## MARK PLAN AND EXAMINER'S COMMENTARY

This report includes:

- a summary of the scenario and requirements for each question
- the technical and skills marks available for each part of the requirement
- a description of how skills should be demonstrated
- detailed points for a full answer
- examiner's commentary on candidates' performance

The information set out below was that used to mark the questions. Markers were encouraged to use discretion and to award partial marks where a point was either not explained fully or made by implication.

### Question 1 – Linx Plant Hire plc (LPH)

**Mark Grid**

| Requirements | Technical & Skills | Skills assessed |
|---|---|---|
| 1.1 Analyse and evaluate the performance and financial position of LPH for the year ended 30 June 2021 compared with the year ended 30 June 2020. Suggest reasons for changes in performance and financial position. Include an evaluation of the comments made by the operations director. | 16 | • Analyse and assimilate the data provided in a structured manner (eg a table).<br>• Carry out data analysis to evaluate performance and position.<br>• Critically appraise the data and the comments of the operations director.<br>• Demonstrate a clear understanding of key issues of performance appraisal. |
| 1.2<br>Explain:<br>(a) the three key metrics currently reported to the board and evaluate the appropriateness of these metrics to inform board-level decisions (Exhibit 3). Further calculations are not required.<br>(b) the benefits of reporting a more detailed analysis of monthly performance to the board. Identify and justify additional, appropriate performance measures. | 12 | • Analyse and assimilate the data provided in a structured manner.<br>• Carry out structured and logical analysis of performance metrics.<br>• Demonstrate and explain the strengths and weaknesses of the metrics.<br>• Set out and explain assumptions and other relevant factors to be considered.<br>• Use judgement and analysis of the data to evaluate the limitations and risks of the measures. |

| | | |
|---|---|---|
| 1.3<br>In respect of the financing of the construction equipment (Exhibit 4):<br><br>• Set out and explain the financial reporting treatment for each of the three financing choices over the six-year asset life cycle. Ignore taxation.<br><br>• Determine and justify the most appropriate method of financing from the three choices identified. Show supporting calculations for all three financing methods, including tax effects. Explain relevant financial and non-financial factors.<br><br>Use the working assumptions in Exhibit 4 and other available information. | 22 | • Identify and explain the key financial reporting issues.<br>• Set out and explain the financial reporting treatment of the leases and the loan.<br>• Use data provided to illustrate and justify the differences between financing choices.<br>• Address the key financial reporting issues arising from the financing choices.<br>• Use judgement to identify and evaluate key financing issues.<br>• Demonstrate a clear understanding of the nature of the risks.<br>• Analyse, compare and evaluate the alternative methods of financing.<br>• Assimilate data and other information to identify key issues. |
| 1.4 Explain how the new digital information system can support operational decision making to improve:<br>• Asset management<br>• Revenue generation. | 10 | • Use judgement to identify and explain the key issues for improved management information.<br>• Demonstrate a clear understanding of the key benefits and problems of asset management and management of revenue generation.<br>• Use judgement to critically appraise the key issues.<br>• Analyse, compare and evaluate the benefits of the SaaS software compared with previous procedures. |
| **Maximum marks** | **60** | |

**Scenario**

LPH hires out industrial equipment to business customers. The LPH board is concerned about the company's performance and financial position and is asking questions about the management of assets and operations. The finance director is concerned about the metrics which should be used in future to inform board-level decisions.

In order to improve performance, the board decided to make a major investment, in construction equipment for hire and wants to select the most appropriate method of financing this new construction equipment. After consultation, LPH has identified three potential types of financing to acquire the construction equipment for a six-year cycle:

- Bank loan
- A six-year lease
- Two consecutive three-year leases.

LPH appointed a new head of digital technology to support the improvement of asset management and revenue generation and introduced a new digital information system. The new system is functioning, but the board is concerned that the system is not being used effectively. The board would like advice on how the information made available by the new system can improve operational decisions by depot managers and others.

Financial and operating data is provided.

**Requirement 1.1 – Performance and position**

Figures in red are given in the question (no marks awarded)

| | 2021 | 2020 | % change |
|---|---|---|---|
| Revenue | 355 | 330 | 7.6% |
| Cost of sales | -162 | -151 | 7.3% |
| Gross profit | 193 | 179 | 7.8% |
| Distribution and administration costs | -164 | -153 | 7.2% |
| Operating profit | 29 | 26 | 11.5% |
| Finance costs | -4 | -2 | 100.0% |
| Profit before tax | 25 | 24 | 4.2% |
| Tax | -5 | -5 | 0.0% |
| Profit for the year | 20 | 19 | 5.3% |
| | | | |
| Customers | 25,200 | 24,100 | 4.6% |
| Depots | 180 | 175 | 2.9% |
| | | | |
| EBITDA | 70 | 62 | 12.9% |
| Depreciation | 41 | 36 | 13.9% |
| Net debt | 86 | 61 | 50.9% |
| | | | |
| ROCE | 8.9% | 9.5% | |
| Utilisation | 52% | 56% | |
| Net debt/EBITDA | 1.23 | 0.98 | 33.7% |

| | | | |
|---|---|---|---|
| Gross profit margin | 54.4% | 54.2% | |
| Operating profit margin | 8.2% | 7.9% | |
| | | | |
| Interest cover | 7.25 | 13.0 | |
| Gearing D/E | 41.9% | 31.6% | |
| Gearing D/E (using net debt) | 37.6% | 29.2% | |
| Gearing D/(D+E) | 29.5% | 24.0% | |
| Gearing D/(D+E) (using net debt) | 27.3% | 22.6% | |
| | | | |
| CAPEX (£m) | 78 | 45 | 73.3% |
| | | | |
| Revenue per customer (£) | 14,087 | 13,693 | 2.9% |
| Operating profit per customer (£) | 1,151 | 1,079 | 6.7% |
| Revenue per depot (£) | 1,972,222 | 2,062,500 | -4.4% |
| Profit per depot (£) | 161,111 | 162,500 | -0.9% |

**Revenue**

Revenue has increased in 2021 by 7.6% compared with the previous year. Data is not provided on price changes and changes in the volume of hires, but there are other causal factors that can be identified.

If the operations director is correct, then £5.6m of the increased revenue is due to the acquisition of specialist assets at the beginning of the year. This leaves a more modest increase of about 2% in like-for-like growth from existing equipment for hire.

Part of the explanation for the increase in revenue has been an expansion in the number of customers by 4.6%. Also, the revenue per customer has risen by 2.9% which could suggest that the new customers generate more revenue than the longer-term customers. However, this assumes that the average revenue generated by the longer-term customers has not changed significantly from last year.

Another possible casual factor for revenue growth has been the growth in the number of depots by 12.5% compared with last year. This is significant but has also resulted in a fall in the revenue per depot by 4.4%. Part of the explanation may be that new depots are in new geographical areas which overlap with existing areas. These may now serve new customers and generate new sales, but could also service existing customer needs more effectively and at lower transport cost by being closer to markets (ie closer than existing depots to existing customers' locations).

**Profit and costs**

Both the overall gross profit margin and the overall operating profit margin have changed very little. This could be indicative that the additional revenue has been generated with similar prices and costs to existing revenue streams.

However, this overall picture of stability of margins could hide different and compensating trends in sub-sets of the data. Thus, for instance, the new specialist equipment may have performed poorly (as indicated by the low utilisation rate of 40%) but profit margins on underlying like-for-like hiring revenue from other assets may have improved. This matter is considered further below in discussing the statement of the operations director.

At £41m for 2021, depreciation is a key cost of asset ownership and use. This is largely a fixed cost and makes the profit sensitive to changes in the level of activity through operating gearing.

**Return on assets**

While profit has increased in absolute terms in 2021 compared with 2020, there has been increased investment in more equipment in 2021 and therefore an expansion of the asset base available to generate revenue.

The total CAPEX in the year was £78m. While some of this amount was for replacement of assets, there was also new investment in specialised equipment for hire of £30m and new depots of £5m.

The ROCE decreased from 9.5% to 8.9% showing that, although profit increased, it did not increase by as much as the asset base. The % return on assets therefore fell. It may however be that this reduction is not a reasonable measure of performance as:

- it may take time for the new business line relating to specialist equipment to gain traction and generate profit. So, while ROCE may fall initially, it may rise again once the new business line is more established.
- Some of the assets (eg the depots) may have been purchased during the year and so have not had a full 12 months to generate profit. Nevertheless, all these assets would be fully reflected in the statement of financial position.

ROCE is considered more in requirement 1.2.

**Financial position and liquidity**

A loan of £30 million was taken out in July 2020 to finance the new specialist equipment. As a consequence, non-current liabilities increased by 45% and all measures of gearing increased. A breach of debt covenants expressed in terms of gearing may be a risk if further borrowing is needed for expansion.

There is a significant increase in debt exposure but, due to a low interest rate on the loan at 4%, LPH's ability to service the debt looks to be secure. For example, in 2021 interest cover remains high at 7.25, despite decreasing from 13 in 2020.

In terms of the asset position, there has been some debt financed expansion as already noted. However, of the total CAPEX only £30m has been debt financed. A reduction in the cash balance (from £10m to £5m) has provided sufficient finance for the investment in new depots. Operating cash flows and disposal proceeds have financed the new replacement assets.

**Operations director's statement**

The operations director claims that the specialised equipment generated £5.6m in the year. If they have the average useful life of six years, then this is only £33.6m generated against a cost of £30m. At 10% pa discount rate this revenue only generates a PV of £24.4m (£5.6m x 4.355) which is less than cost.

In addition to considering the initial outlay, the revenues attributed to the new specialist equipment are gross and do not include variable costs from their use. It is necessary to deduct the annual variable costs of maintaining, transporting and storing the equipment, before assessing whether the specialist equipment contributed to profit. It then needs to be assessed whether it made an adequate return on the initial investment.

In mitigation, as already noted, it may be that this is the first year of use of the specialist equipment and new markets may develop over the six-year life and so the revenue will increase. With a utilisation rate of only 40% there is certainly capacity for greater use.

It may also be, as the operations director notes, that hiring revenue from other equipment may have been generated as a result of gaining new customers.

Despite these mitigating factors there is a requirement for significant improvement before the specialist equipment is likely to break even and earn a reasonable return on the initial outlay.

**Requirement 1.2 – Metrics suggested by finance director**

**(a) Three current metrics**

**(i) ROCE**

ROCE is a measure of return on assets employed (total assets less current liabilities) and therefore takes into account all sources of finance (debt and equity).

In the numerator, the profit is operating profit (ie before interest is deducted) and the therefore the amount available as a return to all providers of finance.

For LPH, it is a measure of the return that its equipment generates from hiring to customers (net of operating costs) relative to the cost of the investment.

This is an important measure of efficiency and performance of the assets as it emphasises not just that assets need to generate positive cash flows but that they need to be sufficient to justify the initial investment.

This is important, not just in selecting the right type of asset, but also in acquiring the appropriate quantity of each asset. If too many of a given type of asset are purchased then, at the margin, a low return may be made due to low utilisation (see also utilisation below).

However, whether ROCE is an appropriate way of measuring monthly returns is questionable as this requires monthly measurement of assets.

Moreover, if carrying amounts in the statement of financial position are used to measure assets in the denominator of ROCE than managers might retain assets beyond their useful lives and which are almost entirely depreciated as they have a low carrying amount and boost ROCE. This may lead to dysfunctional behaviour in managers being measured using ROCE as they may retain older assets for longer than desirable rather than replace them with newer, and more modern, assets.

**(ii) Utilisation**

Utilisation is a key measure of the efficiency with which assets are being used which is related to the return they make in terms of ROCE.

LPH appears to measure physical utilisation of assets based on time. It could more beneficially be measured in terms of value. ie the revenue that has been generated compared with the revenue that could have been generated. This gives a greater weighting to the utilisation of more valuable assets.

Utilisation is however a metric that can be used not just at company level but at all levels down to each depot and even each individual piece of equipment. As such, it is a measure of how far the business is 'making the assets sweat'.

It also provides key management information which is appropriate at a monthly level in a range of key management decisions. Poor utilisation of individual assets may indicate:

- a shift in customer demand
- an inappropriate purchase
- purchase of an excessive quantity of a given asset
- the need to sell the asset
- wrongly located assets.

Conversely, very high utilisation may suggest that more of a given item of equipment needs to be purchased to ensure it is available to satisfy customer demand.

A problem may be that utilisation may depend on a range of factors that are not easily identify (eg over/under pricing). However, it could enable appropriate questions to be asked by the board.

A measure of asset utilisation at a granular level (eg per depot or equipment type) is therefore likely to be an appropriate metric to report to the board on a monthly basis.

**(iii) Net debt to EBITDA**

Net debt to EBITDA is a measure of leverage. It shows how quickly net debt can be repaid using EBITDA as a surrogate for operating cash flows.

In essence, it measures liquidity and solvency from a measure of the ability and time period over which debt can be repaid.

A weakness is that it does not consider the need to replace equipment and acquire new equipment through CAPEX, without which the current level of EBITDA is unlikely to be sustained.

However, whether net debt to EBITDA is an appropriate as a monthly measure is questionable as it reflects longer term liquidity from annual measures of EBITDA.

**(b) Alternative performance measures**

Measuring performance for the business as a whole may have limited use as it may struggle to identify areas of good and bad performance to guide decision making.

Possible suggestions for measuring performance could be:

UK and Overseas

This is a geographical segmentation and if the markets are differentiated or managed differently this may be important is assessing which area needs more investment or divestment or a different type of management. The role of exchange rates could also be considered.

By depot

This is a localised geographical segmentation. However, it can also be used to measure and incentivise the managerial performance of depot managers. Measurement would therefore be linked to managerial responsibility.

A problem might be in measuring common costs (eg where equipment is transferred between depots) and in servicing larger customers with national operations.

By product type

Measuring the performance of individual assets (eg by utilisation rates; hire charges achieved relative to cost) may provide the board with information on the most productive areas to invest in. It may also indicate the most profitable types of customer (eg civil engineering).

The appropriate level at which to capture data is an issue (eg individual type of equipment or classes of equipment types).

**Recommendation**

Assessing monthly performance depot level seems to be the most appropriate as it links to organisational structure and operational management decision making (depot manager) and therefore metrics may not only measure and control at board level, but also incentivise at depot level.

**Requirement 1.3:**

**Financial reporting**

**Choice 1 - borrow and buy**

**Asset**

| **To 30 June** | **COST** | **depreciation** | **Acc depreciation** | **NBV** |
|---|---|---|---|---|
| 2023 | 40,000,000 | 6,000,000 | 6,000,000 | 34,000,000 |
| 2024 | 40,000,000 | 6,000,000 | 12,000,000 | 28,000,000 |
| 2025 | 40,000,000 | 6,000,000 | 18,000,000 | 22,000,000 |
| 2026 | 40,000,000 | 6,000,000 | 24,000,000 | 16,000,000 |
| 2027 | 40,000,000 | 6,000,000 | 30,000,000 | 10,000,000 |
| 2028 | 40,000,000 | 6,000,000 | 36,000,000 | 4,000,000 |

**Liability** (all years) 40,000,000

| **SoPL** | **Depreciation** | **Interest at 5%** | **Total** |
|---|---|---|---|
| 2023 | 6,000,000 | 2,000,000 | 8,000,000 |
| 2024 | 6,000,000 | 2,000,000 | 8,000,000 |
| 2025 | 6,000,000 | 2,000,000 | 8,000,000 |
| 2026 | 6,000,000 | 2,000,000 | 8,000,000 |
| 2027 | 6,000,000 | 2,000,000 | 8,000,000 |
| 2028 | 6,000,000 | 2,000,000 | 8,000,000 |
| | 36,000,000 | 12,000,000 | 48,000,000 |

**Choice 2: six year lease**

| | | | |
|---|---|---|---|
| PVFLP at 5% | 42,632 | (£8,000k x (AF5yrs +1) | AF % yrs = 4.329 + 1 |

***Note: Rounding differences apply to annuity factors. Unrounded data below.***

| Y/e 30 June | Liability b/f | interest at 5% | payment | Bal liability |
|---|---|---|---|---|
| | 42,635,813 | | 8,000,000 | 34,635,813 |
| 2023 | 34,635,813 | 1,731,791 | 8,000,000 | 28,367,604 |
| 2024 | 28,367,604 | 1,418,380 | 8,000,000 | 21,785,984 |
| 2025 | 21,785,984 | 1,089,299 | 8,000,000 | 14,875,283 |
| 2026 | 14,875,283 | 743,764 | 8,000,000 | 7,619,048 |
| 2027 | 7,619,048 | 380,952 | 8,000,000 | - |
| 2028 | - | - | - | - |

*Tutorial note: Assumes rentals paid 30 June. Acceptable to assume paid 1 July.*

| SoPL | Depreciation | Interest at 5% | Total |
|---|---|---|---|
| 2023 | 7,105,969 | 1,731,791 | 8,837,760 |
| 2024 | 7,105,969 | 1,418,380 | 8,524,349 |
| 2025 | 7,105,969 | 1,089,299 | 8,195,268 |
| 2026 | 7,105,969 | 743,764 | 7,849,733 |
| 2027 | 7,105,969 | 380,952 | 7,486,921 |
| 2028 | 7,105,969 | - | 7,105,969 |
| | 42,635,813 | 5,364,187 | 48,000,000 |

**Check** (6 x £8000k) = £48,000k

**Choice 3: Two 3-year leases**

**Lease 1**

| | | | |
|---|---|---|---|
| PVFLP at 5% | 24,015.6 | (£8400k x (AF2yrs +1) | AF % yrs =1.859 + 1 |

**Lease 2**

| | | | |
|---|---|---|---|
| PVFLP at 5% | 25,731.0 | (£9000k x (AF2yrs +1) | AF % yrs =1.859 + 1 |

***Note: Rounding differences apply to annuity factors. Unrounded data below.***

| Y/e 30 June | Liability b/f | interest at 5% | payment | Bal liability |
|---|---|---|---|---|
| | 24,019,048 | | 8,400,000 | 15,619,048 |
| 2023 | 15,619,048 | 780,952 | 8,400,000 | 8,000,000 |
| 2024 | 8,000,000 | 400,000 | 8,400,000 | - |

| Y/e 30 June | Liability b/f | interest at 5% | payment | Bal liability |
|---|---|---|---|---|
| | 25,734,694 | | 9,000,000 | 16,734,694 |
| 2025 | 16,734,694 | 836,735 | 9,000,000 | 8,571,429 |
| 2026 | 8,571,429 | 428,571 | 9,000,000 | - |
| 2027 | - | - | | |
| 2028 | - | - | | |

| SoPL | Depreciation | Interest at 5% | Total |
|---|---|---|---|
| 2023 | 8,006,349 | 780,952 | 8,787,302 |
| 2024 | 8,006,349 | 400,000 | 8,406,349 |
| 2025 | 8,006,349 | - | 8,006,349 |
| 2026 | 8,578,231 | 836,735 | 9,414,966 |
| 2027 | 8,578,231 | 428,571 | 9,006,803 |
| 2028 | 8,578,231 | - | 8,578,231 |
| | 49,753,741 | 2,446,259 | 52,200,000 |

**Check** (3 x £8,400k) + (3 x £9,000k) = £52,200k

**Lease-buy decision**

| | |
|---|---|
| Cost | 40,000,000 |
| After tax borrowing rate | 5%(1-T) = 4% |
| Disposal value | 4,000,000 |
| Tax rate | 0.20 |
| WDA | 0.15 |

**Choice 1 – Purchase (loan)**

| | TWDV | |
|---|---|---|
| 0 | 40,000,000 | |
| 1 | 34,000,000 | |
| 2 | 28,900,000 | |
| 3 | 24,565,000 | |
| 4 | 20,880,250 | |
| 5 | 17,748,213 | |
| 6 | Disposal | 4,000,000 |
| Balancing allowance | | 13,748,213 |

| Time | Equipment | Value of tax relief WDA | Value of bal allowance | DF 4% | CF | PV |
|---|---|---|---|---|---|---|
| 0 | (40,000,000) | | | 1 | - 40,000,000 | -40000000 |
| 1 | | 1,200,000 | | 0.9615 | 1,200,000 | 1,153,846 |
| 2 | | 1,020,000 | | 0.9246 | 1,020,000 | 943,047 |
| 3 | | 867,000 | | 0.8890 | 867,000 | 770,760 |
| 4 | | 736,950 | | 0.8548 | 736,950 | 629,948 |
| 5 | | 626,408 | | 0.8219 | 626,408 | 514,861 |
| 6 | 4,000,000 | | 2,749,643 | 0.7903 | 6,749,643 | 5,334,341 |
| | | 4,450,358 | NPV of purchase | | - 28,800,000 | **- 30,653,197** |

**Choice 2: one six year lease**

| | |
|---|---|
| Lease rental pa | 8,000,000 |

| Time | Lease rental | Value of tax relief | | DF 4% | PV | | |
|---|---|---|---|---|---|---|---|
| 0 | - 8,000,000 | | | 1 | - | 8,000,000 | - 8,000,000 |
| 1 | - 8,000,000 | 1,600,000 | | 0.9615 | - | 6,400,000 | - 6,153,846 |
| 2 | - 8,000,000 | 1,600,000 | | 0.9246 | - | 6,400,000 | - 5,917,160 |
| 3 | - 8,000,000 | 1,600,000 | | 0.8890 | - | 6,400,000 | - 5,689,577 |
| 4 | - 8,000,000 | 1,600,000 | | 0.8548 | - | 6,400,000 | - 5,470,747 |
| 5 | - 8,000,000 | 1,600,000 | | 0.8219 | - | 6,400,000 | - 5,260,333 |
| 6 | | 1,600,000 | - | 0.7903 | | 1,600,000 | 1,264,503 |
| | | | NPV of 6-year lease or use annuity | | - | 38,400,000 | **-35,227,160** |

**Choice 3: two 3-year leases**

| | |
|---|---|
| 1. Lease rental pa | 8,400,000 |
| 2. lease rental pa | 9,000,000 |

| Time | Lease rental | value of tax relief | | DF 4% | PV | |
|---|---|---|---|---|---|---|
| 0 | (8,400,000) | | | 1 | (8,400,000) | (8,400,000) |
| 1 | (8,400,000) | 1,680,000 | | 0.9615 | (6,720,000) | (6,461,538) |
| 2 | (8,400,000) | 1,680,000 | | 0.9246 | (6,720,000) | (6,213,018) |
| 3 | (9,000,000) | 1,680,000 | | 0.8890 | (7,320,000) | (6,507,453) |
| 4 | (9,000,000) | 1,800,000 | | 0.8548 | (7,200,000) | (6,154,590) |
| 5 | (9,000,000) | 1,800,000 | | 0.8219 | (7,200,000) | (5,917,875) |
| 6 | | 1,800,000 | - | 0.7903 | 1,800,000 | 1,422,566 |
| | | | NPV of two leases or use annuity | | (41,760,000) | **(38,231,909)** |

**(a) Financial reporting treatment**

Purchase and borrow

The construction equipment will be recognised as PPE. The depreciable amount (£36m) is written off as depreciation over the six-year useful life on a straight-line basis (£6m pa) if periods benefit equally from the assets' use.

The loan of £40m is recognised as a non-current liability for 5 years, then as a current liability for one year until settled as a bullet repayment on 30 June 2028.

Interest at 5% is recognised each year on the loan (£2m) in profit or loss as a finance charge.

Six-year lease

Initial recognition of the asset (the right of use of the construction equipment) and the lease liability in accordance with IFRS 16 is the present value of the future lease payments (PVFLP).

The assets are recognised as PPE and the PVFLP is written off as depreciation over shorter of the lease term (six-years) and the useful life (also six-years) on a straight-line basis (£7,105,969 pa) if periods benefit equally from the assets' use.

The liability is amortised using the interest rate implicit in the lease or the incremental borrow rate. LPH has chosen the latter (at 5% pa) as its accounting policy. IFRS 16 requires the total finance charge to be allocated to each accounting period to give a constant periodic rate of charge.

The lease liability reduces each year by the difference between the lease rental payment and the finance charge.

The SPL is charged with the depreciation on the asset and the finance charge on the liability. Overall, the amount recognised through profit or loss is the same as the sum of the lease rentals of £48m

Two, 3-year leases

Each of the leases is treated separately.

The treatment is as for the six-year lease in accordance with IFRS 16 but as the lease terms are shorter than for the six year lease arrangement, the lease liability (PVFLP) is smaller at the inception of the lease and, until the final year, at the end of each accounting period (see calculations above).

**(b) Method of financing**

The discount rate is the net of tax borrowing rate of 4% (ie 5%(1-T)). This is because lease rentals are low risk like servicing debt. However, it could be argued that a higher discount rate should apply to the second tranche of 3-year lease rentals as they are uncertain, unless they have been contractually fixed at the beginning of the project.

The proposed expansion of £40m is significant and there could be elements of the investment where LPH borrows and buys the equipment and other elements where it leases the equipment. A range of local commercial factors should be considered in individual investments.

Borrow and buy

Owing the equipment is more flexible than leasing. If the useful life is eventually longer than expected, LPH can retain the asset beyond the (say) six years. Alternatively, if customer demand changes, or technology changes and utilisation is low then LPH can sell the asset without the early termination penalties likely to be in a lease contract. LPH therefore has more discretion with the timing of the end date when it is buying rather than leasing. This can be important in hiring equipment as the business is cyclical and seasonal so utilisation can vary over the term of expected use.

There may also be more flexibility in using the asset. For example, there may be a restriction on taking some equipment out of the UK to use in LPH's European operations if they are leased. There may also be restrictions on the extent of use in a lease (eg a maximum number of miles travelled in a vehicle being hired out).

Owning assumes the ability to borrow sufficient funds to purchase the asset. There may be limited debt capacity. Gearing is high for LPH but, more importantly, it is close to the debt covenant threshold.

Leasing

Leasing will reduce the need to find the initial £40m cash in July 2022. The cash cost will be spread, enabling the new equipment have time to generate revenue for hiring to customers to help pay the lease rentals. With leasing, the timing of costs is therefore more closely matched with cash inflows from revenue streams, which aids liquidity.

The implicit rate of interest in the lease may be lower than a bank loan, although this needs to be ascertained.

Similarly, there may be a difference in the tax treatment of a lease, but this may be a benefit or a cost according to the tax jurisdiction.

Lease rentals need to be capitalised in accordance with IFRS 16. However, the amount of the capitalised lease liability is likely to be lower than the borrowing required to purchase the equipment. This is particularly true for shorter leases. This may be an advantage in avoiding a breach of the debt covenant based on gearing.

The lease contract may include maintenance costs or require the lessee to maintain the asset. If maintenance costs are incurred by the lessor, then the lease rentals will be higher, but it avoids uncertainty. With LPH's mechanical equipment, this may be an advantage.

A key assumption is that the LPH board has already decided to acquire the construction equipment. It is therefore presumably confident that the construction equipment will make a profit irrespective of the method of finance. The viability of the acquisition of the construction equipment is not therefore in question. The issue is therefore which of the three methods of financing the construction equipment is preferable.

Using the net of tax borrowing interest rate as the discount rate, this shows the following present values of financing cash flows.

| | |
|---|---|
| Purchase and borrow | £30,653,197 |
| A six-year lease | £35,227,160 |
| Two, 3-year leases | £38,231,909 |

In pure financial terms, using the working assumptions, the purchase and borrow decision gives the lowest after tax PV and is therefore preferred if assessed on this basis alone.

However, other factors need to be considered. If the asset is still serviceable and its condition acceptable to customers after six years, the ownership of the asset can be extended. Extensions of the lease term may or may not be negotiated with the lessor with the leasing options, but this is uncertain and is likely to have greater cost than extending ownership.

Comparing the 6-year lease with the two 3-year leases, while the 6-year lease has a lower PV cost there are three advantages to the two 3-year leases:

- There is an exit route after three years (unless there is a prior contractual commitment), so if the construction equipment is not hiring out as successfully as expected, then the second lease need not be entered into.
- The second lease is for brand new construction equipment which may be technologically or aesthetically superior to the construction equipment used in the first three years and in the six-year lease.
- As the two leases are shorter than the six-year lease, the lease liability recognised in the financial statements is lower and so gearing is lower. This may be important for complying with the loan covenant.

### 1.4 New digital information system

T-Soft is offering SaaS (software as a service) to LPH. SaaS solutions employ internet technology and remote servers, enabling users to access software online from anywhere, using a device with an internet connection. The software does not need to be installed on hardware in the company's offices.

The RFID tracking device enables the assets over £3,000 to be located and their movements recorded providing useful management information to LPH and its customers.

**Asset management**

Asset management is the process of making best use of an organisation's assets to promote their efficient use and increase the returns generated from the asset.

The tracking of assets enables equipment meeting customers' specification to be identified and located as soon as a customer order is made. The software and tracking improves logistics, enabling the most appropriate asset, in the closest location to be delivered to the customer to reduce lead times and transport costs.

Once delivered to the customer, the use and movement of the asset can be traced recording valuable management information about how and where the asset is being used by the customer.

There is also a benefit to the asset management of the customer who can trace the LPH asset during the hire period to make best use it.

Upon completion of the hire period, information about the location of the asset and possibly the next customer to use the asset can be accessed. This can help determine which depot to return the asset to for storage or whether to transfer it directly to the next customer.

Operating efficiencies can therefore be achieved, such as speeding up drop-off and pick-up (ie turnaround times) which may reduce the associated operating costs and improve customer experience.

Inventories of assets and their locations can also be maintained to ensure there is geographical balance of each type of asset to most efficiently meet future customer demands.

There may also be a more general improvement in customer experience in using real time data to enable customers to track hired equipment and reduce the likelihood of equipment being lost or wrongly located.

Tracking asset usage may also enable maintenance to be carried out by LPH at the time of lowest demand so the impact on utilisation is minimised.

The life-cycle history of each asset can also be ascertained and the decision to replace early or extend useful lives can be informed by evidence.

**Revenue generation**

For LPH, the use of equipment in terms of utilisation is directly linked to revenue generation. Hire revenues are generated by ensuring the assets are available for customers' use at the right time and location.

Management information about the location and use of equipment will facilitate awareness of the patterns of availability and use of each type of asset. This will identify under and over stocking of each type of equipment and help optimise the equipment portfolio to meet customer needs. For example, the number of instances when customer orders cannot be satisfied due to lack of availability of appropriate assets can be minimised.

Having assets in the best locations due to tracking may also shorten lead times to meet urgent customer demands and increase customer satisfaction. Ensuring that assets are in the possession of customers means hiring revenues are being generated.

Cross depot communication may also be improved. Depot managers may have knowledge of local customer needs but may be unaware of revenue generating opportunities outside their geographical region. Asset availability at the company level can be enhanced by co-operation between depots through sharing information via use of the dashboard. The centralised availability of the same real time and historic data enables better internal communications and better and more consistent communications with customers.

Administration of revenue is also facilitated by tracking assets' use and location to support invoicing and provide evidence of the cut-off on the asset return date if there is a dispute.

A centralised sales database can be accumulated over time for customer relationship management (CRM) and marketing, based on knowledge of past customer use.

**Examiner's comments**

1.1 Performance and financial position

Candidates generally performed very well on this requirement.

Most candidates calculated all or most of the appropriate relevant ratios. However, lower scoring answers tended to calculate only a few meaningful ratios. Candidates received no credit for reproducing ratios provided in the question.

In terms of discussion, there was some good analysis, for example suggesting causal factors and making linkages between ratios. Many discussed the impact on performance of the investment in specialist equipment. Weaker answers provided a limited assessment of financial position and largely focused on profitability.

It was surprising that some candidates at this level still just stated that ratios had increased or decreased without offering suggestions or insights into why these changes had occurred by referring to linked data and the circumstances in the scenario.

Surprisingly, some weaker candidates did not address the comments of the operations director, which was a specific instruction in the requirement. There were also some very brief answers, which merely dismissed the operations director's comments with very limited justification.

1.2 Three key metrics

Most candidates generally performed well on this requirement.

Comments by weaker candidates on the three key metrics tended to be generic. Many candidates merely described the three metrics in general terms and stated how they were calculated. There was sometimes little application to the scenario. However, the better answers focused on the metrics for LPH and identified their relevance for management decisions, referring to the numbers in the question.

The section of the requirement addressing the benefits of more detailed analysis and alternative measures, also generated some generic answers by weaker candidates. Some candidates merely restated a few of the ratios calculated in the first requirement, such as operating profit margin and gearing. A large minority of candidates did not discuss whether monthly reporting is appropriate. Better candidates produced answers which highlighted specific, meaningful information for the LPH board such as analysing monthly performance on a geographical or depot basis, as opposed to company-wide information only.

1.3 Financing – lease v buy

There was significant variation in candidate performance on this requirement.

Two general weaknesses were:

- Addressing the financial reporting section in detail, but making a very limited attempt at the NPV lease-buy decision section (or vice versa)
- Describing in narrative terms how to do the calculations (for both FR and NPV sections) but not actually making any meaningful attempt at the calculations themselves.

Specific weaknesses on the financial reporting section were:

- For the buy and borrow choice:
    - this was a straight vanilla loan, with easy marks, but many candidates over-complicated the calculation by discounting, using a variety of interest rates, to obtain a fair value
    - depreciating cost, rather than the depreciable amount
    - addressing the asset, but not the liability
    - addressing the liability, but not the asset
    - limited explanations.

- For the two leasing choices:
    - including tax when this was excluded in the requirement
    - using unadjusted calculations from the NPV lease-buy decision section for FR purposes
    - calculating the implicit interest rate in the leases when the question had said not to use this rate and to use the borrowing rate instead
    - treating the leases as operating leases
    - initial recognition at cost, rather than PVFLP.

Specific weaknesses on the NPV lease-buy decision section were:

- using the FR calculations for the lease-buy decision with no new calculations
- ignoring tax and capital allowances, when tax was specifically required in the question for the NPV lease-buy decision

- interest payments were included as cash flows
- depreciation was included as a cash flow
- use of 6-year annuity factor as an ordinary annuity, rather than 5 years plus one for an advance annuity (annuity due)
- a wide variety of discounts rates used without justification
- limited explanations.

1.4 Digital information system

Many candidates wasted time at the beginning of their answers repeating descriptions given in the question on how SAAS and the RFID tracking devices operated.

Most candidates dealt well with asset management well by explaining how the tracking of assets would benefit LPH's operational decision making in terms of the tracking process, location, customer experience and maintenance.

However, many candidates were far more limited in their coverage of revenue generation and either left this part out altogether or produced quite brief answers repeating what they had said on asset management. Where candidates made no reference to revenue generation, they lost all the marks that were on offer.

Weaker candidates merged the two requirements on asset management and revenue generation, despite these being identified separately in the requirement in separate bullet points for candidates to address. This is a weak approach in not clearly answering the two sub-requirements separately by explaining how the digital information system could improve each of asset management and revenue generation.

Some very weak candidates went down the wrong avenue for this requirement and provided a full discussion of change management issues.

**Question 2 – Tallam**

**Mark Grid**

| Requirements | Technical & Skills | Skills assessed |
|---|---|---|
| 2.1 Evaluate and interpret the data provided by the data analytics team (Exhibit 2). Explain the relative risks arising from the net operating cash flows for each division and the resulting risks for the company as a whole. | 12 | • Use judgement to identify key information in the data distributions.<br>• Demonstrate an understanding of the purpose of the types of data analysis required.<br>• Evaluate the impact of volatility.<br>• Structure information.<br>• Demonstrate an understanding of the application of data analytics.<br>• Distinguish volatility risk in local currencies from currency risk.<br>• Distinguish divisional risk and company-wide risk. |
| 2.2 Calculate the settlements in £ of interdivisional currency balances at 30 June 2021 by applying multilateral netting-off procedures to the illustrative data provided (Exhibit 2).<br>Explain:<br>• how multilateral netting-off procedures may be of benefit to Tallam<br>• the extent to which multilateral netting-off procedures may have been facilitated by introducing a centralised treasury department. | 8 | • Perform calculations using multilateral netting-off procedures.<br>• Identify and explain issues relating to foreign currency risks, including implications for operating cash flows.<br>• Demonstrate an understanding of the nature of a centralised treasury department.<br>• Use judgement to assess the appropriateness of multilateral netting-off.<br>• Understand and assimilate the data provided in a structured manner. |
| 2.3 In respect of the concerns raised by the internal audit department (Exhibit 3), prepare a report for the audit committee which sets out and explains:<br>• appropriate procedures for Tallam to manage credit risk on foreign sales contracts (Concern 1); and<br>• the financial reporting and business issues arising from the differences between internal and external pricing arrangements (Concern 2). | 12 | • Demonstrate an understanding of the causes and risks relevant to each issue.<br>• Use judgement to determine actions and procedures which are appropriate to the circumstances.<br>• Use judgement to evaluate the issues.<br>• Distinguish credit risk from currency risk. |

| | | |
|---|---|---|
| 2.4 Identify and explain the ethical issues for the Tallam board and members of the treasury department arising from the matters described in the anonymous letter (Exhibit 4).<br><br>Evaluate, with supporting calculations, the claims made in the anonymous letter regarding the forward contract. Set out any ethical and business implications.<br><br>Explain the actions that should be taken by the Tallam board in response to the receipt of the anonymous letter and the ethical issues identified. | 8 | • Use ethical language and principles.<br>• Identify key ethical issues presenting a balanced approach to interpreting the facts and incentives<br>• Identify issues for each party separately<br>• Set out the actions to be taken by the relevant parties. |
| **Maximum marks** | **40** | |

**Scenario**

Tallam plc is a global manufacturing company with three subsidiaries. It produces semiconductor devices (semiconductors) and integrated microelectronic circuits (IMCs).

The majority of Tallam's semiconductors are sold to external customers. However, some semiconductors are transferred internally to be used as components in Tallam's manufacture of IMCs.

The board is concerned about Tallam's cash management and treasury activities, particularly in respect of its multiple currency operations. The board is also concerned about foreign currency risks arising from its operating activities.

Each division produces IMCs which are specific to one industry:

- UK division – Aerospace industry
- German division – Digital communications industry
- Malaysian division – Computing industry

Each division sells its IMCs to global external customers operating in the related industry.

The company's data analytics team carried out an analysis of net operating cash flows for Tallam's four major currencies. The team's data shows the average amounts (mean) and variability (standard deviation) of monthly net operating cash inflows during the year.

An ethical matter has arisen when the finance director received an anonymous letter from a treasury staff member making a complaint about the group treasurer.

**Requirement 2.1 – Relative risks from net operating cash flows**

Table 1 – Total net operating cash flows in £s

| Division | Amount | XR | £'000 per month | £'000 pa |
|---|---|---|---|---|
| UK | 40,000 | 1.0 | 40,000 | 480,000 |
| Euro | 27,500 | 1.1 | 25,000 | 300,000 |
| Malaysia | 75,000 | 5.0 | 15,000 | 180,000 |
| US | 26,000 | 1.3 | 20,000 | 240,000 |
| | | | | |
| **Total** | **168,500** | | **100,000** | **1,200,000** |

Table 1 above translates the net operating cash inflows provided in the four currencies into £ sterling using the year-end exchange rates provided to bring them to a common currency basis. The year-end exchange rate is not ideal as the transactions occurred over the year, but it provides a reasonable approximation for management information purposes.

The key issue is that the company generates a significant amount of net operating cash flows at £1,200 million pa. This is a ratio of 0.20 (operating cash flows divided by revenue) on the revenue of £6,000 million. There are a number of payments to be made from these operating net cash inflows including: investment cash flows (CAPEX); financing cash flows (interest and repayment of debt), tax, dividends. Nevertheless, there is a substantial surplus for the year. The cash and cash equivalents balance of £87 million reflects the fact that significant net cash inflows are being generated, but there are substantial outflows.

Nevertheless, whilst there is currently strong growth in the semiconductors industry, there is an historic pattern of variability and hence there is a need to manage variation in cash flows within years and between years.

This is not just to maintain liquidity, but also to optimise the use of surplus cash to generate returns for shareholders.

Table 2

| | Net operating cash inflows (per month) | | |
|---|---|---|---|
| **Currency** | **Average (mean)** | **Standard deviation** | **Coefficient of variation** |
| British pounds (£'000) | 40,000 | 19,596 | 0.49 |
| Euro (€'000) | 27,500 | 22,000 | 0.80 |
| Malaysian ringgit (MYR'000) | 75,000 | 30,000 | 0.40 |
| US dollars (US$'000) | 26,000 | 16,444 | 0.63 |

The standard deviations (SD) shown in the table produced by the Tallam's data analytics team gives absolute values. They cannot therefore be directly compared with each other to give a relative assessment of risk, as the scale of the amounts differs. Clearly, they are also in different currencies.

The coefficient of variation relates the SD to its absolute value and is therefore comparable between the divisions to compare relative risk. Higher values of the coefficient of variation suggest a greater dispersion in the data adjusting for absolute size.

Once this scaling is considered then Malaysian cash flows have the lowest coefficient of variation and therefore the lowest relative dispersion.

If the four currencies are translated to £s then the absolute numbers of the means and SDs will change, but this does not affect the coefficient of variation which shows the relative variability of each division, as it merely scales the data. This is demonstrated below with the table translated to £s as the common currency:

| | Net cash inflows (per month) | | |
|---|---|---|---|
| **Currency** | **Average (mean)** | **Standard deviation** | **Coefficient of variation** |
| British pounds (£'000) | 40,000 | 19,596 | 0.49 |
| Euro (£'000) | 25,000 | 20,000 | 0.80 |
| Malaysian ringgit (£'000) | 15,000 | 6,000 | 0.40 |
| US dollars (£'000) | 20,000 | 12,649 | 0.63 |
| **Total** | **100,000** | | |

It can be seen from the above tables that the euro currency cash generation has the highest relative volatility, but all the divisions are experiencing a reasonable degree of variation in monthly net operating cash flows based on the SD.

In terms of risk, if the cash flows of each division are approximately normally distributed, then there is a probability of approximately 16% of them falling more than one SD below the mean in any one month.

However, the above figures are translated at constant year end exchange rates. Currency fluctuations within the year are an additional source of cash flow uncertainty when the SD in £s equivalent may change over the year from currency variations within the year. This adds to the variations in the original cash flows in the underlying currencies.

The individual divisions' cash flows show fairly high SDs. However, in considering the overall variation for the company, the covariance between divisional flows needs to be considered. A low, or negative, covariance would reduce overall volatility of net operating cash flows for the company as a whole.

Conversely, if the SDs are highly correlated then there is a significant risk at company-wide level as there is a high covariance which means they will move together and not be compensated by different random movements or by movements in opposing directions. The SDs may be highly correlated if there are common factors affecting all divisions, such as a global recession or a technological change in the semiconductor industry.

For the company as a whole, it is unlikely that the SDs are highly correlated if the movements are random and independent between divisions and over time.

However, applying professional scepticism to the data, it should be questioned whether the SD of the past is likely to continue in future. It may be asked, is the data persistent to extrapolate the past to the future? For example, what is the probability of an event shifting the distribution of all divisions through a common causal factor, such as a recession or technological change.

Irrespective of the nature of the distributions, high volatility, measured by a high SD, is not necessarily a major risk. In terms of managing the risk, unexpected volatility is the key problem. If the volatility is expected, then plans can be put in place (eg, extend the overdraft facility) to manage the liquidity risks.

Despite the high SD, the mean cash flows are all positive, so the company is expected to be cash generative. This does not mean cash management is not important as surplus cash flows need to be used favourably (eg invested) and liquidity needs to be managed in case there are random shocks to cash inflows from revenues.

Overall, with centralised cash management, the central treasury department effectively acts as the bank for the group. The central treasury has the job of managing the volatility and ensuring that individual operating units have all the funds they need at the right time. For example, a centralised pool of funds can be maintained for precautionary purposes avoiding the need for separate management of pools at divisional level.

**Requirement 2.2 – Interdivisional currency settlements**

The multilateral netting off process involves establishing a 'base' currency to record all intra-group transactions. For Tallam, this has been determined to be in £s.

In terms of the data provided, multilateral netting off would take place as follows.

Convert to £:

| | **Payables divisions** | | | | | |
|---|---|---|---|---|---|---|
| In £s | **UK** | **Germany** | **Malaysia** | **Total receipts £** | **Total payments £** | **Net receipt/ (payment) £** |
| **Receivables divisions** | | | | | | |
| UK | - | £24,000 | £18,000 | £42,000 | £(12,000) | £30,000 |
| Germany | £5,000 | - | £10,000 | £15,000 | £(34,000) | £(19,000) |
| Malaysia | £7,000 | £10,000 | - | £17,000 | £(28,000) | £(11,000) |
| | | | | | | **Total = zero** |

All transactions are handled in £. Therefore:

The German division should pay £19m to the UK division.
The Malaysia division should pay £11m to the UK division.

- Benefits

This procedure has the advantage for Tallam of reducing the number of settlement transactions and thus transaction costs, including foreign exchange purchase costs and money transmission costs. There will also be less loss of interest through having money in transit. However, it requires strict control procedures from the central treasury. There may also be other legal and tax issues to consider.

- Central treasury function

Multilateral netting off occurs when each of the three divisions of Tallam interact with the central treasury department to net off the outstanding balances arising from internal transactions.

The arrangement is normally most effectively carried out as an internal procedure being co-ordinated by the centralised treasury as it has access to internal transactions and balances and avoids external transaction costs. However, the arrangements could alternatively have been operated by Tallam's relationship bank had the treasury functions remained at division level.

The group treasurer's claim that "centralisation of the treasury department has made this possible" is not therefore valid. However, for the reasons above, it would be valid to state that the process has been significantly facilitated at lower cost by having a central treasury operation.

**Requirement 2.3 – Internal audit**

Issue 1 – Credit risk for foreign sales

Credit risk for Tallam is the risk that credit customers may not pay in full or on time in accordance with the sale agreement.

While LaserTeck has paid in the past, there is now a clear credit risk that it will not pay some or all of the £12 million outstanding.

As this was a foreign sale, the credit risk is potentially increased by a lower level of direct contact with, and knowledge of, the customer's business environment. Moreover, the legal framework cuts across two jurisdictions, which may make the exercise of legal rights for Tallam to recover the debt a more difficult.

In this case, the long credit term of 90 days may have meant that the creditworthiness of LaserTeck has deteriorated in this period. The subsequent delay in settlement beyond 90 days may have caused further deterioration.

Tallam's procedures for granting credit need to be reviewed. There is normally less risk for existing customers, like LaserTeck, than for new customers. Nevertheless, Tallam should not be blind to changes in creditworthiness, particularly on a substantial contract for £12 million, that was far larger than previous contracts with this customer. Bank references, trade references and reference to credit agencies could have been considered.

Alternatively, if competitive conditions permit, some advance payment or periodic progress payments procedures could be considered on such a large contract.

For the future, the following procedures could be considered to manage the credit risk of foreign sales (ie, exports):

Forfaiting is medium-term export finance. Forfaiting would enable Tallam as an exporter to receive immediate cash by selling their medium and long-term receivables at a discount through an intermediary. This is achieved by the purchase of financial instruments such as bills of exchange and letters of credit on a non-recourse basis by a forfeiter. Given Tallam's bad debt experience, the discount may however be significant.

Documentary credits This is a risk-free method of obtaining payment, also a method of obtaining short-term finance from a bank, for working capital, as a bank might agree to discount or negotiate a letter of credit.

Export credit insurance (ie, trade credit insurance). This is insurance against the risk of non-payment by foreign customers for export debts. Export credit insurance is offered by private insurance companies and by government agencies, often referred to as export credit agencies (ECAs). However, export credit insurance comes at a cost which Tallam must weigh against its credit experience. If credit experience has been poor, as indicated by internal audit, then premiums will also be poor.

Acceptance credits. Short-term finance by a bank agreeing to accept bills of exchange drawn on itself.

Issue 2 - Transfer prices

- Financial reporting issues

Some semiconductors manufactured in one division are transferred to Tallam's other two divisions at an average of full cost plus 10%. This inter-divisional trading means the value of inventory may contain some unrealised profit in the consolidated financial statements.

It is important for divisions to ensure that all inter-divisional trading is separately analysed so that any unrealised profit can be identified. As 10% is an average, not universal mark-up, the mark-up on individual internal transfers still in inventory will need to be identified.

Exchange rate movements may alter the impact of the transfer prices. The 10% may apply in the originating currency but the impact would vary with the recipient company. However, under IAS 21, inventory is a non-

monetary item so normally there is no adjustment between the date of the transaction and the end of the reporting period.

The interdivisional receivables/payables balances are monetary items in the individual company financial statement of the subsidiaries. They therefore need to be retranslated at the year end in accordance with IAS 21. These intra group balances need to be cancelled in the consolidated financial statements so common exchange rates need to be used.

As the divisions are subsidiaries, they are related parties of each other. Appropriate disclosures of the related parties should be made in accordance with IAS 24.

Also, there may be challenge by tax authorities if transfer pricing regulations in a jurisdiction require that, for tax purposes, transactions between related parties be priced on a basis that would be comparable to an arm's length transaction between unrelated parties. Provision for any tax payable based on such a challenge should be made in the financial statements.

- Business issues

The practice of adding an average of only 10% onto the cost price may cause other divisions to underprice these products, damaging the gross profit margin of the company as a whole.

More generally, if internally transferred goods are not being recognised at their market value then this may lead to dysfunctional behaviour in not only pricing decisions but performance measurement and performance management.

In particular, divisional performance measures will be distorted by transfer prices that are not market values. Moreover, the policy of centrally set transfer prices is contrary to the general policy of autonomy of divisions and this may have behavioural consequences for managers and by head office towards managers.

**Requirement 2.4 – Ethics**

There are a number of ethical issues

<u>Confidentiality – opening the group treasurer's desk</u>

Forcing open the group treasurer's desk in her absence could be viewed by the board as a breach of confidentiality committed by the members of the treasury department. This applies in terms of her personal confidentiality (personal possessions) and corporate confidentiality in terms of accessing potentially sensitive business information. The board has ultimate responsibility, although not culpability, for this breach of the treasurer's confidentiality.

While the desk and any business contents are the property of Tallam, the decision to force it open should not have been made at the level of treasury staff. Given the group treasurer is a senior employee it would be appropriate for the board to authorise forced access and inspection of the documents contained therein if this was deemed legal and necessary. These documents could then be distributed to appropriate treasury staff.

Depending on the health condition of the group treasurer, permission could have been obtained from her, or at least notification given, to aid transparency of the actions.

<u>Intimidation</u>

There is a possible suggestion in the anonymous letter of an element of intimidation towards the treasury team by the group treasurer in her senior management role. However, this is an accusation, rather than being established, and needs to be ascertained by the board. The board is responsible for governance and the behaviour of its senior management and, if it ignores the possibility of intimidation by the treasurer, it could be regarded as complicit.

The fact that the whistleblower wrote anonymously may suggest possible intimidation, but there may be alternative explanations such as fear of legal action or disciplinary action for an invalid claim or a claim with malicious intent.

Hedging transactions with Mooton Bank

The ethical issue with the placing of the forward contract with the bank where the group treasurer's brother works may imply conflict between personal family interests and the corporate interests of Tallam, particularly the group treasurer's duty in respect of those interests.

In particular, the group treasurer's brother was directly responsible for issuing forward contracts at the bank. By processing transactions for Tallam, this may have meant a bonus or at least a better appraisal for the group treasurer's brother.

Regarding the 'evidence' presented that the group treasurer had deliberately chosen a less favourable contract with her brother's bank Mooton than was available by other banks, the calculations are set out below:

- *Mooton Bank*

| | **£/$** |
|---|---|
| Three months' forward rates | 1.3032 - 1.3072 |

The net payment in three months is: US$4.8m/1.3032 = £3,683,241

- *Kimmel Bank*

| | **£/$** |
|---|---|
| Three months' forward rates | 1.3030 - 1.3071 |

The net payment in three months is: US$4.8m/1.3030 = £3,683,807

From the above it is clear that the Mooton Bank forward contract is actually slightly more favourable to Tallam than the alternative suggested by the whistleblower, as the sterling cost locked-in by the forward is lower.

Also, the bid-offer spread is greater on the contract with Kimmel Bank suggested by the whistleblower. Kimmel is therefore pricing its risk higher, which is to the disadvantage of Tallam compared with the Mooton Bank contract.

The difference in quoted forward rates between Mooton and Kimmel may be due to timing. Although they are both on the same day, they may not be at the same time of the same day, so intra-day exchange rate movements may account for the difference.

There are also non-financial factors to consider as to which bank offers the better deal. For example, it may include the counterparty risk involved if one of the banks is operating under stressed conditions.

There is however a question of motives and competence in whether the group treasurer should be entering into a US$ forward contract for settlement of a payment at all. Tallam generates significant revenues in US$ and there could be matching and a natural off-set against these. Some justification may be required from the group treasurer on her return to work as to why a hedging contract was needed in these circumstances. Entering into the contract may have been a genuine commercial misjudgement but, alternatively, it questions her motives in entering into an unnecessary transaction with a related party.

Overall, there appears to be a lack of transparency and accountability for the group treasurer's actions. A number of quotes should have been obtained and a record made of which quote was selected with a justification of why this quote was preferred over the others. Authorisation should have been obtained (eg, from the finance director).

Actions

- Take legal advice on the actions the board should take with response to whistleblowing and ensure the board's actions responding to the letter comply with legal advice.
- The anonymous letter should be discussed at board level.
- The whistleblower's claims of intimidation and the culture of staff working in treasury feeling threatened needs to be investigated.

- Discussions should be held with the group treasurer and explanations obtained when she returns to work. This should include the results of investigations if evidence of intimidation is discovered.
- It is not appropriate to discover who sent the letter. This may be illegal and it may open the person up to the intimidation feared and may discourage other whistleblowers to come forward in the future.
- An investigation of the circumstances in which it was decided to force open the group treasurer's desk, and how this was done, needs to be carried out. Possible disciplinary action may result.
- Internal controls need to be set up over the group treasurer's ability to enter into hedging transactions on her own. An approval process needs to be set up (eg, with approvals by the finance director) establishing procedures to obtain multiple quotes for hedging and other finance transactions. This should be for all hedges which can impact material risks or have material costs.
- On her return to work, the group treasurer needs to explain why she used Mooton Bank and address the concerns, if true, that her brother, as a related party, is processing transactions for the bank without any disclosure of this relationship.
- Establish procedures for disclosure where there may be potential conflicts of interest to facilitate transparency.

**Examiner's comments**

2.1 Data Analytics – Mean and Standard Deviation

The average performance on this requirement was poor.

Many candidates failed to grasp the nature of a standard deviation (SD) and did not address the relative risk of the divisions. Many candidates did not distinguish between the operating risk of each division, expressed in their local currencies as measured by SD, and currency risk.

Better candidates, who addressed each requirement in a logical manner, referencing the background information provided, performed well. These candidates were able to use the statistical data by translating the currencies into a common currency and placing the standard deviation into context by producing a relative measure to the mean, the coefficient of variation. They also tended to use a one standard deviation measure to show the extent to which cash flows are like to vary from mean in either direction. The better candidates provided explanations that were linked to their findings and evaluated the risks in relation to each of the relevant factors.

Weaker candidates made few calculations, if any. They typically provided some very general answers relating to currency risk only, which described transaction, translation and economic risk, but with little application to the question. There tended to be little or no discussion of variability in cash flows from an operational perspective.

As this is a relatively new area of the syllabus, candidates should have been better prepared and should have expected to do some applied analysis and calculations which are available in the Learning Materials.

2.2 Multilateral netting-off

Overall, this requirement had the highest performance by candidates in the exam.

A large majority of candidates produced a matrix the apply multilateral netting off correctly, and thereby scored full marks on the calculation element of the requirement.

The benefits in terms of efficiency and reduction in number of transactions and costs was also dealt with well by most candidates. Some weaker candidates failed to consider the comments in relation to the central treasury function but, those who did, correctly identified that centralisation was not the only factor which had led to improved efficiency.

2.3 Internal Audit – credit risks and transfer pricing

The credit risk section of this requirement produced a mixed performance.

There were some excellent answers showing an in-depth knowledge of the various aspects of managing credit risk including the forfaiting process, the advantage of taking out credit insurance and obtaining documentary credits.

Weaker candidates produced generic answers about managing default risk. They often failed to specifically address credit management on foreign sales contracts, with answers that could have applied to UK sales. Other weaker candidates focused on currency risk rather than credit risk.

The transfer pricing aspects of the question tended to be weak. Whilst most candidates acknowledged that there needed to be a market value adjustment, the financial reporting aspects in terms of exchange rate movements impacting transfer pricing was noticeably absent. Whilst transfer pricing being challenged for tax purposes was also a relevant point, some candidates wasted time discussing, at great length, tax avoidance and evasion and some of the penalties which may be applied.

Some candidates merged their response to FR issues and business issues. In general, the treatment of business issues was poor, with many missing the point of dysfunctional decision making.

2.4 Ethics

There was a mix of responses to this requirement.

A significant number of candidates still adopt the transparency, effect and fairness approach to questions, without considering any other ethical principles relevant to the scenario. The better answers identified that there were confidentiality and intimidation issues from the treasurer's desk being forced open. They also identified that there were potential self-interest and related party issues, given the group treasurer's unauthorised transactions through her brother on behalf of the company.

The weaker answers did not adopt a balanced approach and often suspected that the group treasurer had stolen from the company and that money laundering had been committed.

It was encouraging to note in this question that a high number of candidates used the data from the question to identify whether there had in fact been any loss to the company through the transaction with her brother. The majority of the candidates were able to calculate the numbers correctly.

In this new 'technical-ethical' style of question, there was data given in the scenario where candidates were able to make FOREX calculations to establish the facts for themselves and then apply professional scepticism to the assertions of the characters in the scenario.

The actions to deal with the issue were reasonable, with candidates identifying the internal control weaknesses and the inappropriateness of how the information had initially been obtained.