TREASURY EXCELLENCE AS STANDARD

ACT PAST PAPER

Certificate in Treasury (CertT)

Unit 1: The Context of Treasury

October 2021

This is a past paper for Unit 1 of the Certificate in Treasury (CertT)

Based on the syllabus assessed from 01 January 2019 to 31 December 2020 that was assessed in a live environment in October 2021.

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 Certificate in Treasury assessments. It contains a copy of the exam held in a live environment for the specified unit as well as example answers that could achieve maximum marks available.

Ideally, students should have completed the majority of their Certificate in Treasury studies for Unit 1 before attempting this past paper. Students should allow themselves 120 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 this past paper is typical of a Certificate in Treasury 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 examination, 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 paper is a professional paper that as well as testing theory expects application to practice at an operational level.

The best way to approach written assessments 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 this means there are marks available for the workings out. You will be able to make rough workings on a piece of paper during the exam and on screen should you wish to, however these will not count towards your final mark.

ASSESSMENT INFORMATION AND TEST SPECIFICATION

The Certificate in Treasury assessments all consist of 37 questions that may have sub questions, split into sections A, B and C; each assessment is worth a total of 100 marks.

Section	Amount of questions	Marks available	Question format
Section A	20 multiple choice questions 10 multiple response questions	30	This section will test a cross-section of knowledge to achieve breadth of syllabus coverage.
Section B	3 longer form questions	30	This section will test knowledge, analysis, application and justification as appropriate.
Section C	4 longer form questions	40	This section will be based on mini-scenarios common to practice. Questions will test knowledge, analysis, application and justification as appropriate.
Total	**37**	**100**	

Under exam conditions, **2 hours** (120 minutes) are allowed for each of the Certificate in Treasury assessments.

When you take your live assessment, you will be sitting online using your own PC/Laptop. You will also have access to an online scientific calculator in the live exam, but for the purpose of this paper test, you may use a non-programmable scientific calculator. There is a formula sheet located on page 21 that will also be accessible during your online assessment.

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 'analyse'). 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 – 30 marks

20 multiple choice questions and 10 multiple response questions x 1 mark each

We do not publish past papers for the multiple choice questions. Please use the practice paper available for revision purposes.

SECTION B – 30 marks

3 longer form questions of 10 marks each, which should be further split. Questions should test knowledge, analysis, application and justification as appropriate to level descriptors.

Q1	(a) Explain the activities undertaken by a typical treasury team in relation to capital markets and funding.	**4 marks**
	(b) Explain the activities undertaken by a typical treasury team in relation to corporate financial management.	**4 marks**
	(c) Summarise **two** external relationships a treasurer is likely to maintain because of their funding responsibilities.	**2 marks**
	LO4: U1.4	
		Total: 10 marks
Q1 answer	(a) This capital markets and funding key role is the **financing of the organisation's activities**. This could include raising bank loans, funding from bond markets, or equity from existing or new investors. The key treasury activities include: · sourcing finance efficiently from private and public markets · ensuring borrowing terms are consistent with the organisation's credit standing and with its business objectives · developing new sources of funds by investigating structures, providers and markets. (b) Corporate financial management is the practice of developing strategies and plans and making investment decisions that positively affect the value of the corporate. The key activities include: · minimising the organisation's weighted average cost of capital (WACC) through appropriate capital structuring and the use of tax efficient instruments and markets · providing a complete, accurate and valid contribution to the organisation's external reporting · ensuring that the organisation is fairly evaluated by investors	1 mark for explanation 1 mark for each responsibility mentioned up to a maximum of 3 marks 1 mark for explanation

	· ensuring that the organisation provides investors with returns commensurate with the risks that investors take on. . Appraising mergers, acquisitions and divestments and managing longer-term cash investments. (c) Major treasury relationships are those with banks, shareholders and bondholders, who need to be properly informed of the company's position and activities and to provide a focal point for negotiations and selection. This area may also manage the relationship with credit rating agencies.	1 mark for each responsibility mentioned up to a maximum of 3 marks 1 mark for each relationship mentioned up to a maximum of 2 marks
		Total: 10 marks

Q2	Compare the potential advantages and drawbacks of centralised and decentralised treasury department structures. LO2: U1.2	**10 marks**
		Total: 10 marks
Q2 answer	***Advantages of centralisation*** ***Single financial status*** When bankers, investors or creditors provide funds to a company, it is often based on an assessment of the financial health and viability of the entire organisation. Given the organisation is viewed with all of its subsidiaries as a single entity, it makes a lot of sense to manage the finances centrally. ***Synergy of expertise*** Good treasurers are hard to find. As a consequence, an argument can be made that the limited number of quality treasury personnel should be gathered at a central location to allow for more sophisticated analysis and operations than if the knowledge were spread geographically throughout the organisation. ***Cost saving*** Cost efficiencies can accrue to an organisation by centralising treasury. These efficiencies occur in two ways: a. by reducing the need for (more expensive) treasury staff in various locations, and b. a single treasury operation can reduce costs through netting of cash positions internally as well as by lower commissions on outside deals through increased buying power. ***Control*** A centralised treasury has much improved control over cash, funding and exposures. Rogue dealing by subsidiaries should be minimised, and management of the group's funding is not only better controlled but also simplified. ***Drawbacks*** The drawbacks to centralising treasury are also persuasive. First, the trend towards identifying profit centres within an organisation implies that those in charge of these units should also be in charge of their finances. By centralising treasury, the profit centre manager cannot be said to operate a self-contained business and hence, to be entirely accountable for its performance. (The in-house bank concept can address this issue.) **Benefits of decentralisation** A decentralised treasury gives business units the responsibility and flexibility to **manage their own particular treasury requirements.** By closely aligning treasury operations to their specific needs, it is anticipated that treasury requirements can be more precisely met. ***Local autonomy***	1 mark for each point made up to a maximum of 10 marks

Efficient and profitable treasury operations need to take into account local financial market conditions as well as the cash and funding requirements of the business. By being more closely aligned with the local financial scene through local bank managers, treasury operations should be enhanced.

Head office costs are reduced

Decentralisation does not often occur solely to the treasury function. It is normally part of an initiative to decentralise all support functions, such as human resource management, sales and marketing, and purchasing. The benefit to the group is simple: to reduce group overheads, although costs and headcount will rise at a local level instead.

Drawbacks

The drawbacks to a decentralised approach include:

Duplication

As each profit centre will require some treasury operation, there will be significant replication of similar activities across the entire range of subsidiaries, resulting in higher local staffing costs.

Loss of economies of scale

The financial clout of dealing in larger volume may be lost as each profit centre maintains and arranges its own financial requirements.

Need for suitably qualified staff

Staff have to be recruited, trained and inculcated with the corporate ethos. They also have to be relied on absolutely to implement policy consistent with the needs of the centre. Decentralisation makes this more challenging to achieve.

Loss of control

Decentralised treasuries require excellent systems and communication in order to retain control.

Other valid suggestions should also be rewarded.

NB: Markers should take care NOT to provided double credit for stating an advantage of one structure is a disadvantage of the other.

Total: 10 marks

Q3	(a) Explain the meaning and use of the: i. forward yield curve ii. par yield curve iii. zero coupon yield curve. (b) Calculate the related par rate for a maturity of three years, using the annual effective zero coupon rates (ZCR) set out in the table. You are required to show your workings. LO8: U2.4	

Period	ZCR
1 year	1.50%
2 years	2.00%
3 years	3.25%

Total: 10 marks

Q3 answer	(A) **FORWARD YIELD CURVE** Forward rates are used for determining: • 'forward' rates for physical deposits or borrowings • the rates for related derivative instruments, known as FRAs • the best available current market information about the market's expectations of future outturn interest rates. This is an aspect of market expectations theory. **PAR YIELD CURVE** The par yield curve plots the coupon rates of coupon paying bonds of equivalent credit risk all of which are trading at their face value, but each of which has a different maturity. Par rates are used for determining: • the coupon rate on a new bond redeemable at par, for it to be issued successfully at its par value. • the fixed leg rate of a new interest rate swap (swap pricing). **ZERO COUPON YIELD CURVE** Zero coupon rates relate to single future cash flows, for example the maturity amounts of zero coupon bonds. (b) The three year par rate (n = 3 years) is calculated using the formula:	1 mark per bullet point (maximum 2 marks) 1 mark 1 mark for identifying the correct formula 1 mark for applying

	$r(par,n) = (1 - DF_n) / CumDF_n$ $= (1 - 1.0325^{-3}) / (1.015^{-1} + 1.02^{-2} + 1.0325^{-3})$ $= 0.09149 / 2.854901$ $= 3.20\%$ effective annual rate	formula correctly 1 mark for correct calc 1 mark for correct solution
		Total: 10 marks

SECTION C – 40 marks

Q1

Outsy plc (OP) is an outdoor clothing manufacturer which is considering the best way to produce a new clothing range. Usually manufacture would be undertaken by OP's own manufacturing plants, but new technology is required for the range, meaning that OP would need to make substantial alterations to its production process. Therefore OP is also considering an outsourcing option.

The original research and development investment of GBP5m for this new range will be relevant to both options at the outset. If OP undertakes the manufacturing itself, -further plant reconfiguration costs of GBP4m would be incurred in year 1 and costs of GBP1.25m in both year 2 and year 3. If OP outsourced the manufacturing, it would be charged GBP2.6m in each of years 1, 2 and 3 by its outsourcing partner.

In-house manufacturing would provide OP with sales revenue of GBP7.5m in year 2 and GBP6m in year 3. Due to the need to reconfigure its plant, sales revenue would be zero in year 1.

Outsourcing would provide OP with sales revenue in year 1 of GBP3m. Sales revenue is forecast to be GBP6.5m in year 2 and GBP6m in year 3.

OP considers that the cost of capital it would apply for both options would be 5.50%.

(a) Calculate the net present value (NPV) of both the options OP is considering and, on the basis of your calculations alone, recommend which manufacturing option OP should take.

10 marks

LO9: U2.5

Total: 10 marks

Q1 answer

In-house	R&D	Manufacture	Sales	Sum	DF	Total
T=0	-5			-5	1	-5
T=1		-4		-4	0.947867	-3.791469
T=2		-1.25	7.5	6.25	0.898452	5.615328
T=3		-1.25	6	4.75	0.851614	4.045165
						0.869023
Outsourcing						
T=0	-5			-5	1	-5
T=1		-2.6	3	0.4	0.947867	0.379147
T=2		-2.6	6.5	3.9	0.898452	3.503964
T=3		-2.6	6	3.4	0.851614	2.895486
						1.778598

Outsourcing will generate the greatest return so this is the appropriate recommendation.

4.5 marks for each option correctly calculated. Broken down to 0.5; t1/2/3-1 mark each; correct total 1 mark.

Correct recommendation 1 mark

Total: 10 marks

You work as a treasury manager for budget airline Cheapflight plc (CF).

Following the appointment of a new treasurer, CF's board has recently given its approval in principle for commodities trading, with the aim of the treasury department managing fuel costs more effectively.

The new strategy is being implemented during a period of transition for the treasury department, which currently consists of just the treasurer and you as a treasury manager.

The new treasurer has been given additional responsibilities by the board, so will no longer have the time to be involved personally in the treasury dealing process. As a result, approval has been given to recruit two new members of staff to support you with the process in the future, as the number of trades undertaken will increase significantly because of the new commodities trading strategy.

You are now determining the best structure to deliver the new trading policy effectively. The treasurer has left you to decide which activities that make up the dealing process should be assigned to the new members of staff when they join the team.

Currently you execute CF's treasury deals with external counterparties and record them in the treasury management system (TMS). The TMS initiates payments once the treasurer has authorised them. You also provide the accounting entries to the central finance team in relation to the deals.

You are willing to retain or change any of these current processes as you establish the new structure.

(a)	Recommend and justify a new structure for the commodity trading process that will utilise the new staff most effectively.	**7 marks**
(b)	Outline **three** key objectives you would wish to achieve as a result of restructuring CF's treasury team.	**3 marks**

Unit 1.3: LO3

Total: 10 marks

Q2 answer

(a)

Ideally the department should be split into a front and back office environment and specific aspects of the commodity trading deal cycle should be placed within two separate types of role clearly defined as such. A typical treasury transaction process has the following steps in bold below, grouped as shown:

Front Office	**Identification of the position**
	Pre-dealing authorisation
	Dealing
Back Office	**Confirmation**
	Settlement (often dual authorised)
	Accounting

As the more experienced member of the team, it may make sense for the TM to retain the identification of the position but a new recruit could be deployed in the front office to complete the pre-authorisation and dealing activities, with the final front office part of the process being to input the deal to a treasury management system.

This deal input may initiate a payment however, a new recruit could be deployed in the back office to confirm trades with counterparties and settle the deal by authorising the payment. Finally the back office recruit would be responsible for accounting for the transactions in CF's accounting systems.

(b)

Treasurers deal with large sums of money on a daily basis and the key operational risks to manage are those of fraud and error. **Segregation of duties** is usually achieved by the split of the treasury into front office and back office which is a **key management control designed to reduce the risk of error or fraud.**

Segregation of duties is sometimes referred to as the 'duality' or 'four eyes' principle. **The objective is to involve at least 2 people in the life of a single deal**, from initiation, through transacting, to settlement and reporting in order to minimise the risk of fraud, which would require collusion on a large scale to be successful, and undetected errors slipping though.

½ mark for each of the stages identified in the treasury transaction life cycle – **3 marks**

1 mark for accurately identifying both groupings of front and back office roles

1 mark each for explaining the elements of the process that the treasury manager should retain, and which should be reallocated to each of the two new recruits – **3 marks**

1 mark for each of the concepts highlighted – 3 marks

Total: 10 marks

Q3

You work for Yum Yum group (YY), a global food brand based in the US that manufactures and sells food across the world.

Subsidiaries of YY are instructed to approach the group's head office treasury team to manage any treasury needs they have. However, local solutions are considered where it can be shown that these are more cost effective.

The head office treasury team acts as an in-house bank (IHB) that aggregates YY's overall currency positions each day and deals externally as appropriate with the group's banks. The IHB publishes exchange rates internally each day, based on USD, for the subsidiaries to use to book any transactions they require.

You are contacted by a subsidiary that needs to know today's internal rate to sell EUR5m and buy Brazilian Real (BRL) in three months' time in order to maintain the supply of their main raw ingredient.

You have the following published rates available to you:

	Spot	3 months
USD/EUR	0.8213 - 15	100-90
USD/BRL	5.2325 - 30	75-68

The same subsidiary also has a borrowing requirement of EUR10m for 90 days to meet its cash flow needs during this period.

To meet this request, external debt funding will have to be raised, so the treasurer has asked you to find out whether it would be more cost effective to borrow in YY's US functional currency, swap the proceeds to EUR and lend through the IHB or for the subsidiary to borrow locally in EUR.

The best quotes received are shown below:

USD	3.00%
EUR	2.10%

(a) Calculate the EUR/BRL rate (to four decimal places) that should be quoted to the subsidiary. You are required to show your workings. **5 marks**

(b) Calculate the most cost effective way to finance the EUR10m cashflow loan required by the subsidiary. You are required to show your workings. **5 marks**

Unit 3.2 & 3.3: LO11 & LO12

Total: 10 marks

Q3 answer

(a)

Subsidiary selling EUR for BRL for value 3 months forward.

This is a forward cross rate calculation via USD.

The forward cross rate is worked out via the respective forward rates for USD/EUR and for USD/BRL, and notionally exchanging USD at the forward rates.

1 mark for cross rate approach

	Summary	
	USD/EUR = 0.8215 - 0.0090 = 0.8125	1 mark
	USD/BRL 5.2325 - 0.0075 = 5.2250	1 mark
	EUR/BRL rate = 5.225 / 0.8125	1 mark
	= 6.4308	1 mark for correct answer
	EUR 1 = 6.4308 BRL	
	(b)	
	Direct borrowing in EUR	
	Direct EUR borrowing for 90 days.	5 marks
	Interest = EUR 10,000,000 x 0.021 x 90/360	
	Total repayable = EUR 10,052,500	
	(2) Swapped USD borrowing	
	Steps:	0.5 mark
	i) Amount of USD to borrow ii) USD repayable iii) EUR repayable	
	i) Amount of USD to borrow:	
	EUR10m is needed and the USD/EUR spot FX rate is 0.8213	
	YY will borrow:	
	10,000,000 / 0.8213	1mark
	= USD 12,175,818.82	
	ii) Calculate USD repayable:	
	YY will repay USD of:	
	12,175,818.82 x (1 + (0.03 x 90 / 360))	1 mark
	= USD 12,267,137.46	
	iii) Calculate EUR repayable:	
	The forward FX rate is:	
	0.8215 - 0.0090	1 mark
	USD 1 = 0.8125 EUR	
	EUR repayable	
	12,267,137.46 x 0.8125	1 mark
	= EUR 9,967,049.19	
	Borrowing in USD from the centre appears to be the cheaper option.	0.5 mark
		Total: 10 marks

Q4	As a treasury consultant, your most recent assignment relates to a fast-growing media platform company based in the eurozone. Given the pace of growth of the business, the rate of change needed within the treasury department has also been rapid. As part of a far-reaching treasury internal audit, you have been asked to review the foreign exchange policy of the business. The policy is considered to be important because receipts of foreign currency from sales are increasing. The treasurer has provided you with the following summary of their draft policy content: ***Foreign exchange policy*** ***Risk*** *- given the recent sales success in new geographic areas, and further expectation of expansion across the globe, the board has agreed that treasury should manage this risk.* ***Objective*** *- to protect sales income.* ***Benchmarking*** *- completed research shows that other companies manage their foreign exchange risk with their banking partners, using the foreign exchange market.* ***Delegation*** *- risk responsibility is being transferred to the treasury department.* ***Risk target*** *- to remove foreign exchange risk from new foreign exchange sales.* ***Performance management*** *- will be on an exceptions reporting basis.* Unit 1.3: LO3 (a) Recommend and justify proposed improvements for each element of the draft policy presented to you and the additional policy elements that should be included.	**10 marks**
		Total: 10 marks
Q4 answer	(a) Recommendations for improvement **Risk** - This section should state the risk and why it is being hedged. It should really explain what the risk is and why it needs to be managed. **Recommendation** – to provide suitable coverage within this policy section, e.g. an increasingly significant amount of sales revenue is denominated in FX	½ mark ½ mark

	and this is affected by the market rates prevalent at the time of contract and sales income being received.	
	Objective - this is almost there – could do with more specifics.	½ mark
	Recommendation - to provide more detailed coverage within this policy section, e.g. to manage the volatility of the value of this income in the company's functional currency.	½ mark
	Risk measures – this element is missing from the draft policy.	½ mark
	Recommendation - to provide an outline within the policy of the measures that will be used in measuring risk and risk management performance, e.g. value at risk, sensitivity analysis.	1 mark (NB: there is no requirement for a specific example to be provided)
	Benchmarking – Although benchmarking appears in most full policies, benchmarking measures should be measurable rather than conceptual (as is currently the case here).	½ mark
	Recommendation – to provide more detailed coverage within this policy section, e.g. to protect / hedge at least 75% of sales income at the start of each 12 month period in line with general market practice.	½ mark
	Delegation – the delegation needs to give levels of responsibility to each treasury specific role.	½ mark
	Recommendation – to provide more detailed coverage within this policy section, e.g. the treasurer will approve trades that fit within the board approved parameters and the treasury front office role holders will execute the trades.	1 mark
	Procedures – this element is missing from the draft policy.	½ mark
	Recommendation – to provide some detailed coverage within this policy section, e.g. outright forward trades will be executed with our relationship banking partners across an e-trading platform.	1 mark ½ mark
	Risk targets – foreign exchange risk cannot be removed but it can be managed. The draft policy will therefore need to be revised to reflect this.	½ mark
	Recommendation – to provide more detailed and appropriate coverage within this policy section, e.g. 90% of the value of foreign exchange contracts will be hedged on signing to protect the majority of value.	½ mark
	Performance management – the nature of the reporting mechanism is included in the draft policy but again more detail is required.	1 mark
	Recommendation – to provide more detailed and appropriate coverage within this policy section, e.g. once an appropriate risk target is agreed, performance against it should be measured regularly (e.g. monthly). Should the target not be met this should be immediately reported to the finance director with mitigating actions stated.	
		Total: 10 marks

Formulae sheet: Unit 1 The context of treasury

ZERO COUPON PAR RELATIONSHIP

$r_{par} = (1 - DF_n) / CumDF_n$

ANNUITY FACTOR

$(1 - (1 + r)^{-n}) / r$

ANNUITY PRESENT VALUE

$$PV = \frac{CF}{r} x \left(1 - \frac{1}{(1+r)^n} \right)$$

PERPETUITY VALUATION

$PV = CF_{t1} / r$

GROWING PERPETUITY

$PV = CF_{t1} / (r - g)$

INTEREST RATE PARITY FORMULA

$$\frac{1+r_A}{1+r_B} \times Spot(B/A) = Forward(B/A)$$

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