Answers

1 REPORT TO THE BOARD OF DIRECTORS, NENTE CO

IMPACT OF THE TAKEOVER PROPOSAL FROM MIJE CO AND PRODUCTION RIGHTS OF THE FOLLOW-ON PRODUCT

The report considers the value of the takeover to Nente Co and Mije Co shareholders based on a cash offer and on a share-for-share offer. It discusses the possible reaction of each group of shareholders to the two offers and how best to utilise the follow-on product opportunity. The significant assumptions made in compiling the report are also explained.

The appendices to the report show the detailed calculations in estimating the equity value of Nente Co, the value to Nente Co and Mije Co shareholders of acquiring Nente Co by cash and by a share-for-share exchange, and the value to Nente Co of the exclusive rights to the follow-on product. The results of the calculation are summarised below:

Estimated price of a Nente Co share before the takeover offer and follow-on product £2·90/share (appendix i)

Estimated increase in share price	**Nente Co**	**Mije Co**
Cash offer (appendix ii)	1·7%	9·4%
Share-for-share offer (appendix ii)	17·9%	6·9%

Estimate of the value per share of the follow-on product to Nente Co 8·7% (appendix iii)

It is unlikely that Nente Co shareholders would accept the cash offer because it is little more than the estimated price of a Nente Co share before the takeover offer. However, the share-for-share offer gives a larger increase in value of a share of 17·9%. Given that the normal premium on acquisitions ranges from 20% to 40%, this is closer to what Nente Co shareholders would find acceptable. It is also greater than the additional value from the follow-on product. Therefore, based on the financial figures, Nente Co's shareholders would find the offer of a takeover on a share-for-share exchange basis the most attractive option. The other options considered here yield lower expected percentage increase in share price.

Mije Co shareholders would prefer the cash offer so that they can maximise the price of their shares and also not dilute their shareholding, but they would probably accept either option because the price of their shares increases. However, Mije Co shareholders would probably assess whether or not to accept the acquisition proposal by comparing it with other opportunities that the company has available to it and whether this is the best way to utilise its spare cash flows.

The calculations and analysis in each case is made on a number of assumptions. For example, in order to calculate the estimated price of a Nente Co share, the free cash flow valuation model is used. For this, the growth rate, the cost of capital and effective time period when the growth rate will occur (perpetuity in this instance) are all estimates or based on assumptions. For the takeover offer, the synergy savings and P/E ratio value are both assumptions. For the value of the follow-on product and the related option, the option variables are estimates and it is assumed that they would not change during the period before the decision. The value of the option is based on the possibility that the option will only be exercised at the end of the two years, although it seems that the decision can be made any time within the two years.

The follow-on product is initially treated separately from the takeover, but Nente Co may ask Mije Co to take the value of the follow-on product into consideration in its offer. The value of the rights that allow Nente Co to delay making a decision are themselves worth $603,592 (appendix iii) and add just over 25c or 8·7% to the value of a Nente Co share. If Mije Co can be convinced to increase their offer to match this or the rights could be sold before the takeover, then the return for Nente Co's shareholders would be much higher at 26·6% (17·9% + 8·7%).

In conclusion, the most favourable outcome for Nente Co shareholders would be to accept the share-for-share offer, and try to convince Mije Co to take the value of the follow-on product into consideration. Prior to accepting the offer Nente Co shareholders would need to be assured of the accuracy of the results produced by the computations in the appendices.

Report compiled by:

Date:

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

APPENDICES

Appendix i: Estimate of Nente Co Equity Value Based on Free Cash Flows

Company value = Free cash flows (FCF) x (1 + growth rate (g))/(cost of capital (k) – g)

k = 11%

Past g = (latest profit before interest and tax (PBIT)/earliest PBIT)$^{1/\text{no. of years of growth}}$ – 1

Past g = $(1{,}230/970)^{1/3} - 1 = 0{\cdot}0824$

Future g = ¼ x 0·0824 = 0·0206

FCF Calculation
FCF = PBIT + non cash flows – cash investment – tax
FCF = $1,230,000 + $1,206,000 – $1,010,000 – ($1,230,000 x 20%) = $1,180,000

Company value = $1,180,000 x 1·0206/(0·11 – 0·0206) = $13,471,000
Equity value = $13,471,000 – $6,500,000 = $6,971,000
Per share = $6,971,000/2,400,000 shares = $2·90

Appendix ii: Estimated Returns to Nente Co and Mije Co Shareholders

Cash Offer
Gain in value to a Nente Co share = ($2·95 – $2·90)/$2·90 = 1·7%

Additional earnings after acquisition = $620,000 + $150,000 = $770,000
Additional EPS created from acquisition = $770,000/10,000,000 = 7·7c/share
Increase in share price based on P/E of 15 = 7·7c x 15 = $1·16

Additional value created = $1·16 x 10,000,000 =	$11,600,000
Less: paid for Nente Co acquisition = ($2·95 x 2,400,000 shares)	$(7,080,000)
Value added for Mije shareholders =	$4,520,000
Gain in value to a Mije Co share = $4,520,000/10,000,000 =	45·2c
or 45·2c/480c =	9·4%

Share-for-share Offer
Earnings combined company = $620,000 + $150,000 + $3,200,000 = $3,970,000
Shares in combined company = 10,000,000 + 2,400,000 x 2/3 = 11,600,000
EPS = 34·2c/share [$3,970,000/11,600,000]
Expected share price = 34·2c x 15 = 513c or $5·13/share

Three Nente Co shares = $2·90 x 3 = $8·70

Gain in value to a Mije Co share = ($5·13 – $4·80)/$4·80 =	6·9%
Gain in value to a Nente Co share = ($10·26 – $8·70)/$8·70 =	17·9%

Appendix iii: Increase in Value of Follow-On Product

Present value of the positive cash flows	= $2,434,000
Present value of the cash outflow	= $(2,029,000)
Net present value of the new product	= $405,000

Based on conventional NPV, without considering the value of the option to delay the decision, the project would increase the value of the company by $405,000.

Considering the value of the option to delay the decision

Price of asset (PV of future positive cash flows)	=	$2,434,000
Exercise price (initial cost of project, not discounted)	=	$2,500,000
Time to expiry of option	=	2 years
Risk free rate (estimate)	=	3·2%
Volatility	=	42%

$d_1 = [\ln(2{,}434/2{,}500) + (0{\cdot}032 + 0{\cdot}5 \times 0{\cdot}42^2) \times 2]/(0{\cdot}42 \times 2^{1/2}) = 0{\cdot}359$
$d_2 = 0{\cdot}359 – (0{\cdot}42 \times 2^{1/2}) = –0{\cdot}235$

N(d1) = 0·5 + (0·1368 + 0·9 x (0·1406 – 0·1368)) = 0·6402
N(d2) = 0·5 – (0·0910 + 0·5 x (0·0948 – 0·0910)) = 0·4071

Value of option to delay the decision = $2{,}434{,}000 \times 0{\cdot}6402 – 2{,}500{,}000 \times 0{\cdot}4071 \times e^{-(0{\cdot}032 \times 2)}$
= $1,558,247 – $954,655 = $603,592

The project increases the value of the company by $603,592 or 25·1c per share ($603,592/2,400,000 shares). In percentage terms this is an increase of about 8·7% (25·1c/290c).

2 (a) Forecast financial position

Amounts in $'000	Current	Proposal 1	Proposal 2	Proposal 3
Non-current assets	282,000	282,000	302,000	257,000
Current assets	66,000	64,720	67,720	63,682
Total assets	348,000	346,720	369,720	320,682
Current liabilities	37,000	37,000	37,000	37,000
Non-current liabilities	140,000	160,000	160,000	113,000
Total liabilities	177,000	197,000	197,000	150,000
Share capital (40c/share)	48,000	45,500	48,000	48,000
Retained earnings	123,000	104,220	124,720	122,682
Total equity	171,000	149,720	172,720	170,682
Total liabilities and capital	348,000	346,720	369,720	320,682

Adjustments to forecast earnings

Amounts in $'000	Current	Proposal 1	Proposal 2	Proposal 3
Initial profit after tax	26,000	26,000	26,000	26,000
Interest payable on additional borrowing ($20m x 6% x (1 – 0·2))		(960)	(960)	
Additional interest payable on extra coupon ($160m x 0·25% x (1 – 0·2))		(320)	(320)	
Interest saved on less borrowing ($27m x 6% x (1 – 0·2))				1,296
Interest saved on lower coupon ($113m x 0·15% x (1 – 0·2))				136
Return on additional investment ($20m x 15%)			3,000	
Return lost on less investment ($25m x 15%)				(3,750)
Profit on sale of non-current assets				2,000
Adjusted profit after tax	26,000	24,720	27,720	25,682

	Current	Proposal 1	Proposal 2	Proposal 3
Gearing % (non-current liabilities/equity)	81·9%	106·9%	92·6%	66·2%
Number of shares ('000)	120,000	113,750	120,000	120,000
Earnings per share (adjusted profit after tax/number of shares)	21·67c	21·73c	23·10c	21·40c

Note: *Gearing defined as non-current liabilities/(non-current liabilities + equity) and/or using market value of equity is acceptable as well.*

The profit from the sale of the assets for proposal 3, of $2,000,000, is assumed to be after tax. Answers which consider the profit to be before tax, and therefore only take into account $1,600,000 as the net profit, will receive full credit.

Tutorial Note *(Explanations are not required for the answer but are included to explain the approach taken)*

Explanations of the financial position based on the three proposals

Proposal 1

Debt is increased by $20m and share capital reduced by the same amount as follows: from par value = $20m x 40c/320c = $2·5m; from retained earnings = $20m x 280c/320c = $17·5m.

Additional interest payable totaling $1,280,000 ($960,000 + $320,000) is taken off retained earnings due to reduction in profit after tax and taken off current assets because presumably it is paid from cash. Note that an alternative answer would be to add the additional interest payable to current liabilities.

Proposal 2

Debt and non-current assets are increased by $20m.

Additional interest payable as above, plus the additional investment of $20 million will generate a rate of return of 15%, which is $3,000,000 income. Net impact is $1,720,000 income which is added to retained earnings as an addition to profit after tax and added to current assets as a cash income (presumably).

Proposal 3

Net non-current assets are reduced by the $25 million, their value at disposal. Since they were sold for $27 million, this is how much the non-current liabilities are reduced by and the profit of $2 million is included in the retained earnings.

Interest saved totals $1,432,000 ($1,296,000 + $136,000). The reduction in investment of $25 million will lose $3,750,000, at a rate of return of 15%. Net impact is $2,318,000 loss which is subtracted from earnings as a reduction from profit after tax and deducted from current assets as a cash expense (presumably). Overall therefore the profit is reduced by $318,000 [$2,000,000 – $2,318,000].

If the profit from the sale of the asset is assumed to be $1,600,000 ($2,000,000 less tax), then the statement of financial position, EPS and gearing figures will all change to reflect this.

Discussion

Proposals 1 and 3 appear to produce opposite results to each other. Proposal 1 would lead to a small increase in the earnings per share (EPS) due to a reduction in the number of shares although profits would decrease by approximately 5%, due to the increase in the amount of interest payable as a result of increased borrowings. However, the level of gearing would increase substantially (by about 30%).

With proposal 3, although the overall profits would fall, because of the lost earnings due to downsizing being larger than the gain in interest saved and profit made on the sale of assets, this is less than proposal 1 (1·2%). Gearing would reduce substantially (19·2%).

Proposal 2 would give a significant boost in the EPS from 21·67c/share to 23·10c/share, which the other two proposals do not. This is mainly due to increase in earnings through extra investment. However, the amount of gearing would increase by more than 13%.

Overall proposal 1 appears to be the least attractive option. The choice between proposals 2 and 3 would be between whether the company would prefer larger EPS or less gearing. This would depend on factors such as the capital structure of the competitors, the reaction of the equity market to the proposals, the implications of the change in the risk profile of the company and the resultant impact on the cost of capital. Ennea Co should also bear in mind that the above are estimates and the actual results will probably differ from the forecasts.

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

(b) Asset securitisation in this case would involve taking the future incomes from the leases that Ennea Co makes and converting them into assets. These assets are sold as bonds now and the future income from lease interest will be used to pay coupons on the bonds. Effectively Ennea Co foregoes the future lease income and receives money from sale of the assets today.

The income from the various leases would be aggregated and pooled, and new securities (bonds) issued based on these. The tangible benefit from securitisation occurs when the pooled assets are divided into tranches and tranches are credit rated. The higher rated tranches would carry less risk and have less return, compared to lower rated tranches. If default occurs, the income of the lower tranches is reduced first, before the impact of increasing defaults move to the higher rated tranches. This allows an asset of low liquidity to be converted into securities which carry higher liquidity.

Ennea Co would face a number of barriers in undertaking such a process. Securitisation is an expensive process due to management costs, legal fees and ongoing administrative costs. The value of assets that Ennea Co wants to sell is small and therefore these costs would take up a significant proportion of the income. High cost implications mean that securitisation is not feasible for small asset pools.

Normally asset pools would not offer the full value of the asset as securities. For example, only 90% of the asset value would be converted into securities, leaving the remaining 10% as a buffer against possible default. This method of credit enhancement would help to credit-rate the tranches at higher levels and help their marketability. However, Ennea Co would not be able to take advantage of the full asset value if it proceeds with the asset securitisation.

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

3 (a) Gross amounts of annual interest receivable by Sembilan Co from Ratus Bank based on year 1 spot rate and years 2, 3 and 4 forward rates:

Year 1 0·025 x $320m = $8m
Year 2 0·037 x $320m = $11·84m
Year 3 0·043 x $320m = $13·76m
Year 4 0·047 x $320m = $15·04m

Gross amount of annual interest payable by Sembilan Co to Ratus Bank:

3·76¼% x $320m = $12·04m

At the start of the swap, Sembilan Co will expect to receive or (pay) the following net amounts at the end of each of the next four years:

Year 1: $8m – $12·04m = $(4·04m) payment
Year 2: $11·84m – $12·04m = $(0·20m) payment
Year 3: $13·76m – $12·04m = $1·72m receipt
Year 4: $15·04m – $12·04m = $3m receipt

Tutorial Note: *At the commencement of the swap contract the net present value of the net annual flows, discounted at the yield curve rates, is zero.*

The reason the equivalent fixed rate of 3·76¼% is less than the 3·8% four-year yield curve rate, is because the 3·8% rate reflects the zero-coupon rate with only one payment made in year four. Here the bond pays coupons at different time periods when the yield curve rates are lower. Therefore the fixed rate is lower.

(b) After taking the swap, Sembilan Co's net effect is as follows:

	% Impact	Yield Interest 3%	Yield Interest 4%
Borrow at yield interest + 60bp	(Yield+0·6)%	$(11·52m)	$(14·72m)
Receive yield	Yield	$9·6m	$12·8m
Pay fixed 3·76¼%	(3·76¼)%	$(12·04m)	$(12·04m)
Fee 20bp	(0·2)%	$(0·64m)	$(0·64m)
Net Cost	(4·56¼)%	$(14·6m)	$(14·6m)

The receipt and payment based on the yield curve cancels out interest rate fluctuations, fixing the rate at 3·76¼% + 0·6% + 0·2% = 4·56¼%

(c) Reducing the amount of debt by issuing equity and using the cash raised from this to reduce the amount borrowed changes the capital structure of a company and Sembilan Co needs to consider all the possible implications of this.

As the proportion of debt increases in a company's financial structure, the level of financial distress increases and with it the associated costs. Companies with high levels of financial distress would find it more costly to contract with their stakeholders. For example, they may have to pay higher wages to attract the right calibre of employees, give customers longer credit periods or larger discounts, and may have to accept supplies on more onerous terms. Furthermore, restrictive covenants may make it more difficult to borrow funds (debt and equity) for future projects. On the other hand, because interest is payable before tax, larger amounts of debt will give companies greater taxation benefits, known as the tax shield. Presumably, Sembilan Co has judged the balance between the levels of equity and debt finance, such that the positive and negative effects of gearing result in minimising the required rate of return and maximising the value of the company.

By replacing debt with equity the balance may no longer be optimal and therefore the value of Sembilan Co may not be maximised. However, reducing the amount of debt would result in a higher credit rating for the company and reduce the scale of restrictive covenants. Having greater equity would also increase the company's debt capacity. This may enable the company to raise additional finance and undertake future profitable projects more easily. Less financial distress may also reduce the costs of contracting with stakeholders.

The process of changing the financial structure can be expensive. Sembilan Co needs to determine the costs associated with early redemption of debt. The contractual clauses of the bond should indicate the level and amount of early redemption penalties. Issuing new equity can be expensive especially if the shares are offered to new shareholders, such as costs associated with underwriting the issue and communicating or negotiating the share price. Even raising funds by issuing rights can be expensive.

As well as this, Sembilan Co needs to determine the extent to which the current shareholders will be able to take up the rights and the amount of discount that needs to be given on the rights issue to ensure 100% take up. The impact on the current share price from the issue of rights needs to be considered as well. Studies on rights issues seem to indicate that the markets view the issue of rights as a positive signal and the share price does not reduce to the expected theoretical ex-rights price. However, this is mainly because the markets expect the funds raised to be used on new, profitable projects. Using funds to reduce the debt amount may not be viewed so positively.

Sembilan Co may also have to provide information and justification to the market because both the existing shareholders and any new shareholders will need to be assured that the company is not benefiting one group at the expense of the other. If sufficient information is not provided then either shareholder group may discount the share price due to information asymmetry. However, providing too much information may reduce the competitive position of the company.

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

4 (a) Use Elfu Co's information to estimate the component project's asset beta. Then based on Tisa Co's capital structure, estimate the component project's equity beta and weighted average cost of capital. Assume that the beta of debt is zero.

Elfu Co MVe = $1·20 x 400m shares = $480m
Elfu Co MVd = $96m

Elfu Co portfolio asset beta =
1·40 x $480m/($480m + $96m x (1 – 0·25)) = 1·217
Elfu Co asset beta of other activities =
1·25 x $360m/($360m + $76·8m x (1 – 0·25)) = 1·078

1·217 = component asset beta x 0·25 + 1·078 x 0·75
Component asset beta = [1·217 – (1·078 x 0·75)]/0·25 = 1·634

Component equity beta based on Tisa Co capital structure =
1·634 x [($18m + $3·6m x 0·75)/$18m] = 1·879
Using CAPM, component Ke = 3·5% + 1·879 x 5·8% = 14·40%
Component WACC = (14·40% x $18m + 4·5% x $3·6m)/($18m + $3·6m) = 12·75%

(b) **Process Omega**

Year	0	1	2	3	4
Net cash flows ($000)	(3,800)	1,220	1,153	1,386	3,829
PV 12·75% ($000)	(3,800)	1,082	907	967	2,369
NPV ($000)	1,525				
PV 30%	(3,800)	938	682	631	1,341
NPV ($000)	(208)				

Internal rate of return is approximately 27·3%

Modified internal rate of return (MIRR) is approximately 22·7% ($[(5{,}325/3{,}800)^{1/4} \times (1{\cdot}1275)] - 1$)

Alternatively:

MIRR can be calculated as follows:

Year	Cashflows ($000)	Multiplier	Re-invested amount ($000)
1	1,220	$1{\cdot}1275^3$	1,749
2	1,153	$1{\cdot}1275^2$	1,466
3	1,386	1·1275	1,563
4	3,829	1	3,829

Total re-invested amount ($000) = 8,607
MIRR = $(8{,}607/3{,}800)^{1/4} - 1 = 22{\cdot}7\%$

The internal rate of return (IRR) assumes that positive cash flows in earlier years are reinvested at the IRR and therefore process Omega, which has higher initial cash flows when compared to process Zeta, gives a slightly higher IRR. The modified internal rate of return (MIRR) assumes that positive cash flows are reinvested at the cost of capital. This is a more reasonable assumption and produces a result consistent with the net present value. Hence, process Zeta should be adopted, although the difference is not significant.

[**Note:** *Using 13% instead of 12·75% as the cost of capital is acceptable*]

(c) 99% confidence level requires the value at risk (VAR) to be within 2·33 standard deviations from the mean, based on a single tail measure.

Annual VAR = 2·33 x $800,000 = $1,864,000
Five year VAR = $1,864,000 x $5^{1/2}$ approx. = $4,168,000

The figures mean that Elfu Co can be 99% confident that the cash flows will not fall by more than $1,864,000 in any one year and $4,168,000 in total over five years from the average returns. Therefore the company can be 99% certain that the returns will be $336,000 or more every year [$2,200,000 – $1,864,000]. And it can be 99% certain that the returns will be $6,832,000 or more in total over the five-year period [$11,000,000 – $4,168,000]. There is a 1% chance that the returns will be less than $336,000 each year or $6,832,000 over the five-year period.

5 **(Solution note: The following answer for question 5(a) is indicative. Credit will be given for alternative suggestions of risks and issues, and their management or control.)**

(a) Kilenc Co needs to consider a number of risks and issues when making the decision about whether or not to set up a subsidiary company in Lanosia. It should then consider how these may be managed or controlled.

Key Risks/Issues

Kilenc Co needs to assess the impact on its current exports to Lanosia and the nearby countries if the subsidiary is set up. Presumably, products are currently exported to these countries and if these exports stop, then there may be a negative impact on the employees and facilities currently employed in this area. Related to this may be the risk of loss of reputation if the move results in redundancies. Furthermore, Kilenc Co should consider how the subsidiary and its products would be seen in Lanosia and the nearby countries. For example, would the locally made products be perceived as being of comparative quality as the imported products?

The recession in Lanosia may have a negative impact on the market for the products. The cost of setting up the subsidiary company needs to be compared with the benefits from extra sales revenue and reduced costs. There is a risk that the perceived benefits may be less than predicted or the establishment of a subsidiary may create opportunities in the future once the country recovers from the recession.

Currently the government offers support for companies involved in the pharmaceutical industry. Kilenc Co may find it difficult to set up the subsidiary if it is viewed as impeding the development of the local industry by the government. For example, the government may impose restrictions or increase the taxes the subsidiary may have to pay. On the other hand, the subsidiary may be viewed as supporting the economy and the growth of the pharmaceutical industry, especially since 40% of the shares and 50% of the Board of Directors would be in local hands. The government may even offer the same support as it currently offers the other local companies.

Kilenc Co wants to finance the subsidiary through a mixture of equity and debt. The implications of raising equity finance are discussed in part (b) of the question. However, the risks surrounding debt finance needs further discussion. Raising debt finance in Lanosia would match the income generated in Lanosia with debt interest payments, but the company needs to consider whether or not it would be possible to borrow the money. Given that the government has had to finance the banks may mean that the availability of funds to borrow may be limited. Also interest rates are low at the moment but inflation is high, this may result in pressure on the government to raise interest rates in the future. The consequences of this may be that the borrowing costs increase for Kilenc Co.

The composition of the Board of Directors and the large proportion of the subsidiary's equity held by minority shareholders may create agency issues and risks. Kilenc Co may find that the subsidiary's Board may make decisions which are not in the interests of the parent company, or that the shareholders attempt to move the subsidiary in a direction which is not in the interests of the parent company. On the other hand, the subsidiary's Board may feel that the parent company is imposing too many restrictions on its ability to operate independently and the minority shareholders may feel that their interests are not being considered by the parent company.

Kilenc Co needs to consider the cultural issues when setting up a subsidiary in another country. These may range from cultural issues of different nationalities and doing business in the country to cultural issues within the organisation. Communication of how the company is organised and understanding of cultural issues is very important in this case. The balance between independent autonomy and central control needs to be established and agreed.

Risks such as foreign exchange exposure, product health and safety compliance, employee health and safety regulations and physical risks need to be considered and assessed. For example, foreign exchange exposures arising from exporting the products to nearby countries need to be assessed. The legal requirements around product health and safety and employee health and safety need to be understood and complied with. Risks of physical damage such as from floods or fires on the assets of the business need to be established.

Mitigating the Risks and Issues

A full analysis of the financial costs and benefits should be undertaken to establish the viability of setting up the subsidiary. Sensitivity and probability analysis should be undertaken to assess the impact and possibility of falling revenues and rising costs. Analysis of real options should be undertaken to establish the value of possible follow-on projects.

Effective marketing communication such as media advertising should be conducted on the products produced by the subsidiary to ensure that the customers' perceptions of the new products do not change. This could be supported by retaining the packaging of the products. Internal and external communication should explain the consequences of any negative impact of the move to Lanosia to minimise any reputational damage. Where possible, employees should be redeployed to other divisions, in order to minimise any negative disruption.

Negotiations with the Lanosian government should be undertaken regularly during the process of setting up the subsidiary to minimise any restrictions and to maximise any benefits such as favourable tax rates. Where necessary and possible, these may be augmented with appropriate insurance and legal advice. Continuing lobbying may also be necessary after the subsidiary has been established to reduce the possibility of new rules and regulations which may be detrimental to the subsidiary's business.

An economic analysis may be conducted on the likely movements in inflation and interest rates. Kilenc Co may also want to look into using fixed rate debt for its long-term financing needs, or use swaps to change from variable rates to fixed rates. The costs of such activity need to be taken into account.

Clear corporate governance mechanisms need to be negotiated and agreed on, to strike a balance between central control and subsidiary autonomy. The negotiations should involve the major parties and legal advice may be sought where necessary. These mechanisms should be clearly communicated to the major parties.

The subsidiary organisation should be set up to take account of cultural differences where possible. Induction sessions for employees and staff handbooks can be used to communicate the culture of the organisation and how to work within the organisation.

Foreign exchange exposure, health and safety regulation and risk of physical loss can be managed by a combination of hedging, insurance and legal advice.

(b) Dark pool trading systems allow share orders to be placed and matched without the traders' interests being declared publicly on the normal stock exchange. Therefore the price of these trades is determined anonymously and the trade is only declared publicly after it has been agreed. Large volume trades which use dark pool trading systems prevent signals reaching the markets in order to minimise large fluctuations in the share price or the markets moving against them.

The main argument put forward in support of dark pool trading systems is that by preventing large movements in the share price due to volume sales, the markets' artificial price volatility would be reduced and the markets maintain their efficiency. The contrary arguments suggest that in fact market efficiency is reduced by dark pool trading systems because such trades do not contribute to the price changes. Furthermore, because most of the individuals who use the markets to trade equity shares are not aware of the trade, transparency is reduced. This, in turn, reduces the liquidity in the markets and therefore may compromise their efficiency. The ultimate danger is that the lack of transparency and liquidity may result in an uncontrolled spread of risks similar to what led to the recent global financial crisis.

It is unlikely that the dark pool trading systems would have an impact on Kilenc Co's subsidiary company because the subsidiary's share price would be based on Kilenc Co's share price and would not be affected by the stock market in Lanosia. Market efficiency in general in Lanosia would probably be much more important.

			Marks
1	**Appendix i**		
	Based on PBIT, calculation of the growth rate		2
	Calculation of free cash flows		2
	Calculation of company value, equity value and value of each share		3
			7
	Appendix ii		
	Cash offer		
	Additional value created for Mije Co shareholders		3
	Value created per share for Nente Co shareholders		1
	Share-for-share offer		
	Expected share price for the combined company		2
	Value created for Nente Co share		1
	Value created for Mije Co share		1
			8
	Appendix iii		
	PV of underlying asset		1
	Value of exercise price		1
	$N(d_1)$		2
	$N(d_2)$		2
	Value of call		1
	Value added to Nente Co share		1
			8
	Discussion		
	Nente Co shareholders		2–3
	Mije Co shareholders		1–2
	Assumptions made		2–3
	Use of value of follow-on product		2–3
		Max	**8**
	Professional Marks		
	Report format		1
	Structure and presentation of the report		3
			4
		Total	**35**

				Marks
2	**(a)**	Financial position calculations: proposal 1		2
		Financial position calculations: proposal 2		2
		Financial position calculations: proposal 3		2
		Adjustments to forecast earnings		
		Interest payable on additional borrowing and higher coupon		2
		Interest saved lower borrowing and lower coupon		1
		Return on additional investment		1
		Return lost on less investment and profit on sale of non-current assets		1
		Gearing and EPS calculations		4
		Discussion of the results of the proposals		2–3
		Discussion of the implications (e.g. risk, market reaction, etc)		2–3
			Max	**20**
	(b)	Explanation of the process		2–3
		Key barriers in undertaking the process		2–3
			Max	**5**
			Total	**25**
3	**(a)**	Gross amount receivable by Sembilan Co		1
		Gross amounts payable by Sembilan Co		1
		Net amounts receivable or payable every year		2
		Explanation of why fixed rate is less than the four-year yield curve rate		2
				6
	(b)	Demonstration of impact of interest rate changes		4
		Explanation and conclusion		1
				5
	(c)	1–2 marks per relevant discussion point	**Max**	**9**
			Total	**20**
4	**(a)**	Reasoning behind cost of capital calculation		2
		Calculation of component asset beta		3
		Calculation of component equity beta, and Ke and WACC		3
				8
	(b)	Calculation of IRR for Process Omega		3
		Calculation of MIRR for Process Omega		1
		Recommendation and explanation of the recommendation		4
				8
	(c)	Annual and five-year VAR		2
		Explanation		2
				4
			Total	**20**

				Marks
5	**(a)**	Discussion of key risks or issues (2–3 marks for each)		8–10
		Suggestions for management or control of the risk or issue (1–2 marks each)		6–8
			Max	**15**
	(b)	Explanation of dark pool trading systems		2–3
		Consequences and how these would affect Kilenc Co		2–3
			Max	**5**
			Total	**20**