

# 1 XYZ Industries

## Alternative strategies

(a) (i) NPV

### Strategy 1

	<i>1 Jan 2019</i>	<i>31 Dec 2019</i>	<i>31 Dec 2020</i>	<i>31 Dec 2021 and thereafter</i>	<i>Total PV</i>
Investment RM'000	(195,000)				
Operating CF RM'000 *			(305)	27,475	
DF 10%	1		0.826	8.264 **	
PV RM'000	(195,000)		(251.9)	227,053.4	31,801.5
Exchange rate	25		25	25	
PV Rs'000	(4,875,000		(6,297.5)	5,676,335	<b>795,037.5</b>

\* Operating loss/profit, adjusted for depreciation

\*\*  $8.264 = (1/1.1^2) / 0.1$

### Strategy 2

	<i>1 Jan 2019</i>	<i>31 Dec 2019</i>	<i>31 Dec 2020 and thereafter</i>	<i>Total PV</i>
Investment RM'000	(12,500)			
Operating CF RM'000*			2,750	
DF 8%	1		11.574 **	
PV RM'000	(12,500)		31,828.5	19,328.5
Exchange rate	25		25	
PV Rs'000	(312,500)		795,712.5	<b>483,212.5</b>

\* Operating profit, adjusted for depreciation

\*\*  $11.574 = (1/1.08) / 0.08$

The NPV of Strategy 1 is Rs 795,037.5k while that of Strategy 2 is Rs 483,212.5k. While it is important in investment appraisal to take a range of factors into account on initial indications of relative NPV's, Strategy 1 is to be preferred.

(ii) **Exchange rate fluctuations**

### Strategy 1

The initial outlay is at a known exchange rate and is therefore, in effect, fixed in Pakistani rupee terms. All subsequent operating cash flows are in Malaysian ringgit for Strategy 1.

A significant depreciation of the Malaysian ringgit against the rupee would make cash inflows to XYZ less valuable and therefore make it more difficult to recover the initial outlay.

The present value of cash flows arising in Malaysia might be reduced by adverse exchange rate movements over the longer term and in the normal course of business. It is used to describe changes in near-term cash flows that have already been contracted for. This arises when amounts are fixed in foreign currency terms (say, a remittance from Malaysia to XYZ) and there is movement in the rupee/ringgit exchange rate between the date when the ringgit amount is agreed and the date when the cash is received and translated into rupees.

The sensitivity calculations (see below) show that a one-off exchange rate shift of 14% depreciation of the ringgit against the rupee would generate a zero NPV.

Other exchange rate considerations for Strategy 1 are that revenues will be generated from other south-east Asian countries, and this revenue will also be subject to fluctuations of their currencies against the ringgit, and ultimately against the rupee, thereby increasing the exchange risk.

### Strategy 2

As in Strategy 1, the initial outlay is at a known exchange rate and therefore fixed in rupee terms. The key difference is that the outlay is much smaller for Strategy 2 at RM 12.5 million, compared to Strategy 1 at RM 195 million. The risk of future cash flows not covering this outlay is therefore reduced.

However, the working assumption is that the operating cash outflows are all in rupees, whereas the revenues are generated in ringgit. There is therefore a currency mismatch, because if the ringgit depreciates against the rupee, then revenues in rupee terms fall, while costs remain constant. As with Strategy 1, hedging activities could be undertaken to reduce the economic and transaction exposure that could arise.

The sensitivity calculations (see below) show that a one-off exchange rate shift of a 5.9% depreciation of the RM against the rupee would generate a zero NPV, based on the data provided.

This makes Strategy 2 more sensitive than Strategy 1 to exchange rate movements, based on the assumptions that have been made.

### Sensitivity calculations

#### Strategy 1

Initial outlay	=	Rs 4,875,000
PV inflows	=	RM 226,801.5 (227,053.4 – 251.9)
Break even exchange rate	=	Rs 4,875,000/RM 226,801.5
	=	21.4946

This represents a 14% depreciation of the ringgit against the rupee  $((25 - 21.4946)/25)$

**Proof** (not required for answer)

	<i>1 Jan 2019</i>	<i>31 Dec 2019</i>	<i>31 Dec 2020</i>	<i>31 Dec 2021 and thereafter</i>	<i>Total PV</i>
Initial outlay RM'000	(195,000)				
Operating CF RM'000			(305)	27,475	
DF	1		0.826	8.264	
PV RM'000	(195,000)		(251.9)	227,053.4	31,801.5
XR	25		21.4946	21.4946	
PV Rs'000	(4,875,000)		(5,414.5)	4,880,422.0	7.5

**Note.** The PV is not exactly zero, as the calculation is subject to rounding as a result of the number of decimal places used in the exchange rate.

### Strategy 2

All costs are incurred in rupees and are therefore unaffected by exchange rate movements.

**Note.** Some professional scepticism must be applied to the assumption that all costs are incurred in rupees. Some costs are likely to be incurred in Malaysia, in ringgit.

Only revenues are affected:

PV revenues in RM =  $(RM\ 28,170 \times 0.926^{***}) / 0.08 = RM\ 326,067.75$

NPV in RM = RM 19,328.5

The PV of the costs (being RM 326,067.75 – RM 19,328.5) is Rs 7,668,481.25  
(at RM 1 = Rs 25)

For revenue of RM 326,067.75 to be worth Rs 7,668,481.25 (i.e. at break-even) then the exchange rate will be RM 1 = Rs 23.518

% Sensitivity  $(25 - 23.518) / 25 = 5.9\%$  depreciation of RM against the rupee

\*\*\* 1 year discount factor at 8%

(iii) **Benefits and risks associated with each strategy**

Both Strategy 1 and Strategy 2 offer the opportunity for XYZ to enter new geographical markets. However, XYZ offers a range of different types of products and services which contain different risks, and so will require different management. This is where the suitability of each strategy for each product and service needs to be evaluated. Summarising the information in the scenario, XYZ offers made-to-order equipment that is specified by customers, as well as standard items that are supplied from inventory. Servicing and maintenance comprises routine maintenance and servicing, and unplanned emergency situations.

**Strategy 1**

MEI, operating under Strategy 1, will have a greater strategic presence in the geographical location of the customer (Malaysia and south-east Asia) and this may constitute an advantage over Strategy 2, as it is likely to be more closely aware of the risks that are presented by the specialist needs of mining companies in the region, and the need for specialist equipment. MEI is also likely to be in closer regular communication with customers than it could be maintained by XYZ head office in Pakistan with its greater geographical distance, time differences etc.

XYZ will need to make sure that it can cope with forecast demand, and that it will be able to find the skilled staff and develop the supply chains that will be required.

Assuming that such concerns can be addressed, and production is successful in Malaysia, the finished equipment is closer to many of the potential customers, so transport links by sea will be comparatively quicker and cheaper than under Strategy 2, reducing the risk of delayed delivery. This represents a significant advantage.

For standard equipment, holding sufficient inventory to reduce lead time and guarantee a certain level of service will reduce the risk of not being able to fulfil an order. Having a local manufacturing facility and local suppliers will enable MEI to adjust inventory levels quickly from local production. This will be more flexible and adaptable, and levels of inventory and holding costs are likely to be lower.

To supply emergency maintenance there needs to be local and skilled staff, and this is supplied under both strategies. However, it seems more achievable with a factory that makes the equipment being located in Malaysia, particularly if some components are needed as part of the maintenance.

**Strategy 2**

Agile and adaptable manufacturing systems are key to being able to commence manufacturing as soon as a request for an item of made-to-order equipment is received. The current Hyderabad factory which would be used in Strategy 2 is both larger and longer established, and this may therefore provide an advantage in terms of adaptable

manufacturing over the new factory that is to be established under Strategy 1, especially when considering that the new factory has a smaller capacity.

However, in order to supply Malaysia and the rest of the south-east Asian market under Strategy 2, both made to order and standard equipment will need to be transported from Pakistan first, probably by sea, as air transport is not feasible. Standard items can be held in the distribution centre for later delivery to customers, as orders arise, while made to order items could be delivered directly to the relevant customer. This all involves considerable distance, cost and time, and may lead to the risk of delayed deliveries for made to order goods. The transport of the goods to customers, particularly those that are made to order, is the major differentiator between the two strategies.

As previously noted, the number of maintenance staff is much lower under Strategy 2. This is probably reflective of lower forecast sales, but lower staff numbers could affect the ability of XYZ to carry out routine and emergency maintenance and repairs effectively.

### **Preferred strategy**

The NPV of Strategy 1 is Rs 795,037.5k while that of Strategy 2 is Rs 483,212.5k. It has already been noted that it is important in investment appraisal to take a range of factors into account, in addition to the NPV. Having done this, Strategy 1 is favoured here.

For both made to order and standard equipment, Strategy 1 is preferred, unless the customer knows significantly in advance of delivery which items of equipment will be needed. If a piece of equipment breaks unexpectedly and needs to be replaced it would be difficult, under Strategy 2, to make and supply it rapidly from Pakistan.

While the initial cost of Strategy 1 is much greater than Strategy 2, it is closer to customers in Malaysia and south-east Asia, and reduces transport costs for the delivery of finished equipment. Materials and components are also supplied locally. Revenues are higher under Strategy 1, presumably because more types of product can be supplied.

As far as maintenance services are concerned, both strategies would involve the recruitment of additional staff, but Strategy 1 may be preferred because it involves the recruitment of more staff, supported by operations at the local factory.

### **(b) Methods of finance**

The key differences in the methods of debt finance for Strategy 1 are:

- The currency in which the debt is denominated
- Whether XYZ or MEI should take out the loan
- The terms of the loan arrangements

### **Currency**

Under Method A, the loan is raised in Malaysian ringgit, while with Method B, it is raised in Pakistan rupees.

Strategy 1 generates operating profits in ringgit, and this presents a currency risk to XYZ with its functional currency being the Pakistan rupee.

Borrowing in ringgit means the currency of the loan will be matched against ringgit denominated net operating cash inflows. Assets are based in Malaysia and are valued in ringgit. Having a ringgit denominated liability will therefore also provide a hedge against exchange rate movements that would affect asset values. Moreover, borrowing in rupees would involve more frequent foreign currency inflows and outflows, which would involve transactions costs and taxation issues.

Thus borrowing in ringgit (Method A) is a more effective method than borrowing in Pakistan rupees (Method B).

**Parent or subsidiary?**

XYZ, as an established company, may be more able to raise a loan (Method B) than MEI, which will not have any track record. Its forecast income stream is also deferred for at least one year. In fact, with MEI taking out a loan on 1 Jan 2019, but not earning any revenue until 2020 (and even then making an operating loss), it could have difficulties making repayments in the early years of the loan. The working assumption in the NPV calculation is that all cash flows are remitted by MEI back to Pakistan. However, once its cash flows are established, decisions will need to be made as to how much is actually remitted by MEI back to Pakistan with enough left in Malaysia to meet the required loan repayments.

XYZ is likely to have established a long-term relationship with its bank. This factor, coupled with XYZ's trading history, might reduce the cost of borrowing, as lending to XYZ is lower risk.

The fact that XYZ is offering the bank guarantees under Method A, would also reduce the bank's risk, but the precise terms of any guarantee would need to be considered.

**Terms of the loan agreement**

Under Method A, the term of the loan is 15 years, while under Method B it is 10 years. This favours Method A, as there is no need to refinance after 10 years (assuming that refinancing is necessary at the end of the loan period).

Under Method B, XYZ is borrowing over 10 years but relending to MEI over 15 years. The terms of the two loans are not matched, and XYZ could be exposed to repaying a loan in 10 years without receiving the repayment of its loan from MEI for a further 5 years.

There may be other differences that may arise from different national laws, different tax allowances and reliefs and different conditions in the loan agreements.

**Recommendation**

Based on the information available, finance Method A is preferred, despite the slightly higher interest rate, and assuming that MEI is able to arrange it. The key reasons for this are:

- It provides better matching with the Malaysian operations, denominated in ringgit
- The longer term provides more long-term liquidity
- The issue of the mismatching term of the loan for XYZ is avoided (although this could be avoided at the outset by changing the internal arrangement between XYZ and MEI to a 10-year repayment).

- (c) Under the Income Tax Ordinance 2001 (ITO), XYZ is the resident taxpayer for the purpose of income tax liability, as it is a locally registered company in Pakistan.

**Sales of made to order equipment**

As XYZ has opted under Strategy 2 to establish a distribution centre in Malaysia, all supplies made to the distribution centre in Malaysia shall be treated as exports, and all proceeds of exports shall be taxed at the rate of 1%. Furthermore, this payment of tax shall be treated as final tax.

**Restrictions as per section 169 of ITO**

The export income of XYZ shall not be chargeable to tax under any head of income in computing the taxable income. No deduction shall be allowable for any expenditure incurred

in deriving the export income. The amount of the export income shall not be reduced by any deductible allowance e.g. zakat, Workers Welfare Fund, Workers Participation Fund and setting off of any loss. The tax deducted shall not be reduced by any tax credit allowed. There shall be no refund of the tax collected or deducted unless the tax collected or deducted is in excess of the amount for which XYZ is chargeable.

**Computations of export profits attributable to export sales (Rule 231 of ITO)**

Where XYZ exports goods manufactured in Pakistan, XYZ's profits attributable to export sales of such goods shall be computed in the following manner:

- (a) Where XYZ maintains separate accounts of the business of export of goods manufactured in Pakistan, the profits of the export business shall be taken to be such amount as may be determined on the basis of such accounts; or
- (b) The profits of XYZ's export business shall be taken to be an amount which is in the same proportion to its total profits as XYZ's export sales of goods is to its total sales of goods.

Export sales shall be the freight on board price of the goods exported. Total sales shall be the aggregate of export sales and the ex-factory price of goods sold in Pakistan.

**Repair services to mining equipment in Malaysia via the Malaysian distribution centre**

Under the ITO-2001, consideration against repair services shall be treated as a "fee for technical services" because it includes any consideration, whether periodical or lump sum, for the rendering of any managerial, technical or consultancy services including the services of technical or other personnel.

However, revenue from repair services shall be exempt from income tax as per 2nd schedule Part 1 Clause 131, which states that the income of the taxpayer shall be exempt from income tax if it is earned by way of fees for technical services rendered outside Pakistan to a foreign enterprise.

The condition to avail this exemption is that such income is received in Pakistan in accordance with the law regulating payments and dealings in foreign exchange.

**(d) Ethical issues – proposed collaboration between XYZ and AUG**

The ethical principle in this case is a perceived conflict of interest on the part of the CFO, given her family relationship with an AUG board member. She could be potentially influential in determining whether the invitation to become AUG's preferred supplier is accepted, and a conflict could be perceived if AUG obtains more favourable terms and treatment than would be available on an arm's length commercial basis to other potential customers (such as an agreement for MEI to sell to AUG for cheaper prices, either for the purposes of securing AUG's business or directly because of the personal relationship).

There does appear to be a danger that AUG is expecting lower prices in return for guarantees of a certain level of business for MEI – which needs to be agreed on by the whole board as being in the best interests of MEI, as a sound commercial decision.

It could therefore be perceived that Saira Kundi as CFO has a conflict of interest between her role for XYZ and her personal family relationship. Saira has duties as a director towards the company. Ethically and legally she has a duty to other stakeholders (e.g. if customers are not paying enough, then there may be less cash available for debt holders in future and for employees).

A number of questions arise from the matter.

Transparency – would MEI and AUG be happy if the details of any future arrangement became more widely known, for instance to other customers of MEI?

Effect – whom does the issue affect? If agreed terms are unduly favourable to AUG then some stakeholders may be disadvantaged. An alternative, more valuable customers may be lost.

Fairness – would the arrangement be considered fair by those affected? If any commercial agreement is influenced by personal relations, then those adversely affected may regard this as unfair in not satisfying arm's length conditions.

As Saira Kundi is an ICAP Chartered Accountant, she is bound by their ethical code. Ethical safeguards demand transparency and openness so that the XYZ board is aware of the relationship, and the CFO has already done this. Also, the role of the CFO in the decision as to whether the arrangement goes ahead should be minimised.

## 2 KIT Solutions

- (a) (i) **Sale of the Hardware division**  
**Financial performance for the year ending 31 December 2018**

	<i>Training</i>	<i>Hardware</i>	<i>Software</i>	<i>Total</i>	<i>Software and Training</i>
	<b>Rs M</b>	<b>Rs M</b>	<b>Rs M</b>	<b>Rs M</b>	<b>Rs M</b>
Revenue	2,100	690	3,500	6,290	5,600
Operating profit	650	95	700	1,445	1,350
Interest	100	75	200	375	300
Profit before tax	550	20	500	1,070	1,050
Net assets at carrying amount	3,200	2,650	6,100	11,950	9,300
Total assets at carrying amount	5,700	4,200	9,100	19,000	14,800
Current liabilities	2,000	1,000	2,000	5,000	4,000
Non-current liabilities	500	550	1,000	2,050	1,500
ROCE (OP/total assets – current liabilities)	17.6%	3.0%	9.9%	10.3%	12.5%
ROE (PBT/net assets)	17.2%	0.8%	8.2%	9.0%	11.3%
Operating profit margin	31.0%	13.8%	20.0%	23.0%	24.1%
PBT margin %	26.2%	2.9%	14.3%	17.0%	18.8%
Gearing (liabilities/net assets)	15.63%	20.75%	16.39%	17.15%	16.30%

The Hardware division appears to have underperformed the other two divisions. The return on equity (ROE) for the Hardware division is also only just positive at 0.8%, and so is making little contribution to shareholder return. This can be contrasted with the better ROE rates of 8.2% and 17.2% for the Software and Training divisions respectively.

The ROCE of the Hardware division is better than the ROE, at 3.0%, but this is still much lower than the other two divisions. However, if the Hardware division is still quite new, and with new assets, its ROCE is likely to be deflated anyway, because of the high carrying value of those assets.

The profit before tax margin is only 2.9% for the Hardware division which is very small when compared to those of the other two divisions at 26.2% for Training and 14.3% for Software.

While excluding the Hardware division's figures has some impact on the group results, it is only by one or two percentage points in each measure of profitability. The Hardware division is much smaller than the other two divisions, and therefore its poor performance has a low weighting and a low impact on the results of the group as a whole.

With the sale of the Hardware division taking place on 31 March 2019, by reference to the analysis above the impact of its operating performance for KIT overall for the year ending 31 December 2019 is likely to be relatively insignificant. Following the disposal, the performance of the Software and Training divisions will not be



unaffected: according to the scenario, the cash proceeds received from disposal are likely to be used either to expand production in the Software division or to reduce debt.

There are likely to be other effects arising from the disposal – for example, there may be lost synergies in terms of operating costs, and the other divisions' revenues could be affected (if customers want to buy hardware and software from a single supplier). In addition, any central costs that are allocated to the divisions will have to be split across two divisions, rather than three, impacting the relative performance of the remaining divisions.

(ii) **Alternative uses of net proceeds**

**Alternative 1 – Purchase new production equipment for the Software division**

This strategy is simultaneously a new operating investment and a new financing arrangement. The operating strategy is further investment in an existing line of the business and so may be lower business risk than an investment in a new line of business. However, the increased borrowing represents additional gearing and financial risk.

The sale of the Hardware division, involved repaying liabilities amounting to Rs 1,550 million. However, the project involves borrowing a further Rs 3,000 million and thus the net effect is to increase borrowing, which raises financial risk. The increase in gearing as a result of borrowing will mean that the required return on equity will rise.

The hurdle rate for the investment, will be KIT's marginal weighted average cost of capital, after allowing for changes in KIT's financial risk and business risk associated with the investment. KIT's share price will rise if the risk adjusted marginal cost of capital is lower than the investment's return of 9%, and it will fall if the risk adjusted marginal cost of capital is greater than 9%.

**Alternative 2 – Degearing**

This is a lower risk and more conservative approach than purchasing new production equipment for the Software division.

After the Hardware division has been sold and its liabilities paid off, the total liabilities of KIT amount to Rs 5,500 million. Using the Rs 3,000 million net sale proceeds to repay debt would therefore more than halve the company's debt and reduce gearing to nil level.

The impact would be to reduce the cost of equity, as there is lower risk due to lower financial gearing. The impact on the weighted average cost of capital would be difficult to determine – it would depend on the market's view of whether KIT had previously been over geared.

The equity beta of the shares would be lower as the gearing is lower, and so the shares may generate a lower return (but at a lower risk of share price volatility).

Another advantage of repaying debt now is that if profitable investment opportunities were to present themselves, then the borrowing capacity of KIT would be greater.

(b) **Corporate governance**

There should be a strong independent element on the board, so that there is no concentration of power in the hands of one person or a small group of individuals. One aspect of this is that the Chairman and CEO of the company cannot be the same person.

KIT currently has seven directors, of whom three are non-executives. The Code of Corporate Governance states that one-third of directors should be independent, and no more than one-third of the board should be executive directors (i.e. paid executives of the company, drawn from senior management). KIT should therefore appoint more independent and

non-executive directors, establishing a board structure that is consistent with the requirements of the Code of Corporate Governance. There must also be female representation on the board.

Non-executive directors with the right skills and experience need to be appointed (preferably knowledge of the IT industry, as KIT is an IT company) to advise executive directors and to monitor and manage their performance. New executive members of the board may even be appropriate to ensure that it has the spectrum of skills necessary. However, the provision that no more than one-third of the board should be executive directors must be kept in mind when establishing the new board structure.

Subcommittees need to be set up. Establishing an audit committee, consisting of non-executive directors, is important when examining internal performance and information flows, as well as dealing with external auditors and monitoring the work of the internal audit department. The board must also be satisfied that the Head of Internal Audit, Sami Ahmed, satisfies the eligibility criteria for his role. He must be appropriately qualified and have five years' experience of audit, finance and compliance functions.

The Human Resource and Remuneration Committee will ensure that, as part of performance management for the executive directors, they are motivated by their remuneration package to promote the performance of KIT.

(c) **Data for divisional management**

The types of data made available to divisional management need to be able to support the types of decisions being made at that level.

While it is true that too much data may create an inability to evaluate the key strategic issues facing the business, the indicative data that has been provided for the Software division as it currently stands, appears too aggregated and lacks in sufficient detail to be useful.

**Sales and customer management**

The report does not contain detail about customers – being split into 'individual' and 'business'. There appears to be no use of the data available from the KIT database to support marketing to the specific needs of the various types of individual user, or type of business.

However, the comment that there is 'too much data to be useful' on individual customers' needs to be treated with some scepticism. While there may indeed be a large amount of data at KIT's disposal, companies are increasingly using data analytics to identify patterns in their sales (such as the seasonality of games sales), and improve commercial and strategic decisions. Identifying such patterns could enable target marketing by KIT, according to the type and frequency of past purchases and customer characteristics (whether individual or business). The businesses on the database that have not made a purchase from KIT for several years, could constitute a target group that could be contacted with promotional offers.

Sales are only broken down by product type (software packages and games) rather than by product line (there are hundreds of types of individual product). More information on the performance of individual product lines is necessary. Showing revenue and gross profit for hundreds of different items will of course be too detailed to present at divisional management level. However, providing information about key product lines (e.g. best sellers, or lines which are selling poorly) could help management decide whether to discontinue a poorly selling product line, or support further sales of a successful product, which would be the type of decision that is appropriate at that level.

Sales return information is also poor. While the level of returns was consistent at around 9% during 2017, the reason for the returns needs to be understood, perhaps by asking customers

to provide such information at the point of return) – for example, are they due to faults, or do they arise from a customer simply changing their mind? If faulty returns can be identified, management can decide whether the fault is due to manufacturing processes at KIT, or because of faulty components, in which case it becomes a question of whether contract terms have been fulfilled by the relevant supplier.

Using the information provided by each customer when they return the goods, it may be found that certain types of customers have a higher propensity to return goods within the 14 day period (for example related to age, gender, location or the type of products they buy). Once identified, sales to these customers may need to be monitored, or KIT's returns policy made less flexible.

### 3 Jazeera Machinery

(a) **Valuation of assets**

The valuation of the business assets is uncertain, given the information available (the figures for 2018 are an 'unaudited forecast' for six months into the future) but the following factors should be considered.

**Property, plant and equipment**

The fair value of the property (asserted to be Rs 2,300 million) should be capable of being independently ascertained from market data or consulting with appropriate property experts.

The remaining PPE should be itemised, because some of it may be specialised equipment, in which case the replacement cost may be higher than the realisable value.

A market should exist in the agricultural equipment trade for other more general equipment, in which case the replacement cost may approximate to the realisable value.

Analysis on an asset-by-asset basis is needed. Selling costs should be deducted, giving an approximate net realisable value of Rs 3,400 million – Rs 75 million = Rs 3,325 million.

**Inventories**

The full retail values quoted by the administrator are an inappropriate basis on which to value inventories, as these are their selling prices.

More accurate figures are needed concerning the current trade values of the agricultural equipment, but the cost of acquiring it could be used as an initial measure. The actual value is, however, likely to be lower than cost, particularly as there are forecast to be around seven months' sales of vehicles and equipment held in inventory at the end of 2018 ( $1,685 / 3,060 \times 12 = 6.6$ ) so it is debatable whether all of this will still be realisable.

It is unlikely that JML would want to acquire the existing inventory of tractors, given their poor sales history and apparent problems, and the fact that JML's plan is to operate a franchise from an alternative manufacturer. They are valued at Rs 615 million and should therefore be deducted from the Rs 1,685 million carrying value, giving a maximum value for the inventory of Rs 1,070 million.

**Receivables**

Although the administrator has expressed 'some confidence' that the debt of Rs 15 million will be paid, the fact that it has been outstanding for more than a year is a cause for concern, and so this amount should prudently be deducted from the receivables balance.

Assuming that the remainder of receivables are fully recoverable, they can initially be valued at Rs 75 million – 15 million = Rs 60 million, but the actual receivables existing at the date of acquisition will still need to be determined.

**Brand**

An offer was made to acquire the brand in 2016 for Rs 300 million. The offer may have approximated to the market value at that time, but there must be doubt as to whether the Teela brand has a comparable value at this time.

The company's reputation will have been damaged by selling the unsuccessful tractors and entering liquidation, along with the fact that it is loss-making.

Taking these factors into consideration a nil value for the brand is prudently assumed at this stage.

**Recommendation**

From the above analysis, a total (maximum estimated) value of Teela's assets of Rs 4,455 million is suggested, based upon values at the forecast date of 31 December 2018. As noted before, caution should be exercised around the reliability of these figures, given that they are based on an unaudited forecast.

**(b) Importance of JML's intended strategy**

The value to JML of the business assets of Teela may be greater than their break-up value, reflecting the earnings which can accrue from their future use as part of the larger Jazeera Machinery group. It may be necessary to bid above the break-up asset value in order to acquire them, especially if another agricultural machinery dealer is also interested in purchasing the Teela assets.

It is possible that with different management (i.e. under the ownership of Jazeera) Teela's performance may improve, but it seems certain that any proposed strategy for Teela should not include continuing with its current tractor franchise.

Jazeera already has contracts with other manufacturers, including tractor manufacturers, and may be able to extend these to Teela.

Although this is currently an uncertainty, if the assumption proves correct that Teela's sales will increase by 100% with new management and a new franchise arrangement (Exhibit 1), then the value of the business assets could be obtained from discounting its future cash flows as follows:

	<b>2019</b>
	<b>Rs M</b>
Sales ( $3,519 \times 2$ )	7,038
Cost of sales variable ( $90\% \times 3,060 \times 2$ )	(5,508)
Cost of sales fixed ( $10\% \times 3,060$ )	(306)
Gross profit	1,224
Depreciation ( $2,815 - 2,480$ )	(335)
Administrative expenses ( $93 - 20$ )	(73)
Operating profit	816
<i>Add:</i>	
Depreciation	335
Operating cash flow	1,151
<i>Less:</i>	
Capital expenditure	(75)
<b>Annual cash flow</b>	<b><u>1,076</u></b>

Present value at 10% in perpetuity of the annual cash flow is:

Rs 1,076 million/0.1 = **Rs 10,760 million**

This value is more than double the maximum break-up value of the assets already calculated at Rs 4,455 million, indicating that Jazeera is adding considerable value with its preferred strategy for Teela. This strategy is, however, completely dependent on it being able to turn the company into a profit making venture by doubling its revenue. The increase of 100% in sales in 2019 seems very optimistic, and is dependent on a new tractor franchise being established quickly.

While the increase of 100% in sales in 2019 seems optimistic, the assumption of no growth in profits at all after 2019 appears too pessimistic.

Capital allowances have been ignored in this calculation; their inclusion would increase the present value. It should also be recognised that the depreciation charge that has been added back to the cash flows is high. A detailed capital budget and projections would be needed to enable a more accurate cash flow forecast to be made.

Finally, the perpetuity assumption may not be valid – more information on the prospects for the revitalised Teela business and its future strategy would enable a definite timeframe to be determined, along with a residual value of the business at that time.

### **Key risks**

The main risk is overpaying for the acquisition of Teela, and that as a result it may not deliver the strategic and financial benefits expected. This risk is moderated where JML only pays the asset value because if the benefits of operating Teela do not fully materialise, then at least some of the assets can presumably be sold.

Despite this, there remain a number of risks:

- There is a significant risk that JML will be unable to turn around Teela's business in the way that it hopes it will be possible. The strategy appears to depend on being able to establish a suitable new franchise agreement. It may be necessary to consider a franchise selling equipment that is more aligned with Teela's expertise in fertilisers and pest control, rather than to continue with a strategy of selling tractors that has failed in the past. The tractor market may be too well established for new entrants.
  - Teela's assets will include loss making locations, as well as profitable ones. It may be decided to operate the most profitable and strategically valuable locations, and close others, but this also will incur closure costs. There may be obligations to Teela employees which will incur costs (such as redundancy pay) if areas of the business are to be closed.
  - The tractor crash may have a longer term impact on Teela's brand. There is a risk that its reputation could fall further if, for example, a similar problem emerges involving a piece of fertiliser equipment.
  - The level of inventories appears to be very high, and may indicate further problems in making sales than is currently fully understood.
- (c) The discounted cash flow working in part (b) shows that from the financial year 2019, Teela Ltd would become profitable. As per first schedule part 1 of ITO 2001, the income tax rate for companies is 30% for the tax year 2018 and onwards. Therefore, Teela would be required to pay tax at the rate of 30% on its operating profit in 2019.

However, Teela's forecast for the financial year 2018 shows a net loss of Rs. 107 million. Therefore, as per ITO 2001 Section 113, minimum tax at the rate of 1.25% would be required to pay on the turnover in financial year 2019. For the purpose of turnover, any sales tax, federal excise duty, and any trade discounts shown on invoices or deemed income should be excluded. Further, this minimum tax shall be carried for adjustment against the tax liability for five tax years immediately succeeding the tax year for which the amount was paid.

However, as the directors of JML would prefer to acquire the Teela business as a whole, but not to acquire its shares, group taxation benefits under section 59AA and 59B would not be available to JML.

**Conclusion:**

Based on the above clauses, the NPV would decrease due to the inclusion of a minimum tax payment in 2018, and normal income tax at the rate of 30% in the tax year 2019 and onwards.