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FINANCIAL MARKETS ASSOCIATION EST.1955

ACI Diploma New Version

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Sample Questions
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"Setting the benchmark in certifying the financial industry globally"

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1 – Financial Markets Environment

1.1 "Unsterilised" currency intervention:

A Has no impact on the money supply
B→ Has a substantial impact on the money supply
C Has less impact on interest rates than on the money supply
D Is more effective under a system of fixed exchange rates

1.2 What should rising interest rates theoretically imply for the external value of a country's currency according to interest rate parity?

A→ An immediate currency appreciation, followed by a gradual depreciation
B An immediate currency depreciation, followed by a gradual appreciation
C An immediate currency stabilisation, followed by a gradual appreciation
D Immediate and long term currency depreciation

2 – Foreign Exchange

2.1 One month ago, you sold EUR 3-month outright against USD. However, now you determine that you need the USD in one month. How can you roll back this position?

A→ You buy and sell 1-month EUR/USD & sell and buy 2-month EUR/USD
B You sell and buy 1-month EUR/USD & buy and sell 2-month EUR/USD
C You buy and sell 2-month EUR/USD & sell and buy 3-month EUR/USD
D You sell and buy 2-month EUR/USD & buy and sell 3-month EUR/USD

2.2 Assume you buy and sell USD 10,000,000.00 against ZAR, spot against 3 months. Which of the following scenarios is the most profitable for your position?

A→ ZAR interest rates fall and USD interest rates remain unchanged
B ZAR interest rates rise and USD interest rates remain unchanged
C USD interest rates and ZAR interest rates remain unchanged
D USD interest rates fall and ZAR interest rates remain unchanged

2.3 You have a short position in GBP for 6 months (180 days) at 7.25%.

The market is quoting:
3-month (90 days) Sterling CP 7.06%
3-month (90 days) USCP 4.96%
Spot GBP/USD 1.6715
3-month (90 days) GBP/USD 80 / 76

What would be your 3x6 break-even rate after issuing USCP and converting the proceeds through an FX swap into 3-month GBP?

A 7.4313%
B 7.3066%
C 7.4385%
D→ 7.3058%

3 – Rates

3.1 How do you calculate the maturity amount in a sell / buy-back where the collateral pays a coupon between start and end dates?

A→ (start proceeds + repo interest) - coupon - reinvestment interest on coupon
B (start proceeds + repo interest) - accrued interest - coupon + reinvestment interest on coupon
C (start proceeds + repo interest) - coupon + reinvestment interest on coupon
D (start proceeds + repo interest) - accrued interest - coupon - reinvestment interest on coupon

3.2 Rank the typical yields of the following financial instruments in the international money market in decreasing order (from highest to lowest):

A deposit, Treasury bill, CP, CD, GC repo
B deposit, CD, Treasury bill, GC repo
C→ deposit, CD, GC repo, Treasury bill
D CD, deposit, GC repo, Treasury bill

3.3 You repo out a CD with a face value of EUR 25,000,000.00, an original term to maturity of 91 days and a coupon of 3.50% that has 51 days remaining to maturity and is currently trading at 3.25%, for 2 weeks (14 days). You are quoted a 2-week EUR repo rate of 2.90-95%. The buyer requires a Margin Ratio of 105%. What are the cashflows in the repo?

A→ start EUR 23,910,085.94; end EUR 23,937,516.12
B start EUR 23,910,085.94; end EUR 23,947,516.12
C start EUR 26,250,000.00; end EUR 26,280,114.58
D start EUR 25,105,590.33; end EUR 25,163,193.613.1

3.4 Other things being equal, which of the following bonds would show the largest relative price increase given the same downward shift in the yield curve?

A→ a zero coupon bond
B a low coupon bond
C a high coupon bond
D a junk bond

3.5 If a bond is issued at "20 through swaps":

A its coupon is 20 basis points less than the swap rate over the same term
B its coupon is 20 basis points more than the swap rate over the same term
C→ its yield is 20 basis points below the swap yield curve
D its yield is 20 basis points above the swap yield curve

3.6 What is the Modified Duration of a 2-year 3.75% semi-annual bond yielding 4.10%?

A 1.84%
B→ 1.91%
C 1.79%
D 1.95%

4 – FICC Derivatives

4.1 An investor expects a weaker USD/JPY exchange rate (spot is 109.00). He wants to profit by using a bear spread. He should:

A→ buy USD put / JPY call (strike 108.00) and sell USD put / JPY (call strike 106.00)
B buy USD put / JPY call (strike 107.00) and buy USD call / JPY (put strike 107.00)
C buy USD call / JPY put (strike 108.00) and sell USD call / JPY (put strike 110.00)
D buy USD put / JPY call (strike 108.00) and sell USD put / JPY (call strike 110.00)

4.2 The market is quoting:

spot USD/CHF 1.4550
6-month USD/CHF -280
ATM forward strike premium 425 / 442 CHF pips
1.4000 USD put / CHF call (30-delta) premium 302 / 319 CHF pips
1.5000 USD call / CHF put (30-delta) premium 165 / 182 CHF pips

You sell an at-the-money-forward straddle. What are the break-even points?

A 1.3845 and 1.4695
B→ 1.3420 and 1.5120
C 1.3386 and 1.5154
D 1.3828 and 1.4712

4.3 A long condor trade for MAR / JUN / SEP / DEC refers to:

A going long 1 MAR, short 2 JUN, short 2 SEP, long 1 DEC
B going short 1 MAR, long 2 JUN, long 2 SEP, short 1 DEC
C→ going long 1 MAR, short 1 JUN, short 1 SEP, long 1 DEC
D going short 1 MAR, long 1 JUN, long 1 SEP, short 1 DEC

4.4 It is 2nd January and you need to hedge a 3-month borrowing exposure of USD 50,000,000.00 on 1st May.

The market is quoting:
MAR Eurodollar future (IMM date 22nd March): 97.00
JUN Eurodollar future (IMM date 21st June): 96.75
SEP Eurodollar future (IMM date 20th September): 96.50

Using interpolative hedging, what is the expected hedged borrowing rate and how many and which contracts would you transact? Ignore the mismatch between the underlying term of the futures contract and the term of the underlying exposure.

A 3.00%; sell 50 MAR
B 3.25%; sell 28 MAR & 22 JUN
C 3.19%; sell 25 MAR & 25 JUN
D→ 3.11%; sell 28 MAR & 22 JUN

4.5 On the last trading day of the MAR futures contract, you transact a 1-year EUR money market swap on which you are receiving fixed against 3-month EURIBOR. How would you hedge your position?

A→ buy a strip of 3x6, 6x9, 9x12 EUR FRA
B sell a strip of 0x3, 3x6, 6x9, 9x12 EUR FRA
C buy a strip of JUN, SEP and DEC EURIBOR futures
D buy a strip of MAR, JUN, SEP and DEC EURIBOR futures

4.6 Three year USD fixed rate swaps are quoted at a spread of 50-55 over the 3 year U.S. Treasury rate, which is 4.05%. At what swap rate would a client pay fixed on an annual bond basis?

A→ 4.65
B 4.60
C 3.53
D 3.58

4.7 You are expecting a steepening of the yield curve. Which of the following would be the most logical low-risk strategy?

A sell a 3x6 FRA and sell a 6x9 FRA
B buy a 3x6 FRA and buy a 6x9 FRA
C buy a 3x6 FRA and sell a 6x9 FRA
D→ sell a 3x6 FRA and buy a 6x9 FRA

4.8 You have a 2-month long cash position of USD 15,000,000.00 in 1 month (28 days). You decide to hedge the position with an FRA. The market is quoting:

1x3 (61 days): 2.27-29% 3x12 (276 days): 4.41-44%
1x6 (153 days): 3.17-20% 6x9 (92 days): 5.09-12%
3x6 (92 days): 3.75-77% 6x12 (184 days): 4.64-67%
3x9 (184 days): 4.45-48% 9x12 (92 days): 4.23-26%

Two business days ahead of the position, you lend at LIBOR -5 b.p.. On the same day, LIBOR is fixed at:
1-month: 2.290% 6-month: 2.510%
2-month: 2.350% 9-month: 2.630%
3-month: 2.420% 12-month: 2.830%

What is the net interest return on this position taking into account your FRA hedge?

A USD 60,491.84
B→ USD 56,425.17
C USD 58,458.33
D USD 58,966.50

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5 – Financial Markets Applications

5.1 What can be calculated internally by a bank under the A-IRB (Advanced Internal Rating-Based) approach under the Basel II capital adequacy rules?

A The probability of default and the effective term to maturity only
B Loss given default and exposure at default only
C The probability of default, loss given default and risk weighted assets
D→ The probability of default, loss given default and exposure at default

5.2 The VaR of asset A is 400 and the VaR of asset B is 300. What is the combined VaR, assuming there is zero correlation between these two assets?

A 700
B 100
C→ 500
D 0

5.3 Calculate the VaR10/99% of a EUR 5,000,000.00 single asset portfolio. The annual volatility for this asset is 17%. Assume that changes follow a normal distribution.

A EUR 50,000.00
B EUR 170,000.00
C EUR 280,575.00
D→ EUR 394,525.00