBP, convert the exchange rates so that AUD is the base currency: 1 / 1.4800 = 0.6757 GBP/AUD five years ago and 1 / 1.6300 = 0.6135 GBP/AUD today. The percentage change in the Australian dollar against the British pound is 0.6135 / 0.6757 - 1 = -9.2%. Note that the GBP has appreciated against the AUD by 1.6300 / 1.4800 - 1 = 10.1% over the same period.

(Study Session 4, Module 14.1, LOS 14.c)

Related Material

Schweser Notes - Book 1

33. (B) 3.00 ATH/MOR.

Explanation

The ATH/MOR cross rate = 9.00 ATH/GBP x (1 / 1.50) GBP/USD x (1 / 2.00) USD/MOR = 3.00 ATH/MOR.

(Study Session 4, Module 14.1, LOS 14.d)

Related Material

Schweser Notes - Book 1

34. (A) 0.70186.

Explanation

First, convert GBP/USD 0.7775 to 1/0.7775 = USD/GBP 1.28617.

Then, divide USD/GBP 1.28617 by CAD/GBP 1.8325 = USD/CAD 0.70187.

(Study Session 4, Module 14.1, LOS 14.d)

Related Material

Schweser Notes - Book 1

35. (A) domestic price level.

Explanation

An increase in the domestic price level, other things equal, will decrease a real exchange rate. Increases in the nominal exchange rate or the foreign price level, other things equal, will increase a real exchange rate.

(Study Session 4, Module 14.1, LOS 14.a)

Related Material

Schweser Notes - Book 1

36. (B)   0.1432.

Explanation

The cross rate between USD and DKK is calculated in the following manner:

(USD/JPY)(JPY/DKK) = (1 / 115.2200) x 16.4989 = USD/DKK 0.1432 (the Yen cancels out)

(Study Session 4, Module 14.1, LOS 14.d)

Related Material

Schweser Notes - Book 1

37. (C)   1.7568.

Explanation

(USD/CHF 1.6250) / (USD/CAD 0.9250) = CAD/CHF 1.7568

(Study Session 4, Module 14.1, LOS 14.d)

Related Material

Schweser Notes - Book 1

38. (B)   the ratio of the two countries' price levels.

Explanation

The difference between real exchange rates and nominal exchange rates is the relative inflation rates over time between the two countries. Real exchange rate

(D/F) = nominal exchange rate (D/F) x $\dfrac{CPI_F}{CPI_D}$

(Study Session 4, Module 14.1, LOS 14.a)

Related Material

Schweser Notes - Book 1

39. (C)   real exchange rate.

Explanation

A comparison of consumption costs between two markets can, in concert with the foreign exchange rate (also called the nominal exchange rate), be used to calculate the real exchange rate.

(Study Session 4, Module 14.1, LOS 14.a)

Related Material

Schweser Notes - Book 1

40. (C) premium of 110 points and the CAD is at a forward discount to the CHF.

Explanation

Because the forward CAD/CHF exchange rate is higher than the spot rate, the quote is a forward premium. Forward points represent 0.0001 for an exchange rate quoted to four decimal places. Here, the forward discount is 1460 - 1350 = 110 points. The base currency, the CHF, is at a forward premium to the CAD, therefore the CAD is at a forward discount to the CHF.

(Study Session 4, Module 14.2, LOS 14.g)

Related Material

Schweser Notes - Book 1

41. (C) use derivatives.

Explanation

Leveraged accounts in the foreign exchange market refer to investment accounts that use derivatives.

(Study Session 4, Module 14.1, LOS 14.b)

Related Material

Schweser Notes - Book 1

42. (B) retail market.

Explanation

The retail foreign exchange market refers to transactions by households and relatively small institutions and may be for tourism, cross-border investment, or speculative trading.

(Study Session 4, Module 14.1, LOS 14.b)

Related Material

Schweser Notes - Book 1

43. (B) risk-free interest rates.

Explanation

Investing the domestic currency at the domestic interest rate should earn the same return as buying a foreign currency at the spot exchange rate, investing at the foreign interest rate, and selling the foreign currency proceeds at the forward exchange rate. If both currencies trade freely and participants can enter forward contracts, arbitrage trading will cause the percentage difference between the forward and spot exchange rates to be approximately equal to the difference between interest rates in the two countries.

For Further Reference:

(Study Session 4, Module 14.2, LOS 14.f)

CFA® Program Curriculum, Volume 2, page 432

Related Material

Schweser Notes - Book 1

44. (C) **multinational banks that deal in currencies.**
Explanation
The sell side of foreign exchange markets is primarily large multinational banks. They are the primary dealers in currencies and originators of forward foreign exchange contracts. Firms and investors that require foreign currencies for transactions or wish to hedge their currency risks comprise the buy side of the foreign exchange market.
(Study Session 4, Module 14.1, LOS 14.b)
Related Material
Schweser Notes - Book 1

45. (B) **greater than the G/H spot rate.**
Explanation

$$\frac{\text{forward}}{\text{spot}} = \frac{\left(1 + \text{interest rate}_{\text{Country G}}\right)}{\left(1 + \text{interest rate}_{\text{CountryH}}\right)}.$$ If the interest rate in Country G is greater

than the interest rate in Country H, the numerator is greater than the denominator on the right side of the equation. The left side must have the same relationship, so the forward rate must be greater than the spot rate.
(Study Session 4, Module 14.2, LOS 14.f)
Related Material
Schweser Notes - Book 1

46. (C) **Target zone or conventional fixed peg.**
Explanation
With formal dollarization or a monetary union, a country does not have its own currency. With a currency board, conventional fixed peg, target zone, or crawling peg, a country has its own currency and manages its exchange rate with another currency or basket of currencies.
(Study Session 4, Module 14.3, LOS 14.i)
Related Material
Schweser Notes - Book 1

47. (B) **Long-term investors.**
Explanation
Forward contracts are for 30, 90, 180, and 360-day periods and would, therefore, be considered short-term investment choices. Other participants in the forward market are hedgers who use forward contracts to protect the home currency value of foreign currency denominated assets on their balance sheets over the life of the contracts involved.
(Study Session 4, Module 14.1, LOS 14.b)
Related Material
Schweser Notes - Book 1

48. (C) 0.0227 PSG/TRT.

Explanation

The TRT/PSG cross rate is 5.5 x 8.0 = 44 TRT/PSG. Because the answer choices are quoted as PSG/TRT, we need to invert this result: 1 / 44 = 0.0227 PSG/TRT.

For Further Reference:

(Study Session 4, Module 14.1, LOS 14.d)

CFA® Program Curriculum, Volume 2, page 428

Related Material

SchweserNotes - Book 1

49. (B) 0.9850.

Explanation

For an exchange rate quoted to four decimal places, forward points are expressed in units of 0.0001. The 60-day forward rate is 0.9875 + 0.0001(-25) = 0.9850.

(Study Session 4, Module 14.2, LOS 14.e)

Related Material

Schweser Notes - Book 1

50. (C) 1.2029.

Explanation

The forward rate for CHF/EUR is 0.8342 x (1 - 0.00353) = 0.8313. The 1-year forward EUR/CHF exchange rate is 1 / 0.8313 = 1.2030.

(Study Session 4, Module 14.2, LOS 14.e)

Related Material

Schweser Notes - Book 1