
Answers

- 1 Up to 4 professional marks are available for the presentation of the answer, which should be in a report style.

The decision should be taken in the best interests of the shareholders and other stakeholders of the company.

Obviously all the input numbers should be considered on basis of their reasonableness and accuracy.

Hence the positions of the interested parties will be considered on this basis.

1. Cease Trading and Liquidate the Company

This is probably not in the best interest of any party. Debt holders only receive 55.7c for every \$1 invested and the shareholders receive nothing (see appendix, proposal 1). Furthermore, the parts division is continuing to make a profit and should possibly continue.

The Board may want to consider closing just the fridge division, and focusing on the parts manufacturing division, with the possibility of pursuing the option of the mobile refrigeration business. However, in this case, the problem of the lack of funding might continue.

2. Corporate Restructuring and Management Buy-Out

Shareholders

The shareholders would benefit from either proposal two or three, as opposed to the first proposal, as they stand to gain some funds. The restructuring proposal requires them to pay \$40m cash for new shares but lose their control of the company (the shareholding falls to just under 13%). On the other hand the statement of financial position looks robust with a \$20m cash float and bank overdraft facilities probably available at previous levels (see appendix, proposal 2). This may make the company more successful in the future, as directors are less restricted by covenants. The value at \$256.3m currently only gives existing shareholders a share (or stake) of about \$33.3m (13% x \$256.3m), which is less than the amount they would inject.

The shareholders would benefit immediately if the management buy-out option is taken because they will receive a premium on the share price, although this may still be lower than when the company's share price was at its height.

Therefore the shareholders need to weigh up whether they would like to possibly benefit from future company prospects (not evident at the moment) or whether they would like to sell their shares for 60c per share. They would probably opt for the management buy-out.

Unsecured Bond Holders

The unsecured bond holders' position is not dissimilar to the shareholders' position in that with the restructuring, their financial position depends on the future success of the company, but with the management buy-out they benefit from receiving the full repayment of their initial investment. However, their preferred proposal is probably more difficult to judge.

With the restructuring option they would become the majority shareholder with just over 87% of the company for a total investment of \$210m. They would be able to play a major part in influencing the management's decision possibly with representation on the Board. However, they would be exposed to additional risk as equity holders, as opposed to being debt holders.

The value attributable to them based on perpetuity cash flows is \$223m ($\$256.3 \times 87\%$) approximately, which is more than their investment. Like the shareholders they would benefit from any future projects that the re-structured business undertakes. They would also receive the shares at a significant discount, 270m shares for \$210m which is 77.7c per \$1 par value. The ability to influence the Board and the possibility of obtaining a higher return than their investment from almost the start may sway them to accept the restructuring option. On the other hand, the management buy-out pays them what is due immediately, but they cannot participate in future benefits.

Bond holders may therefore be more tempted to opt for the restructuring when compared to shareholders.

Directors and Management Participating in the Management Buy-Out

If the restructuring is considered as opposed to liquidation then clearly a significant benefit to the management and directors is that they would retain their employment, unless the new shareholder owners decide to terminate some of their contracts.

The possibility of the offer of the share options is interesting. At first the \$1.10 exercise price may seem generous as the directors would be able to exercise when the price of shares increase by just 10%. However, it is unlikely that the share price will start at \$1 per share. If the estimate of the value to perpetuity of \$256.3m is taken against the total number of shares of 310m, this gives a theoretical share price of 82.7c per share. This means that the share price needs to increase by over 33% before the option will become in-the-money. The option is currently well out-of-the-money and would have a low value. Given the asymmetric payoff of the option and the need to increase the price dramatically, directors and managers may be tempted to act in an excessively risky manner, to the detriment of the shareholders and other stakeholders. Indeed research has shown that the presence of share options in individual pay structure do make option holders behave in a more risky manner compared to pay structures which do not contain options.

The management buy-out may influence different classes of managers and directors very differently. For those who participate in the management buy-out, the calculations seem to indicate a clear benefit (see appendix, proposal 3) of a gain net of the cost of the buy-out. It would seem that by having a 5% growth, the value has increased to more than 50% of the initial cost

of the buy-out, although some unreasonable assumptions have been made. For managers and directors not participating in the buy-out, it is likely that they will lose their employment once the fridge division is sold.

Conclusion

Given that the shareholders will probably prefer the management buy-out, and as it appears to have a significant advantage for the participating managers, it is likely that this will be the option that is preferred. Although some parties may not approve of the option, it is unlikely that their 'voice' will be strong enough to alter the decision.

APPENDIX: Calculatons for each option

Proposal 1: Cease Trading

Estimated Break-up Values of Assets	\$m
Land and Buildings	60
Machinery and Equipment	40
Inventory	90
Receivables	20
Total	210
Less redundancy and other costs	(54)
	<u>156</u>
Current and non-current liabilities	
Payables	70
Bank overdraft	60
Unsecured loan stock	120
Other unsecured loans	30
	<u>280</u>

The current and non-current liabilities will receive 55.7c per \$1 owing to them (156/280). Shareholders will receive nothing.

Proposal 2: Restructure

Financial Position	\$m
Non-Current Assets	
Land and buildings	70
Machinery and equipment (assuming all new investment is here)	130
	<u>200</u>
Current Assets	
Inventory	180
Receivables	40
Cash (\$40m + \$90m – \$80m – \$30m)	20
	<u>240</u>
Total Assets	<u>440</u>
Current Liabilities	
Payables	70
	<u>70</u>
Non-Current Liabilities	
Bank loan (7% interest)	60
	<u>60</u>
Share capital (\$1 per share par value, 40m + 270m)	310
	<u>310</u>
Total Liabilities and capital	<u>440</u>
Income position	\$m
Sales revenue (510 x 1.07)	545.7
Costs prior to depreciation, interest payments and tax	(490)
Tax allowable depreciation (15% x 200)	(30)
Finance cost (interest) (7% x 60)	(4.2)
Tax	(4.3)
Profit	<u>17.2</u>

Note: Even after the 7% growth, the fridge division is still loss-making. Revenue = \$340 x 1.07 = \$363.8m, costs (unchanged) = \$370m.

Cash position	\$m
Profit before interest and tax	25.7
Tax (20%)	(5.14)
Net cash flow	<u>20.56</u>

Note: depreciation is not added back because it is the same amount as needed to maintain operations.

Value of company after re-structuring

Cost of capital = 6.5%

Estimated value based on cash flows to perpetuity

$\$20.56m / 0.065 = \$316.3m$

Value attributable to shareholders (net of bank loan) = $\$316.3 - \$60m = \$256.3m$

Proposal 3: Management Buy-out

	\$m
Value of selling fridge division (2/3 x 210 (proposal 1))	140
Redundancy and other costs (2/3 x 54)	(36)
Funds available from sale of division	<u>104</u>
Amount of current and non-current liabilities (proposal 1)	280
Amount of management buy-out funds needed to pay current and non-current liabilities	176
Amount of management buy-out funds needed to pay shareholders	60
Equipment needed to increase sales by 7% ($\frac{1}{3}$ of 80m)	26.7
Investment needed for new venture	50
Total funds needed for management buy-out	<u>312.7</u>

Estimating value of new company after buy-out

	\$m
Sales revenue (70%* x 170m x 1.07)	127.3
Costs (70%* x 120)	(84.0)
Profits before depreciation	43.3
Growth in profits due to new venture (5%)	2.2
Depreciation ($\frac{1}{3} \times 200 \times 15\%$)	(10)
Tax (20%)	(7.1)
Cash flows before interest payment	<u>28.4</u>

Note: It is assumed that, as before, the depreciation and the amount of capital investment needed are roughly equal. It is assumed that no additional investment in non-current assets or working capital is needed, even though sales revenue is increasing. It is assumed that additional initial working capital requirement is part of the new venture investment of \$50m.

*It is assumed that 30% of the sales revenue lost due to the closure of the fridge division is not recovered.

Cost of capital = 11%

Estimated value based on cash flows to perpetuity = $28.4 / (0.11 - 0.05) = \$473.3m$

This is over 50% in excess of the funds invested in the new venture.

2 (a) Base Case Net Present Value

Fubuki Co: Project Evaluation

Base Case

Units Produced and sold				1,300	1,820	2,548	2,675
	\$'000						
	Unit Price/cost	Inflation	Now	Year 1	Year 2	Year 3	Year 4
Sales revenue	2.5	3%		3,250	4,687	6,758	7,308
Direct costs	1.2	8%		1,560	2,359	3,566	4,044
Attributable fixed costs	1,000	5%		1,000	1,050	1,103	1,158
Profits				690	1,278	2,089	2,106
Working capital	15%		(488)	(215)	(311)	(82)	1,096
Taxation (w1)				(10)	(157)	(360)	(364)
Incremental cash flows							
Investment/sale			(14,000)				16,000
Net cash flows			(14,488)	465	810	1,647	18,838
Present Value (10%) (w2)			(14,488)	422	670	1,237	12,867
Base case NPV				708			

Working (w1)

Profits				690	1,278	2,089	2,106
Less: allowances				650	650	650	650
Taxable profits				40	628	1,439	1,456
Tax				10	157	360	364

Note: Full credit will be given where the assumption is made that allowances are 750 in the first three years and 350 in the final year.

Working (w2)

Discount rate (Haizum's ungeared Ke)
 $ke(g) = ke(u) + (1 - t)(ke(u) - kd)Vd/Ve$
 $Ve = 2.53 \times 15 = 37.95$
 $Vd = 40 \times 0.9488 = 37.952$
 Assume $Vd/Ve = 1$

$14 = ke(u) + 0.72 \times (ke(u) - 4.5) \times 1$
 $14 = 1.72ke(u) - 3.24$
 $ke(u) = 10.02$ assume 10%

Note: The discount rate can be estimated by calculating the asset beta and then using that to estimate the cost of equity.

The base case net present value is calculated as approximately \$708,000. This is positive but marginal.

The following financing side effects apply

	\$'000
Issue costs $4/96 \times \$14,488$	(604)
Tax Shield	
Annual tax relief = $(14,488 \times 80\% \times 0.055 \times 25\%)$ $+ (14,488 \times 20\% \times 0.075 \times 25\%)$ $= 159.4 + 54.3 = 213.7$ 213.7×3.588	766
Subsidy benefit	
$14,488 \times 80\% \times 0.02 \times 75\% \times 3.588$	624
Total benefit of financing side effects	786
Adjusted present value (708 + 786)	1,494

Note: Full credit will be given if the issue costs are included in the funds borrowed.

The addition of the financing side effects gives an increased present value and probably the project would not be considered marginal. Once these are taken into account Fubuki Co would probably undertake the project.

Note: In calculating the present values of the tax shield and subsidy benefits, the annuity factor used is based on 4.5% debt yield rate for four years. It could be argued that 7.5% may also be used as this reflects the normal borrowing/default risk of the company.

Credit will be given where this assumption is made to estimate the annuity factor.

- (b) The adjusted present value can be used where the impact of using debt financing is significant. Here the impact of each of the financing side effects from debt is shown separately rather than being imputed into the weighted average cost of capital. The project is initially evaluated by only taking into account the business risk element of the new venture. This shows that although the project results in a positive net present value, it is fairly marginal and volatility in the input factors could turn

the project. Sensitivity analysis can be used to examine the sensitivity of the factors. The financing side effects show that almost 110% value is added when the positive impact of the tax shields and subsidy benefits are taken into account even after the issue costs.

Assumptions (Credit given for alternative, valid assumptions)

1. Haizum Co's ungeared cost of equity is used because it is assumed that this represents the business risk attributable to the new line of business.
2. The ungeared cost of equity is calculated on the assumption that Modigliani and Miller's (MM) proposition 2 applies.
3. It is assumed that initial working capital requirement will form part of the funds borrowed but the subsequent requirements will be available from the funds generated from the project.
4. The feasibility study is ignored as a past cost.
5. It is assumed that the five-year debt yield is equivalent to the risk-free rate.
6. It is assumed that the annual reinvestment needed on plant and machinery is equivalent to the tax allowable depreciation.
7. It is assumed that all cash flows occur at the end of the year unless specified otherwise.
8. All amounts are given in \$'000 to the nearest \$'000. When calculating the units produced and sold, the nearest approximation for each year is taken.

Assumptions 4, 5, 6, 7 and 8 are standard assumptions made for a question of this nature. Assumptions 1, 2 and 3 warrant further discussion. Taking assumption 3 first, it is reasonable to assume that before the project starts, the company would need to borrow the initial working capital as it may not have access to the working capital needed. In subsequent years, the cash flows generated from the operation of the project may be sufficient to fund the extra working capital required. In the case of Fubuki Co, because of an expected rapid growth in sales in years 2 and 3, the working capital requirement remains high and the management need to assess how to make sufficient funds available.

Considering assumptions 1 and 2, the adjusted present values methodology assumes that MM proposition 2 applies and the equivalent ungeared cost of equity does not take into account the cost of financial distress. This may be an unreasonable assumption. The ungeared cost of equity is based on another company which is in a similar line of business to the new project, but it is not exactly the same. It can be difficult to determine an accurate ungeared cost of equity in practice. However, generally the discount rate (cost of funds) tends to be the least sensitive factor in investment appraisal and therefore some latitude can be allowed.

- 3 (a)** The number of put contracts to purchase depends on the hedge ratio, which in turn depends on the delta of the option. This measures the change in the option price over the change in the price of the share, and therefore helps determine how many option contracts are needed to protect against a fall in the share price. For put options an estimate of the delta is given by $N(-d_1)$.

$$d_1 = [\ln(P_d/P_e) + (r + 0.5\sigma^2)t]/(\sigma t^{1/2}) \text{ (from formulae sheet given in examination)}$$

$$d_1 = [\ln(340/350) + ((0.04 + 0.5 \times 0.4^2) \times 1/6)]/(0.4 \times 1/6^{0.5}) = -0.055$$

$$-d_1 = 0.055$$

$$N(-d_1) = 0.5 + (0.0199 + (0.0239 - 0.0199)/2) = 0.5219$$

Put contracts to be bought for a delta hedge = $200,000/(0.5219 \times 1,000) = 383.2$ rounding to 383 contracts.

- (b)** Wenyu's position is based on the theoretical case put forward for not managing corporate risk. In a situation of market efficiency where information is known and securities are priced correctly, holding well diversified portfolios will eliminate (or at least significantly reduce) unsystematic risk. The position against hedging states that in such cases companies would not increase shareholder value by hedging or eliminating risk because there will be no further reduction in unsystematic risk. In a situation of perfect markets, the cost of reducing any systematic risk will exactly equal the benefit derived from such a reduction. Shareholders would not gain from risk management or hedging, in fact if the costs exceed the benefits due to transactional costs then hedging may result in a reduction in shareholder value.

However, hedging or the management of risk may result in increasing corporate (and therefore shareholder) value if market imperfections exist, and in these situations reducing the volatility of a company's earnings will result in higher cash inflows. Proponents of hedging cite three main situations where reduction in volatility may increase cash flows – in situations: where the rate of tax is increasing; where a firm could face significant financial distress costs due to high volatility in earnings; and where stable earnings increases certainty and the ability to plan for the future and therefore resulting in stable investment policies by the firm.

It would appear that none of the reasons for hedging explains the situation described in the scenario of the question. Given that Marengo Co is a large company with a variety of investments, it is unlikely that reducing the volatility of one investment will significantly alter the cash flows of the company. There could be other reasons for reducing risk through hedging and these are explored further on.

Lola's proposal of selling Arion Co shares is based on the fact that such a move would eliminate the risk of a reduction in price altogether. This proposal has a number of limitations which the managers need to consider carefully. Presumably the purpose of Marengo Co's strategy of investing in companies is to generate value from such activity. It is likely that it generates higher value than the risk-free rate of return (which would be obtained if funds were invested in 'no-risk' investments). The funds generated from selling Arion Co shares will need to be invested elsewhere to generate the target returns. Unless

investments are available which seem to be better than Arion Co, there may not be a case for selling Arion shares. In addition to this, selling such a large quantity of shares can potentially make the share price reduce significantly and the managers would need to investigate whether there is sufficient liquidity in the markets for such a large sale. Finally, the sale may unbalance the investment portfolio.

Sam's proposal would entail purchasing OTC put options from the bank. This can be an expensive alternative as purchasing a right would entail having to pay premiums on the options, which can be substantial. If the option is not exercised then the cost will be the full amount of the premium. On the other hand, options will allow Marengo Co to be protected against downside movements, whilst still benefiting from positive movements in the share price. However, options bring additional risks with them. For example, delta is not stable and the rate of change in an option is measured by the gamma. The option value also changes as time to expiry reduces (measured by theta) and as volatility of the underlying asset changes (measured by vega).

Active hedging may reduce agency costs. For example, unlike shareholders, managers and employees of the company may not be diversified. Hedging allows the risks exposed to them to be reduced. Additionally hedging may allow managers to not be concerned about market movements which are not within their control and instead allow them to focus on business issues on which they can exercise control. A consistent hedging strategy or policy may be used as a signalling tool to reduce the conflict of interest between bondholders and shareholders, and thus reduce restrictive covenants. Although a single transaction, like this scenario, may have little impact on this, it should be part of the overall risk management policy of the company.

The case for hedging or not is not clear cut and should not be taken on an individual or piecemeal basis. Instead the company should consider its overall risk management strategy and the resultant value creation opportunities. Subsequent hedging decisions should be based on the overall strategy.

(Note: Credit will be given for alternative relevant approaches)

4 (a) Dividend Capacity Prior to TE Proposal Implementation

	\$000
Operating profit (30% x \$80,000,000)	24,000
Less interest (8% x \$35,000,000)	(2,800)
Less taxation (28% x (24,000 – 2,800))	(5,936)
Less investment in working capital (15% x (20/120 x 80,000))	(2,000)
Less investment in additional non-current assets (25% x (20/120 x 80,000))	(3,333)
Less investment in project	(4,500)
Cash flows from domestic operations	5,431
Cash flows from overseas subsidiary dividend remittances (W1)	3,159
Additional tax payable on Magnolia profits (6% x 5,400)	(324)
Dividend capacity	<u>8,266</u>

Dividend Capacity After TE Proposal Implementation

Cash flows from domestic operations (as above)	5,431
Cash flows from overseas subsidiaries dividend remittances (W2)	2,718
Additional tax payable on Magnolia profits (6% x 3,120)	(187)
Dividend capacity	<u>7,962</u>

Estimate of actual dividend for coming year

(7,500 x 1.08)	8,100
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Note: The impact of depreciation is neutral, as this amount will be spent to retain assets at their current productive capability.

Workings

W1: Prior to Implementation of TE Proposal

	\$000	\$000
	Strymon	Magnolia
Sales revenue	5,700	15,000
Cost		
Variable	(3,600)	(2,400)
Fixed	(2,100)	(1,500)
Transfer		(5,700)
Profit before tax	<u>Nil</u>	<u>5,400</u>
Tax	Nil	1,188
Profit after tax	Nil	4,212
Remitted	Nil	3,159
Retained	Nil	1,053

W2: After Implementation of TE Proposal

	\$000 Strymon	\$000 Magnolia
Sales revenue	7,980	15,000
Cost		
Variable	(3,600)	(2,400)
Fixed	(2,100)	(1,500)
Transfer		(7,980)
Profit before tax	2,280	3,120
Tax (42%, 22%)	958	686
Profit after tax	1,322	2,434
Remitted (75% x 1,322 x 90%)	892	
Remitted		1,826
Retained	331	608
Total remitted	2,718	

- (b) Lamri's dividend capacity before implementing TE's proposal (\$8,266,000) is more than the dividend required for next year (\$8,100,000). If the recommendation from TE is implemented as policy for next year then there is a possibility that Lamri will not have sufficient dividend capacity to make the required dividend payments. It requires \$8,100,000 but will have \$7,962,000 available. The reason is due to the additional tax that will be paid in the country in which Strymon operates, for which credit can not be obtained. Effectively 14% additional tax and 10% withholding tax will be paid. Some of this amount is recovered because lower additional tax is paid on Magnolia's profits but not enough.

The difference between what is required and available is small and possible ways of making up the shortfall are as follows. Lamri could lower its growth rate in dividends to approximately 6.2% ($7962/7500 - 1 \times 100\%$) and have enough capacity to make the payment. However, if the reasons for the lower growth rate are not explained to the shareholders and accepted by them, the share price may fall.

An alternative could be to borrow the small amount needed possibly through increased overdraft facilities. However, Lamri may not want to increase its borrowings and may be reluctant to take this option. In addition to this, there is a possibility that because of the change of policy this shortfall may occur more often than just once, and Lamri may not want to increase borrowing regularly.

Lamri may consider postponing the project or part of the project, if that option were available. However, this must be considered in the context of the business. From the question narrative, the suggestion is that Lamri have a number of projects in the pipeline for the future. The option to delay may not be possible or feasible.

Perhaps the most obvious way to get the extra funds required is to ask the subsidiary companies (most probably Strymon) to remit a higher proportion of their profits as dividends. In the past Strymon did not make profits and none were retained hence there may be a case for a higher level of remittance from there. However, this may have a negative impact on the possible benefits, especially manager morale.

(Note: credit will be given for alternative relevant suggestions)

- 5 **(Solution note:** Question 5 can be answered in a variety of ways and the suggested answer below is indicative. Credit will be given for reasonable answers that take a different approach. The question asks for a discussion of whether or not PMU should undertake a joint venture. It does not require candidates to discuss whether or not PMU should venture into Kantaka. Credit will not be given for answers which discuss this.)

There are a number of benefits that PMU can potentially take advantage of if it went into a joint venture with a Kantaka academic institution, such as sharing of risks, possible lower running costs and the partner's existing experience of the local market and lower capital investment costs. These are balanced against the potential disadvantages of going into a joint venture such as loss of reputation, product quality and staffing, government restrictions, cultural differences, managerial issues, contractual issues and loss of tax concessions. Each of these issues will be discussed, together with strategies for mitigation of the disadvantages and other information that is required.

PMU does not have the experience of doing business overseas and in particular in Kantaka. Having a partner to guide PMU on the local market and its expectations would be beneficial. It may be able to assist PMU in determining how to market the degree programmes effectively. The partner may also be able to advise PMU on pricing decisions and on how to minimise costs. A well constructed contract could be instrumental in effective risk sharing in case the demand and revenues do not grow as expected.

The capital investment cost is lower if PMU enters into a joint venture. Presumably PMU would have access to the partner's infrastructure and systems. They may also be able to utilise the expertise of the local academic and administrative staff. Training costs may also be lower as the academic staff may have the required level of expertise.

PMU may have an easier access to the local capital markets. This may be particularly beneficial where revenues are matched with the costs of capital. If the fee income is in the Kantaka currency but interest is payable in the Rosinante currency, then there is a

potential for long-term currency exposure. This may be serious if the Kantaka currency continues to weaken. Although some economic data suggests that this may not be the case, it is not very persuasive. It may therefore be beneficial to borrow money using the local currency markets.

Perhaps the most significant disadvantage of progressing with a joint venture is the loss of reputation. It seems that due to historical reasons the Kantaka government may not treat the joint venture favourably by not recognising the degrees issued and not allowing the graduates to seek employment in government controlled organisations. In addition to this, joint ventures have a low reputation with the local population. PMU needs to consider its wider reputation as well. For example, there may be negative publicity if the institution chosen has a poor reputation. In order to mitigate this, PMU needs to choose a partner carefully through detailed due diligence. It may consider linking with an institution with high reputation and perhaps meet with and petition the government to give public and official backing to its degree programmes. However, this may take considerable time and effort. PMU also needs to consider whether the government will recognise its degrees if it sets up its own site. It is not clear from the question whether this is the case.

Linked to this is the quality of the product. Students would have certain expectations of the institution and the quality of the degrees needs to match this. If PMU enters into a joint venture with the expectation of using its partner's infrastructure, systems and staff, it needs to ensure that these match the expectations of its customers. For example, if it uses local staff to deliver its degrees then these staff must be properly trained to ensure that the correct standards are achieved. It may be the case that training costs make it more expensive than getting staff to come from Rosinante. It may be the case that initially a higher proportion of the staff are from Rosinante and then the numbers are lowered as the local staff gain the required skills.

PMU also needs to consider government restrictions other than the ones described above. For example, would the government issue visas for staff from Rosinante and would the government allow repatriation of funds as easily from a joint venture as from PMU's own investment? PMU would need to meet with government officials or seek legal advice to clarify situations such as these.

PMU needs to ensure that cultural differences between expatriate staff from Rosinante and local staff in Kantaka are minimised and they all share common corporate values. The two organisational cultures may be very different. It would require time and resources to get a common ground between the two organisations and a shared identity. Strategies need to be developed and enacted to ensure that this happens, perhaps through implementation of staff exchange programmes and secondments. Human resources need to develop techniques to help expatriate staff settle into the country. The costs related to all these need to be compared with PMU setting up its own site.

Managers' actions may be restricted in the case of joint ventures because the opinions of both the partners need to be taken into account. Managers of the joint venture may feel that they are not being listened to by the management at PMU. And the managers at PMU may feel that the actions of the managers at the partner are incongruent with aims of PMU. Clear guidelines need to be developed and communicated to limit dysfunctional behaviour between the managers, perhaps asking all the parties concerned to be involved in the development of the joint venture.

There may be difficulties in agreeing to the terms and conditions of the contract between the parties involved. Legal representation and clear communication between the senior management would be needed from both parties to agree: clear terms, conditions and boundaries; the roles and responsibilities of both sides; and, the ownership percentage and profit sharing arrangements.

Finally, if PMU proceeds with financing the joint venture using local funding, it may lose the tax concessions attached to any FDI. The financial consequences of this need to be assessed.

Additional Information

1. Financial assessment of both positions to include for example the consequences of loss of tax concessions. Sensitivity analysis of different projections and an assessment of the likelihood of their occurrence.
2. Possibility of hiring experts to advise PMU to set up in Kantaka, as opposed to going for a joint venture.
3. Outcomes from the government discussions on whether or not PMU degrees will get recognition in Kantaka.
4. Assessment of whether the partner's infrastructure and systems meet PMU's requirements.
5. Likely movement in the Kantaka currency and instruments such as swaps to hedge currency fluctuations.
6. The reputation of a PMU degree with Kantaka's people.
7. Quality of local staff, their ability to teach to the methods required and the need for expatriate staff from Rosinante.
8. An assessment of government restrictions on for example, issuing visas, repatriation of funds, etc.

		<i>Marks</i>
1	Calculations	
	(i) Value if company is broken up and liquidated	3
	(ii) Restructure Option Income position (Note: the financial position is not required but helps the discussion) Calculation of cash flows and valuation of business (Assumption(s) should be included)	3 5
	Total	8
	(iii) Management Buy-out Funds required Calculation of value (Assumption(s) should be included)	4 4
	Total	8
	(iv) Discussion Initial comment Break up comment and suggestions for alternatives Shareholders' position Unsecured loan stock holders' position Directors' and managers' position Conclusion	1–2 1–2 2–3 2–3 3–4 1
	Max	12
	Professional Marks Report format Layout, presentation and structure	1 3
	Total	4
	Total	35
2	(a) Sales revenue, direct costs and additional fixed costs Incremental working capital Taxation Estimation of K_e (ungeared) Net cash flows, present value and base case NPV Issue costs Calculation of tax shield impact Calculation of subsidy impact Adjusted present value and conclusion	4 1 2 2 2 1 2 1 2
	Total	17
	(b) Discussion of using APV Assumption about Haizum as proxy and MM proposition 2 Other assumptions	2–3 3–4 2–3
	Max	8
	Total	25

		<i>Marks</i>
3	(a) Identifying the need to calculate $N(d_1)$ for hedge ratio	2
	Calculation of d_1	2
	Calculation of $N(-d_1)$	2
	Calculation of number of put options required	1
	Total	<u>7</u>
(b)	Discussing the theoretical argument for not hedging	3–4
	Discussing the limitations/risks/costs of selling the shares	3–4
	Discussing the risks/costs of using OTC options to hedge	2–3
	Discussing the potential benefits of hedging and application to scenario	2–3
	Relevant concluding remarks	1–2
	Max	<u>13</u>
	Total	<u>20</u>
4	(a) Calculation of operating profit, interest and domestic tax	3
	Calculation of investments in working capital and non-current assets (including correct treatment of depreciation)	3
	Calculation of dividend remittance before new policy implementation	2
	Calculation of additional tax payable on Magnolia profits before new policy implementation	1
	Calculation of dividend remittance after new policy implementation	3
	Calculation of additional tax payable on Magnolia profits after new policy implementation	1
	Dividend capacity	1
	Total	<u>14</u>
(b)	Concluding comments and explanation of reason	2
	Possible actions (1 mark per suggestion)	4
	Total	<u>6</u>
	Total	<u>20</u>
5	Benefits of joint venture (1 to 2 marks per well explained point)	4–6
	Disadvantages of joint venture, including ways of mitigating disadvantages (2 to 3 marks per well explained point)	10–12
	Additional information (1 mark per point)	3–5
		Max