Knowledge Checks: Multiple-Choice Questions and Solutions

FINANCIAL RISK MANAGEMENT

To be used in conjunction with *Financial Risk Management*, 2nd Edition.

Contents

Questions

Module 1

Question 1.1

The board of South Soap Ltd, an Australian soap manufacturer exporting throughout the Asia-Pacific region, has decided to appoint a treasurer to manage its $100 million per annum foreign exchange exposure. When setting the performance measure, the board's rationale was as follows.

> As we have never had a treasurer before, we will benchmark the treasurer's performance against our current policy of doing nothing—which we believe is risk-neutral.

How is the treasurer **most likely** to respond to this performance measure?

A adopt a neutral 50 per cent cover
B minimise their risks by taking out full cover
C minimise their risks by taking out no cover at all
D actively manage the foreign exchange exposure

(FRM ID 1.1)

Question 1.2

Sea Mines Australia Ltd (Sea Mines) currently exports the bulk of its bauxite production to a Chinese manufacturer of aluminium products under a fixed AUD pricing arrangement with settlement terms of 180 days after delivery. Given that movements in the AUD and commodity prices have traditionally been highly correlated, what is the primary risk faced by Sea Mines in respect of these exports?

A credit risk
B liquidity risk
C interest rate risk
D commodity price rise

(FRM ID 1.2)

Question 1.3

Air Rock, a regional Australian airline, receives 80 per cent of its revenues in AUD and the remainder in USD. The airline pilots have been on strike for three months but Air Rock has an obligation to continue to make lease payments on its fleet. What is the primary risk faced by Air Rock airlines?

A credit risk
B liquidity risk
C interest rate risk
D commodity price risk

(FRM ID 1.3)

Question 1.4

Which **one** of the following is **not** a business or operating risk?

A human error resulting in a loss
B fraud that an employee cannot repay
C system breakdown preventing payments
D counterparty defaults through bankruptcy

(FRM ID 1.4)

Question 1.5

Why would an Australian gold-mining company decide that it will use USD as its functional currency?

A It matches the functional currency of all its competitors and accordingly is not disadvantaged.
B USD is less volatile than AUD and therefore reduces the foreign exchange risk to the company.
C Gold is considered a USD-based commodity so shareholders may want a 'pure' exposure to world gold prices.
D This would mean that the company has no foreign exchange exposure as its foreign exchange risk would come from the sale of gold, which is in USD.

(FRM ID 1.5)

Question 1.6

Which **one** of the following is a decision-making tool that presents large numbers of simulations under different market conditions, to assist in highlighting any outcomes that may **not** align with the risk appetite of the board?

A tornado charts
B pay-off diagrams
C scenario analysis
D Monte Carlo analysis

(FRM ID 1.6)

Question 1.7

Pricing clauses, repricing clauses, warranties, ceiling/floor pricing agreements and currency-related price adjustment clauses are all considered as which **one** of the following?

A embedded derivatives
B over-the-counter options
C forward currency contracts
D exchange-traded derivatives

(FRM ID 1.7)

Question 1.8

The process of ranking the variables from top to bottom, from largest to smallest impact, in an attempt to capture and represent how much of an impact a risk has on a particular target such as revenue, net income or earnings per share is known as which **one** of the following?

A tornado charts
B pay-off diagrams
C scenario analysis
D Monte Carlo analysis

(FRM ID 1.8)

Question 1.9

Which **one** of the following is **not** a risk measure?

A mean
B variance
C value at risk (VAR)
D normal distribution

(FRM ID 1.9)

Question 1.10

Consider the following statement and determine its accuracy: 'It is always correct to hedge commodity price risk'. Which **one** of the following responses is correct?

A Yes it is accurate, hedging provides short-term certainty.
B Yes it is accurate, hedging provides a perpetual solution.
C No it is not accurate, investors prefer that firms remain unhedged.
D No it is not accurate, hedging is one of many tools available to firms in meeting firm level objectives.

(FRM ID 1.10)

Module 2

Question 2.1

Free cash flows are calculated as the net income plus depreciation and amortisation charges

A plus changes in net working capital plus new capital expenditure.
B plus changes in net working capital minus new capital expenditure.
C minus changes in net working capital plus new capital expenditure.
D minus changes in net working capital minus new capital expenditure.

(FRM ID 2.1)

Question 2.2

An organisation can employ a number of strategies to maximise cash flow. Which of the following is the **least effective** strategic approach?

A analyse the profit and loss for loss-making business units
B analyse the use of working capital requirements compared to plan
C prepare a cash flow forecast of the entity and investigate actual versus budget
D benchmark key factors to external benchmarks such as cost of credit, average debtor days and exchange rates

(FRM ID 2.15)

Question 2.3

The following is an extract of the annual accounts for Ziplok Ltd (Ziplok).

Ziplok Ltd statement of financial position at 30 June

Assets	**20X3 (000)**	**20X2 (000)**
Current assets		
Cash	30.0	35.0
Accounts receivable	20.0	15.0
Marketable securities	20.0	15.0
Inventory	50.0	45.0
Total current assets	120.0	110.0
Non-current (fixed) assets		
Plant and equipment	100.0	90.0
Total non-current assets	100.0	90.0
Total assets	220.0	200.0
Liabilities		
Accounts payable	49.4	50.0
Non-current liabilities	80.0	75.0
Total liabilities	129.4	125.0
Shareholders' equity		
Issued share capital 4500 shares @ $10	45.0	45.0
Retained profits	45.6	30.0
Total shareholders' equity	90.6	75.0
Total liabilities and shareholders' equity	**220.0**	**200.0**

Ziplok Ltd comparative profit and loss statements at 30 June

	20X3 (000)	20X2 (000)
Gross sales	90.0	102.0
Less: Cost of goods sold	50.0	60.0
Gross profit	40.0	42.0
Less: Selling and distribution expenses	11.0	13.0
Less: General and administration expenses	4.0	7.0
Operating profit	25.0	22.0
Non-operating income	3.0	0.0
Non-operating profit before interest expense and taxes	28.0	22.0
Less: Interest expenses	2.0	2.0
Net profit before tax	26.0	20.0
Less: Income tax expense	10.4	8.0
Net profit after tax	15.6	12.0

What is the current ratio for Ziplok as at 30 June 20X3?

A 0.54
B 0.93
C 1.42
D 2.43

(FRM ID 2.11)

Question 2.4

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(FRM ID 2.12)

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Less: Income tax expense	10.4	8.0
Net profit after tax	15.6	12.0

What is the accounts receivable period for Ziplok in 20X3, rounded to the nearest whole number?

A 61 days
B 66 days
C 73 days
D 81 days

(FRM ID 2.13)

Question 2.6

The following is an extract of the annual accounts for Ziplok Ltd (Ziplok).

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Less: Interest expenses	2.0	2.0
Net profit before tax	26.0	20.0
Less: Income tax expense	10.4	8.0
Net profit after tax	15.6	12.0

What is the accounts payable period for Ziplok in 20X3, rounded to the nearest whole number?

A 300 days
B 361 days
C 365 days
D 380 days

(FRM ID 2.14)

Question 2.7

GML Ltd has 10-year bonds outstanding with a face value of $10 000 each. If the bonds pay an annual coupon of 5 per cent and their market yield is 8 per cent per annum, what is their current market price?

A $7333
B $7987
C $10 799
D $12 317

(FRM ID 2.16)

Question 2.8

KPC Ltd has just issued 15-year bonds with a face value of $1000 and an annual coupon rate of 12 per cent. If the bonds are trading at $824.58 today, what is their yield to maturity?

A 10 per cent
B 12 per cent
C 15 per cent
D 16 per cent

(FRM ID 2.17)

Question 2.9

Assume a company has the opportunity to undertake a new project. The required return on equity, assuming it were all-equity financed, is 20 per cent. Ignoring any tax effects, what would be the required return on equity if 25 per cent of the required finance were obtained through a bank loan costing 14 per cent?

A equal to 14 per cent
B equal to 20 per cent
C greater than 20 per cent
D greater than 14 per cent and less than 20 per cent

(FRM ID 2.18)

Question 2.10

If the risk-free rate is 5 per cent, the expected return on a market portfolio is 10 per cent and the company's equity beta is estimated at 2.0, what is the required return on equity?

A 5 per cent
B 10 per cent
C 15 per cent
D 20 per cent

(FRM ID 2.19)

Question 2.11

What does an equity beta of 0.9 imply about the risk of a company's equity relative to the market portfolio?

A Its systematic risk is less than that of the market portfolio.
B Its unsystematic risk is less than that of the market portfolio.
C Its systematic risk is greater than that of the market portfolio.
D Its unsystematic risk is greater than that of the market portfolio.

(FRM ID 2.20)

Question 2.12

ABF Ltd relies on preference shares (p), bonds (d) and ordinary shares (e) for its long-term financing needs. The costs of these financing instruments would **most likely** be ranked as follows

A kd > ke > kp.
B kd > kp > ke.
C ke > kd > kp.
D ke > kp > kd.

(FRM ID 2.21)

Question 2.13

E-Made Ltd (E-Made) is an Australian company that manufactures and distributes computers throughout Asia and Australia. The board of E-Made is considering an expansion of its current activities and has employed you as a consultant. You have obtained the following financial information.

Liabilities	**$**
Trade creditors	4 200 000
Provision for long service leave	97 000
Bonds	5 400 000

Equity	**$**
P & L appropriation	380 000
Ordinary shares @ $1	1 300 000
General reserve	930 000

Additional information

- E-Made pays interest on its bonds of $386 100 at the end of each year. The bonds mature in seven years. The current market interest rate on bonds of equivalent amount and maturity is 6.5 per cent per annum.
- 1 300 000 ordinary shares issued, last traded at $2.
- Company tax rate is 30 per cent.
- The cost of equity has been estimated at 13 per cent.

What is the after-tax weighted average cost of capital (WACC) for E-Made?

A 7.2 per cent
B 8.6 per cent
C 10.3 per cent
D 10.9 per cent

(FRM ID 2.22)

Question 2.14

E-Made Ltd (E-Made) is an Australian company that manufactures and distributes computers throughout Asia and Australia. The board of E-Made is considering an expansion of its current activities and has employed you as a consultant. You have obtained the following financial information.

Liabilities

Trade creditors	$4 200 000
Provision for long service leave	97 000
Bonds	5 400 000

Equity

P & L appropriation	$380 000
Ordinary shares	1 300 000
General reserve	930 000

Additional information

- E-Made pays interest on its bonds of $386 100 at the end of each year. The bonds mature in seven years. The current market interest rate on bonds of equivalent amount and maturity is 6.5 per cent per annum.
- 1 300 000 ordinary shares issued, last traded at $2.
- Company tax rate is 30 per cent.
- The cost of equity has been estimated at 13 per cent.

Which **one** of the following statements is correct?

A If we had ignored the tax effects on the debt, there would be no difference between the calculated WACC and the correct WACC.
B If we had ignored the tax effects and the book values of debt and equity were used, the resulting WACC would be lower than the correctly calculated WACC.
C If we had ignored the tax effects on the debt, the resulting weighted average cost of capital (WACC) would be higher than the WACC incorporating tax effects.
D If the book values for debt and equity were used, there would be no difference between the calculated WACC and the correct WACC because the weights would be the same.

(FRM ID 2.23)

Module 3

Question 3.1

GBC Ltd is considering a project with an initial cost of $10 000. The project will last for four years and it is estimated that the net cash flows in real terms will be $4000 per annum. The nominal discount rate is 8 per cent per annum and the inflation rate over this period is expected to be 3 per cent per annum. Assuming no tax effects or depreciation, this project's net present value (NPV) can be calculated by which **two** of the following methods?

A discount $4000 over four years at 8 per cent and subtract $10 000
B discount $4000 over four years at 4.85 per cent and subtract $10 000
C discount the following annual cash flows at 8 per cent: $4120 (year 1), $4244 (year 2), $4371 (year 3) and $4502 (year 4) and subtract $10 000
D discount the following annual cash flows at 4.85 per cent: $4120 (year 1), $4244 (year 2), $4371 (year 3) and $4502 (year 4) and subtract $10 000

(FRM ID 3.1)

Question 3.2

Which **one** of the following statements about the internal rate of return (IRR) method of project evaluation is correct?

A There is always one unique IRR associated with a project.
B The IRR considers the timing and magnitude of cash flows.
C The IRR discounts the forecasted net cash flows at the opportunity cost of funds.
D The IRR leads to accepting the project that maximises the wealth of shareholders.

(FRM ID 3.2)

Question 3.3

ARN Ltd is considering the following two mutually exclusive projects. The company uses a discount rate of 12 per cent to evaluate its investments. Project A has a life of two years while project B has a life of three years. Their net cash flows, net present values (NPVs), internal rates of return (IRRs) and equivalent annual annuities (EAAs) are as follows.

	Year 0	Year 1	Year 2	Year 3	NPV at 12%	IRR	EAA
Project A	–$1000	$700	$800	—	$263	31%	$156
Project B	–$750	$300	$500	$600	$344	34%	$143

Which **one** of the following statements is correct?

A Project B should be undertaken because $IRR_B > IRR_A$.
B Project A should be undertaken because $EAA_A > EAA_B$.
C Both projects should be undertaken because their NPVs are positive.
D Project B should be undertaken because $NPV_B > NPV_A$ and $IRR_B > IRR_A$.

(FRM ID 3.3)

Question 3.4

PLC Ltd has evaluated two projects that have the following internal rates of return (IRRs) and net present values (NPVs).

	Project X	**Project Y**
IRR	10.0%	14.0%
NPV	–$100 000	$450 000

If the company used the same discount rate to evaluate the above projects, which **one** of the following statements about the interest rate is correct?

A It is below 10 per cent.
B It is above 14 per cent.
C It is equal to 14 per cent.
D It is between 10 per cent and 14 per cent.

(FRM ID 3.4)

Question 3.5

If a company undertakes a project whose net present value (NPV) is zero, which **one** of the following statements is correct?

A The total value of the company will remain unchanged.
B The market value of its debt will fall while the value of its equity will rise.
C The market value of its debt will rise while the value of its equity will fall.
D The market value of its equity will rise and the market value of debt will remain unchanged.

(FRM ID 3.5)

Question 3.6

You have analysed an investment project that has a conventional cash flow pattern. If the initial outlay and all the net cash flows are doubled, what is the **most likely** effect on the project's net present value (NPV) and internal rate of return (IRR)?

A Both the IRR and the NPV would increase.
B Both the IRR and the NPV would stay the same.
C The IRR would stay the same and the NPV would increase.
D The IRR would increase and the NPV would stay the same.

(FRM ID 3.19)

Question 3.7

Select the option that **most accurately** evaluates the following statement: 'We do all our capital budgeting in real terms. This avoids the need to estimate the inflation rate'.

A Correct, since inflation rate adjustments are factored into the discount rate.
B Correct, since the cash flow estimates of the project should always be expressed in real terms.
C Correct, since the effect on cash flows is offset by a corresponding adjustment to the discount rate.
D Incorrect, since inflation rate estimates are needed because depreciation tax shields are based on historical costs rather than replacement costs.

(FRM ID 3.11)

Question 3.8

Which **one** of the following items of information is **least likely** to be necessary for evaluating an investment project?

A the project's life
B the project's discount rate
C the project's initial cash outlay
D the project's internal rate of return

(FRM ID 3.20)

Question 3.9

Which **one** of the following statements concerning interest tax shields is **not** correct?

A They have no value if the company does not pay company tax.
B They can be treated as side effects in the adjusted present value (APV) approach.
C They should be completely ignored since they are a financing cash flow, not a project cash flow.
D They are implicitly included through the calculation of the after-tax weighted average cost of capital in the net present value (NPV) method.

(FRM ID 3.12)

Question 3.10

Ejection Systems Ltd is considering the following investment project.

Initial cost	$450 000
Salvage value	$0
Useful life	8 years
Real annual net cash flow	$100 000
Nominal discount rate	20.00 per cent p.a.
Expected inflation rate	8.00 per cent p.a.

What is the net present value (NPV) of the project, assuming no tax effects or depreciation? (**Note:** interest rates should be rounded to two decimal places.)

A +$62 600
B +$66 284
C +$124 664
D +$350 000

(FRM ID 3.13)

Question 3.11

HiTech Ltd (HiTech) has to choose between two alternative machines, X and Y, which perform the same function but have lives of one and three years, respectively. The initial cost of Machine X is $25 000 and its annual operating costs are expected to be $4000. The initial cost of Machine Y is $50 000 and its annual operating costs are expected to be $10 000. Assume that the projects are repeatable and there are no constraints on the availability of funds. If HiTech's cost of capital is 12 per cent per annum, using the lowest common duration method, what are the net present values (NPVs) of costs that should be used in comparing the two machines?

	Machine X	Machine Y
A	–$28 571	–$58 929
B	–$28 571	–$74 018
C	–$51 348	–$74 018
D	–$76 859	–$74 018

(FRM ID 3.14)

Question 3.12

ZYX Ltd is a manufacturer of personal computer components and is considering implementing a proprietary technology in the manufacturing process of its next generation of hard drives. It expects that this technology will be prohibitively expensive for its competitors to copy. As a result, it expects the project to generate net after-tax cash flows of $230 000 next year, with the cash flows expected to grow at a constant rate of 4 per cent per annum forever. The initial investment required for this project is $2 million. The company uses a discount rate of 14 per cent to evaluate the project.

The project's net present value (NPV) is closest to

A –$357 143.
B –$291 429.
C +$300 000.
D +$392 000.

(FRM ID 3.15)

Question 3.13

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The project's internal rate of return (IRR) is closest to

A 4.0 per cent.
B 7.5 per cent.
C 11.5 per cent.
D 15.5 per cent.

(FRM ID 3.16)

Question 3.14

What is the minimum number of director and shareholder requirements for public companies?

A two directors and five members/shareholders
B three directors and one member/shareholder
C five directors and five members/shareholders
D two directors and three members/shareholders

(FRM ID 3.21)

Question 3.15

In which **one** of the following aspects does venture capital differ from other types of equity capital?

A Equity capital is listed on the share market.
B Venture capital consists of debt capital, originating from banks.
C Venture capital is only sourced through pooled development funds.
D Venture capital is an inherently higher risk form of capital than share market capital.

(FRM ID 3.22)

Question 3.16

Which **one** of the following correctly describes an entitlement issue?

A a placement issue
B a renounceable rights issue
C a non-renounceable rights issue
D the second instalment of a government privatisation issue

(FRM ID 3.23)

Question 3.17

During the Global Financial Crisis (GFC), it was common for listed companies under financial stress to use the following equity issues, except for which **one** of the following?

A bonus issues
B share purchase plans
C rights issues to shareholders
D private placements to institutions

FRM ID 3.24)

Question 3.18

Eagles Flight Ltd (Eagles) wishes to obtain the use of an additional aircraft with an expected life of 20 years to complement its fleet. The company has had preliminary discussions with an aircraft supplier that has proposed a financing arrangement under which Eagles will enter into a non-cancellable contract to make a series of payments for four years in exchange for the right to use the plane. All maintenance will be performed by Eagles and at the conclusion of the contract Eagles will legally own the plane. Which **one** of the following **best** describes the proposed arrangement from the aircraft supplier?

A finance lease
B hire purchase
C operating lease
D sale and lease back

(FRM ID 3.25)

Question 3.19

Jim Jams Pty Ltd (Jim Jams) is about to raise funds to cover a cash shortfall by issuing a bill. Jim Jams will receive a significant payment in 40 days' time but needs cash now to meet its operating costs until the payment is received. The bill will have a $100 000 face value, 40 days to maturity and yield of 5 per cent, which is at a discount to its recent long-term borrowings of 6.5 per cent. What is the amount that Jim Jams will receive as a result of issuing the bill?

A $98 755
B $99 293
C $99 455
D $100 000

(FRM ID 3.26)

Question 3.20

In calculating the adjusted net present value (NPV) of a project, which of the following is **least likely** to be a side effect associated with the project being evaluated?

A the depreciation tax shield
B flotation or capital raising costs
C the value of subsidised financing
D the present value of interest tax shields

(FRM ID 3.27)

Module 4

Question 4.1

Which **one** of the following statements **best** describes when a market is said to be in contango?

A The current spot price equals the forward price.
B The current spot price exceeds the forward price.
C The forward price exceeds the current spot price.
D The forward price is lower than the current spot price.

(FRM ID 4.1)

Question 4.2

You are the corporate treasurer of an Australian-based gold producer. You believe that the price of gold is going to rise and you would like to benefit from any increase in price, but would also like to hedge against a lower gold price should the market fall. Which **one** of the following hedge instruments would achieve this result?

A sell gold futures
B sell gold forward
C sell a gold call option
D buy a gold put option

(FRM ID 4.2)

Question 4.3

Which one of the following statements about option contracts is **not** accurate?

A An option contract buyer can also be a seller at the same time in the market.
B The seller of an option contract can choose to opt out the contract before it expires.
C Option contracts can be used in various combinations for both hedging and arbitrage purposes.
D An option contract buyer can exercise the contract and settle with the seller through a difference cheque.

(FRM ID 4.18)

Question 4.4

OzGold is considering purchasing a gold put option to hedge its exposure to falls in the gold price. Which **three** of the following factors are likely to cause the price of the gold put option to increase?

A an increase in the gold price
B an increase in the strike price of the option
C an increase in the volatility of the gold price
D an increase in the time to expiry of the option

(FRM ID 4.4)

Question 4.5

An Australian aluminium producer has purchased an aluminium put/AUD call with a strike price of AUD 2800/tonne. If the spot price on the expiry date and time of the option was at AUD 2750/tonne, how should the aluminium producer respond? Select which **one** of the following is correct.

A allow the option to lapse without exercising it
B exercise the option and sell aluminium at AUD 2750/tonne
C exercise the option and sell aluminium at AUD 2800/tonne
D exercise the option and buy aluminium at AUD 2800/tonne

(FRM ID 4.5)

Question 4.6

With respect to options, who has the credit risk? Select which **one** of the following is correct.

A the option seller
B the option buyer
C both the seller and the buyer
D neither the seller nor the buyer as contracts are optional

(FRM ID 4.6)

Question 4.7

Assume that you have bought an oil call option at a strike price of USD 90.00 per barrel. You have paid a premium of USD 2.50 per barrel. What is the net price per barrel that you would pay if the spot price of oil at option expiration is USD 100.00 per barrel? Select which **one** of the following is correct.

A USD 90.00
B USD 92.50
C USD 100.00
D USD 102.50

(FRM ID 4.7)

Question 4.8

OzCo Ltd (OzCo) has entered into an interest rate swap (IRS) with a bank to receive floating-rate payments and pay a fixed rate of 6.50 per cent, based on a principal of AUD 10 000 000. If there were 91 days in the current interest period, the fixed rate amount would be AUD 162 054.79 and the floating-rate amount would be AUD 124 657.53.

Which one of the following is the cash flow between OzCo and the bank?

A OzCo pays the bank AUD 37 397.26.
B The bank pays OzCo AUD 37 397.26.
C OzCo pays the bank AUD 162 054.79.
D The bank pays OzCo AUD 124 657.53.

(FRM ID 4.8)

Question 4.9

A copper producer buys a copper put option at a strike price of USD 6000 per tonne at a premium of USD 100 per tonne. On maturity, the spot copper price is USD 5800 per tonne.

Which **one** of the following is the effective price received by the copper producer?

A USD 5700 per tonne
B USD 5900 per tonne
C USD 6000 per tonne
D USD 6100 per tonne

(FRM ID 4.10)

Question 4.10

With regard to the forward and swap contract, which **one** of the following is **not** correct?

A Swap or forward contracts are not transferrable.
B A swap contract can be regarded as a series of forward contracts.
C Prices or rates in swap or forward contracts are always negotiated between parties.
D Swap contracts can be obtained over the counter (OTC) or exchange traded (ET). But forward contracts can only be OTC.

(FRM ID 4.19)

Question 4.11

Which **one** of the following is the correct strategy for an aluminium producer who wants to fix the price of its aluminium sales?

A buy aluminium forward
B sell aluminium forward
C sell aluminium call options
D buy aluminium put options

(FRM ID 4.12)

Question 4.12

The management team at an Australian smelter with limited cash flow resources has requested a recommendation on a derivative to stabilise future cash flows at around the current futures price curve. Management has requested that the contract match the volume predicted in one year's time and convert back to AUD such that there is minimum cash flow variability. Which **one** of the following derivatives would be appropriate to achieve the desired objectives?

A a futures contract
B a forward contract
C a purchased put option
D a purchased call option

(FRM ID 4.17)

Question 4.13

A company is submitting a tender to purchase an oil rig. It is concerned that interest rates may rise but does not want to fix rates in case it does not win the tender and interest rates fall (in which case it will lose money on the hedge). What type of interest rate derivative transaction would be **most suitable** for hedging this exposure? Select which **one** of the following is correct.

A interest rate swaps
B interest rate futures
C interest rate options
D forward rate agreements

(FRM ID 4.14)

Question 4.14

Regarding option and futures contract, which **one** of the following statements is correct?

A Default risks for both option and future contracts are mitigated.
B Both option and futures contracts can be settled through a difference cheque.
C Both option and futures contracts require the parties to maintain margin accounts.
D Option contract holders can decide when to exercise the contract before its expiry date. Futures contract parties cannot do so.

(FRM ID 4.20)

Question 4.15

Megabank has just emailed its clients to say that, while interest rates in the United States and Australia are steady at present, there is almost universal agreement that they will soon become volatile and the exchange rate will also become unstable.

As a result, Megabank has raised all its forward exchange rate quotes by +200 basis points to compensate.

Which **one** of the following is **most likely** to happen?

A Nothing.
B Megabank will lose a lot of money.
C Megabank will gain a lot of money.
D Megabank's share price is likely to increase as it now is a market leader.

(FRM ID 4.16)

Module 5

Question 5.1

Which institution would be **most disadvantaged** in the medium term by a fall in short-term interest rates?

A a fund manager that has invested in short-term securities
B an organisation with a predominantly floating interest rate borrowing program
C a financial institution that has borrowed short-term funds and lent long term (fixed-rate home loans)
D a central borrowing authority that has borrowed using short-term securities to provide temporary finance to its clients

(FRM ID 5.1)

Question 5.2

Why have most Australian organisations tended to increase the level of interest-bearing investments they hold following the Global Financial Crisis? Select the **most correct** option.

A It reduces interest rate risk.
B It inflates the balance sheet.
C It reduces liquidity risk to debt counterparties.
D It minimises the costs of the margin between borrowing and investment.

(FRM ID 5.2)

Question 5.3

Assume an organisation is setting its fixed/floating ratio.

Which factor would be the **least considered** in determining the degree of volatility it is prepared to accept in its interest expense?

A budget objectives
B financial covenants with lenders
C short-term interest rate forecasts
D financial ratios used by rating agencies and financial analysts

(FRM ID 5.3)

Question 5.4

A company has entered into an interest rate swap for $10 million where it will pay 6 per cent annually and receive the bank bill swap rate (BBSW). If the BBSW is 8 per cent, what is the net amount the company will pay or receive under the swap?

A pay $200 000
B receive $200 000
C pay $600 000
D receive $600 000

(FRM ID 5.4)

Question 5.5

A company enters into a zero cost collar by buying a cap at 8 per cent and selling a floor at 6 per cent. The bank bill swap rate (BBSW) on the expiration of the collar is 5 per cent. What is the effective rate on the collar?

A 5 per cent
B 6 per cent
C 8 per cent
D unclear without further information

(FRM ID 5.5)

Question 5.6

A company pays a premium of 0.15 per cent for an interest rate cap at 7.50 per cent to protect its borrowings. What would be the effective rate if the cap were exercised?

A 7.35 per cent
B 7.50 per cent
C 7.65 per cent
D 7.80 per cent

(FRM ID 5.6)

Question 5.7

A company is submitting a tender to purchase an oil rig. It is concerned that interest rates may rise but does not want to fix rates in case it does not win the tender and interest rates fall (in which case it will lose money on the hedge). What type of interest rate risk management transaction would be **most suitable** for hedging this exposure?

A swap
B floor
C collar
D swaption

(FRM ID 5.7)

Question 5.8

Which **one** of the following strategies could be used by itself to manage interest rate risk on a portfolio of variable rate borrowing instruments at the **least cost**?

A interest rate caps
B interest rate floors
C interest rate swaps
D interest rate swaptions

(FRM ID 5.8)

Question 5.9

A company enters into a payer swaption at 6.00 per cent annually that matures in one year. The swaption is effectively an option on a swap that will last for four years. If, in one year, the bank bill swap rate (BBSW) for one year is 5.50 per cent and the market rate for four-year swaps is 6.50 per cent, what action should the company take?

A allow the swaption to lapse because the BBSW is lower than the swaption rate
B exercise the swaption and enter into the swap because the BBSW rate is lower than the swaption rate
C allow the swaption to lapse because the swaption rate is lower than the market rate for four-year swaps
D exercise the swaption and enter into the swap because the market rate for four-year swaps is higher than the swaption rate

(FRM ID 5.9)

Question 5.10

What financial instrument or product would **best** allow an organisation to fix the interest rate on a proposed loan for a five-year period (so that the interest rate and interest payment were known over the whole five years), but could be changed if necessary?

A loan agreement
B interest rate cap
C interest rate swap
D cross-currency interest rate swap

(FRM ID 5.10)

Module 6

Question 6.1

An Australian bank quotes the AUD/USD at 1.0500–10. This means that the bank will

A sell AUD 1 at USD 1.0500.
B sell USD 1 at AUD 1.0510.
C buy USD 1 at AUD 1.0500.
D buy AUD 1 at USD 1.0500.

(FRM ID 6.1)

Question 6.2

Assume that during the past year, the AUD/USD spot rate changed from 1.0500 to 0.9500. This means that during this period, against the USD, the AUD has

A appreciated by 9.5 per cent.
B depreciated by 9.5 per cent.
C appreciated by 10.5 per cent.
D depreciated by 10.5 per cent.

(FRM ID 6.2)

Question 6.3

The following table shows the cash flows (in millions) for an Australian exporter. Assume that the functional currency for the Australian exporter is AUD. The exporter has entered into forward contracts between USD and AUD for its quarterly USD receipts.

Currency	Quarter 1	Quarter 2	Quarter 3	Quarter 4
AUD	10	15	19	8
USD	–5	13	6	2
JPY†	180	260	0	180
EUR	30	–15	25	–40

† JPY contracts contain a currency revaluation clause, which means that the contract price is adjusted for changes in exchange rates.

Over the one-year period, which **one** of the following statements is correct?

A Only a timing exposure exists for USD.
B Only a timing exposure exists for EUR.
C A net currency exposure exists for JPY.
D A net currency exposure exists for AUD.

(FRM ID 6.3)

Question 6.4

An Australian exporter has entered into a contract to sell goods in six months' time and will receive USD 1 million for these goods.

What type of exposure is this an example of?

A economic exposure
B translation exposure
C transaction exposure
D competitive exposure

(FRM ID 6.4)

Question 6.5

An Australian-based exporter wants to protect the company's profitability from large adverse currency movements. Which **two** of the following strategies will achieve this objective?

A Sell an AUD call option.
B Buy an AUD call option.
C Leave the exposure unhedged.
D Enter into a forward exchange contract (FEC).

(FRM ID 6.5)

Question 6.6

An Australian company is **most likely** to buy an AUD put (USD call) option as a hedge if

A it is an importer.
B it is an exporter.
C it has a foreign currency receivable.
D it is either an importer or exporter with a foreign exchange receivable.

(FRM ID 6.6)

Question 6.7

What does a bought AUD call option (USD put) protect the buyer against? Select which **one** of the following is correct.

A a fall in volatility
B a rise in the USD
C a rise in the AUD
D a decline in the AUD

(FRM ID 6.7)

Question 6.8

You are the corporate treasurer of an Australian-based importer and decide to hedge the company's USD 1 million exposure by entering into a nil-premium collar with strike prices of AUD/USD 1.0600 and AUD/USD 1.0200. At expiry of the collar, the spot AUD/USD rate is trading at AUD/USD 1.0400. What is the cost to the company?

A AUD 943 396.22
B AUD 961 538.46
C AUD 1 040 000
D AUD 1 060 000

(FRM ID 6.8)

Question 6.9

An Australian-based exporter enters into an AUD/USD collar transaction by buying an AUD call at 1.0500 and selling an AUD put at 0.9500. If the AUD falls to 0.9000 at expiry, which of the following events would occur?

A Both options would expire worthless.
B Both options would be exercised and the exporter would receive the spot rate.
C The put option would be exercised and the exporter would receive a rate of 0.9000.
D The put option would be exercised and the exporter would receive a rate of 0.9500.

(FRM ID 6.9)

Question 6.10

You work for an Australian-based company importing goods from the United States. You have an uncommitted exposure for USD 2 million in six months time and are concerned that the AUD will decline from the current level of 1.0500. Which of the following strategies would be **most appropriate**?

A enter into a forward exchange contract
B buy an AUD put option with a strike of 1.0300
C buy an AUD call option with a strike of 1.0300
D do nothing because the company will benefit from a falling AUD

(FRM ID 6.10)

Question 6.11

Which **one** of the following is considered an appropriate risk management technique?

A an exporter hedging uncommitted sales with a futures contract
B an exporter hedging uncommitted sales by buying an AUD put option
C an exporter hedging committed sales with a forward exchange contract (FEC)
D an exporter hedging uncommitted sales with a forward exchange contract (FEC)

(FRM ID 6.11)

Question 6.12

An Australian gold producer with a cost of production of AUD 400 per ounce decides to protect its profit margin by hedging its gold production. The producer buys a gold put option for 100 000 ounces with a strike of AUD 700. The cost of the option was AUD 25 per ounce. What is the minimum profit margin the producer will earn on the 100 000 ounces of gold?

A AUD 27 500 000
B AUD 30 000 000
C AUD 32 500 000
D AUD 40 000 000

(FRM ID 6.12)

Question 6.13

A gold producer has bought a gold put with a strike of AUD 650 for a cost of AUD 15 per ounce. At expiry, the spot AUD gold price is trading at AUD 600. What will the gold producer do?

A exercise the option and achieve an effective AUD gold price of AUD 635
B exercise the option and achieve an effective AUD gold price of AUD 665
C allow the option to expire and achieve an effective AUD gold price of AUD 635
D allow the option to expire and achieve an effective AUD gold price of AUD 665

(FRM ID 6.13)

Question 6.14

You are the financial controller for an Australian-based importer and you want to hedge against a possible fall in the AUD but you also want to have unlimited upside participation in any favourable AUD move. Which **one** of the following risk management strategies will achieve this result?

A bought AUD call
B bought AUD put
C nil-premium collar
D forward exchange contract (FEC)

(FRM ID 6.14)

Question 6.15

Which **three** of the following are likely to result in a reduced profit margin for an Australian-based gold producer, assuming all other variables remain unchanged?

A a fall in the USD gold price
B a rise in the cost of gold production
C a fall in the AUD/USD exchange rate
D a rise in the AUD/USD exchange rate

(FRM ID 6.15)

Question 6.16

Steel Pty Ltd (Steel) sells battleships to the Australian Department of Defence (Defence). The ships are purchased by Steel in the United States for USD 10 million each and then on-sold to Defence. The spot rate is AUD/USD 0.8000 and both US and Australian interest rates are 5 per cent per annum.

Steel has been offered four alternative pricing clauses by Defence. Which should it accept?

A fixed price of AUD 19 million payable in one year
B USD 18 million, with Steel subject to all exchange rate variations between now and payment in one year
C fixed price of USD 15 million payable in one year in AUD at the present spot rate of AUD/USD 0.8000
D AUD 20 million in one year, but Steel compensates Defence for unfavourable exchange rate movements affecting Defence

(FRM ID 6.16)

Question 6.17

The CEO of Hi-Fli Enterprises has requested that, as corporate treasurer, you minimise the company's exposure to the euro. Currently the company has a contract to sell EUR 2 million of goods next Christmas but has also a contract to buy a limousine for delivery at Easter at a cost of EUR 2 million.

Which foreign exchange instrument **best** meets the need to manage the total exposure?

A swaps
B options
C forwards
D spot markets

(FRM ID 6.17)

Question 6.18

In the AWA Case study, why was the actual exposure to foreign exchange volatility much lower than the apparent exposure to foreign exchange volatility? Select which **one** of the following is correct.

A Embedded options existed.
B There were offsets between sales and purchases in foreign currencies.
C The price of the company's products was sensitive to the exchange rate.
D The majority of actual exposures were speculative and related to the apparent exposures.

(FRM ID 6.18)

Question 6.19

The board of an Australian-based airline has resolved to make the USD its functional currency as two of its largest costs, aeroplane purchases and fuel, are priced in USD. The airline continues to report in Australian dollars. The airline will need to enter the following transactions next month:

- the purchase of a new plane in USD
- payment of the salaries of Australian employees in AUD
- payment of the salaries of New Zealand employees in NZD
- purchase fuel in USD
- secure retail ticket sales in AUD.

Which **three** of the following risks is the Australian-based airline exposed to?

A commodity price risk
B USD foreign exchange risk
C NZD foreign exchange risk
D AUD foreign exchange risk

(FRM ID 6.19)

Question 6.20

A forward curve for a commodity is **most likely** to be in backwardation when

A it is a non-perishable commodity.
B the spot price falls below the forward price.
C the forward price rises above the spot price.
D there is a sharp increase in demand for the commodity.

(FRM ID 6.20)

Question 6.21

An Australian-based importer with an AUD functional currency has annual revenues of AUD 125 million and costs of USD 75 million. The current spot rate is AUD/USD 1.0500. The company needs to hedge to ensure it achieves a minimum profit margin (profit as a percentage of revenue) of 40 per cent. What is the worst-case exchange rate the company will need to hedge to protect its minimum profit margin?

A AUD/USD 0.9000
B AUD/USD 0.9500
C AUD/USD 1.0000
D AUD/USD 1.0500

(FRM ID 6.22)

Question 6.22

An Australian-based company needs to import some machinery priced in NZD in six months' time and is required to hedge the exposure. Which of the following strategies would you consider the **most appropriate**?

A buying an AUD call, NZD put option
B buying an AUD put, NZD call option
C entering into a six-month AUD/NZD swap
D entering into a six-month forward exchange contract (FEC) to buy AUD and sell NZD

(FRM ID 6.23)

Question 6.23

An Australian-based wine producer is expected to receive NZD 2 million in three months' time and is concerned about a possible sharp rise in the AUD/NZD exchange rate.

Which **two** of the following would be considered an appropriate hedging strategy or strategies if the wine producer still wants to benefit from a weakening AUD?

A buy AUD/sell NZD three months forward
B buy an AUD call/NZD put expiring in three months
C enter into an AUD/NZD swap expiring in three months
D buy an AUD call/NZD put and sell AUD put/NZD call expiring in three months

(FRM ID 6.24)

Question 6.24

You are the corporate treasurer at OzCo Ltd (OzCo) and you have just purchased an AUD put/USD call currency option from BigBank. Which **one** of the following statements is **most correct**?

A The option gives OzCo the right, but not the obligation, to buy AUD and sell USD.
B The option gives OzCo the right, but not the obligation, to buy USD and sell AUD.
C The option requires BigBank to buy USD and sell AUD if OzCo exercises the option.
D The option gives BigBank the right, but not the obligation, to buy AUD and sell USD.

(FRM ID 6.25)

Question 6.25

An Australian company is exporting goods to Germany and receiving payment in euros (EUR).

You are given the following information.

- The AUD/EUR spot rate is 0.8000.
- AUD interest rate is 4.5 per cent per annum.
- EUR interest rate is 1.5 per cent per annum.

Which **two** of the following statements are correct?

A The Australian company needs to buy EUR at a future date.
B The forward rate would be lower than the current spot rate.
C The Australian company needs to buy AUD at a future date.
D The forward rate would be higher than the current spot rate.

(FRM ID 6.26)

Question 6.26

ImportCo Ltd (ImportCo) is considering whether to accept a 10 per cent discount on buying imported machinery from China at USD 1800 each (normal price is USD 2000) or continuing to buy them in Australia at AUD 2300 each.

Payment is to be made on arrival of the machines in one year's time. Relevant information:

- Exchange rate (spot) AUD/USD 0.8000
- Forward (outright) exchange rate AUD/USD 0.7700
- ImportCo borrowing interest rate is 6 per cent
- Available USD one-year deposit rate 1 per cent

Which **one** of the below should ImportCo do?

A continue to purchase at AUD 2300
B accept the discount, buy at USD 1800 and purchase the USD now at AUD/USD 0.8000
C accept the discount, buy at USD 1800 and purchase the USD in one year at AUD/USD 0.7700
D buy the machines at the undiscounted price of USD 2000 and purchase the USD in one year at AUD/USD 0.8000

(FRM ID 6.27)

Question 6.27

ExportCo has been offered the following alternatives for a container load of its custom-designed surfboards, which are to be delivered to, and paid for by, the customer in one year from today.

- AUD 1 000 000 paid one year from today.
- USD 950 000 paid one year from today.
- The AUD equivalent of USD 950 000 converted at the current AUD/USD forward rate, and paid in AUD one year from today.
- The AUD equivalent of USD 960 000 converted at the current AUD/USD spot rate and paid in AUD one year from today.

Additional information:
- The AUD/USD forward rate is 0.9450.
- The AUD/USD spot rate is 0.9500.

Which **one** of the following courses of action should ExportCo choose if it wants to take no risk and maximise known returns?

A accept AUD 1 000 000 payable in one year
B accept USD 950 000 payable in one year, and enter into a forward exchange contract (FEC) to hedge the exchange rate risk
C accept the AUD equivalent of USD 960 000 converted at the current AUD/USD spot rate and paid in AUD one year from today.
D accept the AUD equivalent of USD 950 000 converted at the current AUD/USD forward rate, and paid in AUD one year from today

(FRM ID 6.28)

Module 7

Question 7.1

Can an organisation combine derivatives to create a hedged instrument? Select the **most appropriate** answer.

A Yes, any derivatives can be combined provided it is documented in the initial hedge documentation.
B No, derivatives must be in a hedge relationship on a stand-alone basis to qualify for hedge accounting.
C Yes, derivatives can be combined, provided the entire combination is in an effective hedge relationship for the attributable risks.
D Yes, derivatives can be combined, provided that part of the combination is in an effective hedge relationship for the attributable risks.

(FRM ID 7.1)

Question 7.2

Assume a derivative is used in a hedge relationship. What is the organisation able to do to improve the hedge relationship? Select which **one** of the following is correct.

A Remove the time value of an option or forward contract.
B Split a derivative on a time basis to improve the effectiveness of the hedge.
C Remove the time value of an option or forward contract and split on a time basis.
D An organisation can never remove components of a derivative in a hedge relationship.

(FRM ID 7.2)

Question 7.3

In assessing the hedge relationship, can an organisation exclude time value from a derivative? Select which **one** of the following is correct.

A No, time value must never be excluded in assessing the hedge relationship.
B Yes, time value must be excluded in the assessment of the hedge relationship.
C Time value can be excluded for certain derivatives if it is documented accordingly.
D Part of the assessment process every period is to determine whether time value is included or excluded.

(FRM ID 7.3)

Question 7.4

If the forecast transaction is no longer expected to occur, should an organisation transfer the gains and losses out of equity to profit or loss? Select which **one** of the following is correct.

A yes, always
B only if it is a cash flow hedge
C only if the derivative is terminated
D this depends on the hedge relationship

(FRM ID 7.4)

Question 7.5

Can an organisation hedge a derivative with another derivative and qualify for hedge accounting? Select which **one** of the following is correct.

A never
B only for interest rate risk
C only as a combination hedge
D only as an aggregated exposure

(FRM ID 7.5)

Question 7.6

Assume an organisation had highly probable forecast sales of oil at a floating price in USDs, and has entered into a cash flow hedge to fix the cash flow in AUDs. What cash flow risk is the organisation hedging? Select which **one** of the following is correct.

A foreign exchange risk
B all risk including foreign exchange
C all risk other than foreign exchange
D the transaction would not qualify as a risk that is able to be hedged

(FRM ID 7.6)

Question 7.7

Can an organisation hedge foreign exchange risk for a USD equity instrument recorded at fair value through other comprehensive income with a USD loan? Select which **one** of the following is correct.

A No, as the USD loan is not an eligible hedge instrument.
B No, as equity instruments recorded at fair value through other comprehensive income do not qualify as hedge items.
C Yes, for foreign currency risk as a cash flow hedge with the effective component of the hedge put to other comprehensive income.
D Yes, for foreign currency risk as a fair value hedge with the effective component of the hedge put to other comprehensive income.

(FRM ID 7.7)

Question 7.8

Can an Australian organisation use a USD loan to hedge an unrecognised firm commitment to receive USDs as a cash flow hedge? Select which **one** of the following is correct.

A No, as this would be a fair value hedge.
B Yes, but would only hedge foreign exchange risk.
C No, as only derivatives can hedge foreign currency risk.
D Yes, but would hedge all risks including foreign exchange risk of the unrecognised firm commitment.

(FRM ID 7.8)

Question 7.9

If a cash flow hedge is discontinued but the underlying hedged item continues to exist, what happens to the deferred hedge gains and losses? Select which **one** of the following is correct.

A The deferred gains and losses are taken to the profit and loss immediately.
B The deferred gains and losses remain in equity as long as the hedge instrument continues to exist.
C The deferred gains and losses remain in equity until the underlying hedge item is recorded in the profit and loss.
D In a cash flow hedge, the gains and losses on the hedge instrument will already be recorded in the profit and loss.

(FRM ID 7.9)

Question 7.10

If an organisation hedges variable-rate debt with an interest-rate swap, would it be a cash flow hedge or a fair value hedge? Select which **one** of the following is correct.

A It is a cash flow hedge attributable to all risks.
B It is a fair value hedge attributable to interest-rate risk.
C It is a cash flow hedge attributable to interest-rate risk.
D It will not qualify as a cash flow hedge because credit risk is not hedged.

(FRM ID 7.10)

Question 7.11

If an organisation hedges fixed-rate debt with an interest rate swap, which **one** of the following is correct?

A cash flow of all risks
B fair value hedge of interest rate risk
C cash flow hedge of interest rate risk
D fair value hedge of all fair value changes

(FRM ID 7.11)

Question 7.12

Which **one** of the following statements is correct about the treatment of a foreign exchange hedge of an unrecognised firm commitment?

A A firm commitment can be a fair value or a cash flow hedge for any risk.
B A firm commitment is always a fair value hedge for foreign currency risk.
C A firm commitment can be a fair value or cash flow hedge for foreign currency risk.
D A firm commitment exposes the profit and loss to cash flow variability and, hence, is a cash flow hedge.

(FRM ID 7.12)

Question 7.13

Is a parent company able to hedge future profits from a subsidiary? Select which **one** of the following is correct.

A Yes, it will be a fair value hedge.
B Yes, it will be a cash flow hedge.
C Yes, if it is part of the net investment in a foreign operation.
D No, because profits are a net outcome of different transactions.

(FRM ID 7.13)

Question 7.14

How would an organisation assess whether or not a straightforward cash flow hedge is effective? Select which **one** of the following is correct.

A use a combination of dollar offset and matched term
B use a matched term approach to check whether critical terms match
C use the dollar offset method to assess whether any of the cash flows offset
D use regression analysis to measure whether there is any correlation between the two variables

(FRM ID 7.14)

Question 7.15

When does a fair value hedge relationship qualify as an economic relationship? Select which **one** of the following is **most correct**.

A When the fair value changes of the derivative equal the fair value changes of the hedged item.
B When the fair value changes of the hedge instrument almost fully offset the fair value changes of the hedged item.
C When the fair value changes of the hedge instrument move in opposite directions to the fair value changes of the hedged item.
D When the fair value changes of the hedge instrument offset the fair value changes of the hedged item within a range of 80 per cent to 125 per cent.

(FRM ID 7.15)

Question 7.16

Under IFRS 9 *Financial Instruments* must an organisation assess the effectiveness of a hedge if it knows from the outset that the hedge will be effective? Select which **one** of the following is correct.

A The organisation must assess the effectiveness of all hedges at each reporting date.
B If the organisation assesses the hedge to be effective at inception, that is sufficient.
C The organisation must assess the hedge for effectiveness at inception and at each reporting date thereafter.
D The organisation must assess effectiveness at inception, and at least each reporting date, or earlier if a significant change occurs that could impact effectiveness.

(FRM ID 7.16)

Question 7.17

If a cash flow hedge is no longer assessed as effective, what would an organisation do with the gains and losses on the derivative in equity from the previous period? Select which **one** of the following is correct.

A Gains and losses in equity should be written off immediately.
B Gains and losses can continue to be deferred in equity as long as the derivative exists.
C No gains and losses can be deferred in equity as the hedge is no longer assessed as effective.
D Gains and losses up to the previous period prior to the hedge no longer being assessed as effective can continue to be deferred to match the underlying hedging item.

(FRM ID 7.17)

Question 7.18

Which **one** of the following contracts would be excluded from the scope of IFRS 9 *Financial Instruments*?

A an interest rate swap
B a foreign exchange contract
C a commodity contract that is net settled prior to delivery
D a commodity contract that is always physically delivered for the entity's expected use

(FRM ID 7.18)

Question 7.19

Company ABC issues floating-rate debt when the benchmark rate is 6 per cent. To protect itself against rising interest rates, the debt contract stipulates that the interest payable is capped at 8 per cent. Which **one** of the following **best** describes the debt contract?

A The interest cap is not an embedded derivative because it does not satisfy the definition of a derivative.
B The floating-rate debt in combination with the interest rate cap is a hybrid instrument and, therefore, must be fair valued.
C The host contract is a floating-rate debt instrument and the clause that caps the interest payable is an embedded derivative. The embedded derivative must be separately fair valued.
D The host contract is a floating-rate debt instrument and the clause that caps the interest payable is an embedded derivative. The embedded derivative does not need to be separated.

(FRM ID 7.19)

Question 7.20

Company XYZ, an Australian company, leases property from Company ABC, a New Zealand company.

The lease payments are denominated in New Zealand dollars. The functional currency of Company XYZ is the Australian dollar and the functional currency of Company ABC is the New Zealand dollar. Which **one** of the following **best** describes the lease contract from XYZ's perspective?

A The embedded derivative is a foreign currency forward contract and must be fair valued separately.
B There is no need to investigate the existence of an embedded derivative as the contract is a lease contract.
C This is not an embedded derivative because the New Zealand dollar is the functional currency of Company ABC.
D The embedded derivative is a currency forward contract but does not have to be fair valued separately, as it is 'closely related' to the host contract.

(FRM ID 7.20)

Question 7.21

ABC Company documents a hedge of a net position of sales of USD 100 offset by inventory purchases of USD 80 and an forward exchange contract (FEC) for USD 20.

Which **one** of the following statements is correct about the hedge relationship?

A It is invalid without a gross hedge instrument equal to the sales.
B It is valid and can be recorded as a normal accounting hedge relationship.
C It is invalid because inventory purchases is not an eligible hedge instrument.
D It is valid, however sales and inventory must be recorded at spot rates with an adjustment through other comprehensive income to recognise the hedge relationship.

(FRM ID 7.21)

Module 8

Question 8.1

The treasury accountant has computed the credit exposure on the following financial instruments outstanding at the end of the year. Which **one** has **not** been computed correctly?

A cash investment for $100 000—exposure calculated at $100 000
B interest rate swap of a notional value of $100 000 for 12 months—exposure calculated at $5000
C forward rate agreement for a notional value of $100 000 for five months—exposure calculated at $2083
D forward exchange contract (FEC) with a notional value of $100 000 for 12 months—exposure calculated at $10 000

(FRM ID 8.1)

Question 8.2

Reconciling derivative transactions to bank account records is an example of which **one** of the following types of control?

A passive
B detective
C corrective
D preventive

(FRM ID 8.2)

Question 8.3

A firm has decided to change the roles of members of back office and front office teams due to a recent restructure. This may be considered an example of which **one** of the following types of control?

A passive
B detective
C corrective
D preventive

(FRM ID 8.3)

Question 8.4

A firm establishing a formal breach reporting system is an example of which **one** of the following types of control?

A passive
B detective
C corrective
D preventive

(FRM ID 8.4)

Question 8.5

The Sarbanes–Oxley Act has consequences for which **one** of the following?

A Australian entities that are US subsidiaries
B Australian firms that have delisted in the United States
C Australian firms that operate representative offices in the United States
D Australian firms that were previously listed on the Australian Securities Exchange

(FRM ID 8.5)

Question 8.6

Which **one** of the following disclosures is a specific requirement under IFRS 7 *Financial Instruments: Disclosures*?

A the nature of hedge relationships
B the liquidity profile of all derivatives
C the potential impact of subjectivity in the valuation of all derivatives
D the timing of release of 'fair value' hedge reserve balances to profit and loss

(FRM ID 8.11)

Question 8.7

The financial risk management policy should cover the organisation's risk appetite. Which **one** of the following is an example of setting the risk appetite?

A monitoring and investing any surplus funds
B identifying the escalation and reporting procedures
C nominating how much decision power is delegated to the business managers
D setting the hedge ratio limits to manage the impact of foreign exchange rates

(FRM ID 8.7)

Question 8.8

The US Committee of Sponsoring Organizations of the Treadway Commission (COSO) framework is based on the proposition that internal controls are based on five interrelated concepts. Which **one** of the following are internal control concepts within the COSO framework?

A Control environment, Risk assessment, Risk identification, Process redesign, Risk monitoring
B Control environment, Risk assessment, Process redesign, Monitoring activities, Risk identification
C Control environment, Risk assessment, Control activities, Information and Communication, Process redesign
D Control environment, Risk assessment, Control activities, Information and Communication, Monitoring activities

(FRM ID 8.8)

Question 8.9

The Australian Securities Exchange (ASX) has stipulated the need for sound risk management practices in listed companies. Which **one** of the following is an ASX recommendation?

A The board of a listed entity should directly oversee the risk.
B Company risk committees should have an independent director.
C Company boards should design and monitor the risk and internal control framework.
D Companies should disclose any material economic, environmental and social sustainability risks.

(FRM ID 8.9)

Question 8.10

When considering the approach to managing liquidity risk in the short term, which **one** of the following is an example of managing liquidity risk?

A monitoring debt covenants
B implementing a cash buffer
C diversifying funding sources
D maintaining an appropriate credit rating

(FRM ID 8.10)

Solutions

Module 1

Question 1.1

Correct answer: C

The correct answer is Option C. The board obviously lacks expertise in risk management. Doing nothing and remaining completely unhedged is not the same as risk neutrality. But, if this is the board's understanding, then the incoming treasurer can easily meet their performance expectations by simply doing nothing.

That is, the treasurer can meet the treasury benchmark by simply never hedging and essentially adopting a standard strategy of informing the board that treasury is 'actively monitoring carefully'.

We need to look at this performance measure from the perspective of the treasurer, not the organisation or the board. While taking out no cover at all may not be in the best interests of the organisation, it may well be in the best interests of the treasurer. The rationale is that by doing nothing, they will at least meet the benchmark requirement.

Options A, B and D are incorrect because if the treasurer chooses to hedge, they will probably incur some hedging expenses for the firm. Even worse, the hedging positions may force the firm to give up potential gains due to market fluctuations. If the treasurer does not hedge and there is a loss due to the lack of hedging, the treasurer can argue that the market is to blame.

You can review this topic area in the study guide under the section titled 'Financial risks' > 'Performance measurement in the context of FRM'.

Question 1.2

Correct answer: A

Option A is correct because there is significant credit risk due to the extended settlement terms of the arrangement and no security is held.

Option B is incorrect as liquidity risk relates to timing issues of cash flows, and is less serious than credit risk.

Options C and D are incorrect as there is no currency or commodity price risk, due to the contract being fixed in AUD.

You can review this topic area in the study guide under the section titled 'Framework for FRM' > 'Identifying financial risk and opportunity in an organisation' > 'Figure 1.18: Example financial risk management process' > 'Step 3: Determine the risk factors'.

Question 1.3

Correct answer: B

Option B, liquidity risk, is correct. Without revenue generated by flying the planes, and with lease payments continuing, the airline is suffering financial stress through not having sufficient funds to meet its obligations as and when they fall due.

Option A is incorrect as no counterparty exposure is mentioned in the question. Normally airline tickets are paid prior to flight so this is unlikely to be an issue.

Option C is incorrect as no interest rate risk is mentioned in the question.

Option D is incorrect as commodity price exposure is not mentioned.

You can review this topic area in the study guide under the section titled 'Framework for FRM' > 'Identifying financial risk and opportunity in an organisation' > 'Figure 1.18: Example financial risk management process' > 'Step 3: Determine the risk factors'.

Question 1.4

Correct answer: D

Option D is correct because counterparty defaulting through bankruptcy is a credit risk.

Options A, B and C are incorrect because they all relate to items that are business or operating risks.

You can review this topic area in the study guide under the section titled 'Framework for FRM' > 'Identifying financial risk and opportunity in an organisation' > 'Figure 1.18: Example financial risk management process' > 'Step 3: Determine the risk factors'.

Question 1.5

Correct answer: C

The correct answer is Option C. A pure exposure to gold is when a company is completely exposed to movements in the gold price. By removing the impact of foreign exchange movements on the gold price, the Australian gold-mining company can maintain this pure exposure.

This will only reduce, not totally remove, foreign exchange exposure, as the company will still have many expenses in AUD, which will create an exposure.

Option A is incorrect unless every gold company uses the USD as its functional currency.

Option B is incorrect because the AUD/USD price is a relative one—if the AUD strengthens against the USD, the USD is weakened against the AUD.

Option D is incorrect because the foreign currency is now Australian dollars.

You can review this topic area in the study guide under the section titled 'Financial risks' > 'Functional currency'.

Question 1.6

Correct answer: D

The correct answer is Option D. Monte Carlo analysis is the only true simulation tool.

Option A is incorrect because tornado charts are basic visualisation tools used to depict risk exposures.

Option B is incorrect because it is a basic diagrammatic representation of pay-offs.

Option C is incorrect because scenario analysis involves a limited number of scenarios.

You can review this topic area in the study guide under the section titled 'Financial risks' > 'Accountants and financial risk' > 'Table 1.10: Sensitivity tools and techniques'.

Question 1.7

Correct answer: A

The correct answer is Option A because they are all embedded derivatives; they are not traded but rather embedded in contracts or commercial agreements.

Option B is incorrect because over-the-counter options are derivatives that are purchased from a bank.

Option C is incorrect because forward exchange contracts are derivatives that are acquired via a bank.

Option D is incorrect because exchange-traded derivatives are derivatives listed on an exchange.

You can review this topic area in the study guide under the section titled 'Financial risk in different industry sectors' > 'Parallel universes: Financial institutions and corporate treasury operations' > 'Table 1.12: Differences between financial institutions and corporate treasury functions' > '4. Managing embedded risk'.

Question 1.8

Correct answer: A

The correct answer is Option A. A tornado chart is a visual risk representation tool showing the impact each risk has on a particular target, by ranking each risk from largest to smallest. It is very useful in assessing which risks should be given the most focus.

Option B is incorrect because it is a basic diagrammatic representation of pay-offs, which does not rank separate risks.

Option C is incorrect because scenario analysis involves a limited number of scenarios either looking at one risk or all risks together. It does not rank risks.

Option D is incorrect because Monte Carlo runs random scenarios of risk factors but does not rank different risks.

You can review this topic area in the study guide under the section titled 'Financial risks' > 'Accountants and financial risk' > 'Table 1.10: Sensitivity tools and techniques'.

Question 1.9

Correct answer: D

The correct answer is Option D. A normal distribution assumes a random distribution of outcomes around a central point (the mean) based on the given standard deviation. It is a way of defining the expected spread of outcomes in a given population for risk measure. It is not a measure of risk in itself.

Option A is incorrect because this is a measure of risk/dispersion.

Option B is incorrect because this is a measure of risk/dispersion.

Option C is incorrect because this is a measure of the VAR of a firm.

You can review this topic area in the study guide under the section titled 'Overview of statistical terms'.

Question 1.10

Correct answer: D

The correct answer is Option D. As explained in the text there can be more than one hedge strategy appropriate to the organisation—based on the core criterion of achieving the organisational objectives within a defined level of uncertainty. There may be multiple strategies that achieve the core objective. As a result, the preferred risk profile will be based on the qualitative and quantitative advantages and disadvantages of each profile.

Options A and B are incorrect because while hedging provides short-term certainty and may be a perpetual solution for some companies, it is not always correct to hedge.

Option C is incorrect because while some investors prefer unhedged firms, this will not apply to all firms.

You can review this topic area in the study guide under the section titled 'Financial risks' > 'Risk appetite in the context of financial risks'.

Module 2

Question 2.1

Correct answer: D

The correct answer is Option D. The free cash flow can be calculated using the following expression:

> Free cash flow = Net income + Depreciation and amortisation –
> Changes in net working capital – Capital expenditure

Option A is incorrect because it adds rather than subtracts both net working capital and new capital expenditure. Free cash flow is a measure of cash remaining, assuming that new investment capital has come from internal cash flow rather than additional debt or equity.

Option B is incorrect because it adds rather than subtracts changes in net working capital.

Option C is incorrect because it adds capital expenditure rather than subtracting capital expenditure.

You can review this topic area in the study guide under the section titled 'Part A: Cash flow management' > 'Free cash flow'.

Question 2.2

Correct answer: A

The correct answer is Option A. An essential part of cash flow management is not to confuse profit and loss management with cash flow management. Many profitable companies go into receivership because of cash flow problems.

Options B, C and D are incorrect because these are all strategies that assist in better understanding the use of cash and hence should assist in cash flow management.

Option B looks at the use of working capital versus plan to see where cash might be better utilised.

Option C looks at the actual cash forecast to understand where there are favourable and unfavourable movements.

Option D looks at external benchmarks on the use of cash to see how internal cash management might be better managed.

You can review this topic area in the study guide under the section titled 'Part B: Working capital management' > 'Strategies to manage working capital'.

Question 2.3

Correct answer: D

The correct answer is Option D. The current ratio can be calculated as follows:

Current ratio = Current assets / Current liabilities

Current ratio = 120 / 49.4 = 2.43

Note: that accounts payable is the only current liability.

Option A is incorrect because it excludes inventory from current assets and divides by total liabilities, rather than current liabilities.

Option B is incorrect because it divides by total liabilities rather than current liabilities.

Option C is incorrect because it excludes inventory from current assets.

You can review this topic area in the study guide under the section titled 'Part A: Cash flow management' > 'Liquidity management'.

Question 2.4

Correct answer: C

The correct answer is Option C. The quick ratio can be calculated as follows:

Quick ratio = (Current assets – Inventory) / Current liabilities

Quick ratio = (120 – 50) / 49.4 = 1.42

Note: that accounts payable is the only current liability.

Option A is incorrect because it divides by total liabilities rather than current liabilities.

Option B is incorrect because it includes inventory within current assets and is divided by total liabilities rather than current liabilities.

Option D is incorrect because it includes inventory incorrectly in current assets.

You can review this topic area in the study guide under the section titled 'Part A: Cash flow management' > 'Liquidity management'.

Question 2.5

Correct answer: D

The correct answer is Option D. The accounts receivable period can be calculated as follows:

Accounts receivable period = Accounts receivable / Average daily sales

Average daily sales = Total sales / 365 = 90 / 365 = 0.2466

Accounts receivable period = 20 / 0.2466 = 81.1 or 81 days

Options A, B and C are incorrect because they would equate via back solving to an estimated accounts receivable balance of 15, 16 and 18 respectively, whereas the correct balance is 20.

You can review this topic area in the study guide under the section titled 'Part B: Working capital management' > 'Measuring working capital requirements'.

Question 2.6

Correct answer: B

The correct answer is Option B. The accounts payable period can be calculated as follows:

Accounts payable period = Accounts payable / Average daily cost of goods sold

Average daily cost of goods sold = Annual cost of goods sold / 365 = 50 / 365 = 0.137

Accounts payable period = 49.4 / 0.137 = 361 days

Option A, C and D are incorrect because they would equate via back solving to an estimated accounts payable balance of 41, 50 and 52 respectively, whereas the correct balance is 49.4.

You can review this topic area in the study guide under the section titled 'Part B: Working capital management' > 'Measuring working capital requirements'.

Question 2.7

Correct answer: B

The correct answer is Option B. The annual coupon paid on the bond is 10 000 × 0.05 = $500 and the bond matures in 10 years. The market price of the bond today is equal to the present value of the 10-year coupon annuity and the present value of the face value at the end of that period. That is:

$$P_0 = \left(\frac{C}{k_d}\right)\left(1 - \frac{1}{(1+k_d)^n}\right) + \frac{F_n}{(1+k_d)^n}$$

$$P_0 = \left(\frac{500}{0.08}\right)\left(1 - \frac{1}{(1+0.08)^{10}}\right) + \frac{10\,000}{(1+0.08)^{10}} = \$7986.97$$

Option A is incorrect because it swaps the yield to maturity (8%) with the time to maturity (10 years), and vice versa, and calculates the price as:

$$P_0 = \left(\frac{500}{0.10}\right)\left(1 - \frac{1}{(1+0.10)^{8}}\right) + \frac{10\,000}{(1+0.10)^{8}} = \$7332.54$$

Option C is incorrect because it swaps the time to maturity (10 years) with the coupon rate (5%), and vice versa, and calculates the price as:

$$P_0 = \left(\frac{1000}{0.08}\right)\left(1 - \frac{1}{(1+0.08)^{5}}\right) + \frac{10\,000}{(1+0.08)^{5}} = \$10\,798.54$$

Option D is incorrect because it swaps the yield to maturity (8%) with the coupon rate (5%), and vice versa, and calculates the price as:

$$P_0 = \left(\frac{800}{0.05}\right)\left(1 - \frac{1}{(1+0.05)^{10}}\right) + \frac{10\,000}{(1+0.05)^{10}} = \$12\,316.52$$

You can review this topic area in the study guide under the section titled 'Part C: Cost of capital and capital structure' > 'Quantitative factors'.

Question 2.8

Correct answer: C

The correct answer is Option C. The price of the bonds today will be equal to the present value of the 15-year coupon annuity and the present value of the face value at the end of that period. That is:

$$P_0 = 824.58 = \left(\frac{120}{k_d}\right)\left(1 - \frac{1}{(1+k_d)^{15}}\right) + \frac{1000}{(1+k_d)^{15}}$$

As the bonds are trading at a discount to their face value we know that the yield to maturity (k_d) will be higher than the coupon rate of 12 per cent. So, the only two viable yields to maturity are 15 per cent and 16 per cent. Using 15 per cent, we get the present value of the future cash flows (PV_0) as:

$$PV_0 = \left(\frac{120}{0.15}\right)\left(1 - \frac{1}{(1+0.15)^{15}}\right) + \frac{1000}{(1+0.15)^{15}} = \$824.58$$

As this is the same value as the bond's price, the yield to maturity is 15 per cent. **Note:** if 15 per cent had not been the yield to maturity then the only other possible answer would have been 16 per cent and no additional calculation would have been needed.

Options A and B are incorrect, as the yield to maturity must be higher than the coupon rate.

Option D is incorrect, as this would give a present value of $776.98.

You can review this topic area in the study guide under the section titled 'Part C: Cost of capital and capital structure' > 'Quantitative factors'.

Question 2.9

Correct answer: C

The correct answer is Option C. The effect of introducing debt finance is to increase the systematic risk to equity holders because the company has to pay interest and principal to debt holders before any profits are available for distribution as dividends to equity holders. As a result, equity holders require a higher return on equity compared to a situation with no debt. So, the required return on equity must increase above the all-equity rate of 20 per cent.

Option A is incorrect because this is just the interest rate on the debt funding.

Option B is incorrect because it is the required return on equity with no debt funding and it does not include the increased risk to equity of debt funding.

Option D is incorrect because it is the range between the interest rate on debt funding and the required return on equity without debt funding. It does not include the increased risk to equity associated with debt funding.

You can review this topic area in the study guide under the section titled 'Part C: Cost of capital and capital structure' > 'Quantitative factors'.

Question 2.10

Correct answer: C

The correct answer is Option C. From the capital asset pricing model (CAPM), we have:

$E(r) = r_f + [E(r_m) - r_f]\beta$.

$E(r) = 5.0 + [10.0 - 5.0]2.0 = 15.0\%$.

Option A is incorrect because it is the risk-free rate.

Option B is incorrect because it is the expected return on the market portfolio.

Option D is incorrect because it is calculated ignoring the risk-free rate in the CAPM as:

$E(r) = [10.0]2.0 = 20.0\%$.

You can review this topic area in the study guide under the section titled 'Part C: Cost of capital and capital structure' > 'Quantitative factors'.

Question 2.11

Correct answer: A

The correct answer is Option A. Beta is a measure of the systematic (or market) risk associated with a company's equity. Because the market portfolio's beta is 1.0, a beta less than 1.0 means that the company's systematic risk is less than that of the market portfolio.

Options B and D are incorrect because a company's equity beta is a measure of the systematic, not unsystematic, risk of the company's equity. It does not tell us anything about the level of unsystematic risk associated with the company's equity relative to the market portfolio.

Option C is incorrect because the company's equity beta is less than 1.0, indicating that its equity's systematic risk is lower, not higher, than the market's systematic risk.

You can review this topic area in the study guide under the section titled 'Part C: Cost of capital and capital structure' > 'Quantitative factors'.

Question 2.12

Correct answer: D

The correct answer is Option D. The payment of interest and principal on debt are contractual obligations to the company, which implies that the cost of debt would be the lowest because debt has the lowest risk. The payment of dividends to preference shareholders is typically fixed and takes priority over any payment of dividends to ordinary shareholders. However, there is no contractual obligation to pay preference dividends, implying that preference shares are more like ordinary shares than debt. This implies that preference shares are riskier than debt but less risky than ordinary shares. So, the cost of preference shares will be higher than the cost of debt but lower than the cost of ordinary shares.

Options A, B and C are incorrect, as they rank the costs of preference shares, bonds and ordinary shares incorrectly.

You can review this topic area in the study guide under the section titled 'Part C: Cost of capital and capital structure' > 'Weighted average cost of capital'.

Question 2.13

Correct answer: A

The correct answer is Option A. For the after-tax WACC, it is necessary to calculate the market value of outstanding shares and the market value of outstanding bonds, and convert the cost of bonds into after-tax terms. The computations are as follows.

Costs of financing instruments:

Bonds	6.5% (given we use the comparable market interest rate for the cost of bonds, not the coupon rate)
Equity	13.0% (given)

Market values of financing instruments:

Bonds	$(386\,100 / 0.065) \times [1 - (1.065)^{-7}] + 5\,400\,000 / (1.065)^{7} = \$5\,592\,507$
Equity	$1\,300\,000 \times 2.00 = \$2\,600\,000$
Total	$5\,592\,507 + 2\,600\,000 = \$8\,192\,507$

Proportions of financing instruments and after-tax WACC:

Bonds	$5\,592\,507 / 8\,192\,507 = 0.683$
Equity	$2\,600\,000 / 8\,192\,507 = 0.317$

WACC $= w_d \times k_d \times (1 - \tau) + w_e \times k_e$
$= 0.683 \times 0.065 \times (1 - 0.30) + 0.317 \times 0.130$
$= 7.23\%$.

Note: in the above calculations, we have converted the interest (k_d) to become after-tax. We don't need to adjust the cost of equity (k_e) as this is already provided on an after-tax basis (unless otherwise stated).

Option B is incorrect because it is calculated using the before-tax cost of debt as:

$0.683 \times 0.065 + 0.317 \times 0.130 = 8.56\%$.

Option C is incorrect because it is calculated using the incorrect financing proportions as:

$0.317 \times 0.065 \times (1 - 0.30) + 0.683 \times 0.130 = 10.32\%$.

Option D is incorrect because it is calculated using the incorrect financing proportions and the before-tax cost of debt as:

$0.317 \times 0.065 + 0.683 \times 0.130 = 10.94\%$.

You can review this topic area in the study guide under the section titled 'Part C: Cost of capital and capital structure' > 'Weighted average cost of capital' and 'Weighted average cost of capital with taxes'.

Question 2.14

Correct answer: C

The correct answer is Option C. Incorporating tax effects reduces the cost of debt. So, ignoring tax effects will increase the WACC.

Option A is incorrect because ignoring tax effects will increase the WACC.

Option B is incorrect because using book value weights increases the WACC (in this example). Also, ignoring tax effects will increase the WACC.

Option D is incorrect because the weights using book values are not the same as the weights using market values.

You can review this topic area in the study guide under the section titled 'Part C: Cost of capital and capital structure' > 'Weighted average cost of capital' and 'Weighted average cost of capital with taxes'.

Module 3

Question 3.1

Options B and C are correct.

Option B is correct because it discounts the real annual cash flows of $4000 at the real discount rate. **Note:** the real discount rate can be calculated using the Fisher equation as:

$$(1 + 0.08) / (1 + 0.03) – 1 = 0.0485.$$

Option C is also correct because it discounts nominal cash flows at the nominal discount rate. The nominal cash flows are obtained as:

Year 1: $4000 \times 1.03 = 4120$
Year 2: $4000 \times 1.03^2 = 4244$
Year 3: $4000 \times 1.03^3 = 4371$
Year 4: $4000 \times 1.03^4 = 4502$

To obtain the NPV, we discount these nominal cash flows at the nominal discount rate of 8 per cent.

Both methods will give the same NPV because the two methods treat cash flows consistently. That is, we discount real cash flows at the real discount rate and nominal cash flows at the nominal discount rate.

Option A is incorrect because it discounts real cash flows at the nominal discount rate.

Option D is incorrect because it discounts nominal cash flows at the real discount rate.

You can review this topic area in the study guide under the sections titled 'Part C: Capital budgeting techniques' > 'Net present value (NPV)' and 'Part D: Additional issues in capital budgeting' > 'Inflation and capital budgeting'.

Question 3.2

Correct answer: B

The correct answer is Option B. The calculation of the IRR takes into consideration the timing and size of the cash flows of a project.

Option A is incorrect because projects whose cash flows change sign in the future can have multiple IRRs.

Option C is incorrect because the IRR is the rate of return that equates the project's net present value (NPV) to zero and does not reflect the project's opportunity cost of funds.

Option D is incorrect because the IRR method does not necessarily lead to the selection of the project with the maximum NPV, and hence its use may not lead to a maximisation of shareholder wealth.

You can review this topic area in the study guide under the section titled 'Part C: Capital budgeting techniques' > 'Internal rate of return (IRR)' and 'NPV and IRR methods compared'.

Question 3.3

Correct answer: B

The correct answer is Option B. Projects with different lives should be compared on the basis of equivalent time horizons. This can be achieved with either using EAAs, or the NPV with the constant chain of replacement assumption. (**Note:** the latter is not calculated in this question as the relative rankings would remain the same.)

Option A is incorrect because of the lives of the projects are not the same. In addition, as discussed in the study guide, even if the project lives were the same, a higher IRR does not guarantee that the project will also have a higher NPV.

Option C is incorrect because the projects are mutually exclusive so only one project can be chosen.

Option D is incorrect because the NPVs are not based on equivalent project lives. Also, IRRs are not a reliable basis of comparison, as discussed in the module.

You can review this topic area in the study guide under the section titled 'Part C: Capital budgeting techniques' > 'NPV and IRR methods compared' > 'Mutually exclusive projects with different lives'.

Question 3.4

Correct answer: B

The correct answer is Option B. This question has provided two sets of related information (i.e. IRR and NPV) and is asking you to determine the most likely discount rate used to evaluate the projects.

For Project X, the IRR is 10 per cent and at that discount rate the NPV is (by definition) zero. This means that if the discount rate were higher than 10 per cent, the NPV would be less than zero. We observe that the NPV is –$100 000, which implies that the discount rate is higher than 10 per cent. Therefore, Option A is incorrect.

For Project Y, the IRR is 14 per cent and at that discount rate the NPV is zero. This means that if the discount rate were lower than 14 per cent, the NPV would be greater than zero. We observe that the NPV is $450 000, which implies that the discount rate is lower than 14 per cent. Therefore, Options C and D are incorrect.

Because the company uses the same discount rate to evaluate both projects, we know from the above reasoning that the discount rate must be between 10 and 14 per cent. Therefore, Option B is correct.

You can review this topic area in the study guide under the section titled 'Part C: Capital budgeting techniques' > 'NPV and IRR methods compared'.

Question 3.5

Correct answer: A

The correct answer is Option A. A zero NPV project is one that generates sufficient cash flows (and return) to service the funds invested (typically debt and equity) with no surplus left over. Such a project will leave the market value of the company unchanged.

Options B, C and D are incorrect because at a zero NPV, the project is earning a return just enough to compensate the sources of funds (typically debt and equity) used to finance the project. Thus, there is no reason to expect the market value of debt or equity to change as a result of the project being adopted.

You can review this topic area in the study guide under the section titled 'Part C: Capital budgeting techniques' > 'Net present value (NPV)'.

Question 3.6

Correct answer: C

The correct answer is Option C. The IRR would not change as it is invariant to the scale of the project, which has doubled in this case. The NPV would be double the original NPV because all cash inflows and outflows have doubled.

Option A is incorrect because the NPV would be double the original NPV and the IRR would not change as it is invariant to the scale of the project.

Option B is incorrect because while the IRR would not change as it is invariant to the scale of the project, the NPV would be double the original NPV.

Option D is incorrect because the IRR would not change as it is invariant to the scale of the project, while the NPV would be double the original NPV.

You can review this topic area in the study guide under the section titled 'Part C: Capital budgeting techniques' > 'Net present value (NPV)' and 'Internal rate of return (IRR)'.

Question 3.7

Correct answer: D

The correct answer is Option D. The statement given is incorrect because conducting capital budgeting in real terms does not avoid the need to estimate the expected inflation rate. This estimate is needed to adjust depreciation tax shields, which are stated in nominal terms, to real tax shields. It is also needed to convert observed market rates, which are also stated in nominal terms, to real discount rates.

Option A is incorrect because inflation rate adjustments are factored only into the nominal discount rate. For cash flows in real terms, the appropriate discount rate that needs to be used is the real discount rate.

Option B is incorrect because cash flows can be stated in either real or nominal terms, including a combination of the two.

Option C is incorrect because there is no reason to believe that the effect on cash flows will be offset by adjustments in the discount rate.

You can review this topic area in the study guide under the section titled 'Part D: Additional issues in capital budgeting' > 'Inflation and capital budgeting'.

Question 3.8

Correct answer: D

The correct answer is Option D. To calculate the net present value (NPV), we would need the project's life, the discount rate to discount the cash flows and the project's initial outlay. The project's IRR can be used to evaluate the project by comparing it with the discount rate but it is not needed to calculate the project's NPV.

Option A is incorrect because it is needed to calculate the NPV.

Option B is incorrect because it is needed to calculate the NPV.

Option C is incorrect because it is needed to calculate the NPV.

You can review this topic area in the study guide under the section titled 'Part C: Capital budgeting techniques' > 'Net present value (NPV)' and 'Internal rate of return (IRR)'.

Question 3.9

Correct answer: C

The correct answer is Option C. While the interest on debt is a financing charge, interest tax shields, which arise due to the tax deductibility of interest payments on debt finance, should be considered in the analysis as they are a project-related cash flow. So the statement in Option C is incorrect.

Option A is incorrect. A company that does not pay tax will have a zero interest tax shield.

Option B is incorrect. Interest tax shields are side effects that can be analysed in an APV framework.

Option D is incorrect. The after-tax weighted average cost of capital takes into account the after tax cost of debt, which includes the effects of interest tax shields.

You can review this topic area in the study guide under the section titled 'Part D: Additional issues in capital budgeting' > 'Estimating cash flows' and 'Adjusted present value (APV) approach'.

Question 3.10

Correct answer: A

The correct answer is Option A. The first step is to convert the nominal rate of return to a real rate of return as the net cash flows are stated in real terms. That is:

Real discount rate = (1 + 0.20) / (1 + 0.08) – 1 = 0.1111 or 11.11%

The next step is to apply the NPV formula, making sure to discount the real cash flows using the real discount rate, as follows:

$$NPV = (100\,000 / 0.1111) \times [1 - (1 + 0.1111)^{-8}] - 450\,000 = \$62\,600$$

Note: we could also convert the real cash flows to nominal cash flows and then apply the nominal discount rate to calculate the NPV. This method would give us the same NPV as above but would involve time-consuming calculations.

Option B is incorrect because the nominal discount rate is used to discount real cash flows.

Option C is incorrect because the inflation rate is used to discount the cash flows.

Option D is incorrect because the cash flows are just added up.

You can review this topic area in the study guide under the section titled 'Part D: Additional issues in capital budgeting' > 'Inflation and capital budgeting'.

Question 3.11

Correct answer: D

The correct answer is Option D. Using the common terminal date of three years, we would invest in Machine X three times and Machine Y once. This gives a common life for the two machines of three years. Since the initial and operating costs of the two machines are given, we can calculate the net cash flows and NPVs of costs as follows.

Year	Net cash flows — Machine X and its replications	PV of net cash flows (k = 12%)	Net cash flows — Machine Y	PV of net cash flows (k = 12%)
0	–$25 000	–$25 000	–$50 000	–$50 000
1	–$25 000 – $4 000 = –$29 000	–$25 893	–$10 000	–$8 928
2	–$25 000 – $4 000 = –$29 000	–$23 119	–$10 000	–$7 972
3	–$4 000	–$2 847	–$10 000	–$7 118
NPV		**–$76 859**		**–$74 018**

Note: in year 1, Machine X has an operating cost of $4000 and the second investment in Machine X costs $25 000. Similarly, in year 2, Machine X has an operating cost of $4000 and the third investment in Machine X costs $25 000. Then, in year 3, Machine X has the final operating cost of $4000.

Based on this analysis, Machine Y would be preferred as it has the higher NPV.

Option A is incorrect because it assumes that Machine Y has a life of one year.

Option B is incorrect because it ignores that the company will need to invest again in Machine X in years 1 and 2 so that it has the same duration as Machine Y.

Option C is incorrect because it assumes that the company will need to invest again in Machine X in year 2 only.

You can review this topic area in the study guide under the section titled 'Part C: Capital budgeting techniques' > 'NPV and IRR methods compared' > 'Mutually exclusive projects with different lives'.

Question 3.12

Correct answer: C

The correct answer is Option C. As the cash flows from this project are expected to be $230 000 next year then grow at a constant rate of 4 per cent per annum forever, we have a growing perpetuity. As shown in the Appendix, the present value of a growing perpetuity can be calculated as:

$PV_0 = C_1/(k - g)$.

Note: in the above expression k is the discount rate or required rate of return. The present value of the $230 000 next year growing at a constant rate of 4 per cent per annum is:

$PV_0 = 230\,000/(k - 0.04)$.

Given an initial investment of $2 000 000, the NPV of the project is:

$NPV = 230\,000 / (k - 0.04) - 2\,000\,000$.

Using a discount rate of 14 per cent we get the NPV as:

$NPV = 230\,000 / (0.14 - 0.04) - 2\,000\,000 = \$300\,000$.

Option A is incorrect because it is calculated as: 230 000 / 0.14 – 2 000 000 = –$357 143.

Option B is incorrect because it is calculated as: 230 000 (1.04) / 0.14 – 2 000 000 = –$291 429.

Option D is incorrect because it is calculated as: 230 000 (1.04) / (0.14 – 0.04) – 2 000 000 = $392 000.

You can review this topic area in the study guide under the sections titled 'Part C: Capital budgeting techniques' > 'Net present value (NPV)' and 'Appendix' > 'Appendix 3.1' > '8. Present value of a growing perpetuity'.

Question 3.13

Correct answer: D

The correct answer is Option D. The IRR of a project is defined as the rate of return that makes the net present value (NPV) of the project equal to zero. We can solve for the IRR by setting the NPV equal to zero, as follows:

NPV = 0 = 230 000 / (IRR – 0.04) – 2 000 000

Solving for IRR, we get:

2 000 000 = 230 000 / (IRR – 0.04)

2 000 000 × (IRR – 0.04) = 230 000

(IRR – 0.04) = 230 000/2 000 000

IRR = 0.115 + 0.04

IRR = 0.155 or 15.5%

Option A is incorrect because it is just the growth rate of cash flows.

Option B is incorrect because it is calculated by solving for the IRR in the following expression:

NPV = 0 = 230 000 / (IRR + 0.04) – 2 000 000.

Option C is incorrect because it is calculated by solving for the IRR in the following expression:

NPV = 0 = 230 000 / IRR – 2 000 000.

You can review this topic area in the study guide under the sections titled 'Part C: Capital budgeting techniques' > 'Internal rate of return (IRR)' and 'Appendix' > 'Appendix 3.1' > '8. Present value of a growing perpetuity'.

Question 3.14

Correct answer: B

The correct answer is Option B. Both public and private companies are required to have at least one member/shareholder. In addition, a public company must have at least three directors and at least two directors must ordinarily reside in Australia.

Options A and D are incorrect because a public company must have at least three directors.

Option C is incorrect because you only need at least three directors and one shareholder.

You can review this topic area in the study guide in the section titled 'Part A: Sources of funds for business' > 'Equity financing' > 'Listed and non-listed companies'.

Question 3.15

Correct answer: D

The correct answer is Option D. Venture capital is equity capital provided to start-up ventures, which typically is inherently riskier than sharemarket capital. These start-up ventures may be businesses that may, or may not, be listed on the stock exchange.

Option A is incorrect because equity capital is not necessarily listed on the sharemarket and it does not explain how it differs from venture capital. Equity capital simply refers to capital that has been provided by individuals and entities in exchange for part or full ownership of an organisation.

Option B is incorrect because venture capital is equity capital; this would preclude the venture capital consisting of a loan from a bank. Debt is not normally provided to start-ups due to the fact that venture capital entities have a high probability of not succeeding.

Option C is incorrect because venture capital can be sourced from a range of providers, so describing venture capital as being only sourced from pooled development funds is incorrect.

You can review this topic area in the study guide under the section titled 'Part A: Sources of funds for business' > 'Equity financing' > 'Forms of equity financing'.

Question 3.16

Correct answer: C

The correct answer is Option C. The term 'entitlement issue' refers to a non-renounceable rights issue. Non-renounceable rights issues or entitlement issues cannot be traded on the sharemarket. As one cannot sell a 'non-renounceable right', it follows that the right being given to shareholders is one of intrinsic entitlement, hence the term entitlement issue. Non-renounceable rights issues should be distinguished from renounceable rights issues, where a shareholder has the right to sell those rights on the sharemarket.

Option A is incorrect because a placement issue relates to the placement of shares and is not an entitlement issue as proceeds are paid for the issue of the shares.

Option B is incorrect because a renounceable issue, unlike a non-renounceable issue, can be traded on the sharemarket.

Option D is incorrect because the second instalment is payment for shares previously acquired.

You can review this topic area in the study guide under the section titled 'Part A: Sources of funds for business' > 'Equity financing' > 'Mechanisms for raising equity capital'.

Question 3.17

Correct answer: A

The correct answer is Option A. During this time, listed companies under financial stress did not use bonus issues because bonus issues do not raise funds.

Option B is incorrect because listed companies did raise funds via share purchase plans.

Option C is incorrect because it was common for listed companies to raise funds via rights issues during the GFC.

Option D is incorrect because listed companies did raise funds via private placements during the GFC. The text reads: 'These corporations issued equity capital (the primary market) in the form of placements, rights issues and share purchase plans. These issues were made at a substantial discount to the already low pre-existing share prices for those companies and were very attractive'.

You can review this topic area in the study guide under the section titled 'Part A: Sources of funds for business' > 'Debt versus equity—the GFC and ESDC'.

Question 3.18

Correct answer: B

The correct answer is Option B. The contract is essentially a hire purchase agreement as the term is relatively short (four years for an aircraft's life), and the asset will be legally owned by Eagles at the conclusion of the contract.

Option A is incorrect. A financial lease is non-cancellable, but transfer of ownership does not necessarily occur at the end of the contract. As such, the 'best' description of the arrangement is a hire purchase agreement.

Option C is incorrect. Even though the contract is short term (four years is not a significant length of time with respect to an aircraft's life), an operating lease does not provide for a transfer of ownership at the end of the contract.

Option D is incorrect as Eagles does not own the aircraft initially.

You can review this topic area in the study guide under the section titled 'Part A: Sources of funds for business' > 'Short- and intermediate-term financing' > 'Other sources of short-term and intermediate-term finance'.

Question 3.19

Correct answer: C

The correct answer is Option C. The amount that the company will receive as a result of issuing the bill can be calculated as follows:

Price = 100 000 / [1 + (0.05 × 40 / 365)] = $99 455

Note: the reference in the case information to 6.50 per cent for recent long-term borrowings is a distractor as it is not required for the purposes of calculating the price of the bill.

Option A is incorrect because it uses a discount interest rate of 11.5 per cent.

Option B is incorrect because it uses a discount rate of 6.50 per cent and so does not result in the correct discounted proceeds.

Option D is incorrect because it has not discounted the bill.

You can review this topic area in the study guide under the section titled 'Part A: Sources of funds for business' > 'Short- and intermediate-term financing' > 'Money market instruments'.

Question 3.20

Correct answer: A

The correct answer is Option A. While depreciation itself is not an operating cash flow, it has a cash flow impact because of its associated depreciation tax shield, which needs to be included in the incremental cash flows from a project.

Options B, C and D are incorrect because these cash flows are typical side effects associated with a project being evaluated and are included in the adjusted NPV calculations.

You can review this topic area in the study guide under the section titled 'Part D: Additional issues in capital budgeting' > 'Estimating cash flows' and 'Adjusted present value (APV) approach'.

Module 4

Question 4.1

Correct answer: C

The correct answer is Option C. **Contango** is the situation where the forward price exceeds the current spot price.

Option A is incorrect. When the spot and forward prices are equal, the market is neither in **contango** nor **backwardation**.

Options B and D are incorrect. When the forward price is lower than the spot price the market is said to be in **backwardation**.

You can review this topic area in the study guide under the section titled 'Forwards' > 'Contango and backwardation in commodity forward markets'.

Question 4.2

Correct answer: D

The correct answer is Option D. If the gold price increases, the producer can let the option expire and sell gold at the favourable current price. If the gold price falls, the producer can exercise the option and sell gold at the option strike price.

Option A is incorrect. Gold futures would also lock in the sale price of gold and not provide any benefit to the producer from an increased gold price.

Option B is incorrect. A gold forward would lock in the price of gold and not provide any benefit from an increased gold price.

Option C is incorrect. Selling a gold call would put a ceiling on the gold price. The producer wishes to put a floor under the gold selling price.

You can review this topic area in the study guide under the section titled 'Options' > 'Hedging using options'.

Question 4.3

Correct answer: B

The correct answer is Option B. The seller of an option contract cannot opt out the contract before its expiry. In practice, the seller of an option contract can also buy another option contract to hedge their exposure. However, it is the obligation of the option contract seller that they exercise the valid contract upon the buyer's request.

Option A is incorrect. There is no such constraint that an option contract buyer cannot be a seller at the same time in the market.

Option C is incorrect. Option contracts can be used in various combinations for hedging, arbitrage and speculation purposes.

Option D is incorrect. A difference cheque can be used for settlement between the buyer and the seller. When the buyer chooses to exercise the option contract, the seller pays the buyer a difference cheque, which is equivalent to the difference between the spot price of the exercise day and the strike price in the contract.

You can review this topic area in the study guide under the section titled 'Options'.

Question 4.4

Correct answers: B, C and D

Option B is correct. An increase in the strike price would make the option more expensive.

Option C is correct. An increase in volatility would make the option price more expensive.

Option D is correct. An increase in the time to expiry of the option would make it more expensive.

Option A is incorrect. An increase in the gold price would cause the gold put option to become cheaper.

You can review this topic area in the study guide under the section titled 'Options' > 'Table 4.5: Key determinants and drivers of option values'.

Question 4.5

Correct answer: C

The correct answer is Option C. The producer would exercise the option and sell aluminium at AUD 2800/tonne, AUD 50/tonne over the current market price.

Option A is incorrect. The producer would give up revenues of AUD 50/tonne by forgoing the opportunity to sell at AUD 50/tonne over the current market price.

Option B is incorrect. The option would be exercised at the strike price of AUD 2800/tonne, not the current market price of AUD 2750/tonne.

Option D is incorrect. The option gives the producer the right to sell aluminium, not buy it.

You can review this topic area in the study guide under the section titled 'Options'.

Question 4.6

Correct answer: B

The correct answer is Option B. If the buyer exercises the option, the seller must perform its obligation to honour the contract to buy or sell at the agreed price. The buyer is therefore at risk if the seller fails to honour that obligation.

Options A and C are incorrect as generally the seller is paid the premium up front and the buyer thereby fulfils all its obligations.

Option D is incorrect as an option contract does involve an obligation on the part of the seller.

You can review this topic area in the study guide under the section titled 'Options' > 'Other option terminology'.

Question 4.7

Correct answer: B

The correct answer is Option B. As the spot oil price at option expiry is USD 100.00 per barrel, you would exercise your right to buy at USD 90.00 per barrel. Your net price would therefore be USD 90.00 per barrel purchase price plus USD 2.50 per barrel premium.

With a bought call option the effective cost (if exercised) is: Strike price + Call option premium. The call option provides the buyer with the right to buy the underlying instrument. By adding the premium, they effectively pay more than otherwise.

Option A is incorrect. This is the strike price excluding the call option premium. The premium must be paid to exercise the option.

Option C is incorrect. This is the spot price that would be paid if the call option wasn't exercised.

Option D is incorrect. This is the spot price plus the call premium, rather than the strike price plus call premium.

You can review this topic area in the study guide under the section titled 'Options' > 'Hedging using options'.

Question 4.8

Correct answer: A

The correct answer is Option A. OzCo would pay the fixed rate payment of AUD 162 054.79 and receive the floating-rate payment of AUD 124 657.53, resulting in a net payment from OzCo to the bank of AUD 37 397.26.

Option B is incorrect. The net amount of AUD 37 397.26 is correct but OzCo would pay the fixed rate payment of AUD 162 054.79 and receive the floating-rate payment of AUD 124 657.53, resulting in a payment from OzCo to the bank of AUD 37 397.26.

Option C is incorrect. This is the amount that OzCo pays the bank, but it ignores the floating rate payments of AUD 124 657.53 that OzCo receives from the bank.

Option D is incorrect. This is the amount of floating rate payments that OzCo receives from the bank, but it ignores the fixed rate payments of AUD 162 054.79 that OzCo makes to the bank.

You can review this topic area in the study guide under the section titled 'Swaps' > 'Interest rate swaps'.

Question 4.9

Correct answer: B

The correct answer is Option B. The producer would exercise the option and sell (put) the copper at USD 6000 per tonne. Net of premium paid (USD 100 per tonne), this results in a net price of USD 5900 per tonne.

With a bought put option the effective cost (if exercised) is: strike price – put option premium.

The put option provides the buyer with the right to sell the underlying instrument. By subtracting the premium, they effectively receive less than otherwise.

Option A is incorrect. This is the spot price less the premium.

Option C is incorrect. This is the strike price, but it is excluding the premium of USD 100 per tonne that must be paid to exercise this option.

Option D is incorrect. The premium of USD 100 per tonne has been added rather than subtracted from the strike price.

You can review this topic area in the study guide under the section titled 'Options' > 'Hedging using options'.

Question 4.10

Correct answer: D

The correct answer is Option D. A swap contract can be obtained OTC but not ET. OTC contracts are negotiated between the two parties.

Option A is incorrect. The OTC contracts are customised and it is difficult to find a third party.

Option B is incorrect. A swap contract can be regarded as a series of forward contracts.

Option C is incorrect. The prices or rates in swap and forward contracts are always negotiated between two parties.

You can review this topic area in the study guide under the sections titled 'Swaps' and 'Forwards'.

Question 4.11

Correct answer: B

The correct answer is Option B. The producer wishes to sell aluminium and therefore would need to sell a forward, which locks in the price. The producer can fix the aluminium price through the forward contract and therefore effectively manage the exposure to the price volatility in the market. The forward contract fixes not only the price but also the amount of the aluminium that the producer sells to the buyer.

Option A is incorrect. Buying aluminium would increase the producer's exposure to the aluminium price. The producer is the seller of the product. Buying a forward contract would add to the inventory of the producer and also increase the exposure to the price volatility.

Option C is incorrect. Selling calls would not fix the aluminium price. The producer would be exposed to falls in the aluminium price.

Option D is incorrect. Buying puts, while potentially a valid hedge strategy, would not fix the aluminium price as the producer would benefit from prices over and above the put option strike price.

You can review this topic area in the study guide under the section titled 'Options' > 'Table 4.4: Option matrix'.

Question 4.12

Correct answer: B

The correct answer is Option B because a forward contract can be tailored to the specific volumes required by the company and permit conversion back to AUD. In addition, a forward does not require cash margin calls and hence is better suited to a company with tight cash resources. As forwards are priced off the futures market, it is expected that the price outcome will be similar to the futures prices and the cash flows of the company will be stabilised as the forward will lock in future cash flows.

Option A is incorrect as a futures contract cannot be tailored to the specific company volumes; in addition the margin calls on a futures contract may challenge the limited cash resources of the company.

Option C is incorrect as a purchased put option would utilise cash resources per the cost of the option premium and would only stabilise prices below the strike rate.

Option D is incorrect as a purchased call option would add volatility to results and would not stabilise cash flows of the company.

You can review this topic area in the study guide under the sections titled 'Futures' and 'Options'.

Question 4.13

Correct answer: C

The most correct answer is Option C—interest rate options.

Options A, B and D are incorrect because forward rate agreements, interest rate swaps and interest rate futures would all lock the company into a fixed interest rate. If it did not win the tender, it would be exposed to hedge losses if interest rates fell. By using options, the maximum downside is limited to the option premium. As a borrower, the company would buy a call option on interest rates (i.e. a cap). If interest rates rise, the company exercises the call option. If interest rates fall, the company can let the interest rate options expire worthless and simply borrow at the lower rates.

You can review this topic area in the study guide under the section titled 'Options'.

Question 4.14

Correct answer: B

The correct answer is Option B. Both option and futures contracts can be settled through a difference cheque. This does not exclude the physical settlement choice agreed between the two parties.

Option A is incorrect. When an option contract is obtained over the counter (OTC), it is subject to default risks.

Option C is incorrect. Option contracts can be obtained OTC or exchange-traded (ET). ET option contracts have margin maintenance requirement on the sellers but not on the buyers. OTC option contracts have no margin requirement. Futures contracts have margin maintenance requirements on both parties.

Option D is incorrect. For European options, exercise is only possible at maturity, while American options can be exercised any time before maturity.

You can review this topic area in the study guide under the sections titled 'Options' and 'Futures'.

Question 4.15

Correct answer: B

The correct answer is Option B. Forward rates are not based on forecasts, so Megabank's reasoning for the rate rise is illogical.

Since its forward rates are now out of line with market rates, other banks will arbitrage them and take profits from the difference between Megabank's rates and those set by the current interest rates and spot rate. As a result, Megabank will systematically lose money until it reverts to the correct forward prices.

Option A is incorrect; other banks at least will see the arbitrage opportunity and exploit it.

Option C is incorrect. Where Megabank is overcharging, no-one should transact; where it is undercharging (importers or exporters), the bank will be 'buying high, selling low'— or systematically losing money.

Option D is incorrect; increased losses do not lead to increasing the value of a company.

You can review this topic area in the study guide under the section titled 'Forwards'.

Module 5

Question 5.1

Correct answer: A

The correct answer is Option A. A fund manager that has invested in short-term securities will be most disadvantaged as, in the short term, the securities will mature and be reinvested at the lower interest rates.

Option B is incorrect. Such an organisation would benefit through lower borrowing costs.

Option C is incorrect. A financial institution would benefit through lower borrowing costs with the return on the fixed-rate loans remaining constant.

Option D is incorrect. The effect on a central borrowing authority would be neutral because the lower borrowing costs would be reflected in the lower return on the temporary finance it provides to its clients.

You can review this topic area in the study guide under the section titled 'Key steps in IRRM' > 'Time frame for IRRM' and 'Determination of the fixed/floating ratio'.

Question 5.2

Correct answer: C

Option C is correct because organisations found cash (including liquid interest-bearing investments) is king during a credit squeeze.

Option A is not a valid reason for increasing the level of interest-bearing investments as interest rate risk could be eliminated by hedging the organisation's borrowings such that movements in interest rates would not affect borrowings. Option A is therefore incorrect.

Option B is incorrect because an inflated balance sheet per se is not an objective that most organisations seek to achieve.

Option D is incorrect as for most organisations there is a negative cost spread on carrying interest bearing investments.

You can review this topic area in the study guide under the section titled 'Key steps in IRRM' > 'Debt and investments'.

Question 5.3

Correct answer: C

Option C is correct. Short-term interest rate forecasts may be considered when undertaking short-term interest rate risk management. However, when determining the degree of volatility the organisation is prepared to accept, forecasts become irrelevant. This is mainly because forecasts are frequently wrong when there are big shifts in financial markets.

Option A is incorrect as the budget objectives would be the base case from which management would consider any variation, so they are important in determination of the degree of volatility the board would accept.

Options B and D are incorrect as management should always be considering financial covenants and rating agency/analyst implications in assessing the impact of volatility.

You can review this topic area in the study guide under the section titled 'Key steps in IRRM' > 'Determination of the fixed/floating ratio'.

Question 5.4

Correct answer: B

The correct answer is Option B. The company would pay $600 000 ($10 000 000 × 6.00%) and receive $800 000 ($10 000 000 × 8.00%), resulting in a net receipt of $200 000.

Option A is incorrect as the company will receive $200 000 rather than pay $200 000.

Option C is incorrect as it ignores the BBSW receipts that take place under the swap.

Option D is incorrect as net $200 000 is received.

You can review this topic area in the study guide under the section titled 'Key steps in IRRM' > 'Step 4: Manage risks (treasury operations)'.

Question 5.5

Correct answer: B

Option B is correct as the BBSW (5%) is below the floor rate (6%); the counterparty would exercise the floor at 6 per cent. The collar limits the effective rate to an upper level of 8 per cent when the BBSW is above 8 per cent and a lower range of 6 per cent when the BBSW is below 6 per cent.

Option A is incorrect as this is the BBSW, which ignores the fact that a floor of 6 per cent is in place.

Option C is incorrect as this is the upper limit on the interest rate cap and is not the effective rate.

Option D is incorrect as all the information to calculate the rate is available.

You can review this topic area in the study guide under the section titled 'Key steps in IRRM' > 'Step 4: Manage risks (treasury operations)'.

Question 5.6

Correct answer: C

Option C is correct because for a cap, the effective rate (if exercised) is calculated as: Cap strike + Cap premium. We therefore add the cap strike (7.50%) and the cap premium (0.15%) to attain the effective rate (7.65%).

Option A is incorrect as it mistakenly assumes the company receives the premium rather than pays the premium.

Option B is incorrect as it ignores the cost of the premium.

Option D is incorrect as it adds the premium twice.

You can review this topic area in the study guide under the section titled 'Key steps in IRRM' > 'Step 4: Manage risks (treasury operations)'.

Question 5.7

Correct answer: D

The correct answer is Option D, a swaption. A swaption would reduce the potential loss to the premium paid while still providing protection should the tender prove successful.

Option A is incorrect because a swap would fix the interest rate.

Option B is incorrect because a floor does not protect against the rising interest rate.

Option C is incorrect because a collar would still leave the risk that interest rates may move lower than the sold floor on the collar, thereby creating a loss.

You can review this topic area in the study guide under the section titled 'Key steps in IRRM' > 'Step 4: Manage risks (treasury operations)'.

Question 5.8

Correct answer: C

Option C is correct. As interest rate swaps are not an option product, there is no premium in their use, hence this is the least-cost strategy.

Options A and D are incorrect. Interest rate caps and swaptions can be used to protect borrowers from rising interest rates. However, as these are option products, there is a cost to their use in hedging.

Option B is incorrect because interest rate floors are used by investors to protect against decreases in interest rates (as opposed to borrowers, who want to protect against increases in interest rates).

You can review this topic area in the study guide under the section titled 'Key steps in IRRM' > 'Step 4: Manage risks (treasury operations)'.

Question 5.9

Correct answer: D

Option D is correct because exercising the swaption and entering into a swap at 6 per cent is the preferred alternative. This would be better than allowing the swaption to lapse and having to enter into a swap at the prevailing market rate of 6.50 per cent. The BBSW of 5.50 per cent is irrelevant as it only fixes the rate for one year and the company wanted to hedge a four-year exposure (which is why it entered into the swaption).

Options A and B are incorrect because the swaption covers a four-year period, hence the swaption rate should be compared against the swap rate, not the BBSW, which is a one-year rate.

Option C is incorrect because the payer swaption should be exercised when the swaption rate is less than the swap rate.

You can review this topic area in the study guide under the section titled 'Key steps in IRRM' > 'Step 4: Manage risks (treasury operations)'.

Question 5.10

Correct answer: C

The correct answer is Option C. Interest rate swaps are an instrument commonly used to manage a company's exposure to movements in interest rates. The market is highly liquid, so reversing the swap would normally be possible when required.

Option A is incorrect. There are likely to be significant costs in cancelling the contract and an early payout of the loan.

Option B is incorrect. Caps provide an upper limit to the interest rate paid, but if rates fall below the cap, then the rate would not be fixed for the term of the loan.

Option D is incorrect. This would involve potential currency revaluations each year with revaluations going to the profit and loss account.

You can review this topic area in the study guide under the section titled 'Key steps in IRRM' > 'The key IRRM financial instruments—swaps and options' > 'Interest rate swaps (IRSs)'.

Module 6

Question 6.1

Correct answer: D

The correct answer is Option D. This quote says that the bank's bid (buying) rate for AUD is USD 1.0500 and its ask or offer (selling) rate for AUD is USD 1.0510.

Remember that this is from the point of view of the bank (not the customer). The bank is going to buy AUD/sell USD at the rate that provides it with a margin (i.e. 1.0500). If an importer would buy USD/sell AUD at 1.0500, then the bank would sell USD/buy AUD at 1.0500.

Option A is incorrect. The quote means that the bank is prepared to sell AUD at 1.0510.

Option B is incorrect. Selling USD is equivalent to buying AUD, for which the rate is 1.0500.

Option C is incorrect. Buying USD is equivalent to selling AUD, for which the rate is 1.0510.

You can review this topic area in the study guide under the section titled 'Part A: FX risk' > 'Demystifying FX'.

Question 6.2

Correct answer: B

The correct answer is Option B. During this period, the AUD changed from 1.0500 to 0.9500. The AUD has lost value against the USD. The AUD depreciates by (1.0500 – 0.9500) / 1.0500 = 9.5 per cent.

Option A is incorrect, as the AUD has depreciated 9.5 per cent, falling from 1.0500 to 0.9500, not appreciated by 9.5 per cent. If the AUD had appreciated by 9.5 per cent it would have increased from 1.0500 to 1.1498 (1.05 + (1.05 × 0.095)).

Option C is incorrect as the calculation uses the end period FX rate as the denominator rather than the numerator. The correct calculation is (start period FX rate – end period FX rate) / start period FX rate, not (1.0500 – 0.95) / 0.95 = 10.5 per cent.

Option D is incorrect as it uses the same incorrect calculation in Option C as well as stating the AUD has appreciated when it depreciated.

You can review this topic area in the study guide under the section titled 'Part A: FX risk' > 'Demystifying FX'.

Question 6.3

Correct answer: B

The correct answer is Option B. The cash flows for the euro all net out to zero in the coming one year. However, in each quarter the euro may have different values in AUD terms. Therefore, if the exporter does not hedge the euro income, the exporter still has the exposure to the volatility of euro value.

Option A is incorrect. There is a currency exposure to the USD, but that is not an available option.

Option C is incorrect. The currency revaluation clause protects the exporter from currency exposure. **Note:** if there was no currency revaluation for JPY, then this would lead to a currency exposure for JPY (as the cash flows do not offset each other).

Option D is incorrect. As the company is an Australian exporter and its functional currency is AUD, there is no AUD currency exposure.

You can review this topic area in the study guide under the section titled 'Part A: FX risk' > 'Demystifying FX' > 'Five key elements of FX'.

Question 6.4

Correct answer: C

The correct answer is Option C. Transaction exposure arises from the conversion of foreign exchange relating to operational contracts/commitments.

Option A is incorrect. Economic exposure occurs with unknown or uncommitted exposures and this is a committed exposure.

Option B is incorrect. Translation exposure is the change in the statement of financial position from the revaluation of assets or liabilities.

Option D is incorrect. Competitive exposure occurs when a competitor sources goods from another country but sells into the same market. There is nothing to advise of that in this situation.

You can review this topic area in the study guide under the section titled 'Part A: FX risk' > 'FX risk management' > 'Step 2: Identify exposures'.

Question 6.5

Correct answer: B and D

The correct answer is Options B and D. An FEC or a bought AUD call will protect an exporter from adverse currency movements (i.e. a rising AUD for an exporter).

Option A is incorrect. Selling a call offers no protective benefit, just the economic value of the option premium.

Option C is incorrect. Leaving the exposure unhedged would leave the company exposed to a rise in the AUD.

You can review this topic area in the study guide under the section titled 'Part A: FX risk' > 'FX risk management' > 'Step 4: Manage risks (treasury operations)' > 'Risk management for exporters'.

Question 6.6

Correct answer: A

The correct answer is Option A. Only an importer would hedge against a falling AUD using an AUD put option.

Options B, C and D are incorrect. An exporter or a company that has a foreign currency receivable would buy an AUD call option.

You can review this topic area in the study guide under the section titled 'Part A: FX risk' > 'FX risk management' > 'Step 4: Manage risks (treasury operations)'.

Question 6.7

Correct answer: C

The correct answer is Option C. A bought AUD call option gives the buyer the right but not the obligation to buy AUD at an agreed rate. This would protect the buyer against a rise in the AUD.

Option A is incorrect because a bought option does not protect against a fall in volatility. A decline in volatility would reduce, not increase, the value of the bought option.

Option B is incorrect because a bought AUD call option gives the right to buy AUD and sell USD. The right to sell USD would not protect the option buyer from a rise in the USD.

Option D is incorrect because a bought AUD call would not protect against a fall in the AUD. A bought AUD put would protect against a fall in the AUD, not a bought AUD call.

You can review this topic area in the study guide under the section titled 'Part A: FX risk' > 'FX risk management' > 'Step 4: Manage risks (treasury operations)'.

Question 6.8

Correct answer: B

The correct answer is Option B. If the spot rate is 1.0400, both the importer's sold AUD call at 1.0600 and the bought AUD put at 1.0200 would have no value and would not be exercised. The importer would therefore transact at the spot rate of 1.0400. The AUD cost will be USD 1 000 000 / 1.0400 = AUD 961 538.46.

Option A is incorrect as it uses the 1.06 strike rate of the sold AUD call, which would have had no value, rather than the correct rate of 1.04—not USD 1 000 000 / 1.06 = AUD 943 396.22, which is incorrect.

Option C is incorrect as the AUD cost is calculated by dividing the USD amount by the AUD/USD exchange rate of 1.04—not USD 1 000 000 × 1.04 = AUD 1 040 000, which is incorrect.

Option D is incorrect as it uses the 1.06 strike rate of the sold AUD call, which would have had no value, rather than the correct rate of 1.04. The AUD cost is calculated by dividing the USD amount by the AUD/USD exchange rate of 1.04—not USD 1 000 000 × 1.06 = AUD 1 060 000, which is incorrect.

You can review this topic area in the study guide under the section titled 'Part A: FX risk' > 'FX risk management' > 'Step 4: Manage risks (treasury operations)' > 'Risk management for importers'.

Question 6.9

Correct answer: D

The correct answer is Option D. The bought call option would expire worthless and the put option would be exercised at 0.9500.

Option A is incorrect because the put option would be exercised. The exporter has sold an AUD put with a strike of 0.9500 as part of a nil-premium collar. If the AUD were at 0.9000 at the option expiry, the buyer of that put would exercise the option and would sell the AUD to the exporter at 0.9500.

Option B is incorrect: only the put option would be exercised. The exporter would receive the strike rate on the put of 0.9500, not the spot rate of 0.9000.

Option C is incorrect because the exporter would receive the strike rate on the put of 0.9500, not the spot rate of 0.9000.

You can review this topic area in the study guide under the section titled 'Part A: FX risk' > 'FX risk management' > 'Step 4: Manage risks (treasury operations)' > 'Risk management for exporters'.

Question 6.10

Correct answer: B

The correct answer is Option B. Given that this is an uncommitted exposure, the best practice strategy would be to buy an AUD put option with a strike of 1.0300. This would give the company the right but not the obligation to sell AUD and buy USD at 1.0300. It would therefore provide protection against a falling AUD (which would increase the AUD cost for an importer).

Option A is incorrect. A forward is inappropriate as it is an uncommitted exposure.

Option C is incorrect. A call option is inappropriate as the importer wants to protect against a falling AUD, not a rising AUD.

Option D is incorrect. Doing nothing is inappropriate as the importer wants to protect against a falling AUD.

You can review this topic area in the study guide under the section titled 'Part A: FX risk' > 'FX risk management' > 'Step 4: Manage risks (treasury operations)' > 'Risk management for importers'.

Question 6.11

Correct answer: C

The correct answer is Option C. Hedging committed exposures with an FEC is considered the most appropriate risk management strategy. FECs carry delivery obligations; at maturity the exporter will need to deliver the foreign currency to settle the FEC. Committed exposures are defined as contracted exposures. The cash flows from these committed currency exposures can be delivered to settle the FEC, making the use of FECs the most appropriate strategy for hedging committed exposures.

Option B is incorrect as exporters do not hedge with a bought AUD put. An exporter would hedge an uncommitted exposure with a bought AUD call.

Options A and D are incorrect as best practice risk management recommends that uncommitted exposures are not hedged with instruments that carry delivery obligations such as FECs.

You can review this topic area in the study guide under the section titled 'Part A: FX risk' > 'FX risk management' >'Step 4: Manage risks (treasury operations)'.

Question 6.12

Correct answer: A

The correct answer is Option A. The minimum AUD gold price the producer will receive is AUD 700 per ounce. If the AUD gold price is below AUD 700, the producer will exercise the put option and sell the 100 000 ounces of gold at AUD 700 per ounce.

Therefore the producer's profit margin would be AUD 700 – AUD 25 (cost of the option) – AUD 400 (the cost of production) = AUD 275 per ounce. 100 000 ounces × AUD 275/ounce = AUD 27 500 000.

Option B is incorrect because the AUD 25 per ounce option premium, which is a cost, has not been deducted from the gold revenue. This incorrect calculation is AUD 700 – AUD 400 × 100 000 = AUD 30 000 000. The option premium of AUD 25 × 100 000 = 2 500 000 also needs to be deducted.

Option C is incorrect because the option premium (which is a cost) has been added to the gold revenue when it should be deducted. The option premium of AUD 2 500 000 ($25 × 100 000) needs to be deducted from the net gold revenue of AUD 30 000 000.

Option D is incorrect because the calculation uses the cost of production (AUD 400 per ounce) to calculate the profit margin (400 × 100 000 = 40 000 000).

You can review this topic area in the study guide under the section titled 'Part B: Commodity price risk' > 'Precious metals'.

Question 6.13

Correct answer: A

The correct answer is Option A. Since the spot price is lower than the strike of the bought put, the producer will exercise the put and deliver gold at the strike price of AUD 650. The effective gold price will be AUD 635 (the strike price less the cost of the option).

Option B is incorrect as the option premium is a cost to the gold producer. The AUD 15 per ounce option premium has been added to the option strike to calculate the effective price (650 + 15 = 665) when the cost should be deducted (650 – 15 = 635).

Option C is incorrect because the gold producer would exercise the option. The bought put gives the producer the right to sell gold at AUD 650. If the spot price is lower than the strike price, the producer will exercise the option and achieve an effective price of AUD 635.

Option D is incorrect because the gold producer would exercise the option. The bought put gives the producer the right to sell gold at AUD 650. If the spot price is lower than the strike price the producer will exercise the option. The AUD 15 per ounce option premium has been added to the option strike to calculate the effective price (650 + 15 = 665) when option premium is a cost and should be deducted (650 – 15 = 635).

You can review this topic area in the study guide under the section titled 'Part B: Commodity price risk' > 'Precious metals'.

Question 6.14

Correct answer: B

The correct answer is Option B. A bought AUD put gives importers unlimited upside participation if the AUD increases.

Option A is incorrect. A bought AUD call is incorrect as they give exporters unlimited participation if the AUD falls.

Option C is incorrect. A nil-premium collar only offers the importer upside participation to the level of the sold call.

Option D is incorrect. An FEC provides no upside participation.

You can review this topic area in the study guide under the section titled 'Part A: FX risk' > 'FX risk management' > 'Step 4: Manage risks (treasury operations)' > 'Risk management for importers'.

Question 6.15

Correct answer: A, B and D

The correct answer is Options A, B and D.

Option A is correct as a fall in the USD gold price will reduce USD revenue and therefore reduce the producer's AUD revenue and reduce the profit margin.

Option B is correct as an increase in the gold production costs reduces the producer's profit margin.

Option D is correct as a rise in the AUD/USD exchange rate would reduce the AUD gold price and therefore reduce the producer's AUD revenue and reduce the profit.

Option C is incorrect as a fall in the AUD/USD exchange rate would increase the AUD gold price and would therefore increase the producer's profit margin.

You can review this topic area in the study guide under the section titled 'Part B: Commodity price risk' > 'Precious metals'.

Question 6.16

Correct answer: B

The correct answer is Option B. The key is to understand that if interest rates are identical, the forward price equals the spot price. Under Option B, Steel sells forward the USD 18 million at an outright price of AUD 22.50 million, which is superior to the next best option of AUD 20 million.

Calculations:

Option A: Fixed price of AUD 19 million payable in one year. This is lower than AUD 22.50 million, and is therefore incorrect.

Option B: USD 18 million, with Steel subject to all exchange rate variations between now and payment in one year, allows Steel to sell forward at the outright rate of AUD/USD 0.8000 and lock in AUD 22.50 million. This is the highest amount, and is therefore the best option for Steel.

Option C: Fixed price of USD 15 million payable in one year in AUD at the present spot rate of AUD/USD 0.8000 equates to AUD 18.75 million. This is lower than AUD 22.50 million, and is therefore incorrect.

Option D: AUD 20 million in one year, but Steel compensates Defence for unfavourable exchange rate movements affecting Defence equating to AUD 20 million, as there is no exchange rate exposure to Defence—it pays in AUD. This is lower than AUD 22.50 million, and is therefore incorrect.

You can review this topic area in the study guide under the section titled 'Part A: FX risk' > 'FX risk management' > 'Step 4: Manage risks (treasury operations)'.

Question 6.17

Correct answer: A

The correct answer is Option A. There is no currency exposure—only a timing exposure.

A foreign exchange swap to sell EUR 2 million at Christmas and buy EUR 2 million at Easter neutralises the exposure.

Option B is incorrect because there is no currency exposure, only a timing mismatch. Foreign exchange (FX) options are used to manage FX exposures, not timing mismatches. FX options are also expensive and require a premium to be paid, and so are not suitable for managing timing mismatches.

Option C is incorrect because there is no currency exposure, only a timing mismatch. FX forwards are used to manage FX exposures, not timing mismatches.

Option D is incorrect because there is no currency exposure, only a timing mismatch. Spot markets are used to buy and sell currencies that are settled in two days' time, not months ahead.

You can review this topic area in the study guide under the section titled 'Part A: FX risk' > 'Demystifying FX'.

Question 6.18

Correct answer: A

The correct answer is Option A. AWA had extremely large embedded options in the form of government offsets. From Reading 1.1 referenced in Module 6:

In addition to the discussion in the study guide under the pricing of options, note that Chief Justice Rogers stated in his judgment in the AWA case:

> … in a number of contracts with the Department of Supply, the plaintiff was held covered against fluctuations in foreign currency in respect of the purchase of overseas components. In the years 1986–1987 the annual estimated cost of imports of the plaintiff was said to be approximately $200 million. Of this approximately $75–$100 million was covered by the Department's contracts. (*AWA Ltd v. George Richard Daniels T/AS Deloitte Haskins & Sells NSW Supreme Court Commercial Division*, No 50271 of 1991, p. 2).

Option B is incorrect because no such offsets existed.

Option C is incorrect because the government-embedded option neutralised this exposure.

Option D is incorrect because exposures were speculative but were not related to the apparent exposures.

You can review this topic area in the study guide under the section titled 'Part A: FX risk' > 'Demystifying FX' > 'Five key elements of FX', and Module 1 > Reading > 'Reading 1.1: AWA Ltd and foreign exchange exposure management'.

Question 6.19

Correct answer: A, C and D

The correct answer is Options A, C and D. The airline is exposed to AUD, NZD and commodity price risk for fuel.

Option B is incorrect because there is no risk for USD when the USD is the functional currency.

You can review this topic area in the study guide under the section titled 'Part A: FX risk' > 'FX risk management' > 'Step 2: Identify exposures'.

Question 6.20

Correct answer: D

The correct answer is Option D. A sharp increase in demand can push the spot price above the forward price, which is backwardation.

Option A is incorrect. Non-perishable commodities are more likely to be in contango due to the cost of carry.

Option B is incorrect. This is contango.

Option C is incorrect. This is contango.

You can review this topic area in the study guide under the section titled 'Part B: Commodity price risk' > 'Introduction' > 'Contango and backwardation'.

Question 6.21

Correct answer: C

The correct answer is Option C. At AUD/USD 1000, the USD costs will be equal to AUD 75.000m and 40 per cent profit margin.

AUD revenue	USD cost	AUD/USD	AUD cost	Profit	Margin
125 000 000.00	75 000 000.00	0.9000	83 333 333	41 666 667	33%
125 000 000.00	75 000 000.00	0.9500	78 947 368	46 052 632	37%
125 000 000.00	75 000 000.00	1.0000	75 000 000	50 000 000	40%
125 000 000.00	75 000 000.00	1.0500	71 428 571	53 571 429	43%

Option A is incorrect as the margin is only 33 per cent.

Option B is incorrect as at 0.9500 the margin is only 37 per cent.

Option D is incorrect as 1.0500 would achieve the required margin but it is not the worst-case rate.

You can review this topic area in the study guide under the section titled 'Part A: FX risk' > 'FX risk management' > 'Step 4: Manage risks (treasury operations)' > 'Risk management for importers'.

Question 6.22

Correct answer: B

The correct answer is Option B. The company needs to sell AUD and buy NZD. It can protect its position by buying an AUD put/NZD call.

Option A is incorrect as this would have the company selling (put) NZD, not buying as required.

Option C is incorrect as the swap only changes the timing; it does not remove the risk.

Option D is incorrect as this FEC has the company selling NZD, not buying.

You can review this topic area in the study guide under the section titled 'Part A: FX risk' > 'FX risk management' > 'Step 4: Manage risks (treasury operations)' > 'Risk management for importers'.

Question 6.23

Correct answer: B and D

The correct answer is Options B and D. Margins will decline as the costs of production rise, or the wine price falls, or the AUD rises as the AUD receipts from the NZD-denominated wine sales decline. The wine producer can hedge (Option B) with a bought NZD put or hedge (Option D) with a collar. Both of these strategies protect the wine producer from a rising AUD, but allow the wine producer to participate (either fully or partially) in the benefits of a weakening AUD.

Options A and C (i.e. the forward and foreign exchange swap) are incorrect because they lock the wine producer into a foreign exchange rate and therefore preclude it from participating in any benefits if the AUD weakens.

You can review this topic area in the study guide under the section titled 'Part A: FX risk' > 'FX risk management' > 'Step 4: Manage risks (treasury operations)' > 'Risk management for exporters'.

Question 6.24

Correct answer: B

The correct answer is Option B. As buyer of the option, OzCo has the right but not the obligation to sell (put) AUD and buy (call) USD.

Option A is incorrect. An AUD put/USD call option gives the buyer the right to sell AUD and buy USD.

Option C is incorrect. BigBank sold an AUD put/USD call, so it has granted the right to sell AUD and buy USD to OzCo. Accordingly, BigBank has the obligation to buy AUD and sell USD.

Option D is incorrect. The seller of an option has the obligation but not the right to buy and sell the currency/commodity.

You can review this topic area in the study guide under the section titled 'Part A: FX risk' > 'Demystifying FX' > 'Five key elements of FX' > '5. Options'.

Question 6.25

Correct answer: B and C

Option B is correct. The forward is given by the formula:

$$\text{Forward rate} = \frac{\text{spot}\left(1+\left(I_t \times {}^{D}\!/\!_{Y}\right)\right)}{1+\left(I_b \times {}^{D}\!/\!_{Y}\right)}$$

In this case, the terms currency's (EUR) interest rate in the numerator is less than the base currency's (AUD) interest rate in the denominator, so the forward rate will be less than the spot rate. Option D is therefore incorrect.

Option C is correct. The Australian exporter would receive EUR and need to sell EUR and buy AUD. Option A is therefore incorrect.

You can review this topic area in the study guide under the section titled 'Part A: FX risk' > 'Demystifying FX' > 'Five key elements of FX' > '3. Forward rates'.

Question 6.26

Correct answer: A

The correct answer is Option A because ImportCo wants to pay the lowest amount of AUD (payable in one year). ImportCo would minimise its cost by buying the machines in 12 months' time at AUD 2300.

Option B is incorrect. If we accept the discount and convert USD into AUD at the spot rate of 0.8000, it will only cost AUD 2250, which is less than AUD 2300. However, the question assumes that funds are exchanged at the spot rate now, with payment in a year. We would ideally try to match the currency conversion with the payment date. If we convert AUD 2250 to USD 1800 now, we will need to borrow funds at 6 per cent and then invest USD 1800 for 12 months at 1 per cent. The borrowing cost would be AUD 135 (AUD 2250 × 6%) and the USD interest would only recoup USD 18 (USD 1800 × 1%), which after transaction costs to remit to AUD would be close to zero. Option B would therefore cost AUD 2385 (AUD 2250 + AUD 135), which results in a higher price and is therefore incorrect.

Option C is incorrect as USD 1800 @ 0.7700 results in a higher price of AUD 2338.

Option D is incorrect as it uses the spot rate rather than the forward rate to convert and would still be more expensive.

You can review this topic area in the study guide under the section titled 'Part A: FX risk' > 'Demystifying FX' > 'Five key elements of FX' > '3. Forward rates'.

Question 6.27

Correct answer: C

The correct answer is Option C. ExportCo wants to receive the highest amount of AUD (receivable in one year), which is AUD 1 010 526 (i.e. USD 960 000 / the spot rate of 0.95000).

Option A is incorrect. This equals AUD 1 000 000. This is the lowest of the options, while ExportCo wants to maximise the amount received.

Option B is incorrect. This equals AUD 1 005 291 (USD 950 000 / the forward rate of 0.9450).

Option D is incorrect. This equals AUD 1 005 291 (USD 950 000 / the forward rate of 0.9450).

Note: Option D is converted at the current spot rate, but is paid in one year's time. As such, the net AUD receipt is higher than all the other options and there are no further foreign exchange exposures or transaction costs.

Note: the wording of this question is slightly different to the question in relation to ImportCo Ltd. In this question, ExportCo is accepting the current spot rate in one year's time. This suggests that the counterparty has offered the current spot rate for conversion in one year's time. In the question in relation to ImportCo Ltd, if ImportCo Ltd buys at the current spot rate, it would need to hold on to USD for the 12-month period.

You can review this topic area in the study guide under the section titled 'Part A: FX risk' > 'Demystifying FX' > 'Five key elements of FX' > '3. Forward rates'

Module 7

Question 7.1

Correct answer: C

Option C is correct because derivatives can be combined to form a hedging instrument in a hedge relationship, provided the entire combined derivative is in an effective hedge relationship.

Option A is incorrect because certain derivatives can't be combined (e.g. two sold options will never be permissible) and the combination must form an effective hedge relationship.

Option B is incorrect because eligible derivatives can be combined to form a hedge relationship.

Option D is incorrect because the entire combination must be in an effective hedge relationship.

You can review this topic area in the study guide under the section titled 'Part B: Hedge accounting' > 'Eligible hedge instruments' and 'Eligible hedge items'.

Question 7.2

Correct answer: A

Option A is correct because one of the rules of hedge accounting permits the removal of time value to improve the hedge relationship. Under hedge accounting the only exceptions to designating a derivative in its entirety is that an organisation can choose to:

a) designate only a portion of a derivative; or
b) exclude the time value of an option; or
c) exclude the time value of a forward.

Options B and C are incorrect because the rules of hedge accounting do not permit a derivative to be split on a time basis.

Option D is incorrect because the rules of hedge accounting do permit the splitting of a derivative in limited circumstances.

You can review this topic area in the study guide under the section titled 'Part B: Hedge accounting' > 'Eligible hedge instruments' and 'Eligible hedge items'.

Question 7.3

Correct answer: C

Option C is correct because the exclusion of time value is permissible provided it is documented.

Option A is incorrect because the hedge rules permit time value to be excluded from option and forward contracts.

Option B is incorrect because the hedge rules permit the exclusion or inclusion of time value depending on the hedge documentation.

Option D is incorrect because the hedge relationship documented at inception cannot be changed as part of the assessment process.

You can review this topic area in the study guide under the section titled 'Part B: Hedge accounting' > 'Eligible hedge instruments' and 'Eligible hedge items'.

Question 7.4

Correct answer: A

Option A is correct because the hedge rules stipulate that the gain and losses in equity will always be transferred to the profit and loss immediately when the forecast transaction is no longer expected to occur.

Option B is incorrect because a hedge of a forecast transaction is always a cash flow hedge, and hence cannot be a fair value hedge.

Option C is incorrect because all gains and losses deferred in equity must be transferred irrespective of whether the hedge instrument is terminated.

Option D is incorrect because the hedge rules stipulated in Option A above do not depend on the hedge relationship.

You can review this topic area in the study guide under the section titled 'Part B: Hedge accounting' > 'Eligible hedge instruments' and 'Part B: Hedge accounting' > 'Cash flow hedge' > 'Accounting for cash flow hedges of a non-financial asset' > 'Table 7.5: Termination of the cash flow hedge'.

Question 7.5

Correct answer: A

Option A is correct because hedge accounting rules never permit an organisation to hedge a derivative with another derivative, because a derivative is not a permissible hedge item. This rule applies irrespective of what risk is being hedged.

Option B is incorrect because, as explained in Option A, a derivative can never be a hedged item.

Option C is incorrect because, as explained in Option A, a combination derivative can never be a hedged item.

Option D is incorrect because an aggregated exposure is a combination of a derivative and an eligible hedged item.

You can review this topic area in the study guide under the section titled 'Part B: Hedge accounting' > 'Eligible hedge instruments' and 'Eligible hedge items'.

Question 7.6

Correct answer: B

Option B is correct because only by hedging all risk including foreign exchange do you fix the cash flows of the hedge transaction in AUD. The risks would include foreign exchange risk and commodity price risk.

Option A is incorrect because hedging foreign currency risk alone would not fix the cash flow in AUD as there would still be variability from the commodity price risk.

Option C is incorrect because hedging all risk other than foreign currency risk alone would not fix the cash flow in AUD as there would still be variability from the foreign exchange risk.

Option D is incorrect because this transaction would qualify as a cash flow hedge of a highly probable forecast transaction.

You can review this topic area in the study guide under the section titled 'Part B: Hedge accounting' > 'The nature of risk'.

Question 7.7

Correct answer: D

Option D is correct because hedge accounting rules permit an organisation to treat equity instruments recorded at fair value through other comprehensive income as an eligible hedge item and permit a USD loan to be a hedge instrument for foreign currency risk. This is a fair value hedge. Furthermore, because the gain or loss relating to foreign exchange (FX) on the equity instrument go to other comprehensive income, then so do the FX gains or losses on the hedge instrument.

Option A is incorrect because, as explained in Option D, a USD loan can be a hedged instrument.

Option B is incorrect because, as explained in Option D, an equity instrument at fair value through other comprehensive income can be a hedged item.

Option C is incorrect because, as explained in Option D, this is a fair value not cash flow hedge.

You can review this topic area in the study guide under the section titled 'Part B: Hedge accounting' > 'Summary of hedge accounting treatment'.

Question 7.8

Correct answer: B

Option B is correct because financial assets and liabilities not recorded at fair value through profit or loss (excluding equity instruments designated at fair value through other comprehensive income) are permissible hedged items in fair value and cash flow hedges, but they can only hedge a firm commitment as a cash flow hedge for foreign currency risk.

Option A is incorrect because IFRS 9 *Financial Instruments* permits a firm commitment to be hedged as a fair value or a cash flow hedge; however, the cash flow hedge can only qualify when the risk being hedged is foreign exchange risk as per Option B.

Option C is incorrect because, as per Option B, non-derivative financial assets and liabilities can also be hedged instruments for foreign exchange risk.

Option D is incorrect because the USD loan only hedges foreign exchange risk and not the fair value risk in the firm commitment.

You can review this topic area in the study guide under the section titled 'Part B: Hedge accounting' > 'Summary of hedge accounting treatment'.

Question 7.9

Correct answer: C

Option C is correct because gains and losses on a discontinued cash flow hedge will still be effective up until that point in time. Accordingly, gains and losses up to the point when the hedge was discontinued should remain in equity until the underlying transaction is recorded in the profit and loss.

Option A is incorrect because the gains and losses prior to discontinuation remain effective, hence they should remain in equity until the underlying transaction is recorded in the profit and loss.

Option B is incorrect because when a hedge is discontinued the gains and losses in equity are released to the profit and loss to match the hedged item. The gains and losses in equity on a discontinued hedge do not remain in equity as long as the hedge instrument continues.

Option D is incorrect because under a cash flow hedge, gains and losses up to the point when the hedge was discontinued should remain in equity until the underlying transaction is recorded in the profit and loss. Hence the gains and losses will not already be recorded in the profit and loss.

You can review this topic area in the study guide under the section titled 'Part B: Hedge accounting' > 'Cash flow hedge' > 'Accounting for cash flow hedges of a non-financial asset' > 'Table 7.5: Termination of the cash flow hedge'.

Question 7.10

Correct answer: C

Option C is correct because with variable-rate debt, the organisation is exposed to variable cash flows due to benchmark interest rate movements that ultimately affect the profit and loss. The nature of the swap is that it seeks to convert the variable cash exposure into a fixed cash flow. Hence, it is a cash flow hedge attributable to interest rate risk.

Option A is incorrect because the interest rate swap only hedges interest rate risk, it does not cover any other risk.

Option B is incorrect because the organisation is exposed to variable cash flows, it is a cash flow rather than a fair value hedge.

Option D is incorrect because the credit risk does not need to be hedged when the attributable risk documented in the hedge relationship is interest rate risk.

You can review this topic area in the study guide under the section titled 'Part B: Hedge accounting' > 'Cash flow hedge'.

Question 7.11

Correct answer: B

Option B is correct because when hedging fixed-rate debt, the organisation is hedging the fair-value changes of the debt attributable to the benchmark interest-rate risk.

Options A and C are incorrect because a hedge of fixed rate debt is not a cash flow hedge.

Option D is incorrect because an interest rate swap only hedges the benchmark interest-rate risk.

You can review this topic area in the study guide under the section titled 'Part B: Hedge accounting' > 'Fair value hedge' and 'Part B: Hedge accounting' > 'Fair value hedge' > 'Accounting for a fair value hedge'.

Question 7.12

Correct answer: C

Option C is correct because a firm commitment can be considered as creating an exposure to fair value changes or as creating an exposure to cash flow changes from foreign exchange risk at settlement. Accordingly, the hedge rules permit a firm commitment to be hedged as a 'fair value' or 'cash flow' hedge for foreign exchange risk only.

Option A is incorrect because a hedge of a firm commitment can be a cash flow hedge of foreign exchange risk only.

Option B is incorrect because a foreign exchange hedge of a firm commitment can be a cash flow or fair value hedge.

Option D is incorrect because a firm commitment can also expose the company to fair value risk.

You can review this topic area in the study guide under the section titled 'Part B: Hedge accounting' > 'Eligible hedge instruments', 'Eligible hedge items' and 'Summary of hedge accounting treatment'.

Question 7.13

Correct answer: D

Option D is correct because IFRS 9 *Financial Instruments* does not permit hedging profits because they are a net outcome of different transactions.

Options A and B are incorrect because IFRS 9 does not permit hedging profits from a subsidiary.

Option C is incorrect as future profits are not part of a net investment.

You can review this topic area in the study guide under the section titled 'Part B: Hedge accounting' > 'Net investments in a foreign operation'.

Question 7.14

Correct answer: B

Option B is correct because this is a straightforward cash flow hedge arrangement: a qualitative assessment approach should suffice to assess the hedge as effective.

Option A is incorrect because it would be unusual to use a combined approach to assess effectiveness for a straightforward cash flow hedge.

Options C and D are incorrect because a qualitative approach is used when critical terms do not match.

You can review this topic area in the study guide under the section titled 'Part B: Hedge accounting' > 'How effectiveness will be assessed and measured'.

Question 7.15

Correct answer: C

Option C is correct because by definition a fair value hedge is assessed as having an economic relationship when the hedge moves in opposite directions from the hedged item for the designated hedged risk.

Option A is incorrect because 'equal' is not a defined parameter for an economic hedge relationship.

Option B is incorrect because 'almost fully' is not a defined parameter for an economic hedge relationship.

Option D is incorrect because 80 per cent or 125 per cent is not a defined parameter for an economic hedge relationship.

You can review this topic area in the study guide under the section titled 'Part B: Hedge accounting' > 'How effectiveness will be assessed and measured'.

Question 7.16

Correct answer: D

Option D is correct. IFRS 9 *Financial Instruments* requires the organisation to assess effectiveness at inception, and at least each reporting period, or earlier if a significant change occurs that could impact effectiveness.

Option A is incorrect because effectiveness needs to also be assessed at inception and if circumstances change.

Option B is incorrect because assessing the effectiveness at inception is not sufficient.

Option C is incorrect because the effectiveness must also be assessed for significant changes.

You can review this topic area in the study guide under the section titled 'Part B: Hedge accounting' > 'How effectiveness will be assessed and measured'.

Question 7.17

Correct answer: D

Option D is correct. Gains and losses on a 'cash flow' hedge can be deferred in equity as long as the hedge is assessed as effective. As soon as the hedge is no longer highly effective, gains and losses relating to that period must be recorded directly in the profit and loss, but gains or losses previously deferred in equity can remain to match the underlying hedge item.

Options A and C are incorrect because the gains or losses in equity from the previous period when the hedge was assessed as effective can continue to be deferred in equity.

Option B is incorrect because gains and losses relating to the previous period would need to continue in equity irrespective of whether the derivative continues to exist.

You can review this topic area in the study guide under the section titled 'Part B: Hedge accounting' > 'Cash flow hedge' > 'Accounting for cash flow hedges of a non-financial asset' > 'Table 7.5: Termination of the cash flow hedge'.

Question 7.18

Correct answer: D

Option D is correct. A derivative is defined as having all three of the following characteristics: (a) its value changes in response to the change in a specified interest rate, financial instrument price, commodity price, foreign exchange rate, index of prices or rates, credit rating or credit index, or other variable; (b) it requires no initial net investment; and (c) it is settled at a future date.

While Option D satisfies the definition of a derivative, it would be scoped out as a contract to buy a non-financial item that was entered into and continue to be held for the purpose of receipt of a non-financial item in accordance with the entity's expected usage requirements.

Options A and B are incorrect because this contract satisfies the definition of a derivative.

Option C is incorrect because it is a derivative due to net settlement.

You can review this topic area in the study guide under the section titled 'Part A: Accounting concepts' > 'IFRS 9* Financial Instruments' *> 'Derivatives' > 'Definition of a derivative under IFRS 9'.

Question 7.19

Correct answer: D

Option D is correct. Because the cap would be considered to be 'closely related' to the host debt contract (as the cap rate of 8% is at or above the market interest rate at the time the debt was issued), the cap is not separately valued.

Option A is incorrect. Because the interest rate cap has all the three elements of a stand-alone derivative, it does satisfy the definition of a derivative.

Option B is incorrect. Because the interest rate cap is closely related to the host contract, this hybrid contract does not need to be fair valued.

Option C is incorrect. Because the interest rate cap is closely related to the host contract, this embedded derivative does not need to be fair valued.

You can review this topic area in the study guide under the section titled 'Part A: Accounting concepts' > 'IFRS 9* Financial Instruments*' > 'Derivatives' > 'Definition of a derivative under IFRS 9' and 'Part A: Accounting concepts' > 'IFRS 9* Financial Instruments*' > 'Embedded derivatives'.

Question 7.20

Correct answer: D

Option D is correct. While the host contract is a lease contract, there is an embedded derivative due to the contract being denominated in foreign currency. However, the embedded derivative is considered closely related because:

- it is not leveraged;
- does not contain an option; and
- the contract is denominated in the currency of a substantial party to the contract.

Option A is incorrect. Because the embedded forward exchange contract is closely related to the lease contract, it does not need to be fair valued separately.

Option B is incorrect because lease contracts should be investigated for embedded derivatives.

Option C is incorrect because the embedded forward exchange contract is still an embedded derivative in the eyes of XYZ.

You can review this topic area in the study guide under the section titled 'Part A: Accounting concepts' > 'IFRS 9* Financial Instruments*' > 'Embedded derivatives'.

Question 7.21

Correct answer: D

Option D is correct because IFRS 9 *Financial Instruments* permits a designation for net positions but it is only permitted for foreign exchange risk. However, in such hedge relationships, the offsetting hedged items are recorded at spot rates with a separate line adjustment through other comprehensive income and the profit or loss to bring to account the hedge accounting entries.

Option B is incorrect as there is special accounting involved.

Options A and C are incorrect as this is a valid hedge relationship.

You can review this topic area in the study guide under the section titled 'Part B: Hedge accounting' > 'Complex hedge topics' > 'Cash flow hedge of a net position'.

Module 8

Question 8.1

Correct answer: D

The correct answer is Option D. All calculations have been done correctly in accordance with Table 8.15: Calculation of credit exposures in the study materials except for Option D.

The correct calculation for an FEC of $100 000 for 12 months would be calculated as:

Notional principal of the FEC × 15% × Days to maturity / Days per year

= $100 000 × 15% × 365 / 365

= $15 000 (not $10 000 as stated)

Option A is incorrect. The correct credit risk exposure base for cash is the face value of the security, which in this case is the $100 000.

Options B and C are incorrect. Five per cent per year is the correct multiplier for both: Option B 100 000 × 5% = 5000, Option C 100 000 × 5% × 5 / 12 = 2083. Table 8.15 does not specifically cover forward rate agreements (FRAs), but candidates should be aware from Module 5 that FRAs and interest rate swaps are similar and, hence, would have the same credit measures.

You can review this topic area in the study guide under the section titled 'Governance framework for financial risk management' > 'Financial risk management policy—key risks and controls' > 'Credit/counterparty risk management'.

Question 8.2

Correct answer: B

The correct answer is Option B. The process of reconciling transactions is to detect any variations in records and the actual transaction values.

Option A is incorrect because this is not a control.

Option C is incorrect because corrective actions occur after the detection of errors or breaches.

Option D is incorrect because preventive controls occur before transaction confirmation; they precede detective controls.

You can review this topic area in the study guide under the section titled 'Internal control framework' > 'Controlling financial risks' > 'Types of internal controls'.

Question 8.3

Correct answer: D

Option D is correct because preventive controls occur before breach detection; they precede detective controls. The duties have been separated to ensure a clear separation between front office and back office teams.

Option A is incorrect because it is not a control.

Option B is incorrect because preventive controls occur before breach detection; they precede detective controls. The action is not a detective control because it seeks to prevent a contravening action.

Option C is incorrect because corrective actions occur after the detection of errors or breaches. The action is not a corrective action because no breach of duty has been reported.

You can review this topic area in the study guide under the section titled 'Internal control framework' > 'Controlling financial risks' > 'Types of internal controls'.

Question 8.4

Correct answer: C

Option C is correct because a breach reporting system is an example of a corrective control as it seeks to correct a contravening action. By reporting breaches, including documenting the control breakdown and the corrective action to be taken, management and the board can review the breach register to assess whether the action taken has been appropriate and assess for any systemic issues. This process aims to implement effective detective and preventive controls to correct current deficiencies in the system.

Option A is incorrect because this is not a control.

Option B is incorrect because a detective control seeks to identify potential breaches. Breaches are usually identified by detective controls, which require reporting of breaches as part of a continuous improvement process.

Option D is incorrect because preventive controls occur before breach detection; they precede detective controls.

You can review this topic area in the study guide under the section titled 'Internal control framework' > 'Controlling financial risks' > 'Types of internal controls'.

Question 8.5

Correct answer: A

The correct answer is Option A. US subsidiaries will have to meet US reporting requirements.

Option B is incorrect because delisted firms have no Securities and Exchange Commission (SEC) obligations.

Option C is incorrect because operating a representative office that is unlisted in the United States does not create a reporting obligation.

Option D is incorrect because listing in Australia does not create a reporting obligation.

You can review this topic area in the study guide under the section titled 'Regulations' > 'US regulations: Sarbanes–Oxley Act 2002'.

Question 8.6

Correct answer: A

The correct answer is Option A because disclosing the nature of hedge relationships is a specific requirement of IFRS 7.

Option B is incorrect because it is a requirement of IFRS 7 to disclose the liquidity profile of derivative liabilities, but it is not a requirement to disclose the liquidity profile of derivative assets. Hence it is not correct to say there is a requirement to disclose the liquidity profile of all derivatives, as derivatives can be either an asset or a liability.

Option C is incorrect because IFRS 7 only requires disclosure of the potential impact where there is 'significant' subjectivity.

Option D is incorrect because it is a requirement to disclose the timing of release of cash flow hedge balances to the profit and loss, not fair value balances.

You can review this topic area in the study guide under the section titled 'Accounting disclosure requirements' > 'Risk management disclosures'.

Question 8.7

Correct answer: D

The correct answer is Option D, as this is an example of a quantitative limit that reflects the board's risk appetite.

Option A is incorrect as an example of the financial risk management function.

Option B is incorrect as it reflects a reporting arrangement to the board.

Option C is incorrect as it is an example of a board delegation.

You can review this topic area in the study guide under the section titled 'Governance framework for financial risk management' > 'Financial risk management policy'.

Question 8.8

Correct answer: D

The correct answer is Option D. This option includes five COSO concepts.

Options A, B and C are incorrect because they include non-COSO concepts.

You can review this topic area in the study guide under the section titled 'Internal control framework'.

Question 8.9

Correct answer: D

The correct answer is Option D as this is specified under ASX Recommendation 7.4.

Option A is incorrect because under ASX Recommendations: 7.1 (a) the board should have a committee to oversee risk.

Option B is incorrect as Recommendation 7.1 w(a) states that the board risk committee should consist of a majority of independent committee members.

Option C is incorrect as it is the role of the board or committee to review the entity's risk management framework at least annually. It is management's role (not the board's) to create a risk management framework to identify and manage risk and then report to the board such that the board can do an effective review.

You can review this topic area in the study guide under the section titled 'Risk management framework' > 'ASX Principles on good governance.'

Question 8.10

Correct answer: B

Option B is the correct answer as this is an example of a control over ensuring there is sufficient cash in the short term.

The objectives of liquidity risk management are to ensure the availability of sufficient funds to meet daily cash requirements, while also ensuring that cash surpluses in low-interest accounts are maintained at a minimum level.

Options A, C and D are incorrect as they are all examples of the management approach to funding risk.

You can review this topic area in the study guide under the section titled 'Governance framework for financial risk management' > 'Financial risk management policy—key risks and controls' > 'Liquidity/funding risk management' > 'Liquidity risk management'.