

## Derivatives and Currency Management

### 共享题干题

【题干】Kalila Al-Khalili has been hired as a consultant to a Middle Eastern sovereign wealth fund. The fund's oversight committee has asked her to examine the fund's financial characteristics and recommend an appropriate currency management strategy given the fund's Investment Policy Statement. After a thorough study of the fund and its finances, Al-Khalili reaches the following conclusions: The fund's mandate is focused on the long-term development of the country, and the royal family (who are very influential on the fund's oversight committee) are prepared to take a long-term perspective on the fund's investments. The fund's strategic asset allocation is tilted towards equity rather than fixed-income assets. The fund's strategic asset allocation is tilted towards equity rather than fixed-income assets. Both its fixed-income and equity portfolios have a sizeable exposure to emerging market assets. Currently, about 90% of exchange rate exposures are hedged although the IPS allows a range of hedge ratios. Liquidity needs of the fund are minimal, since the government is running a balanced budget and is unlikely to need to dip into the fund in the near term to cover fiscal deficits. Indeed, the expected lifetime of country's large oil reserves has been greatly extended by recent discoveries, and substantial oil royalties are expected to persist into the future.

1. 【单项选择题】Based on her investigation, Al-Khalili would most likely recommend:

- A. active currency management.
- B. a hedging ratio closer to 100%.
- C. a narrow discretionary band for currency exposures.

参考答案: A

【莽学解析】The fund has a long-term perspective, few immediate liquidity needs, and a lower weight in fixed income than in equities (bond portfolios are typically associated with hedge ratios closer to 100% than equity portfolios). The emerging market exposure would also support active management, given these countries' typically higher yields (carry trade) and often volatile exchange rates. B is incorrect because the characteristics of the fund and the beneficial investor (in this case, the royal family) do not argue for a conservative currency strategy. C is incorrect because a more active currency management strategy would be more suitable for this fund.

【题干】Aline Nunes, a junior analyst, works in the derivatives research division of an international securities firm. Nunes's supervisor, Cátia Pereira, asks her to conduct an analysis of various option trading strategies relating to shares of three companies: IZD, QWY, and XDF. On 1 February, Nunes gathers selected option premium data on the companies, presented in Exhibit 1.

Nunes considers the following option strategies relating to IZD:

Strategy 1: Constructing a synthetic long put position in IZD

Strategy 2: Buying 100 shares of IZD and writing the April €95.00 strike call option on IZD

Strategy 3: Implementing a covered call position in IZD using the April €97.50 strike option

Nunes next reviews the following option strategies relating to QWY:

Strategy 4: Implementing a protective put position in QWY using the April €25.00 strike option

Strategy 5: Buying 100 shares of QWY, buying the April €24.00 strike put option, and writing the April €31.00 strike call option

Exhibit 1 Share Price and Option Premiums as of 1 February (share prices and option premiums in €)				
Company	Share Price	Call Premium	Option Date/Strike	Put Premium
IZD	93.93	9.45	April/87.50	1.67
		2.67	April/95.00	4.49
		1.68	April/97.50	5.78
QWY	28.49	4.77	April/24.00	0.35
		3.96	April/25.00	0.50
		0.32	April/31.00	3.00
XDF	74.98	0.23	February/80.00	5.52
		2.54	April/75.00	3.22
		2.47	December/80.00	9.73

Strategy 6: Implementing a bear spread in QWY using the April €25.00 and April €31.00 strike options Finally, Nunes considers two option strategies relating to XDF:

Strategy 7: Writing both the April €75.00 strike call option and the April €75.00 strike put option on XDF

Strategy 8: Writing the February €80.00 strike call option and buying the December €80.00 strike call option on XDF

2. 【单项选择题】Strategy 1 would require Nunes to buy:

- A. shares of IZD.
- B. a put option on IZD.
- C. a call option on IZD.

参考答案: C

【莽学解析】To construct a synthetic long put position, Nunes would buy a call option on IZD. Of course, she would also need to sell (short) IZD shares to complete the synthetic long put position.

3. 【单项选择题】Based on Exhibit 1, Nunes should expect Strategy 2 to be least profitable if the share price of IZD at option expiration is:

- A. less than €91.26.
- B. between €91.26 and €95.00.
- C. more than €95.00.

参考答案: A

【莽学解析】Strategy 2 is a covered call, which is a combination of a long position in shares and a short call option. The breakeven point of Strategy 2 is €91.26, which represents the price per share of €93.93 minus the call premium received of €2.67 per share ( $S_0 - c_0$ ). So, at any share price less than €91.26 at option expiration, Strategy 2 incurs a loss. If the

share price of IZD at option expiration is greater than €91.26, Strategy 2 generates a gain.

4. 【单项选择题】Based on Exhibit 1, the breakeven share price of Strategy 3 is closest to:

A. €92.25.

B. €95.61.

C. €95.82.

参考答案: A

【莽学解析】Strategy 3 is a covered call strategy, which is a combination of a long position in shares and a short call option. The breakeven share price for a covered call is the share price minus the call premium received, or  $S_0 - c_0$ . The current share price of IZD is €93.93, and the IZD April €97.50 call premium is €1.68. Thus, the breakeven underlying share price for Strategy 3 is  $S_0 - c_0 = €93.93 - €1.68 = €92.25$ .

5. 【单项选择题】Based on Exhibit 1, the maximum loss per share that would be incurred by implementing Strategy 4 is:

A. €2.99.

B. €3.99.

C. unlimited.

参考答案: B

【莽学解析】Strategy 4 is a protective put position, which is a combination of a long position in shares and a long put option. By purchasing the €25.00 strike put option, Nu?es would be protected from losses at QWY share prices of €25.00 or lower. Thus, the maximum loss per share from Strategy 4 would be the loss of share value from €28.49 to €25.00 (or €3.49) plus the put premium paid for the put option of €0.50:  $S_0 - X + p_0 = €28.49 - €25.00 + €0.50 = €3.99$ .

6. 【单项选择题】Strategy 5 is best described as a:

A. collar.

B. straddle.

C. bear spread.

参考答案: A

【莽学解析】Strategy 5 describes a collar, which is a combination of a long position in shares, a long put option with an exercise price below the current stock price, and a short call option with an exercise price above the current stock price.

7. 【单项选择题】Based on Exhibit 1, Strategy 5 offers:

A. unlimited upside.

B. a maximum profit of €2.48 per share.

C. protection against losses if QWY's share price falls below €28.14.

参考答案: B

【莽学解析】Strategy 5 describes a collar, which is a combination of a long position in shares, a long put option, and a short call option. Strategy 5 would require Nu?es to buy 100 QWY shares at the current market price of €28.49 per share. In addition, she would purchase a QWY April €24.00 strike put option contract for €0.35 per share and collect €0.32 per share from writing a QWY April €31.00 strike call option. The collar offers protection against losses on the shares below the put strike price of €24.00 per share, but it also limits upside to the

call strike price of €31.00 per share. Thus, the maximum gain on the trade, which occurs at prices of €31.00 per share or higher, is calculated as  $(X_2 - S_0) - p_0 + c_0$ , or  $(€31.00 - €28.49) - €0.35 + €0.32 = €2.48$  per share.

8. 【单项选择题】Based on Exhibit 1, the breakeven share price for Strategy 6 is closest to:

A. €22.50.

B. €28.50.

C. €33.50.

参考答案: B

【莽学解析】Strategy 6 is a bear spread, which is a combination of a long put option and a short put option on the same underlying, where the long put has a higher strike price than the short put. In the case of Strategy 6, the April €31.00 put option would be purchased and the April €25.00 put option would be sold. The long put premium is €3.00 and the short put premium is €0.50, for a net cost of €2.50. The breakeven share price is €28.50, calculated as  $X_H - (p_H - p_L) = €31.00 - (€3.00 - €0.50) = €28.50$ .

9. 【单项选择题】Based on Exhibit 1, the maximum gain per share that could be earned if Strategy 7 is implemented is:

A. €5.74.

B. €5.76.

C. unlimited.

参考答案: B

【莽学解析】Strategy 7 describes a short straddle, which is a combination of a short put option and a short call option, both with the same strike price. The maximum gain is €5.76 per share, which represents the sum of the two option premiums, or  $c_0 + p_0 = €2.54 + €3.22 = €5.76$ . The maximum gain per share is realized if both options expire worthless, which would happen if the share price of XDF at expiration is €75.00.

10. 【单项选择题】Based on Exhibit 1, the best explanation for Nunes to implement Strategy 8 would be that, between the February and December expiration dates, she expects the share price of XDF to:

A. decrease.

B. remain unchanged.

C. increase.

参考答案: C

【莽学解析】Nunes would implement Strategy 8, which is a long calendar spread, if she expects the XDF share price to increase between the February and December expiration dates. This strategy provides a benefit from the February short call premium to partially offset the cost of the December long call option. Nunes likely expects the XDF share price to remain relatively flat between the current price €74.98 and €80 until the February call option expires, after which time she expects the share price to increase above €80. If such expectations come to fruition, the February call would expire worthless and Nunes would realize gains on the December call option.

11. 【单项选择题】Over the past few months, Nunes and Pereira have followed news reports on a proposed merger between XDF and one of its competitors. A government antitrust committee is

currently reviewing the potential merger. Pereira expects the share price to move sharply upward or downward depending on whether the committee decides to approve or reject the merger next week. Pereira asks Nunes to recommend an option trade that might allow the firm to benefit from a significant move in the XDF share price regardless of the direction of the move. The option trade that Nunes should recommend relating to the government committee's decision is a:

A. collar.

B. bull spread.

C. long straddle.

参考答案: C

【莽学解析】Nunes should recommend a long straddle, which is a combination of a long call option and a long put option, both with the same strike price. The committee's announcement is expected to cause a significant move in XDF's share price. A long straddle is appropriate because the share price is expected to move sharply up or down depending on the committee's decision. If the merger is approved, the share price will likely increase, leading to a gain in the long call option. If the merger is rejected, then the share price will likely decrease, leading to a gain in the long put option.

【题干】Li Jiang is an international economist operating a subscription website through which she offers financial advice on currency issues to retail investors. One morning she receives four subscriber e-mails seeking guidance. Subscriber 1: "As a French national now working in the United States, I hold US dollar-denominated assets currently valued at USD 700,000. The USD/EUR exchange rate has been quite volatile and now appears oversold based on historical price trends. With my American job ending soon, I will return to Europe. I want to protect the value of my USD holdings, measured in EUR terms, before I repatriate these funds back to France. To reduce my currency exposure I am going to use currency futures contracts. Can you explain the factors most relevant to implementing this strategy?" Subscriber 2: "I have observed that many of the overseas markets for Korean export goods are slowing, while the United States is experiencing a rise in exports. Both trends can combine to possibly affect the value of the won (KRW) relative to the US dollar. As a result, I am considering a speculative currency trade on the KRW/USD exchange rate. I also expect the volatility in this exchange rate to increase." Subscriber 3: "India has relatively high interest rates compared to the United States and my market view is that this situation is likely to persist. As a retail investor actively trading currencies, I am considering borrowing in USD and converting to the Indian rupee (INR). I then intend to invest these funds in INR-denominated bonds, but without using a currency hedge." Subscriber 4: "I was wondering if trading in emerging market currencies provides the more opportunities for superior returns through active management than trading in Developed Market currencies."

12. 【单项选择题】For Subscriber 1, the most significant factor to consider would be:

A. margin requirements.

B. transaction costs of using futures contracts.

C. different quoting conventions for future contracts.

参考答案: A

【莽学解析】Exchange-traded futures contract not only have initial margin requirements, they also have daily mark-to-market and, as a result, can be subject to daily margin calls. Market participants must have sufficient liquidity to meet margin calls, or have their positions

involuntarily liquidated by their brokers. Note that the risk of daily margin calls is not a feature of most forwards contracts; nor is initial margin. (However, this is changing among the largest institutional players in FX markets as many forward contracts now come with what are known as Collateral Support Annexes—CSAs—in which margin can be posted. Posting additional margin would typically not be a daily event, however, except in the case of extreme market moves.)

B is incorrect because futures contracts have low transactions costs.

C is incorrect because whether the EUR is the price or the base currency in the quote will not affect the hedging process. In fact, on the CME the quote would be the market-standard USD/EUR quote, with the EUR as the base currency.

13. 【单项选择题】For Subscriber 2, and assuming all of the choices relate to the KRW/USD exchange rate, the best way to implement the trading strategy would be to:

A. write a straddle.

B. buy a put option.

C. use a long NDF position.

参考答案: C

【莽学解析】Based on predicted export trends, Subscriber 2 most likely expects the KRW/USD rate to increase (i.e., the won—the price currency—to depreciate relative to the USD). This would require a long forward position in a forward contract, but as a country with capital controls, a NDF would be used instead. (Note: While forward contracts offered by banks are generally an institutional product, not retail, the retail version of a non-deliverable forward contract is known as a “contract for differences” (CFD) and is available at several retail FX brokers.) A is incorrect because Subscriber 2 expects the KRW/USD rate to increase. A short straddle position would be used when the direction of exchange rate movement is unknown and volatility is expected to remain low. B is incorrect because a put option would profit from a decrease of the KRW/USD rate, not an increase (as expected). Higher volatility would also make buying a put option more expensive.

14. 【单项选择题】Which of the following market developments would be most favorable for Subscriber 3’ s trading plan?

A. A narrower interest rate differential.

B. A higher forward premium for INR/USD

C. Higher volatility in INR/USD spot rate movements.

参考答案: B

【莽学解析】Subscriber 3’ s carry trade strategy is equivalent to trading the forward rate bias, based on the historical evidence that the forward rate is not the center of the distribution for the spot rate. Applying this bias involves buying currencies selling at a forward discount and selling currencies trading at a forward premium. So a higher forward premium on the lower yielding currency—the USD, the base currency in the INR/USD quote—would effectively reflect a more profitable trading opportunity. That is, a higher premium for buying or selling the USD forward is associated with a lower US interest rate compared to India. This would mean a wider interest rate differential in favor of Indian instruments, and hence potentially more carry trade profits.

A is incorrect because Subscriber 3’ s carry trade strategy depends on a wide interest rate differential between the high-yield country (India) and the low-yield country (the United



States). The differential should be wide enough to compensate for the unhedged currency risk exposure. C is incorrect because a guide to the carry trade's riskiness is the volatility of spot rates on the involved currencies, with rapid movements in exchange rates often associated with a panicked unwinding of carry trades. All things being equal, higher volatility is worse for carry trades.

15. 【单项选择题】Jiang's best response to Subscriber 4 would be that active trading in trading in emerging market currencies:

- A. typically leads to return distributions that are positively skewed.
- B. should not lead to higher returns because FX markets are efficient.
- C. often leads to higher returns through carry trades, but comes with higher risks and trading costs.

参考答案: C

【莽学解析】Emerging market currencies are often the investment currencies in the carry trade. This reflects the higher yields often available in their money markets compared to Developed Market economies (funding currencies are typically low-yield currencies such as the JPY). This can lead to higher holding returns, but these higher returns can also come with higher risks: carry trades are occasionally subject to panicked unwinds in stressed market conditions. When this occurs, position exit can be made more difficult by market illiquidity and higher trading costs (wider bid/offer spreads). The leverage involved in the carry trade can magnify trading losses under these circumstances.

A is incorrect because return distributions are often negatively skewed, reflecting the higher event risk (panicked carry trade unwinds, currency pegs being re-set, etc.) associated with the carry trade. B is incorrect because although FX markets are typically efficient (or very close thereto) this does not mean that higher returns are not available. The key question is whether these are abnormally high risk-adjusted returns. Higher return in an efficient market comes with higher risk. The higher (short-term) return in the carry trade reflects the risk premia for holding unhedged currency risk, in the context of a favorable interest rate differential.

【题干】Stanley Kumar Singh, CFA, is the risk manager at SKS Asset Management. He works with individual clients to manage their investment portfolios. One client, Sherman Hopewell, is worried about how short-term market fluctuations over the next three months might impact his equity position in Walnut Corporation. Although Hopewell is concerned about short-term downside price movements, he wants to remain invested in Walnut shares because he remains positive about its long-term performance. Hopewell has asked Singh to recommend an option strategy that will keep him invested in Walnut shares while protecting against a short-term price decline. Singh gathers the information in Exhibit 2 to explore various strategies to address Hopewell's concerns. Another client, Nigel French, is a trader who does not currently own shares of Walnut Corporation. French has told Singh that he believes that Walnut shares will experience a large move in price after the upcoming quarterly earnings release in two weeks. French also tells Singh, however, that he is unsure which direction the stock will move. French asks Singh to recommend an option strategy that would allow him to profit should the share price move in either direction. A third client, Wanda Tills, does not currently own Walnut shares and has asked Singh to explain the profit potential of three strategies using options in Walnut: a long straddle, a bull call spread, and a bear put spread. In addition, Tills asks Singh to explain the gamma of a call option. In response, Singh prepares a memo to be shared with Tills that

provides a discussion of gamma and presents his analysis on three option strategies:

Strategy 1: A long straddle position at the \$67.50 strike option

Strategy 2: A bull call spread using the \$65 and \$70 strike options

Strategy 3: A bear put spread using the \$65 and \$70 strike options

**Exhibit 2 Walnut Corporation Current Stock Price: \$67.79 Walnut Corporation European Options**

Exercise Price	Market Call Price	Call Delta	Market Put Price	Put Delta
\$55.00	\$12.83	1.00	\$0.24	-0.05
\$65.00	\$3.65	0.91	\$1.34	-0.29
\$67.50	\$1.99	0.63	\$2.26	-0.42
\$70.00	\$0.91	0.37	\$3.70	-0.55
\$80.00	\$0.03	0.02	\$12.95	-0.76

Note: Each option has 106 days remaining until expiration.

16. 【单项选择题】The option strategy Singh is most likely to recommend to Hopewell is a:

A. collar.

B. covered call.

C. protective put.

参考答案: C

【莽学解析】A protective put accomplishes Hopewell's goal of short-term price protection. A protective put provides downside protection while retaining the upside potential. While Hopewell is concerned about the downside in the short-term, he wants to remain invested in Walnut shares, as he is positive about the stock in the long-term.

17. 【单项选择题】The option strategy that Singh is most likely to recommend to French is a:

A. straddle.

B. bull spread.

C. collar.

参考答案: A

【莽学解析】The long straddle strategy is based on expectations of volatility in the underlying stock being higher than the market consensus. The straddle strategy consists of simultaneously buying a call option and a put option at the same strike price. Singh could recommend that French buy a straddle using near at-the-money options (\$67.50 strike). This allows French to profit should the Walnut stock price experience a large move in either direction after the earnings release.

18. 【单项选择题】Based on Exhibit 2, Strategy 1 is profitable when the share price at



expiration is closest to:

- A. \$63.00.
- B. \$65.24.
- C. \$69.49.

参考答案: A

【莽学解析】The straddle strategy consists of simultaneously buying a call option and buying a put option at the same strike price. The market price for the \$67.50 call option is \$1.99, and the market price for the \$67.50 put option is \$2.26, for an initial net cost of \$4.25 per share. Thus, this straddle position requires a move greater than \$4.25 in either direction from the strike price of \$67.50 to become profitable. So, the straddle becomes profitable at  $\$67.50 - \$4.26 = \$63.24$  or lower, or  $\$67.50 + \$4.26 = \$71.76$  or higher. At \$63.00, the profit on the straddle is positive.

19. 【单项选择题】Based on Exhibit 2, the maximum profit, on a per share basis, from investing in Strategy 2, is closest to:

- A. \$2.26.
- B. \$2.74.
- C. \$5.00.

参考答案: A

【莽学解析】The bull call strategy consists of buying the lower-strike option and selling the higher-strike option. The purchase of the \$65 strike call option costs \$3.65 per share, and selling the \$70 strike call option generates an inflow of \$0.91 per share, for an initial net cost of \$2.74 per share. At expiration, the maximum profit occurs when the stock price is \$70 or higher, which yields a \$5.00 per share payoff ( $\$70 - \$65$ ) on the long call position. After deduction of the \$2.74 per share cost required to initiate the bull call spread, the profit is \$2.26 ( $\$5.00 - \$2.74$ ).

20. 【单项选择题】Based on Exhibit 2, and assuming the market price of Walnut's shares at expiration is \$66, the profit or loss, on a per share basis, from investing in Strategy 3, is closest to:

- A. \$2.36.
- B. \$1.64.
- C. \$2.64.

参考答案: B

【莽学解析】The bear put spread consists of buying a put option with a high strike price (\$70) and selling another put option with a lower strike price (\$65). The market price for the \$70 strike put option is \$3.70, and the market price for the \$65 strike put option is \$1.34 per share. Thus, the initial net cost of the bear spread position is  $\$3.70 - \$1.34 = \$2.36$  per share. If Walnut shares are \$66 at expiration, the \$70 strike put option is in the money by \$4.00, and the short position in the \$65 strike put expires worthless. After deducting the cost of \$2.36 to initiate the bear spread position, the net profit is \$1.64 per contract.

21. 【单项选择题】Based on the data in Exhibit 2, Singh would advise Tills that the call option with the largest gamma would have a strike price closest to:

- A. \$ 55.
- B. \$ 67.50.

C. \$ 80.

参考答案: B

【莽学解析】The \$67.50 call option is approximately at the money because the Walnut share price is currently \$67.79. Gamma measures the sensitivity of an option's delta to a change in the underlying. The largest gamma occurs when options are trading at the money or near expiration, when the deltas of such options move quickly toward 1.0 or 0.0. Under these conditions, the gammas tend to be largest and delta hedges are hardest to maintain.

【题干】Guten Investments GmbH, based in Germany and using the EUR as its reporting currency, is an asset management firm providing investment services for local high net worth and institutional investors seeking international exposures. The firm invests in the Swiss, UK, and US markets, after conducting fundamental research in order to select individual investments. Exhibit 1 presents recent information for exchange rates in these foreign markets.

### Exhibit 1.Exchange Rate Data

	One Year Ago	
Euro-dollar (USD/EUR)*	1.2730	1
Euro-sterling (GBP/EUR)	0.7945	0
Euro-Swiss (CHF/EUR)	1.2175	1

\* The amount of USD required to buy one EUR

In prior years, the correlation between movements in the foreign-currency asset returns for the USD-denominated assets and movements in the exchange rate was estimated to be +0.50. After analyzing global financial markets, Konstanze Ostermann, a portfolio manager at Guten Investments, now expects that this correlation will increase to +0.80, although her forecast for foreign-currency asset returns is unchanged. Ostermann believes that currency markets are efficient and hence that long-run gains cannot be achieved from active currency management, especially after netting out management and transaction costs. She uses this philosophy to guide hedging decisions for her discretionary accounts, unless instructed otherwise by the client. Ostermann is aware, however, that some investors hold an alternative view on the merits of active currency management. Accordingly, their portfolios have different investment guidelines. For these accounts, Guten Investments employs a currency specialist firm, Umlauf Management, to provide currency overlay programs specific to each client's investment objectives. For most hedging strategies, Umlauf Management develops a market view based on underlying fundamentals in exchange rates. However, when directed by clients, Umlauf Management

uses options and a variety of trading strategies to unbundle all of the various risk factors (the “Greeks”) and trade them separately. Ostermann conducts an annual review for three of her clients and gathers the summary information presented in Exhibit 2.

Exhibit 2. Select Clients at Guten Investments	
Client	Currency Management Objectives
<b>Adele Kastner</b> – A high net worth individual with a low risk tolerance.	Keep the portfolio’s currency exposure equal to, the benchmark so that the domestic-currency return is equal to foreign-currency return.
<b>Braunt Pensionskasse</b> – A large private-company pension fund with a moderate risk tolerance.	Limited discretion which allows the currency risk exposures to vary plus/minus from the neutral position.
<b>Franz Trading GmbH</b> – An exporting company with a high risk tolerance.	Discretion with respect to currency exposure allowed in order to add alpha to the

22. 【单项选择题】Based on Exhibit 1, the domestic-currency return over the last year (measured in EUR terms) was higher than the foreign-currency return for:

- A. USD-denominated assets.
- B. GBP-denominated assets.
- C. CHF-denominated assets.

参考答案: C

【莽学解析】The domestic-currency return is a function of the foreign-currency return and the percentage change of the foreign currency against the domestic currency. Mathematically, the domestic-currency return is expressed as:  $RDC = (1 + RFC)(1 + RFX) - 1$  where RDC is the domestic-currency return (in percent), RFC is the foreign-currency return, and RFX is the percentage change of the foreign currency against the domestic currency. Note that this RFX expression is calculated using the investor’s domestic currency (the EUR in this case) as the price currency in the P/B quote. This is different than the market-standard currency quotes in Exhibit 1, where the EUR is the base currency in each of these quotes. Therefore, for the foreign currency (USD, GBP, or CHF) to appreciate against the EUR, the market-standard quote (USD/EUR, GBP/EUR, or CHF/EUR, respectively) must decrease; i.e. the EUR must depreciate. The Euro-Swiss (CHF/EUR) is the only spot rate with a negative change (from 1.2175 to 1.2080), meaning the EUR depreciated against the CHF (the CHF/EUR rate decreased). Or put differently, the CHF appreciated against the EUR, adding to the EUR-denominated return for the German

investor holding CHF-denominated assets. This would result in a higher domestic-currency return (RDC), for the German investor, relative to the foreign-currency return (RFC) for the CHF-denominated assets. Both the Euro-dollar (USD/EUR) and Euro-sterling (GBP/EUR) experienced a positive change in the spot rate, meaning the EUR appreciated against these two currencies (the USD/EUR rate and the GBP/EUR rate both increased). This would result in a lower domestic-currency return (RDC) for the German investor relative to the foreign-currency return (RFC) for the USD- and GBP-denominated assets. A is incorrect because the Euro-dollar (USD/EUR) experienced a positive change in the spot rate, meaning the EUR appreciated against the USD (the USD/EUR rate increased). This would result in a lower domestic-currency (i.e. EUR-denominated) return relative to the foreign-currency return for the USD-denominated assets, since the USD has depreciated against the EUR. B is incorrect because the Euro-sterling (GBP/EUR) experienced a positive change in the spot rate, meaning the EUR appreciated against the GBP (the GBP/EUR rate increased). This would result in a lower domestic-currency (i.e. EUR-denominated) return relative to the foreign-currency return for the GBP-denominated assets, since the GBP has depreciated against the EUR.

23. 【单项选择题】Based on Ostermann's correlation forecast, the expected domestic-currency return (measured in EUR terms) on USD-denominated assets will most likely:

- A. increase.
- B. decrease.
- C. remain unchanged.

参考答案: C

【莽学解析】

$$\sigma^2(R_{DC}) \approx \sigma^2(R_{FC}) + \sigma^2(R_{FX}) + 2\sigma(R_{FC})\sigma(R_{FX})\rho(R_{FC}R_{FX})$$

If the correlation increases from +0.50 to +0.80, then the variance of the expected domestic-currency return will increase—but this will not affect the level of the expected domestic-currency return (RDC). Refer to the equation shown for the answer in Question 1 and note that Ostermann's expected RFC has not changed. (Once again, note as well that RFX is defined with the domestic currency as the price currency.) A and B are incorrect. An increase in the expected correlation between movements in the foreign-currency asset returns and movements in the spot rates from 0.50 to 0.80 would increase the domestic-currency return risk but would not impact the expected domestic-currency return.

24. 【单项选择题】Based on Ostermann's views regarding active currency management, the percentage of currency exposure in her discretionary accounts that is hedged is most likely:

- A. 0%
- B. 50%
- C. 100%

参考答案: A

【莽学解析】Guten believes that, due to efficient currency markets, there should not be any long-run gains for speculating (or active management) in currencies, especially after netting out management and transaction costs. Therefore, both currency hedging and actively trading currencies represent a cost to the portfolio with little prospect of consistently positive

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active returns. Given a long investment horizon and few immediate liquidity needs, Guten is most likely to choose to forgo currency hedging and its associated costs.

B and C are incorrect because given a long investment horizon and little immediate liquidity needs, Guten is most likely to choose to forgo currency hedging and its associated costs. Guten believes that due to efficient currency markets there should not be any long-run gains when speculating in currencies, especially after netting out management and transaction costs.

25. 【单项选择题】The active currency management approach that Umlauf Management is least likely to employ is based on:

A.volatility trading.

B.technical analysis.

C.economic fundamentals.

参考答案: B

【莽学解析】Umlauf develops a market view based on underlying fundamentals in exchange rates (an economic fundamental approach). When directed by clients, Umlauf uses options and a variety of trading strategies to unbundle all of the various risk factors and trades them separately (a volatility trading approach).A market technical approach would entail forming a market view based on technical analysis (i.e., a belief that historical prices incorporate all relevant information on future price movements and that such movements have a tendency to repeat).A is incorrect because, in using options and a variety of trading strategies to unbundle all of the various risk factors and trade them separately, Umlauf is likely to periodically employ volatility trading-based currency strategies.C is incorrect because, in developing a market view based on underlying fundamentals in exchange rates, Umlauf does utilize an economic fundamentals approach.

26. 【单项选择题】Based on Exhibit 2, the currency overlay program most appropriate for Braunt Pensionskasse would:

A.be fully passive.

B.allow limited directional views.

C.actively manage foreign exchange as an asset class.

参考答案: B

【莽学解析】Braunt Pensionskasse provides the manager with limited discretion in managing the portfolio's currency risk exposures.This would be most consistent with allowing the currency overlay manager to take directional views on future currency movements (within predefined bounds) where the currency overlay is limited to the currency exposures already in the foreign asset portfolio. It would not be appropriate to use a fully-passive hedging approach since it would eliminate any alpha from currency movements. Further, a currency overlay program, which considers "foreign exchange as an asset class", would likely expose Braunt's portfolio to more currency risk than desired given the given primary performance objectives.A is incorrect because a directional view currency overlay program is most appropriate given the limited discretion Braunt Pensionskasse has given the manager.A fully passive currency overlay program is more likely to be used when a client seeks to hedge all the currency risk.C is incorrect because a directional view currency overlay program is most appropriate given the limited discretion Braunt Pensionskasse has given the manager. In contrast, the concept of "foreign exchange as an asset class" allows the currency overlay manager to take currency exposure positions in any currency pair where there is value-added to be harvested.

27. 【单项选择题】Based on Exhibit 2, the client most likely to benefit from the introduction of an additional overlay manager is:

A. Adele Kastner.

B. Braunt Pensionskasse.

C. Franz Trading GmbH.

参考答案: C

【莽学解析】The primary performance objective of Franz Trading GmbH is to add alpha to the portfolio, and thus has given the manager discretion in trading currencies. This is essentially a “foreign exchange as an asset class” approach. Braunt Pensionskasse and Kastner have more conservative currency strategies, and thus are less likely to benefit from the different strategies that a new overlay manager might employ. A is incorrect because Franz Trading GmbH is more likely to benefit from the introduction of an additional overlay manager. Kastner is more likely to have a fully passive currency overlay program. B is incorrect because Franz Trading GmbH is more likely to benefit from the introduction of an additional overlay manager. Braunt is more likely to have a currency overlay program where the manager takes a directional view on future currency movements.