ACT EDUCATION

ACT EXAMINATION PAPER

Diploma in Treasury Management (AMCT)

Unit 4b: Working capital and trade finance

March 2026

This is a past paper for Unit 4b of the Diploma in Treasury Management (AMCT)

Based on the syllabus assessed from 1 August 2022.

INTRODUCTION

This past paper has been produced by the Awarding Body at the Association of Corporate Treasurers (ACT) to assist students in their preparation for the Diploma in Treasury Management assessments. It is important to highlight that the answers provided in this paper are not exhaustive and that any other reasonable answers would be awarded marks where necessary in a marked assessment. It contains a past exam for the specified unit as well as past answers. Ideally, students should have completed the majority of their Diploma in Treasury Management studies for Unit 4b before attempting this past paper.

Students should allow themselves 180 minutes to complete the exam plus an additional 15 minutes reading time. They should then review their performance to identify areas of weakness on which to concentrate the remainder of their study time. Although the past exam in this guide is typical of a Diploma in Treasury Management 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, students 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 a managerial level.

The best way to approach written assessments is to work methodically through the questions. You 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 Diploma in Treasury Management Units 4A and 4B each have 3 mandatory written questions. The papers will be split into sections A and B and will involve a pre-seen case study for Section A that is released no later than two weeks prior to the assessment date. Each unit exam is worth a total of 100 marks. For the purpose of this past paper the questions follow each case study.

Diploma in treasury management assessment test specification:

Section	Amount of questions	Marks available
Section A	1 case study based question	50
Section B	2 shorter case study based questions	50
Total	**3**	**100**

Under exam conditions, **3 hours** (180 minutes) is allowed for the Diploma in Treasury Management assessments plus an additional 15 minutes reading time.

When you take your actual exam, you will be sitting online using your own PC/Laptop. You will have access to an online scientific calculator, but for the purpose of this past paper, you may 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 '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

1 long form question worth 50 marks based on a pre-seen case study. This question should test knowledge, analysis, application insight, evaluation and justification as appropriate to level descriptors. This is a professional paper and application to practice should be at 'management' level.

Total available for Section A: 50 marks

QUESTION 1: CASE STUDY

Aura Jet Airways (AJA) was founded in 2002 by two former airline executives and a private equity backer who saw an opportunity in the fast-growing budget travel market in the United States. AJA began with a fleet of five leased aircraft, focusing on high-density routes between Miami, Orlando, New York and Caribbean vacation destinations.

AJA focuses on ultra-low fares and offers a no-frills flying experience. Ancillary revenue from baggage fees, seat selection and onboard sales quickly became a core part of the business model. By 2008, AJA had expanded to 25 aircraft and gained a reputation for low prices, though customer reviews are mixed. With demand for leisure travel rising, AJA grew rapidly through aggressive fleet expansion. In addition, AJA has switched all operating aircraft to the same manufacturer to standardise operations and reduce costs.

In 2013, AJA filed for an IPO on the NASDAQ, raising USD450m. The listing provided funds to expand its fleet to over 80 aircraft and open new hubs in Dallas and Las Vegas, enabling transcontinental low-cost routes. AJA became known as the fastest-growing ultra-low-cost carrier (ULCC) in the United States, frequently reporting double-digit annual revenue growth. Investors viewed it as a strong challenger to legacy carriers on price-sensitive leisure routes.

However, the COVID-19 pandemic hit AJA hard. Passenger demand collapsed almost overnight in March 2020, forcing AJA to ground over 80% of its fleet. Revenues plunged by 70% year-on-year, and the airline posted its first full-year net loss since going public. Government support programs, including payroll protection loans and temporary tax relief, kept the airline afloat through 2020–2021. By mid-2021, leisure demand rebounded strongly, and AJA returned to profit.

Many airlines regained stability after 2021. AJA expanded capacity aggressively, betting on a sustained leisure boom in the coming years. However, rising fuel prices and labour costs eroded margins. The strategy to use aircraft from a single manufacturer also backfired in 2022. Many models from this manufacturer had engine reliability issues. AJA had to ground part of the fleet for repair work. This disrupted the flight schedule, reducing aircraft utilisation and increasing flight costs. AJA is now facing new challenges in 2026.

Extract from AJA's financial statements:

USDm							
Year	**2025**	**2024**	**2023**	**2022**	**2021**	**2020**	**2019**
Sales	4,115	3,952	3,764	3,426	3,178	1,423	4,873
Accounts receivable	599	601	624	512	396	312	227
Accounts payable	369	348	338	406	468	517	593
Inventories	376	392	426	316	277	213	146
Cash and equivalents	219	301	392	544	647	842	1,184
Net profit	(422)	(114)	95	103	(126)	(957)	318
Expenditure on operations/ cost of sales	3,981	3,687	3,482	3,057	2,779	1,227	3,412

Receivables

The majority of AJA's passenger tickets are sold through online travel agencies (OTAs) and global distribution systems (GDS), which typically settle funds weeks after the booking. AJA has not invested adequately in direct booking platforms, so has no negotiation power over these intermediaries.

In 2022, AJA launched corporate travel contracts to diversify revenue streams. The plan aimed at attracting small business clients with bulk discounts. To compete with larger carriers, AJA offered 60-90 days payment terms, which is much longer than the industry average. Many small businesses were struggling after the pandemic, with many delaying payments beyond their contract terms.

As AJA pushed into Latin America and the Caribbean, it started to accept payments in local currencies. However, settlement delays frequently occurred due to currency controls, foreign exchange restrictions and cross-border banking restrictions.

AJA lacks experience in dealing with foreign currencies. Furthermore, AJA's finance team does not have the technological know-how in automating payment collections. An IT upgrade was delayed many times due to budget constraints and AJA's other priorities. The current system is overburdened and many missed payments are not chased at all.

To further increase sales, AJA trialled a deferred payment system in 2023. Under the system, AJA let leisure travellers lock in fares but delay payment until closer to departure. Adoption was higher than expected, but many travellers changed their mind after booking and defaulted on payment. AJA is aware of its increasing receivables and have built a dedicated team to address problem accounts. They have achieved some good results since 2024, though this increased operational expenses considerably.

USDm							
Year	**2025**	**2024**	**2023**	**2022**	**2021**	**2020**	**2019**
Receivables before write-offs	647	643	676	548	418	327	235
Annual write-offs	48	42	52	36	22	15	8
Accounts receivable	599	601	624	512	396	312	227

Payables

In 2021, after repeated late settlements, major fuel providers shifted AJA to cash in advance arrangements. Instead of enjoying a 30-day payable window, AJA must now pay for jet fuel before delivery, impacting liquidity. Attempts were made to re-negotiate this arrangement after the pandemic but had no success so far. AJA desperately needed bring on new fuel suppliers.
AJA's fleet is largely leased. Historically, it negotiated flexible monthly lease payments. As interest rates rose in 2022, lessors required larger deposits and advance payments. Some aircraft lease contracts were renegotiated with shorter payment cycles or even partial prepayments.

Since 2023, service providers at many airports, especially those in Latin America and the Caribbean, started to refuse credit extension. They blamed high interest rates and a worsening of the economic environment for shortening payment terms. AJA was forced into shorter settlement terms as it was losing market share therefore having less leverage in negotiating service contracts. Service providers prefer to prioritise bigger carriers, who are in a much better position to withstand economic downturns. For this reason, AJA's payment terms was reduced by half in 2023.

To counter the worsening terms, in 2024 AJA adopted a no dispute and no payment practice, paying some suppliers up to 30 days later than the agreed terms. While many suppliers are unhappy, they still need AJA's business.

Inventory

During the COVID-19 pandemic, AJA grounded 80% of its fleet. Spare parts, auxiliary equipment, and consumables purchased under long-term supplier contracts still flowed in, even though the planes were idle. With recovery slower than forecast, much of this stock remains unused and stored in warehouses near airports. Some catering goods and medical kits expired in 2023. AJA has not removed these stocks yet because the cost of removal is significant and it cost less in the short term to just leave these stocks stored. These inventories were eventually written off in 2024.

In 2022, anticipating price inflation, AJA bulk bought jet fuel and spare parts. AJA's forecasting model didn't adequately deal with new market conditions in the post pandemic world, hence failed to align supply orders with passenger demand. As a result, fuel, catering supplies, uniform and duty-free stocks grew. In 2024, AJA started to clear old stocks and expired inventories were destroyed and written off.

USDm							
Years	**2025**	**2024**	**2023**	**2022**	**2021**	**2020**	**2019**
Spare parts and engines	177	228	209	156	134	102	68
Maintenance materials	82	74	98	71	58	44	34
Catering and onboard supplies	51	40	55	42	37	28	21
Fuel and consumables	40	30	36	29	27	21	13
Other (uniforms, duty-free, prepaid stock)	26	20	28	18	21	18	10
Total Inventories	376	392	426	316	277	213	146

Liquidity position

To fill liquidity gaps, AJA leaned heavily on short-term borrowings and revolving credit facilities (RCF), which initially had a credit limit of USD1,000m in 2019. At the request of AJA, the issuing banks increased the credit limit to USD2,000m in 2020 and again to USD2,400m in 2024. By 2023, AJA had massively expanded all available credit lines, often rolling over debt just to cover operating costs. Interest payments increased, consuming much of the already small gross profit.

At the start of 2026, AJA secured a USD400m syndicated loan, but the funds were quickly utilised funding fuel deposits, lease prepayments, and other maturing obligations. By March 2026, AJA was juggling between overdraft, RCF and long-term loans, effectively borrowing from one lender to pay another. AJA's cash reserves had been drained from USD1.2bn in 2019 to just USD219m by 2025, barely enough to cover payroll and essential supplier payments. AJA has not employed other funding instruments such as trade finance and supply chain finance instruments.

Breakdown of AJA's borrowings:

USDm							
Years	**2025**	**2024**	**2023**	**2022**	**2021**	**2020**	**2019**
Revolving credit facility	2,394	2,076	1,822	1,406	1,084	680	450
Overdraft balance	502	411	334	289	212	145	72
Long term borrowings	2,541	2,631	2,326	2,122	1,922	1,920	1,578
Interest expense	482	453	396	312	236	191	114

Restructuring attempts

AJA is in constant communication with its major creditors to manage their concerns. AJA's major banks are willing to extend maturities on the revolving credit facility (RCF) and overdrafts and have also accepted temporary interest deferrals for six months. However, they rejected AJA's request to further increase the RCF facility. AJA is also now seeking equity injections from new strategic investors, with no success so far. AJA's long term creditors are less willing to access variations in terms and have not yet accepted any concessions. AJA's liquidity will completely dry up if no new funding is secured by June 2026. If that happens, many analysts believe insolvency will be inevitable and Chapter 11 will likely be invoked.

QUESTION 1

a.	Calculate the cash conversion cycles for the years 2019 to 2025 inclusive. You are required to show your workings.	5 marks
b.	Examine the main strengths and weaknesses in AJA's receivables, payables, inventories, cash, liquidity and working capital practices. In your answer, you must examine strengths and weaknesses in each of these six areas.	25 marks
c.	Recommend and justify appropriate solutions for the weaknesses identified in question 1b.	15 marks
d.	Discuss potential advantages and disadvantages of the Chapter 11 bankruptcy code. In your answer, you must recommend and justify whether AJA should invoke Chapter 11.	5 marks
		Total: 50 marks

Mark scheme

Q1a

Airline does not have cost of goods sold, instead it has operating expenses, which is equivalent to cost of goods sold from a normal manufacturing company. — 1 mark

Year	2019	2020	2021	2022	2023	2024	2025
DSO	17.0	80.0	45.5	54.5	60.5	55.5	53.1
DIO	15.6	63.4	36.4	37.7	44.7	38.8	34.5
DPO	63.4	153.8	61.5	48.5	35.4	34.5	33.8
CCC	(30.8)	(10.4)	20.4	43.8	69.7	59.9	53.8

1 mark DSO
1 mark for DIO
1 mark for DPO
1 mark for CCC

Total marks: 5

Q1b

Receivables
DSO increasing from 2019 to 2023 because receivables are increasing during this period. This shows poor collection management.

However, it improved in 2024 and 2025, which is a strength — 1 mark

	1 mark
Lack of negotiating power to customers and hence leads to customer late payment, this is a weakness from 2019 to 2023.	1 mark
Though AJA managed to tighten the receivables in 2024 which is a strength.	1 mark
New corporate contracts are ill-prepared and hence caused late payment.	1 mark
No-fee booking is another example, it almost feels like the management does not care about payment and only wants to maximise sales.	1 mark
Poor credit control procedures and IT system not fit for purpose, probably under-investment for many years. There is no systematic approach to deal with non-payment.	1 mark
Payables Payables are decreasing from 2020 to 2023, which indicate shorter payment terms, this is a weakness. However, 2024 and 2025 see improvements of increased payables and DPO decreases slowed between 2024 and 2025 compared to previous years. This is a relative strength.	2 marks
Lack of bargaining power, this relates to fuel suppliers, service providers, aircraft lessor, this is a weakness. Though AJA still managed to not pay suppliers under agreed terms, they have some market power, and that is a strength.	2 marks
No alternative suppliers and hence cannot easily change suppliers.	1 mark
Inventories DIO increased substantially from 2019 to 2023, from 15.6 to over 44.7 in 2023, showing signs of poor inventory management or sign of slow sales.	1 mark
This, however, improved in 2024 and 2025, where inventory is reduced.	1 mark
Over-estimate of sales, over-expanding the business, over-order of inventories, poor forecasting tools that can't deal with new reality of post pandemic.	1 mark
Lack of inventory management, inefficient use of warehouse space, and expired goods are still in the warehouse.	1 mark
Large amount of inventory write off is needed in early years, which may be due to under-investment due to the overall business problem. But write off eventually happened in 2024.	1 mark
Cash RCF and overdraft balances are increasing with cash reserves decreasing, RCF has been fully overdrawn for quite some years, even after multiple credit limit increases. This is showing a deteriorating cash position.	1 mark
CCC is increasing substantially from 2020 to 2023 from -10 to over 69, a 7-fold increase. AJA clearly taken actions since 2024 and CCC finally starts to come down.	2 marks

Problems are happening in all aspects of trade, from payables, receivables, inventory to cash management. Every aspect of trade affects AJA's cash position.

Build-up of a large amount of debt, both short-term and long-term debts are increasing, interest is increasing. RCF has been fully drawn, increased to nearly 2,400m in 2025. A serious liquidity problem.

1 mark

Interest rate on borrowing is also increasing. This could be inferred from the data, using interest expense to divide total borrowing, average interest rate on borrowings are:

2 mark

5.43%	6.96%	7.33%	8.17%	8.84%	8.85%	8.87%
2019	2020	2021	2022	2023	2024	2025

This may be due to increased borrowing cost due to credit condition worsening. Another metric that can reflect AJA's worsening interest expense is interest cover, which equals to EBIT/interest expense or equivalently (net profit + interest) / interest expense:

1 mark

2019: 3.79
2020: -4.01
2021: 0.47
2022: 1.33
2023: 1.24
2024: 0.75
2025: 0.12

This also shows the ability to repay interest is worsening.

Did not mention cash management structure which could be useful for generating interest income or minimise interest expenses

1 mark

Liquidity and working capital

Liquidity is gradually drying up; cash can no longer cover interest payment since 2023. RCF reached maximum in 2025.

AJA is likely rolling old debt into newer facilities to cover working capital. Cash/WC reduced to the lowest level in 2025.

2 marks

Cash/WC	-538%	10525%	316%	129%	55%	47%	36%
	2019	2020	2021	2022	2023	2024	2025

The strength is happening in 2024 and 2025 where cash/WC ratio finally starts to come down.

1 mark

Another way to look at this by using cash ratio and current ratio.

Cash ratio = Cash / Current liabilities
Current ratio = Current assets / Current liabilities

In the case

Current liabilities = RCF + overdraft + AP;
Current assets = Cash + AR + inventories

And the cash ratio and current ratio would be:
2019: 1.06 | 1.40
2020: 0.63 | 1.02
2021: 0.37 | 0.75
2022: 0.26 | 0.65
2023: 0.16 | 0.58
2024: 0.11 | 0.46
2025: 0.07 | 0.37

And the trends of both ratios show the liquidity performance weakens from year to year and it is now in danger to cover debts by working capital.

Maximum mark: 25

Q1c

Receivables
Employ a factor. This basically outsources the collection part of the receivables, given the IT system is not fit for purpose. This is a good short-term plan.

Align incentives of sales team to profitability of AJA. This is to prevent sales team making sales at unfavourable payment terms. This relates to no-fee booking and corporate contracts.

4 marks

Implement a payment management solution internally. This could be more costly than factoring as the IT infrastructure needs to be updated up. This may involve substantial capital investment. Streamline the FX operation to reduce exchange bottlenecks. Note a factor will be to collect FX payments as well – the internal solution needs to consider this, as well.

Stop enticing new customers using payment terms. This might be difficult against bigger carriers. Perhaps AJA needs to reduce its size to be profitable.

Payables
Shop around for better suppliers, which may be possible if the market is competitive. There may be suppliers that provide better credit terms. This is especially true for fuel suppliers and aircraft lessors, though this depends on competitiveness of the fuel supplier market. If bigger players are controlling the fuel network, AJA has very little choice but to accept supplier terms.

2 marks

If new suppliers are not found, AJA should work closely with its existing suppliers and employ supply chain finance solutions wherever possible, e.g. reverse factoring, however, this depends on willingness of the suppliers and whether they have supplier chain finance scheme already setup etc.

Inventories

Develop a better forecasting model covering inventories, sales and cash flow forecasting. Machine learning or AI based tools could be used to improve accuracy.

Just in time inventory system, to reduce inventory stockpile building up.

Implement a more streamlined process of inventory management, changed layout of the warehouse and disposing of expired inventories. There will be cost implications for these actions.

4 marks

Additionally, AJA should have in place a procedure for dealing with inventories which are near expiry date. Reduce ordering while inventories are increasing, use near expiry inventory first to increase utilisation. Find if there are engine parts from engine manufacturers which are no longer used, they can be sold to reduce inventory and increase cash.

Cash

Restructure debt positions and use long term debt to reduce refinancing risk. Long-term debt also help reduce interest expense if the yield curve is inverted

2 marks

Setup a cash management structure to take advantage of cash balances to reduce interest expenses.

Sell assets to improve the cash position, sell unused inventory and reduce fleet size to get more cash. This makes sense only if occupancy and aircraft utilisation is low.

Stop flying non-profitable routes.

Liquidity and working capital

Much of the solution would be similar to that of improving cash and AJA's overall trade management. Reduce interest expense should be the number 1 priority, as it is larger than AJA's gross profit and bigger than AJA's cash. This is not an easy task, and success depends on all parts of AJA working together. It also depends on capital structure and potentially needs equity injection. That being said, all signs appear to suggest AJA is suffering from overtrading in a saturated market. Better FX management shall better secure liquidity under volatile market.

3 marks

Scale back operations (such as divesting unprofitable travel routes) and concentrating in profitable markets may lead to a positive outcome. However, this means further job cuts. Divesting can also free up aircraft which can be sold to reduce liquidity bottleneck.

If market is saturated, then smaller firm size (in terms of sales) could improve liquidity and working capital. As the market may not be able support AJA's original size.

Total marks: 15

Q1d

Chapter 11 bankruptcy provides a procedure by which a debtor can reorganise its debts while continuing to operate in business. Chapter 11 is the basis on which the UK Administration procedure was modelled and illustrates the US procedure's aim of saving a business from liquidation. However, one key difference between Chapter 11 and Administration is that under the Chapter 11 route the existing managers continue to operate the business whereas in the UK an Administrator takes over the powers of the directors. This is seen as an advantage of the US method since the people who know the business best are its current managers.

1 mark

The Chapter 11 process starts with the filing of a petition in the court where the debtor is resident. A petition filed by a debtor is classed as a voluntary bankruptcy. A voluntary petition for relief, upon filing, the debtor automatically assumes an additional identity as the 'debtor in possession'. This means that the debtor keeps possession and control of their assets and continues to operate the business, without the appointment of a case trustee. AJA needs to file the petition of chapter 11 to maintain the company as going concern.

Once chapter 11 is invoked, then another form of bankruptcy/liquidation procedure cannot be commenced by the creditor. This buys time for AJA to focus on the turnaround plan.

1 mark

Like administration, during the period when chapter 11 is in force, several protections from creditors come into effect, including:

- moratorium – this is a key protection and means that no creditor can enforce their debt during the administration period without the court's permission, this is particularly relevant to AJA which has huge amount of debt which needs restructuring, this is critical for AJA's turnaround
- halt to legal proceedings – winding-up proceedings or any other legal process against the company cannot be commenced by a creditor, AJA may leverage this position to negotiate better payment terms with its creditors, though it may lose suppliers goodwill
- securities cannot be enforced – a creditor may not enforce any charge, hire purchase or retention of title provision against the company without the leave of the court. Again, AJA should use this provision to negotiate better deals with aircraft lessors, for better payment terms. For a secured creditor, it is possible to get relief from chapter 11, that means the creditor can enforce recovery actions. However, this does not negate benefits of chapter 11.

2 marks

Finally, there is no specific duration of a Chapter 11 case, and indeed, it may continue for many years. This means chapter 11 can give AJA plenty of time to turn around the business.

1 mark

A serious disadvantage of chapter 11 is loss of reputation, which could lead AJA to lose prospective customers. AJA could also suffer a further credit downgrade, though given AJA's case, this is probably the least of its worries. Also, chapter 11 does not guarantee AJA can turn around the business, if that is the case, then

1 mark

	chapter 7 will be invoked. Finally, chapter 11 is not free, there are legal costs involved with the process. Given that AJA has already attempted many things and improved trade finance since 2024, it looks like the business has already started to turn around. If AJA can find liquidity from negotiating with its creditors, it is worthwhile not invoking chapter 11. This mark scheme is not exhaustive – all valid points within answers will be awarded marks. **Syllabus refs: 4.1.1; 4.2.1; 4.2.2; 4.2.3; 4.2.4; 4.3.3.**	1 mark **Maximum marks: 5**
		Total: 50 marks

SECTION B – 50 MARKS

2 longer form questions, based on mini case studies, of which both are compulsory (2 x 25 marks).

Questions test knowledge, analysis, application, insight, evaluation and justification as appropriate to level descriptors. This is a professional paper and application to practice should be at 'management' level. Candidates are expected to be able to synthesise knowledge from different elements of the syllabus rather than be tested on discrete areas.

Total available for Section B: 50 marks

QUESTION 1: CASE STUDY

Hungary Autos Ventures (HAV) is a mid-sized manufacturing conglomerate headquartered in Budapest. HAV is a key supplier of automotive components across Europe. Its products include drivetrain systems, fuel modules and braking assemblies.

HAV's products are very competitive and reasonably priced. Nearly all European auto brands source their components from HAV. However, HAV is having a few internal challenges. The treasury management system (TMS) was first introduced in the early 1990s and has been gradually updated over the years. It has features of a modern TMS but lacks integration with HAV's other systems.

Over the past 10 years HAV has acquired 16 companies, and each operates as a wholly-owned subsidiary. However, the integration with its subsidiaries has been sub-optimal. For example, receipts from export customers are sometimes missed because certain invoices are managed directly by local subsidiaries and they are not properly recorded at the parent level. The Polish subsidiary recently failed to report a PLN21m quarterly tax payment it made. In another instance, the treasury in Budapest paid a large supplier invoice centrally on behalf of the subsidiary, but errors in the recording oof intragroup transactions at the Italian subsidiary led to confusion, resulting the Italian subsidiary including that same payment in its next forecast.

HAV has significant EUR and USD transactions. The TMS could only present a consolidated view in Hungarian Forint (HUF). The treasury team had no clear visibility of a growing USD shortfall because subsidiary managers, thinking only in HAV's functional currency in EUR or HUF, disregarded the underlying currency of transactions and hence underestimating FX needs. Intragroup loans and dividends between the Hungarian parent and its German subsidiary caused great difficulty to reconcile and were never properly eliminated from the group's cash flow forecast.

In addition, there was a persistent unexplained difference of several million Euros between the bank balances and the accounting system. This may be due to cut-off errors where sales receipts were recorded in the ledger days before it cleared the bank. The treasury team has been unable to verify the cause. Furthermore, each business unit saw cash flow forecasting as a low-priority administrative task, viewing it only as a "treasury problem". For this reason, data for forecasting has

been either submitted late or with optimistic inaccuracies. Treasury's requests for explanations of variances have been frequently ignored.

The TMS has the ability to reconcile daily cash positions automatically, but treasury staff still manually reconcile 15 bank accounts every morning. Bank statement files received from HAV's banks usually arrive late or with missing transaction codes. Automatic reconciliations fail because of inconsistent transaction reference codes between the ERP and the banks.

Idle balances remain trapped in local accounts, while group companies simultaneously draw on the EUR20m revolving credit facility. The system frequently fails to trigger automated investment or funding suggestions (as expected by the central treasury), with consequent excess cash often sitting uninvested, or overdrafts remain unrepaid for days.

Furthermore, HAV uses letters of credit for some customers outside the EU. However, documentation errors are common – incorrect product codes, missing signatures, and non-compliant certificates. As HAV relies on manual Word templates rather than an integrated trade finance system, letters of credit are often delayed at banks due to incomplete or inconsistent documents. The lack of integration between the trade documentation and the ERP means accounting staff manually re-enter data, further increasing chances of human error. To solve this problem, HAV introduced electronic invoicing (EIPP) in 2024, but rollout has been inconsistent. Only 60% of customers are on the system; others still rely on emailed PDF documents. Disputes are still handled offline manually, slowing resolution and delaying receipts.

In 2024, HAV launched a supply chain finance (SCF) programme with two banks, allowing suppliers to receive early payments at HAV's credit spread. The SCF rollout was a success, allowing HAV to improve liquidity while maintaining a good credit rating. However, some treasury team members began to question the programme's structure, suggesting that the SCF programme is a form of off-balance sheet solution. In 2025, HAV's auditors noted EUR190m in hidden obligations that was not reported as financial debts. HAV lacks experience in reporting standards but is unwilling to re-state these obligations as debt in the balance sheet. From HAV's point of view, SCF is a supplier support program, not a borrowing. For this reason, the balance sheet should reflect trade obligations and to not treat this as a liability. However, in early 2026, one of the HAV's banks decided to reduce the SCF programme exposure by 20%. They demanded HAV take on the 20% funding line themselves. This forced HAV to fund an immediate EUR27m repayment to maintain supplies from their vendors, creating a liquidity squeeze. HAV had to draw a revolving credit facility in full to fund the repayment.

QUESTION 1

a.	Recommend and justify ways that HAV's challenges (related to its treasury, ERP and TMS) might be resolved.	16 marks
b.	Evaluate the costs and benefits of HAV's off-balance sheet solution.	9 marks
		Total: 25 marks

Mark Scheme

Q1a

HAV's treasury management system has all kinds of problems, and it can be broadly classified into the following:

1. Missing invoice of PLN21m, which is a material omission.
2. Counting the same payment to a supplier in the next forecast.
3. Under reporting of FX transaction and no central transparency of FX standing.
4. Cash flow forecast cannot remove intragroup transactions.
5. Lack of interest by local managers in contributing quality data.
6. No cash management structure, and inefficient use of cash resources.
7. Inconsistency of documentation between ERP and trade documentation.
8. Cut-off errors and inconsistency of cash balance between bank and the company's book.

8 marks

These problems can be solved following a few board approaches:

a. Improve TMS integration with other systems in HAV, this means connecting ERP, banks, trade systems via APIs. Once this is done, manual uploads should be kept minimum. This should reduce problems 1, 2, 4, 7 and 8 from the above list. — 1 mark

b. Establish a cash visibility dashboard within the TMS system, this should provide a consolidated view by currencies, region and entity. There should be a report developed in the TMS that automatically illustrates an FX mismatch,. This would solve the problem of 3 and improve problem 4, and also help problem 8. Expected and actual bank balance can be directly compared in the dashboard. — 2 marks

c. Establish a centralised liquidity/cash management structure including cash pooling. This needs to be integrated with the cash visibility dashboard. With visibility the treasury can work on investing and funding plans. This improvement will help solve problem 6. — 2 marks

d. Prepare cash flow forecast on a weekly basis, ideally automated, forecasted variance should be identified so mechanical/system errors are sorted out, if variances are identified, reconciliation needs to be performed — 1 mark

e. KPIs for local managers should be linked to forecasting accuracy, training should be provided. The cash visibility dashboard can be built to show accuracy by locality, so local managers' inaccuracies are visible. This should provide more incentive and solve problem 5.	1 mark
f. Finally, all these solutions involve capital investment and commitment from the top management. Once new TMS updates are implemented, it still needs constant maintenance. So dedicated teams should be established just to make sure the secure running of the TMS.	1 mark
	Total marks: 16

Q1b

Off-balance sheet treatment and solutions refer to a range of financial structures and techniques which allow, or try to allow, an organisation to remove liabilities (and related assets) from its balance sheet. In HAV's case, SCF allows some of HAV's payables listed as trade-related, but not direct borrowings.	1 mark
If successful, this results in presenting a reduced amount of debt, or other financial obligations, on the organisation's balance sheet instead of a trade payable. Reduced debt can lead to an improvement in book ratios such as a lower gearing ratio. This is especially beneficial to HAV as it has much lower debt, which may be the reason HAV has a good credit rating. Additionally, all SCF's benefits are relevant:	1 mark
1. Good for supplier relationships as HAV is providing financing solutions to them.	1 mark
2. Lower borrowing cost for both HAV and its suppliers, using trade finance to fund working capital could be cheaper than direct borrowing if HAV's supplier also have good credit rating.	1 mark
As a result of evolving regulations and financial reporting standards, many previously off-balance sheet structures and techniques have been brought on-balance sheet, requiring the financial statements to more transparently report obligations. It is essential that the treasurer evaluates the true risks and cashflows of any proposals for off-balance sheet financing solutions. The treasurer must distinguish illusion from reality. In HAV's case, the bank's withdrawal from SCF is an example of a risk. While longer payables are essentially liquidity provided by the bank, the reality may be lending to HAV depending on the terms of the SCF contract. This means HAV is hiding its true leverage or its true credit worth.	1 mark 1 mark 1 mark
As the auditor has pointed out, the re-statement could mean reputational damage. Not the nature of the financing is required to be disclosed under International Accounting Standards (both FASB and IASB).	1 mark

	Relying on SCF for funding also means HAV builds dependence on banks, which could be withdrawn as in this case. Any other valid answers are accepted. **Syllabus refs: 4.5.1.**	1 mark **Total marks: 9**
		Total: 25 marks

QUESTION 2: CASE STUDY

Dale Dairy Ltd (DDL) is a small family-run dairy manufacturer based in Somerset, England. Founded in 1987, DDL produces pasteurised milk, butter and cream for regional supermarkets and wholesalers.

Despite decades of experience operating in the dairy sector, DDL never managed to be adequately profitable. The business has never expanded beyond just one farm factory. This is mainly because the dairy market is very competitive. In the UK dairy sector, products are homogenous. A litre of semi-skimmed milk from DDL is no different from one sold by dozens of other producers across the country. Consumers do not care whose milk they buy; they simply pick the lowest-priced carton. The supermarkets often switch suppliers based purely on marginal cost differences. This means DDL has no bargaining power in pricing.

DDL and its competitors are mostly price takers. The market dictates the price per litre, leaving little room for negotiation. DDL cannot raise prices without instantly losing customers. Entry and exit barriers to the sector are low. In recent years, new entrants have joined the market with minimal startup costs, as technology and flexible supply contracts significantly reduced barriers to entry. Older players, who are unable to streamline processes and employ newer technology to sustain profitability, usually exited the market quietly, selling off cows and equipment to competitors. Information related to pricing is very transparent. Buyers and sellers know prevailing market prices, production costs, and yield trends. Online exchanges post daily updates on spot prices for milk and cream, so everyone operates with the same data.

In 2024, DDL decided to experiment with differentiation and launched a premium sub-brand called DDL Health+, targeting health-conscious consumers who were increasingly looking for functional nutrition that is low in fat, high in protein, and fortified with vitamins and probiotics. The packaging was sleek and modern, with clear nutritional transparency and an emphasis on sustainability and traceability. Unlike traditional milk, the Health+ range included lactose-free and omega-enriched variants, appealing to a growing segment of consumers who were willing to pay more for perceived health benefits. The product launch exceeded expectations. The Health+ range gained traction quickly in major supermarkets and online grocery platforms, attracting fitness enthusiasts and young professionals.

For the first time in its history, DDL could set its own prices. DDL wanted to understand how much pricing power the brand truly has. Over several months, DDL offered temporary discounts in selected regions and monitored sales responses closely. DDL want to understand how sales would change with different prices. They determined the following relationship between price and quantity sold of DDL's Health+ milk line. The table indicates the number of items buyers are willing to purchase at a range of prices.

Price (GBP)	Quantity Sold (units)
0.50	114,000
0.75	98,000
1.00	82,000
1.25	66,000
1.50	50,000
1.75	34,000
2.00	18,000

In 2025, DDL announced a surprising strategic review. Instead of expanding its dairy operations, it planned to invest in crypto assets. The idea was radical but made financial sense. The dairy market is too competitive and DDL has no edge to capture more market share. As inflation is likely to remain elevated in 2026, margins are going to be very thin. The cryptocurrency market, on the other hand, represents a speculative and potentially high-return frontier. Under this plan, DDL would continue its core dairy operations to maintain cash flow stability, but it would begin allocating a portion of retained earnings into Bitcoin. Rather than buying government treasury instruments and earning interest, DDL will convert a portion of its cash holding into Bitcoin. Over time, as the digital asset appreciates, those gains can be used to support the milk business.

DDL believed Bitcoin could serve as a long-term treasury reserve, protecting DDL's wealth against inflation and the cyclical downturns of the agricultural sector. The move drew both scepticism and intrigue. Investors and financial commentators saw an interesting experiment: a small manufacturer trying to outsmart the competition through financial innovation. Nevertheless, many remain cautious of this radical approach.

QUESTION 2

a.	Analyse the market structure of the dairy market within which DDL operates. You must refer to economic theory to support your answer.	8 marks
b.	Calculate the optimal price for the DDL Health+ milk line that will maximise sales value. You must comment on the results of your calculation and show your workings.	7 marks
c.	Evaluate the advantages and disadvantages of DDL's Bitcoin treasury strategy.	10 marks
		Total: 25 marks

Mark Scheme

Q2a

The market DDL operates in has many features of perfect competition	1 mark
The product being sold is homogeneous, as consumers perceive little to no difference between one brand of milk and another.	1 mark
Each buyer and seller is small relative to the market as a whole, as demonstrated in the case study, manufacturers in the market are price takers and have no influence on the overall market, so no one is large enough to affect the market in general.	1 mark
Free entry and exit in the long run, as cost of entering the dairy market is low and also bankruptcy occurs frequently in the market. There are minimal barriers to entry.	1 mark
Perfect information, this is possible because price information is on the internet.	1 mark
However, from what is offered in the second part of the case, the market DDL operates in also has features of monopolistic competition.	1 mark
Where there are many sellers of a similar (but not identical) product in a market, this is known as 'monopolistic competition'. In this market, sellers, although small, aim to differentiate their product in some way from their competitors. Differentiation can take many forms, for example, through advertising, brand name, packaging, performance characteristics, service, etc.	1 mark
In such a market, competition between companies will be based on price as well as other non-price considerations. The individual companies will try to achieve a monopoly position through the non-price factors. For example, there are many different varieties of bottled beer, but only one producer of Budweiser, who will use advertising etc to differentiate its brand from the competition.	1 mark

What DDL has done with its Health+ line represents an attempt to differentiate products and DDL can influence price, although not to a great extent. These are features of monopolistic competition.	1 mark **Total marks: 8**

Q2b

Assuming the demand curve is a linear line, then the line can be written as:	
Q=a+bP	1 mark
This is a function of price (P) and quantity (Q), since we have many data point, they can be used to determine coefficient "a" and "b".	
We can use the two data points to find "a" and "b".	
At P = 1.5, Q = 50,000 50,000=a+b(1.5)	1 mark
At P = 1.0, Q = 82,000 82,000=a+b(1.0)	
And it can be found b=-64,000 and a=146,000, it can be verified that other points are also on this curve, for example at P=0.5	1 mark
146000-64000*0.5=114000	
And the quantity reported in the table is 114,000	1 mark
Sales is equals to quantity * price, so we need to maximise	
Sales = $P*Q = 146000P - 64000P^2$	
To find the price that maximises Sales, differentiate with respect to P:	1 mark
d(sales)/dP=146,000−128,000P	
Set the equation to zero and solve for P	1 mark
0=146,000−128,000P	
This gives P=1.1406, which gives the maximum sales.	1 mark

Alternative solution:

Price	Quantity	Price*Quantity = Sales
0.5	114,000	57,000
0.75	98,000	73,500
1	82,000	82,000
1.25	66,000	82,500
1.5	50,000	75,000
1.75	34,000	59,500
2	18,000	36,000

Working out £1.25 will get 6 marks

Sales can be calculated directly from price times quantity. By working out all sales, the maximum can be approximated at around £1.25.

Total marks: 7

Q2c

Crypto assets are important to treasury, they offer something that traditional financial assets do not have, here are its benefits in corporate treasury which provide reasons for DDL's decision to hold Bitcoin:

- it offers diversification which is not related to traditional financial markets.
- Some crypto assets, like Bitcoin, can be used as hedges against inflation.
- Bitcoin can act as store of value.
- Finally, crypto assets can serve as investment vehicles.

5 marks

However, crypto assets come with their own problems, as blockchain technology can have many additional properties which set it apart from cash. The acquisition and custodianship of crypto assets have specific nuances. This comes with a cost and experiences, the main impact of working with cryptos are:

1 mark

- Unlike cash, crypto assets can also be generated independently. They may be 'mined' – a reward minted automatically through the code embedded in a blockchain for any node which succeeds in validating a block of transactions. New assets may be issued to existing holders of the same or another asset. However, value of crypto assets is very risky, it will increase HAV's financial risk as crypto assets are much more volatile in value than GBP.

1 mark

- Speculating in crypto is excessively risky and should have proper risk management. There needs to be a strong segregation between treasury management and trading. DDL should carefully manage its Bitcoin holdings.

1 mark

- Custodianship and management of crypto assets is the responsibility of the owner, and this falls to treasurers in organisations holding such assets. This aspect requires proper expertise and comes with some cost. Protection of

	keys is paramount. If you do not hold the keys to your wallets, for instance, if you are reliant on an exchange as custodian, there are potential risks if that exchange is compromised. Exchanges such as Coinbase, Binance and Gemini all have strong know your customer (KYC) procedures, and Kraken exchange is the first to acquire a banking license in the State of Wyoming. On the other hand, if you hold your own keys they must be protected. Hard (cold) wallets hold private keys offline for safety. Online wallets may be used in conjunction with offline authorisation. This means DDL needs more training and procedures to make sure correct ways of holding Bitcoin.	1 mark
	Treasurers contemplating crypto investments as part of a diversified portfolio should expect rapid changes in the regulatory landscape and stay abreast of market developments to minimise risk. In particular, fundraising practices from the early unregulated days of crypto development are under scrutiny. This is another area DDL needs to be very careful of as DDL may have problems later if it planned to raise capital.	1 mark
	Any other valid answers are accepted. **Syllabus refs: 4.1.3; 4.5.2.**	**Total marks: 10**
		Total: 25 marks

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