LEADING TREASURY PROFESSIONALS

ACT PAST PAPER

Advanced Diploma in Treasury Management (FCT)

ACT Level 7

September 2019

This is a past paper for the Advanced Diploma in Treasury Management (FCT), based on the 2019 syllabus.

INTRODUCTION

This past paper has been produced by the Assessment Department at the Association of Corporate Treasurers (ACT) to assist students in their preparation for the Advanced Diploma in Treasury Management (FCT) assessment.

Students will have 30 minutes reading time at the start and then will have three hours and 30 minutes to complete the exam. They should then review their performance to identify areas of weakness on which to concentrate the remainder of their study time. Although the past paper in this guide is typical of an assessment, it should be noted that it is not possible to test every single aspect of the syllabus in any one particular exam.

To prepare properly for the exam, candidates should make full use of the tuition options where available and read as widely as possible to ensure that the whole syllabus has been covered.

ASSESSMENT TECHNIQUE

This is a professional paper and application to past should be at 'strategic' level. The best way to approach written exams is to work methodically through the questions. Candidates should not spend too much time on any one question if you are struggling to think of an adequate answer. Remember you can flag any question to come back to later should you want to continue your way through the exam.

When all of the questions have been answered, it is prudent to use any remaining time to go through each question again, carefully, to double-check that nothing has been missed. Altering just one response could make the difference between passing and failing.

Please ensure you show your workings within your answer when prompted as there are marks available for the workings. You will be able to make rough workings on a piece of paper during the exam should you wish to, however these will not count towards your final mark.

ASSESSMENT INFORMATION

The exam consists of eight written questions, of which you must answer seven, and will involve a preseen case study that will be released two weeks prior to the exam date. The exam paper is split into Sections A and B and is worth a total of 100 marks.

Section	Number of questions	Marks available
Section A	Four case study-based questions (pre-seen)	40
Section B	Four scenario-based questions of which three must be answered	60
Total	7	100

Under exam conditions, three and a half hours (210 minutes) is allowed to complete the exam, plus an additional 30 minutes reading time at the start.

When you take your actual exam, you will be sitting online using your own PC/Laptop. You have access to an online scientific calculator, but you may also use a non-programmable scientific calculator.

In order for you to determine how well you have performed, sample mark schemes are provided after each question. Please note that these are mark schemes only and not model answers. They provide lists of points that are expected to be covered within answers, although the content of your answers must be much more detailed (satisfying the command word used in the question, for example 'critically analyse'). At Level 7 examiners are looking for answers which demonstrate your understanding, and not just a list. As with all mark schemes, the content is indicative only, i.e. the lists of points featured are not exhaustive. It is highly likely that there are other perspectives and, provided these are valid and supported fully, marks would be awarded for these in a live exam. There are also references to the relevant Learning Outcomes if you need to revisit the associated material.

SECTION A – 40 marks

FOUR long form questions worth a total of 40 marks based on a pre-seen case study. These questions will test knowledge, understanding, analysis, application, insight, evaluation and justification as appropriate to level descriptors. This is a professional paper and application to practice should be at 'strategic' level and, as would therefore be expected, candidates need to be able to synthesise knowledge from different elements of the syllabus rather than be tested on discreet areas.

Section A Case Study

Organisation

Global Mining Inc (GMI) is a global mining company whose products are coal, iron and platinum. The company has set out its strategy and growth plans. It plans to diversify its mining portfolio across its product range but utilise its specialism and knowledge.

GMI has embarked on a programme to address culture, diversity and equality in the business. It has been running a global project on ESG (Environmental, Social and Governance) for a number of years with specific focus on environmental and health and safety concerns as this is a major criterion in this business sector.

Treasury Organisation

The treasury function at GMI is centralised with all strategic treasury decisions made centrally. Bank structures and bank relationships are well managed and visibility of cash across the group is reasonably accurate and timely. The treasury team is based in London and has recently lost some key staff. It is now in a learning phase and hence workload is high. Additionally, the focus on ESG projects and emphasis on compliance and major environmental challenges have added to the workload.

Mergers and Acquisitions (M&A)

GMI has been very active with acquisitions and disposals in recent years. The M&A team is a specialist team that reports directly to the Board. Information is released on a 'need to know' basis and the Treasurer typically finds out late in the process. Historically, the size of acquisitions has been relatively small and they have been US companies. The next likely acquisition is expected to be Black Gold (BG) which is based in Australia, with a market capitalisation of USD10bn. BG mines precious metals such as gold, silver and platinum and has operations throughout Australia and some in South America. BG has adopted traditional management values and does not have a good record on environmental matters.

Financials – Extract only –does not include all line items

Financial Statements	**Dec-18**
Income Statement	**USD m**
Revenue	43,000
Operating profit	16,000
Interest	(1,200)
PBT	14,800
Tax	(7,700)
Net profit	7,100
Balance Sheet	
Cash	15,900
Net working capital	21,000
Total debt	26,800
Net debt	10,900
Equity	60,700
Total liabilities and equity	112,000
Cash Flow Statement	
Cash from operations	18,500
EBITDA	22,300
Free cash flow (FCF)	14,700
Dividends	5,200
Net capex	5,000
Depreciation	6,300
Other	

Share price (cents)	1,950
# shares (million)	5,300
Dividends per share (cents)	90

Ratios	Dec-18
Ratings	A, A3
EBITDA/net interest	18.6
Net debt/EBITDA	49%
FCF/net debt	135%
Gearing ratio (total debt/equity)	44.2%
Shareholder details	
Market cap	103,350
EPS	1.34
P/E	14.6
Dividend yield	4.62%

Key Performance Indicators – Month January 2019

Functional Area	**#**	**KPI examples**		**Ratio**	**Target**	**Trend**
Debt Management	1	Refinance risk - % debt mature in 12m	%	10%	< 15%	→
	2	EBITDA/net interest	x	18.6	>12	→
	3	FCF/net debt	x	1.35	> 1.3	→
	4	Net debt/EBITDA	x	49%	<80%	→
Cash Management	5	Percentage in the cash pool	%	90%	98%	→
	6	Percentage funds of trapped cash	%	3%	2%	→
	7	Bank service charges % finance costs	%	5%	<8%	→
Risk Management	8	P&L FX charge % operating profit	%	1%	< 2%	→

	9	FX hedge cover ratio	%	90%	95%	→
	10	VAR – FX	#	400k	300k	↑
Corporate Finance	11	Gearing ratio	%	44%	< 45%	↓
	12	Dividend cover	x	1.4	>1.3	→
Treasury Operations	13	Number of breached controls	#	5	Nil	↑
	14	Number of trades made in error	#	Nil	Nil	↓
	15	Number of unreconciled accounts	#	2	Nil	→
	16	Counterparty limit breaches	#	3	Nil	→

Bank Relationships

There are ten key relationship banks (banks A-I and bank K) each contributing funding to the revolving credit facility in equal proportions. Bank A primarily provides cash management services such as pooling across Europe and is used for payment and collections. Banks (B, C, D, E, F, G, H and I) provide foreign exchange and commodity hedging derivatives and some trade finance products. Bank K is a new entrant to the debt syndicate and currently provides funding and offers FX services.

The treasury team has a meeting with Bank K in two months' time and is anticipating that this bank will request that it receives more ancillary business. A share of wallet analysis below shows how well Bank K has performed in terms of wallet share and its win/loss ratio. GMI does not offer option trades to either bank A or K. The table below shows annual volumes of trades, the total estimated earnings and the allocation across the banks. Note there are ten banks but for some products such as commodity options only eight banks are used. The banks' B to I (2-9) percentages show the average across these 8 banks in total.

GMI obtains competitive quotes for all its FX and commodity trades and uses most banks in the bid. The number of banks is indicated in column i. The table below shows they received 10% win/loss on letters of credit and as there are 10 banks, its share of the wallet should be 10% (column j) but they only received 5% (column h).

Bank K has a credit rating of BBB+ whilst the majority of the other banks in the relationship group have A or A+ ratings. Additionally, the one-year CDS rate for Bank K is 80 compared to other banks averaging 50bp. However, Bank K's CDS rate is stable whilst the others are trending upwards.

Transaction types	*Volume, values and margin*					*Percentage of Wallet earned per bank(s)*				*Win/Loss %*	
	Volume	*Avg Value*	*Tot Value*	*Margin*	*Earnings*	*Bank A*	*Banks B-I*	*Bank K*	*Number of banks competing*	*Win/loss K*	*Earnings Predicted*
		USD M	*USD B*	*BP*	*USD K*	*1*	*8*	*1*			
Columns/calculations	a	b	c= a x b	d	e = c x d x 100	f	g	h	i	j	k= e x j
FX Forward	1,200	1	1.20	2	240	10%	11%	5%	10	5%	12.00
FX Swaps	240	2	0.48	1	48	10%	10%	10%	10	15%	7.20
FX Options	12	5	0.06	10	60		13%	0%	9	10%	6.00
IRS	2	50	0.10	5	50		13%		8		
CCS	1	75	0.08	8	60		13%		8		
Commodity Swaps	120	2	0.24	6	144		12%	5%	9	10%	14.40
Commodity Options	6	4	0.02	15	36		13%		8		
Bank maintenance	-				50	100%	0%		1		
Payments					20	100%	0%		1		
Letters of credit	100	1	0.10	10	100	25%	9%	5%	10	10%	10.00
Bond advisory					200	10%	11%		9		
Total USD K					1,008						49.6
Total USD K Multiple of column 'e' and relevant column (f, g or h)						143.8	104.4	29.0			

Payment Controls and Cybercrimes

GMI has been targeted by cyber criminals in the last few months. One recent serious incident was an email purporting to be from the CEO requesting an urgent payment to be made for a deposit to its advisers, in connection with a M&A transaction. The company is aware of other companies suffering ransomware attacks where sensitive files have been encrypted and where the fraudsters have requested bitcoin payments in exchange for safe release of the files.

Treasury is in the process of bolstering its payment procedures and controls in light of this activity. Treasury typically settles transactions that relate to its own activity however where there are urgent, high-value payments, these are paid through the treasury payment system. These non-standard payments require two authorisations and the value of the payment dictates the seniority of the authorisers. Once approved, a new supplier is added to the payment system, input by the treasury analyst and approved by the treasury manager. The payment, once authorised, follows the same procedure.

Q1	a) Critically evaluate the performance of Bank K, in terms of share of wallet, in preparation for the upcoming relationship meeting. b) Critically evaluate the negotiating and strategic influencing skills that you would apply to ensure a successful outcome to the meeting.	5 marks 5 marks
		Total: 10 marks
Q1 answer	a) The wallet share analysis provides some evidence of the level of business that Bank K has been receiving and the win/loss ratios provide some background to their performance. A caveat is that GMI will not know the exact margins that the bank is making on the transactions. Secondly, the better rated banks will be in a superior position to Bank K as they have fewer restrictions on their capital and hence not all banks will have the same margins per product. As Bank K is new to the preferred bank relationships, they should expect that it will take time for them to have an equal share. However, Bank K is clearly receiving significantly less than the rest of the 9 banks currently (i.e. USD29k versus USD104k). And if using the win/loss ratio they should be receiving USD50k Their performance has been mixed though. In FX, they have lost out on the bidding for FX forwards but for FX swaps and options it should have received more wallet share. And for commodities a 10% win ratio is double its current share of 5%.	1 mark 1 mark 1 mark 1 mark

	The other consideration is the credit worthiness of Bank K compared to the other banks. It has a slightly lower credit rating and its CDS price is higher indicating that it is likely to have higher capital restrictions and thus tighter margins. The positive is that the CDS is stable whilst the others are trending up narrowing that CDS difference. This mark scheme is not exhaustive – all valid points within answers will be awarded marks. b) • Planning: knowing the wallet share, how much they are estimated to be making are important data points • Preparation for questions Bank K will ask in terms of understanding the financial strategy and growth prospects • Further research: Bank K in terms of its capital structure and its credit rating reports • Research who the team members are, and review previous meeting notes • GMI treasury should try to anticipate Bank K's requests by attempting to view how the bank would view it ("feet in someone else's shoes") • During the meeting build rapport, find common ground and work towards a win/win should be the strategy • It is important to listen and summarise as you go through and paraphrase what they have said • Importantly, be sure to summarise and follow up after the meeting to continue to build trust and confidence with Bank K • Understand how it values the business and how it fits into its overall strategy • Understand if it has currencies or instruments that it is are naturally more competitive in This mark scheme is not exhaustive – all valid points within answers will be awarded marks. **Syllabus ref:** Unit:2.12 (LO 2.1) & 2.22 (LO 2.2)	1 mark (5 marks) (1/2 mark per point, up to 5 marks maximum)
		Total: 10 marks

Q2	Critically assess the KPIs provided. Within your answer you are required to also comment on the areas that GMI's treasury function should focus on as a priority.	10 marks

Total: 10 marks

Q2 answer

KPI suggestions by area: — 10 marks

Functional Area	#	KPI examples	Metric	Ratio	Target	Trend
Debt Management	1	Refinance risk - % debt mature in 12m	%	10%	< 15%	→
	2	EBITDA/net interest	x	18.6	>12	→
	3	FCF/net debt	x	1.35	> 1.3	→
	4	Net debt/EBITDA	x	47%	<80%	→
Cash Management	5	Percentage in the cash pool	%	90%	98%	→
	6	Percentage funds of trapped cash	%	3%	2%	→
	7	Bank service charges % finance costs	%	5%	<8%	→
Risk Management	8	P&L FX charge % operating profit	%	1%	< 2%	→
	9	FX Hedge cover ratio	%	90%	95%	→
	10	VAR – FX	#	400k	300k	↑
Corporate Finance	11	Gearing ratio	%	44%	< 45%	↓
	12	Dividend cover	x	1.49	>1.3	→
Treasury Operations	13	Number of breached controls	#	5	Nil	↑
	14	Number of trades made in error	#	Nil	Nil	↓
	15	Number of unreconciled accounts	#	2	Nil	→
	16	Counterparty Limit breaches	#	3	Nil	→

Debt management

GMI are generally doing well against their target ratios so it seems to be well in control on the financial metrics such as gearing and interest cover. However, they are only marginally above the target FCF/net debt which is a key metric for its credit rating. So, either more free cash flow needs to be generated or debt needs to be reduced, the latter is where treasury may be able to influence.

2 marks per functional area

Cash Management

It is below target (90 v 98%) for number in the cash pool. There may be valid reasons such as legal restrictions or new business units have not yet been on boarded.
Trapped cash is greater than target but likely to be out of treasury's control and has been stable.
Bank service charges are below the target. So overall not that much for treasury to do other than investigate the details behind the first two ratios.
More granular cash management KPIs may be relevant such as number of bank relationships, bank accounts and payment costs.

Risk Management
P&L FX charge whilst below target is a measure mostly outside treasury control. Hedge ratios and compliance with policy should be managed by treasury – the below target could be timing so would need to be investigated further. There could also be new currencies which the company is exposed to and which treasury is not hedging
The value at risk rising above the target again, merits further investigation and highlights a rising level of FX risk.
There is no mention of commodity risk, perhaps not significant but we know from the wallet sharing, it is using commodity derivatives.
Counterparty risk should also be included as a key metric.

Corporate Finance
The current gearing levels of 44% are just below the target ratio of 45% and at least the trend is downwards. The 45% target seems a relatively low target level of gearing where theory and practice suggest increased gearing is beneficial due to the tax shield and the nature of the business.

Treasury Operations
The zero tolerance on all four KPIs may be too tight a target.
The number of breached controls is a cause of concern and would need to be investigated to understand why and how material they are. Worryingly the trend for breached controls is upwards. The unreconciled accounts of 3 is small if they have 1000's of bank accounts and it depends if there is auto-reconciliation.
No trades were made in error which is good, and the metric has been stable.

All the ratios mentioned are backward-looking, so they should consider forecast ratios as well as historic ones.

This mark scheme is not exhaustive – all valid points within answers will be awarded marks.

Syllabus ref: Unit 2.4.3 (LO 2.4)

Total: 10 marks

Q3	Critically assess how GMI's treasury should enhance controls and behaviours to protect against the risk of a potential cyber-attack.	10 marks
		Total: 10 marks
Q3 answer	Enhanced controls GMI have typical treasury controls of segregation between authorisation and release of payments. Two levels of input and approval is adequate. There should however be a review of the payees on at least on annual basis by someone independent such as internal audit. There appears to be payment approvals levels based on payment values and adding payment type as third-party non-treasury payments will have a higher level of risk. Further checks, when adding new payees, could be performed such as contacting the supplier by phone or checking with the authorisers that it has been approved. Responsibility for adding new payees may well be outside of the treasury function though. There should also be system checks that highlight where there has been a change in the bank details. The policy on passwords and updates of these should be robust. Passwords should never be shared amongst colleagues and the password itself should not be easy to crack. Recruitment: the vetting of new staff is an important preventative step as people are often the weak link in the chain. More difficult to prevent is an existing member of staff who succumbs to fraudsters. Preventative controls are much more effective than detective as it is difficult to recover funds once they have left the bank account. A key control is ensuring that the 'approved' payees are genuine and accurate. This is especially true for non-standard payments. This is where awareness training on cyber risk is important where urgent payments from a high ranking official still need to be challenged similar to any payment request. Enhanced behaviours Controls are very important but the biggest risk with cybercrimes are the people in the process. Fraudsters attempt to utilise the behaviour of individuals in an organisation. With social media, it is much easier to target individuals in an organisation in the payment process. They also can obtain the names of senior officers who typically authorise the payments. Thus staff training and awareness is vital in order to fight cybercrime. Many companies have annual training - this is a dynamic risk and becoming increasingly sophisticated. Training should focus on the types of exploitation,	1 mark per point up to 10

	awareness of giving too much away on social media and for example internal test emails to check that email links are not clicked on from unknown, dubious sources. Fraudsters prey on the natural instinct of staff to be helpful and kind so awareness of this and being sceptical of unsolicited phone calls or emails. They also prey on fear – worry that one needs to do the boss's bidding immediately. Networking and attending conferences should improve awareness of the latest cyber and payment type risks. Exchanging knowledge with peers can be helpful. This mark scheme is not exhaustive – all valid points within answers will be awarded marks. **Syllabus ref:** Units:2.3.2,2.3.1, 2.4.2 (LO 2.3 & LO 2.4)	
		Total: 10 marks

Q4	a) Examine the likely synergies that may create value for GMI through its planned acquisition of Black Gold. b) Analyse the potential impact on the GMI treasury function of the acquisition of Black Gold.	5 marks 5 marks
		Total: 10 marks

Q4 answer	**a) Synergies from the acquisition**
	
	There are a number of potential synergies which include:
	• Strategic
	  ○ Diversification of product range using expertise in mining
	  ○ Opportunity to drive more value with new management and emphasis on safety
	  ○ Forward thinking management to drive ESG initiatives over the larger group
	• Cost – economies of scale
	  ○ Production – ability to purchase more and negotiate with existing suppliers where mining equipment similar in nature
	  ○ Marketing – only one budget needed albeit potentially a different customer base
	  ○ IT – integration of systems for both GMI and Black Gold – no need for two IT departments
	  ○ Fewer finance and support staff in general as tasks get consolidated and streamlined
	  ○ More efficient working capital through bargaining power mentioned but potentially lower stock levels
	• Financial
	  ○ As GMI grows revenue and asset base and with some diversification of product range and geographic spread, this should result in lower perceived risk to the group
	  ○ Should be a favourable factor for its credit rating once the integration is in progress
	  ○ Potential to use any tax losses for the larger group but regulatory authorities are picking up on this
	
	This mark scheme is not exhaustive – all valid points within answers will be awarded marks.
	
	b) Impact on treasury
	The question was focused on post-acquisition impact but pre-acquisition considerations were also credited
	
	• Organisation and culture
		1/2 mark each up to a maximum of 5 marks per point

	○ Black Gold appears to have a different management approach and culture to GMI so this could be a key challenge as Black Gold is integrated ○ New reporting structure will result in some form of transformation projects • People ○ GMI treasury needs to work closely with the Black Gold team, post-acquisition, to gain a thorough understanding of its responsibilities and how treasury works in Black Gold's operation ○ The treasury team in Black Gold is likely to be reduced in size with potential re-deployment or redundancy • Systems landscape ○ Duplication of systems will take some time to be transformed, typically the incumbent will use their own systems ○ Systems include the TMS, payment systems, integration with the accounting system and other interfaces • Bank landscape ○ Most likely to include more banks with the acquisition and this should be rationalised as well as the bank account structures ○ Cash management services such as pooling and netting will need to bring in the acquired business units ○ Bank mandates may need to be updated to reflect new payment signatories and limits • Processes ○ Processes will not be aligned and this would form part of the transformation ○ Examples include cash forecasting for the new subsidiaries ○ Group processes on intercompany loans and trade finance ○ • Other factors ○ Impact on liquidity whilst cash management is centralised and the demands of the acquisition on cash ○ Foreign exchange changes both translational and transactional ○ Cash management – updating and integrating cash pooling arrangements This mark scheme is not exhaustive – all valid points within answers will be awarded marks. **Syllabus ref:** Unit:1.4.2, 1.4.3 (LO 1.4)	1 mark each up to a maximum of 5 marks
		Total: 10 marks

SECTION B – 60 marks

FOUR questions all based on separate scenarios, of which candidates must answer THREE (3 x 20 marks).

Section B, Question 1 Case Study

Tech Fly is an international leading drone manufacturing company and is based in the UK where its main operations and head office are based. The business is a FTSE 250 company and reports in GBP. The marketplace is competitive with four other suppliers of drones, three based in Europe and the other based in the US.

Its customers are mostly based in the Americas where it sells its goods in USD based on a price list set for one year at the start of the year. It imports raw materials from European suppliers who require a lead time of three months from invoice to delivery.

Funding

It has one wholly owned subsidiary in Japan where it has a manufacturing site and a small sales office. There are outline plans to move more production to Japan away from the UK and thus Tech Fly will need to invest in larger manufacturing plant. The subsidiary is funded by equity. Its current funding is sufficient to cover its operational needs.

Financial Projections	GBPm
Sales	1,000
Purchases	600
Equity injection	5
Plant investment	100
Exposures	Local currency
USD	600
EUR	300

Hedging strategy

The company has been using forward contracts to hedge both sales and purchases. The policy dictates that 100% of cover is put in place for the first six months and 70% for the following six months exposure for sales. Treasury buy the whole amount (i.e. 6 months of USD exposure) at the six month outright rate. For purchases, only the committed exposure is hedged but full cover is taken out i.e. 100%. The company measures its hedge rate based on what has been covered, ignoring the un-hedged proportion.

Foreign exchange rates and forward points
Spot

	Spot
GBP/USD	1.2500
GBP/EUR	1.1000
GBP/JPY	135

Forward points for GBP/USD are +90 points for six months and +180 for 12 months.
And for GBP/EUR then are minus 35 points for three months

Bank currency forecast versus GBP

Currency	GBP Direction
USD	Weaken i.e. GBP weaken
EUR	Strengthen
JPY	Weaken

Q1	a) Critically examine the main foreign exchange risks to which Tech Fly is subject. Explain the impact on the business if rates move as forecast and how this risk might be mitigated without using derivatives. b) Critically evaluate Tech Fly's hedging strategy. Within your answer show the average hedged rates for both imports and exports.	11 marks 9 marks
		Total: 20 marks
Q1 answer	(a) **FX types** The company is subject to the all the main types of foreign exchange risk: I. Pre-transaction risk in USD as they are issuing a price list for goods up to 12 months ahead II. Transaction risk as they are buying raw materials in EUR three months ahead. III. Economic risk as both payments to suppliers and receipts from customers are on an ongoing basis and they are in a competitive environment. Given they have competitors whose cost base is located in Europe (source of supply) and another competitor based in the US (customer location) they have extra challenges with competitive positioning	(3 marks) ½ mark ½ mark 1 mark ½ mark

	IV. Translation risk as they have an overseas asset that is based in Japan. The revaluation of this asset at the reporting date may impact net worth. V. There will also be P&L translation of funds from Japan in profits or dividend flows	½ mark (8 marks)
	Impact of rate changes and mitigation	½ mark
	• If GBP weakens against the USD, then the value of the exports will fall	½ mark
	• Pre-transaction risk - could be reduced if the option was to update the price list on a more frequent basis such as quarterly	
	• If the EUR strengthens relative to the pound, the cost of supplies will rise	½ mark
	• Tech Fly could seek to enter into a commercial contract for the 12 months and setting foreign exchange details in the contract to mitigate against the transactional risk.	1 mark
	• It could buy euros spot and hold the funds in a bank account or fund. This is economically equivalent to buying foreign exchange contract.	1 mark
	• Economic risk is difficult to quantify as understanding competitors' cost bases and their hedging strategies is unlikely to be known with any degree of certainty	1 mark
	• One approach could be to locate the manufacturing/cost base in the US thereby matching the USD flows from sales.	
	• Alternatively, looking for raw material supplies from the US rather than Europe would help with matching the currency exposures	1 mark
	• A key point is the accuracy of the forecasted sales in terms of timing and volume which may lead to over or an under hedged position	
	This mark scheme is not exhaustive – all valid points within answers will be awarded marks.	1 mark (9 marks total)
	b) FX hedge ratio and analysis • Calculate the forward FX rates:	

Outrights	**Spot**	**6m**	**12m**
GBP/USD	1.2500	1.2590	1.2680

½ mark

Outrights	**Spot**	**3m**
GBP/EUR	1.1000	1.0965

½ mark

- Calculate the hedge cover i.e. 100% for 1st 6 months and 70% for second 6 months
- Use one quarter for EUR hedge as 3 months only

	6m	**12m**	**Hedged**
Sales	300	300	600
Hedge %	100%	70%	**85%**
Hedged amount	300	210	510
FX rate	1.2590	1.2680	
GBP m	238.28	165.62	403.90
Average rate			**1.2627**

1 mark

Euro exposure	**Basis**	**Q1 hedge**
Euro supplies	300	75
FX rate	1.100	**1.0965**
GBP amount		68.40

1 mark
(3 marks subtotal)

Evaluation of hedging strategy

- Tech Fly have adopted a traditional hedging strategy of hedging committed exposures (euro purchases) and hedged the USD sales with a reduced hedge ratio for the second half of the year. And have used standard foreign exchange contracts which has kept it simple and easy to understand.
- It has hedged 85% of USD exposure at 1.2627 which is worse than spot rate but does provide certainty of flows especially with the weakness in GBP currency.
- The EUR hedge is a more expensive rate than buying spot but only the committed exposure is being hedged. The policy is not consistent here and perhaps forecast EUR exposures should be in alignment to the sales policy.
- FX options maybe an alternative where demand is uncertain in both amount and timing especially for sales volumes which they have less control over.
- It has hedged the whole six months USD cash flows with one forward contract and this will need to be swapped back to match when the customer settles. It would be assumed that there is at least 30 days before invoice so some advance notice of when the cashflows are due to occur. They could also

1 mark per point up to 6 marks

	consider hedging for 3 months out and the swapping forwards and backwards during the 6 month period. • Currently the Japanese subsidiary is being financed by an equity injection and the amount is not material. However, if they decide to relocate their plant, the subsidiary will require funding most likely in local currency. Tech fly will need to consider how this is funded (internal, external debt or further equity injection) and how the currency risk is mitigated, if it is felt to be material. This mark scheme is not exhaustive – all valid points within answers will be awarded marks. **Syllabus ref:** Unit:1.3.4 (LO 1.3)	
		Total: 20 marks

Section B, Question 2 Case Study

Chance All (CA) has an investment opportunity costing USD50m which would be financed by debt. The project would last five years and the CFO wishes to know the NPV of the project and whether it is worth pursuing.

Project detail

Financials USD m	
Assets/investment	50.0
Operating profit	20.0
Marketing spend	2.0
Head office costs	1.0
Debt	40.0
Equity	60.0

Financial Assumptions	
Tax	30%
Depreciation (% of assets)	10%
Working capital (% op profit)	5%
Capex (% assets)	12%
Growth in free cash flow per annum	5%

Financing details

Chance All has a beta of 1.3 and the company has assumed a risk-free rate of 3% and an equity premium of 5.2%.
The current capital structure has USD40m and after the investment, this will rise to USD45m debt but there will be no change in the tax rate. The company has a pre-tax cost of debt of 7.5%. The company has already spent USD2m on marketing and the head office costs previously incurred in setting up the project are USD1m.

Q2	Critically appraise the project using discounted cash flow and noting the change in capital structure. Within your answer explain all assumptions, any potential weaknesses of the analysis and suggestions on how it could be improved.	20 marks
		Total: 20 marks

Q2 answer	Work out the ungeared beta from the geared beta (1.3)
	• Assume the beta is geared 1.3 and needs to be converted to an ungeared beta
	  ○ Bu = Bg / (1+(1-t) * D/E)
	  ○ Bu = 1.3 /(1 + (1-0.3) * 40/60) = 0.886364
	• Gear beta up for new capital structure 45/60
	  ○ Bg = Bu * ((1+(1-t) * D/E)
	  ○ Bg = 0.8864364 * (1+(1-0.3) * 45/60) = 1.351705
	• WACC = Kd * D% + Ke * E%
	  ○ Need Ke – so using CAPM
	  ○ CAPM Ke = Rf + Bg (Rm-RF)
	  ○ Ke = 3% +(5.2%) * 1.351705 = 10.03%
	  ○ WACC = [7.5%* (1-30%)] * 42.86% + 10.25% * 57.14% = 7.98%
	Then calculate the cash flows for year 1
		(4 marks)
		
		1 mark
		
		1 mark
		
		1 mark
		1 mark

Cash flows		Year 1 1
Operating profit	Rate	20.0
Tax	30%	-6.0
Depreciation	10%	5.0
Working capital adjustment	5%	-1.0
Capex	12%	-6.0
Cash flow (FCF)		**12.0**

½ mark per line to total 2.5 marks

Then calculate the DCF over the 5 years:

DCF	Rates	Year 0	Year 1 1	Year 2 2	Year 3 3	Year 4 4	Year 5 5
Cash flow		-50.0	12.0				
Growth	5%	-50.0	12.0	12.6	13.2	13.9	14.6
Discount	7.98%	1.0000	0.9261	0.8577	0.7943	0.7356	0.6812
DCF		- 50.0	11.11	10.81	10.51	10.22	9.94
						NPV	**2.58**

1 mark per line and ½ for NPV for total of 3.5 marks

This gives overall positive NPV of USD 2.55m and hence the project should be accepted, but a return of USD 2.6m over 5 years for USD 50m investment seems low.

(10 marks for calcs)

Assumptions/comments

- The NPV depends heavily on the FCF, growth rate and the discount rate
- There has been no mention of inflation which in the UK is around 3% which would reduce the real growth rate
- Both marketing and head office costs are sunk costs and should not be included

Up to 7 marks

	- Chance All has a high beta of 1.3 and would be expected to have riskier projects - Assumed tax rates stay the same over the 5 years - Over 5 years the intensity of capex is likely to fall and not be the same percentage level each year. - There may well be competing projects that have a better return so the project appraisal needs to be considered with all the major capex projects. Improvements - Sensitivity analysis of the assumptions would provide a better view of the robustness of the project especially for the growth and inflation rates - Other measures such as internal rate of return, discounted payback other NPVs such as profitability index may provide alternative measures to validate the outcome - Further research into the project to understand what the investment is, the quality of the assets and what risks are there with the project and the vendor. This mark scheme is not exhaustive – all valid points within answers will be awarded marks. **Syllabus ref:** Unit:1.2.4 & Unit 1.2.5 (LO 1.2)	3 marks
		Total: 20 marks

Section B, Question 3 Case Study

Night Bed is an international hotel group based in the UK. It has embarked on a programme to improve its approaches to ESG (Environmental, Social and Governance). It has engaged in a number of sustainable projects such as energy efficient lighting, using renewable energy sources and supporting local environmental projects.

The company has a debt portfolio that includes capital market bonds, US private placements and a GBP 500m multi-currency revolving credit facility. The RCF is 90% drawn and is likely to remain drawn for at least another six months. The business has USD1bn debt maturing in the next year and the Treasurer is contemplating whether to issues a green bond to refinance the maturing debt.

Night Bed uses OTC derivatives for interest rate and foreign exchange risk management, the table below shows the types and values. All derivatives are taken out for hedging purposes. One of its banks is requesting a Credit Support Annex (CSA) for new derivative trades. The company uses 10 relationship banks for derivative hedging and has ISDAs in place with all of these banks. However, these documents have not been reviewed for a number of years.

	Instrument	Total Annual Value £m (notional)	Average term	Volume per annum
1	Interest rate swaps	900	5 years	4
2	Cross currency swaps	500	5 years	1
3	FX forwards	2,000	6 months	500
4	FX Swaps	800	2 months	80
5	FX options	50	1 year	10

Q3	a) Critically examine the potential justification for Night Bed issuing a green bond, in light of the benefits and drawbacks of this type of instrument, rather than a normal bond issue. b) Critically discuss the impact that a Credit Support Annex (CSA) may have on Night Bed's treasury operation.	12 marks 8 marks
		Total: 20 marks
Q3 answer	a) Green bond benefits and drawbacks Night Bed will need to carefully plan their approach and do plenty of research if they are hoping to utilise the 'green' bond marketplace. It's a new market with limited track record and only a small number of experienced banks and advisers are in this space. Typically green funding has been used by utility	 2 marks

	companies for renewable energy and carbon reduction programmes so energy efficiency is a different approach.
	
	However, it is growing market, where the benefits should outweigh the drawbacks and for an innovative and forwarding looking business, a green bond would be a welcome new source of funding.
	
	• Benefits of this type of funding
	  ○ Growing demand for this type of bond from investors interested in ESG and a novel approach for a hotel chain
	  ○ Potentially can be cheaper form of funding but comes with restrictions
	  ○ Positive for the ESG movement and shareholders so there should be strong demand for green bonds
	  ○ Internally positive with employees who are interested in green/ethical issues
	  ○ Diversifies the debt portfolio as an alternative source of funding
		Up to 5 marks
		
		1 mark per point

	• Drawbacks and challenges
	  ○ It's a new area where there are limited number of banks and advisors who have issued green bonds
	  ○ The proceeds are ring fenced and need to be monitored separately
	  ○ Higher ongoing compliance and greater disclosure needed for the projects that use the funding with the funds being strictly segregated
	  ○ There may be specific covenants that are green related that need to be managed
	  ○ The impact if projects change relating to the earmarked green funds
	  ○ The definition of green funding is not strictly defined so this adds some complexity to what constitutes a green issue
	  ○ Independent and costly validation of the use of "green proceeds"
		Up to 5 marks
		1 mark per point

	This mark scheme is not exhaustive – all valid points within answers will be awarded marks.	12 marks part a

	b) CSA • As one bank is demanding a CSA, this means posting collateral for the mark to market value of the derivative positions. However, liquidity appears to be tight with only GBP100m available on the RCF facility • The foreign exchange forward and swap trades, although classed as derivatives, are outside of ISDA and CSA agreements so only IRS, CCS and FX options would be included • The volume of trades for longer dated derivatives is relatively low and thus a reduction of one bank down to nine is unlikely to be an issue. However, there is the relationship issue with the bank demanding the CSA. • If a CSA is agreed, it would be advantageous to use a central clearing party for these derivative trades • An agreement that is 'both-ways' will reduce Night bed's credit risk to this bank • And by posting collateral this can lower the credit spread for large longer-term transactions such as interest rate and cross currency swaps • Night Bed could resist agreeing to a CSA as if it is agreed with one bank, the other banking relationships are likely to want to be on the same terms • It also sensible to have consistent documentation for derivatives across all banks where possible • If the CSA is rejected, Night Bed may wish to find an alternative banker for its derivative transactions This mark scheme is not exhaustive – all valid points within answers will be awarded marks. **Syllabus ref:** Unit:2.1.3 & 2.1.5 (LO 2.1)	8 marks 1 mark per point
		Total: 20 marks

Section B, Question 4 Case Study

Build Group is involved in construction, facilities management and related services and is based in the UK. The sector has been keenly watched by investors following some high-profile business failures in the sector. The company has a strong order book and the last financial statements to December 2018 were relatively robust. However, in the last seven months there have been some significant events which have resulted in the share price dropping dramatically. It is now 31 July 2019 and the share price is currently 420.

Extract of the financials (not all lines are shown)

Financial Statements	Dec-18	Dec-19
	Actual	Forecast
Income Statement	GBP m	GBP m
Revenue	4,200	4,300
Operating profit	129	61
Interest	(21)	(18)
PBT	108	43
Tax	(18)	(7)
Net profit	87	36
Balance Sheet		
Cash	330	200
Net working capital	(18)	NA
Total debt	544	400
Net Debt	214	200
Equity	600	600
Total liabilities and equity	2,809	
Cash Flow Statement		
Cash from operations	130	110
EBITDA	175	106
Free cash flow (FCF)	88	70

Dividends	68	68
Net capex	63	58
Depreciation	46	45
Other		
Share price (p)	950	420
# shares (m)	100	100
Dividends per share (pence)	68	68

Q4	a) Critically assess the financials of Build Group. You are required to calculate and apply appropriate ratios to support your assessment. b) Critically discuss the factors both theoretical and practical that would influence Build Group's dividend policy. Within your answer you are required to recommend an appropriate dividend policy for Build Group.	12 marks 8 marks

Total: 20 marks

Q4 answer

a) Financial assessment of the results.
Ratios projected for Dec 19 - calculate these:

3 marks

Ratios	Dec-18	Dec-19
Operating margin	3.1%	1.4%
ROE	14.5%	6.0%
Interest cover	6.1	3.4
EBITDA/net interest	8.3	5.9
Net debt/EBITDA	122%	189%
FCF/net debt	41%	35%
Gearing	91%	67%

Shareholder details			
Market Cap (m)	950	420	
Dividend cover	1.3	0.5	
Dividend yield	7.2%	16.2%	Up to 6 marks 1 mark per point
Pay-out ratio	78%	189%	

- The company was profitable in Dec 18 although margins of 3% indicate it was a low margin business. And projected margins are due to fall to 1.4% which is dangerously low
- ROE has dropped from 14.5% to 6% which is a significant drop
- The > 50% drop in share price has cut market capitalisation by the same percentage
- Interest cover of 6x and the net debt/EBITDA of 122% seems adequate. However on a projected basis interest cover almost halves to 3.4 and net debt/EBITDA rises to 189%
- The gearing ratio of 91% has dropped to 67% which is a positive sign but it is questionable whether it can pay more debt back.
- The pay-out ratio increasing from 78% to 189% provides a clear message that current dividend levels are not sustainable
- Free cash flow to net debt of is 41% and dropping further to 35% which is worryingly low
- Dividend cover of 1.3 is at least above 1 showing that dividends are covered for the past year. However for 2019 dividend cover will now fall to 0.5 indicating that the dividend is no longer covered

Stronger students would discuss the state of the economic sector and the economic drivers that provide context to the treasury challenges

This mark scheme is not exhaustive – all valid points within answers will be awarded marks.

b) Dividend policy theoretical and practical insights — 6 marks

Practical considerations:

- A dividend policy should take a long-term view and be sustainable. Typical approaches are to maintain constant dividends per share or a constant proportion of post-tax profits (pay-out ratio)
- The company needs to reduce the dividends per share as they are not covered by post tax profits, although dividends can be paid out of accumulated earnings. We don’t know if the downturn for Build Group is a one-off or if it is in terminal decline
- Cash flows: these are important and as FCF has dropped nearly 40% this also suggests that the current dividend level is not sustainable. Thus, cash flow dividend cover is an important consideration for dividends

	• Gearing and capital structure have a bearing on the long-term dividend policy. We know that it has remained stable but note that cash levels are forecast to drop from 330m to 200m • The quality and liquidity of the company's assets has a bearing on its financial stability which ties in with a policy for dividends. Note that it had total assets at end of Dec 18 2.8bn but we don't know the quality of these and what the forecast is for them going forward Theory • Dividends can act as signal of future moves but Build Group with a share price that has halved, has greater concerns and needs to focus on a sustainable dividend policy that attempts to avoid dividend cuts • A dividend policy should aim to have a stable policy of linking dividend payments to earnings growth. Where there is no growth in earnings, there should be sufficient reserves to at least maintain dividends. However, in Build Group's case, with falling margins and share price they don't have that option. • The Linter model forecasts the next periods dividend based on historic dividends and earnings (Dt = Dt-1 + Et). Again a useful model where there is stability of the business which is not true for Build Group Policy recommendation • A dividend policy must be long term and sustainable so as to minimise 'surprise' dividend cuts to shareholders. A pay-out ratio of say 50% would allow reserves to be built up and this could then be increased as the business turns around its profitability. • Liquidity may be a more important factor than profitability and thus a cash flow to dividends ratio may be more appropriate. • Alternatively, a target dividend yield could be sought but this varies considerably with share price and does not take account of the profits and cash flows that are needed to fund the dividend This mark scheme is not exhaustive – all valid points within answers will be awarded marks. **Syllabus ref:** Units:1.2.1 & 1.2.3 (LO 1.2)	2 marks
		Total: 20 marks

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