Answers

1 (a) Before implementing the proposal

Cost of equity = 4% + 1·1 x 6% = 10·6%
Cost of debt = 4% + 0·9% = 4·9%

Market value of debt (MV_d):
Per \$100: \$5·2 x $1·049^{-1}$ + \$5·2 x $1·049^{-2}$ + \$105·2 x $1·049^{-3}$ = \$100·82
Total value = \$42,000,000 x \$100·82/\$100 = \$42,344,400

Market value of equity (MV_e):
As share price is not given, use the free cash flow growth model to estimate this. The question states that the free cash flow to equity model provides a reasonable estimate of the current market value of the company.

Assumption 1: *Estimate growth rate using the rb model. The assumption here is that free cash flows to equity which are retained will be invested to yield at least at the rate of return required by the company's shareholders. This is the estimate of how much the free cash flows to equity will grow by each year.*

r = 10·6% and b = 0·4, therefore g is estimated at 10·6% x 0·4 = 4·24%

MV_e = 2,600 x 1·0424/(0·106 – 0·0424) approximately = \$42,614,000

The proportion of MV_e to MV_d is approximately 50:50

Therefore, cost of capital:
10·6% x 0·5 + 4·9% x 0·5 x 0·8 = 7·3%

After implementing the proposal

Coeden Co, asset beta estimate
1·1 x 0·5/(0·5 + 0·5 x 0·8) = 0·61

Asset beta, hotel services only

Assumption 2: *The question does not provide an asset beta for hotel services only, which is the approximate measure of Coeden Co's business risk once the properties are sold. Assume that Coeden Co's asset beta is a weighted average of the property companies' average beta and hotel services beta.*

Asset beta of hotel services only:
0·61 = Asset beta (hotel services) x 60% + 0·4 x 40%
Asset beta (hotel services only) approximately = 0·75

Coeden Co, hotel services only, estimate of equity beta:

MV_e = \$42,614,000 (Based on the assumption stated in the question)

MV_d = Per \$100: \$5·2 x $1·046^{-1}$ + \$5·2 x $1·046^{-2}$ + \$105·2 x $1·046^{-3}$ = \$101·65
Total value = \$12,600,000 x \$101·65/\$100 = \$12,807,900 say \$12,808,000

0·75 = equity beta x 42,614/(42,614 + 12,808 x 0·8)

0·75 = equity beta x 0·806

Equity beta = 0·93

Coeden Co, hotel services only, weighted average cost of capital

Cost of equity = 4% + 0·93 x 6% = 9·6%

Cost of capital = 9·6% x 0·769 + 4·6% x 0·231 x 0·8 = 8·2%

Comment:

	Before proposal implementation	After proposal implementation
Cost of equity	10·6%	9·6%
WACC	7·3%	8·2%

Implementing the proposal would increase the asset beta of Coeden Co because the hotel services industry on its own has a higher business risk than a business which owns its own hotels as well. However, the equity beta and cost of equity both decrease because of the fall in the level of debt and the consequent reduction in the company's financial risk. The company's cost of capital increases because the lower debt level reduces the extent to which the weighted average cost of capital can be reduced due to the lower cost of debt. Hence the board of directors is not correct in assuming that the lower level of debt will reduce the company's cost of capital.

(b) It is unlikely that the market value of equity would remain unchanged because of the change in the growth rate of free cash flows and sales revenue, and the change in the risk situation due to the changes in the business and financial risks of the new business.

In estimating the asset beta of Coeden Co as offering hotel services only, no account is taken of the changes in business risk due to renting rather than owning the hotels. A revised asset beta may need to be estimated due to changes in the business risk.

The market value of equity is used to estimate the equity beta and the cost of equity of the business after the implementation of the proposal. But the market value of equity is dependent on the cost of equity, which is, in turn, dependent on the equity beta. Therefore, neither the cost of equity nor the market value of equity is independent of each other and they both will change as a result of the change in business strategy.

(c) Demerger

A demerger would involve the company splitting into two (or more) parts, with each part becoming a separate, independent company. The shareholders would then hold shares in each separate, independent company. Each company would most probably have its own separate management team. On the other hand, selling the hotel properties outright would be termed as a divestment, where a company would sell part of its assets.

Benefits

There are a number of possible benefits in pursuing a demerger option for Coeden Co and its shareholders. The management teams would be able to focus on creating value for each company separately, and create a unique financial structure that is suitable for each company. The full value of each company would become apparent as a result. Coeden Co's shareholders may have invested in the company specifically for its risk profile and selling the properties may imbalance their portfolios. With a demerger, the portfolio diversification remains unchanged. Communication may be stronger between the two management teams with a demerger. Since Coeden Co trades heavily on its brand name, the quality and maintenance of the hotel properties is critical, and good communication links will help ensure that these are safeguarded. However, responsibility for maintenance of the properties will need to be negotiated. Selling a lot of properties all at once may flood the market and lower the value that can be obtained for each hotel property.

Drawbacks

A number of possible drawbacks for Coeden Co and its shareholders may occur if it pursues the option to demerge. The demerger may be an expensive process to undertake and may result in a decline in the value of the companies overall. The bond holders may not agree to 70% of the long-term loans to be transferred to a property company and may ask for the terms of the loans to be re-negotiated. The new property company would need to raise the extra finance to pay the cash for the remaining property values. Coeden Co may not have the expertise amongst its management staff to manage a property company or to recruit an appropriate management team. Overall, the main drawbacks revolve around the additional costs that would probably need to be incurred if the demerger option is pursued.

[Note: Credit will be given for alternative, valid points]

2 Report to the Treasury Division, Lignum Co

Discussion and recommendations for managing the foreign exchange exposure

The report discusses and makes recommendations on how the treasury division may manage the foreign exchange exposure it faces under three unrelated circumstances or cases.

The appendices to the report show the detailed calculations to support the discussion around case one (see appendix I) and around case two (see appendix II).

Foreign exchange exposures

With case one, Lignum Co faces a possible exposure due to the receipt it is expecting in four months in a foreign currency, and the possibility that the exchange rates may move against it between now and in four months time. This is known as transactions exposure. With case two, the exposure is in the form of translation exposure, where a subsidiary's assets are being translated from the subsidiary's local currency into Euro. The local currency is facing an imminent depreciation of 20%. Finally in the third case, the present value of future sales of a locally produced and sold good is being eroded because of overseas products being sold for a relatively cheaper price. The case seems to indicate that because the US$ has depreciated against the Euro, it is possible to sell the goods at the same dollar price but at a lower Euro price. This is known as economic exposure.

Hedging strategies

Case one

Transactions exposure, as faced by Lignum Co in situation one, lasts for a short while and is easier to manage by means of derivative products or more conventional means. Here Lignum Co has access to two derivative products: an OTC forward rate and OTC option. Using the forward rate gives a higher return of €963,988, compared to options where the return is €936,715 (see appendix I). However, with the forward rate, Lignum Co is locked into a fixed rate (ZP145·23 per €1) whether the foreign exchange rates move in its favour or against it. With the options, the company has a choice and if the rate moves in its favour, that is if the Zupeso appreciates against the Euro, then the option can be allowed to lapse. Lignum Co needs to decide whether it is happy receiving €963,988, no matter what happens to the exchange rate over the four months or whether it is happy to receive at least €936,715 if the ZP weakens against the €, but with a possibility of higher gains if the Zupeso strengthens.

Lignum Co should also explore alternative strategies to derivative hedging. For example, money markets, leading and lagging, and maintaining a Zupeso account may be possibilities. If information on the investment rate in Zupesos could be obtained, then a money market hedge could be considered. Maintaining a Zupeso account may enable Lignum Co to offset any natural hedges and only convert currency periodically to minimise transaction costs.

Case two

Hedging translation risk may not be necessary if the stock market in which Lignum Co's shares are traded is efficient. Translation of currency is an accounting entry where subsidiary accounts are incorporated into the group accounts. No physical cash flows in or out of the company. In such cases, spending money to hedge such risk means that the group loses money overall, reducing the cash flows attributable to shareholders. However, translation losses may be viewed negatively by the equity holders and may impact some analytical trends and ratios negatively. In these circumstances, Lignum Co may decide to hedge the risk.

The most efficient way to hedge translation exposure is to match the assets and liabilities. In Namel Co's case the assets are more exposed to the Maram Ringit compared to the liabilities, hence the weakening of the Maram Ringit from MR35 per €1 to MR42 per €1 would make the assets lose more (accounting) value than the liabilities by €1,018,000 (see appendix II). If the exposure for the assets and liabilities were matched more closely, for example by converting non-current liabilities from loans in Euro to loans in MR, translation exposure would be reduced.

Case three

Economic exposure, which is not part of transactions exposure, is long-term in nature and therefore more difficult to manage. There are for example, few derivatives which are offered over a long period, with the possible exception of swaps. A further issue is that economic exposure may cause a substantial negative impact to a company's cash flows and value over the long period of time. In this situation, if the US$ continues to remain weak against the Euro, then Lignum Co will find it difficult to maintain a sustained advantage against its American competitor. A strategic, long-term viewpoint needs to be undertaken to manage risk of this nature, such as locating production in countries with favourable exchange rates and cheaper raw material and labour inputs or setting up a subsidiary company in the USA to create a natural hedge for the majority of the US$ cash flows.

In conclusion, the report examined, discussed and made recommendations on managing foreign exchange exposure in each of the three cases.

Report compiled by:

Date:

APPENDICES

Appendix I: Financial impact of derivative products offered by Medes Bank (case one)

Using forward rate

Forward rate = 142 x (1 + (0·085 + 0·0025)/3)/(1 + (0·022 – 0·0030)/3) = 145·23
Income in Euro fixed at ZP145·23 = ZP140,000,000/145·23 = €963,988

Using OTC options

Purchase call options to cover for the ZP rate depreciating
Gross income from option = ZP140,000,000/142 = €985,915

Cost

€985,915 x ZP7 = ZP6,901,405
In € = ZP6,901,405/142 = €48,601
€48,601 x (1 + 0·037/3) = €49,200
(Use borrowing rate on the assumption that extra funds to pay costs need to borrowed initially; investing rate can be used if that is the stated preference)

Net income = €985,915 – €49,200 = €936,715

Appendix II: Financial impact of the devaluation of the Maram Ringit (case two)

MR devalued rate = MR35 x 1·20 = MR42 per €1

	MR '000	Exposed?	€ '000 at current rate MR35 per €1	€ '000 at devalued rate MR42 per €1
Non-current assets	179,574	Yes	5,131	4,276
Current assets	146,622	60%	2,514	2,095
Non-current liabilities	(132,237)	20%	(756)	(630)
Current liabilities	(91,171)	30%	(781)	(651)
Share capital and reserves	102,788		6,108	5,090

Translation loss = €6,108,000 – €5,090,000 = €1,018,000

3 (a) Number of Sigra Co shares = 4,400,000/0·4 = 11,000,000 shares
Sigra Co earnings per share (EPS) = $4,950,000/11,000,000 shares = 45c/share
Sigra Co price to earnings (PE) ratio = $3·6/$0·45 = 8

Dentro PE ratio = 8 x 1·125 = 9
Dentro Co shares = $500,000/0·4 = 1,250,000 shares
Dentro Co EPS = $625,000/1,250,000 = 50c/share
Estimate of Dentro Co value per share = $0·5 x 9 = $4·50/share

Cash offer
Dentro share percentage gain under cash offer
$0·50/$4·50 x 100% = 11·1%

Share-for-share exchange

Equity value of Sigra Co = 11,000,000 x $3·60 =	$39,600,000
Equity value of Dentro Co = 1,250,000 x $4·50 =	$5,625,000
Synergy savings = 30% x $5,625,000 =	$1,688,000
Total equity value of combined company	$46,913,000
Number of shares for share-for-share exchange 11,000,000 + [1,250,000 x 3/2] =	12,875,000
Expected share price of combined company	$3·644/share

Dentro share percentage gain under share-for-share offer
[($3·644 x 3 – $4·50 x 2)/2]/$4·50 x 100% = 21·5%

Bond offer
Rate of return

$104 = $6 x $(1 + r)^{-1}$ + $6 x $(1 + r)^{-2}$ + $106 x $(1 + r)^{-3}$

If r is 5%, price is $102·72
If r is 4%, price is $105·55

r is approximately = 4% + (105·55 – 104)/(105·55 – 102·72) x 1% = 4·55%

Price of new bond =
$2 x $1·0455^{-1}$ + $2 x $1·0455^{-2}$ + $102 x $1·0455^{-3}$ = $93·00

Value per share = $93·00/16 = $5·81/share

Dentro share percentage gain under bond offer
Bond offer: ($5·81 – $4·50)/$4·50 x 100% = 29·1%

Comments
An initial comparison is made between the cash and the share-for-share offers. Although the share-for-share exchange gives a higher return compared to the cash offer, Dentro Co's shareholders may prefer the cash offer as the gains in the share price are dependent on the synergy gains being achieved. However, purchase for cash may mean that the shareholders face an immediate tax burden. Sigra Co's shareholders would probably prefer the cash option because the premium would only take $625,000 of the synergy benefits ($0·50 x 1,250,000 shares), whereas a share-for-share exchange would result in approximately $1,209,000 of the synergy benefits being given to the Dentro Co shareholders (21·5% x $4·50 x 1,250,000 shares).

The bond offer provides an alternative which may be acceptable to both sets of shareholders. Dentro Co's shareholders receive the highest return for this and Sigra Co's shareholders may be pleased that a large proportion of the payment is deferred for three years. In present value terms, however, a very high proportion of the projected synergy benefits are given to Dentro Co's shareholders (29·1% x $4·50 x $1,250,000 = $1,637,000).

(b) The regulatory framework within the European Union, the EU takeovers directive, will be used to discuss the proposals. However it is acceptable for candidates to refer to other directives and discuss the proposals on that basis.

Proposal 1
With regards to the first proposal, the directive gives the bidder squeeze-out rights, where the bidder can force minority shareholders to sell their shares. However, the limits set for squeeze-out rights are generally high (UK: 90%; Belgium, France, Germany and the Netherlands: 95%; Ireland 80%). It is likely therefore that Sigra Co will need a very large proportion of Dentro Co's shareholders to agree to the acquisition before they can force the rest of Dentro Co's shareholders to sell their shares. Dentro Co's minority shareholders may also require Sigra Co to purchase their shares, known as sell-out rights.

Proposal 2
With regards to the second proposal, the principle of equal treatment in the directive requires that all shareholders should be treated equally. In general terms, the bidder must offer to minority shareholders the same terms as those offered to other shareholders. It could be argued here that the principle of equal treatment is contravened because later shareholders are not offered the extra 3 cents per share, even though the 30% is less than a majority shareholding. It is highly unlikely that Sigra Co will be allowed to offer these terms.

4 (a) PDur05

Annual sales revenue = \$14 x 300,000 units = \$4,200,000
Annual costs = \$3,230,000
Annual cash flows = \$970,000

Net present value of PDur05 =
(\$2,500,000) + (\$1,200,000 x $1{\cdot}11^{-1}$) + (\$1,400,000 x $1{\cdot}11^{-2}$) + \$970,000 x 7·191 x $1{\cdot}11^{-3}$
= (\$2,500,000) + (\$1,081,000) + (\$1,136,000) + \$5,100,000
= \$383,000

In order for the net present value to fall to nil, the PV of the project's annual cash flows needs to equal to:
\$2,500,000 + \$1,081,000 + \$1,136,000 = \$4,717,000

Annual cash flows need to reduce to: \$4,717,000/(7·191 x $1{\cdot}11^{-3}$) = \$897,110
Sales revenue would reduce to: \$897,110 + \$3,230,000 = \$4,127,110
Selling price would fall to: \$4,127,110/300,000 units = \$13·76
Percentage fall = (\$14·00 – \$13·76)/\$14 x 100% = 1·7%

[Note: The estimate of the annual cash flows will differ if tables are used rather than a calculator. This is acceptable and will be allowed for when marking]

Comment: The net present value of the project is very sensitive to changes in the selling price of the product. A small fall in the selling price would reduce the net present value to nil or negative and make the project not worthwhile.

(b) A multi-period capital rationing model would use linear programming and is formulated as follows:

If:
Y1 = investment in project PDur01; Y2 = investment in project PDur02; Y3 = investment in project PDur03; Y4 = investment in project PDur04; and Y5 = investment in project PDur05

Then the objective is to maximise
464Y1 + 244Y2 + 352Y3 + 320Y4 + 383Y5

Given the following constraints
Constraint year 1: 4,000Y1 + 800Y2 + 3,200Y3 + 3,900Y4 + 2,500Y5 ≤ 9,000
Constraint year 2: 1,100Y1 + 2,800Y2 + 3,562Y3 + 0Y4 + 1,200Y5 ≤ 6,000
Constraint year 3: 2,400Y1 + 3,200Y2 + 0Y3 + 200Y4 + 1,400Y5 ≤ 5,000

And where Y1, Y2, Y3, Y4, Y5 ≥ 0

(c) **Category 1:** Total Final Value. This is the maximum net present value that can be earned within the three-year constraints of capital expenditure, by undertaking whole, part or none of the five projects. This amount is less than the total net present value of all five projects if there were no constraints.

Category 2: Adjustable Final Values. These are the proportions of projects undertaken within the constraints to maximise the net present value. In this case, all of project PDur05, 95·8% of project PDur01, 73·2% of project PDur03 and 40·7% of project PDur02 will be undertaken.

Category 3: Constraints utilised, slack. This indicates to what extent the constraint limits are used and whether any investment funds will remain unused. The figures indicate that, in order to achieve maximum net present value, all the funds in all three years are used up and no funds remain unused.

(d) **(i)** Normally, positive net present value projects should be accepted as they add to the value of the company by generating returns in excess of the required rate of return (the discount rate). However, in this case, Arbore Co seems to be employing soft capital rationing by setting internal limits on capital available for each department, possibly due to capital budget limits placed by the company on the amounts it wants to borrow or can borrow. In the latter case, the company faces limited access to capital from external sources, for example, because of restrictions in bank lending, costs related to the issue of new capital and lending to the company being perceived as too risky. This is known as hard capital rationing and can lead to soft capital rationing.

(ii) A capital investment monitoring system (CIMS) monitors how an investment project is progressing once it has been implemented. Initially the CIMS will set a plan and budget of how the project is to proceed. It sets milestones for what needs to be achieved and by when. It also considers the possible risks, both internal and external, which may affect the project. CIMS then ensures that the project is progressing according to the plan and budget. It also sets up contingency plans for dealing with the identified risks.

The benefits, to Arbore Co, of CIMS are that it tries to ensure, as much as possible, that the project meets what is expected of it in terms of revenues and expenses. Also that the project is completed on time and risk factors that are identified remain valid. A critical path of linked activities which make up the project will be identified. The departments undertaking the projects will be proactive, rather than reactive, towards the management of risk, and therefore possibly be able to reduce costs by having a better plan. CIMS can also be used as a communication device between managers charged with managing the project and the monitoring team. Finally CIMS would be able to re-assess and change the assumptions made of the project, if changes in the external environment warrant it.

5 (Solution note: The following answer for question 5 is indicative. Credit will be given for alternative, valid points.)

(a) The role of the IMF is to oversee the global financial systems, in particular to stabilise international exchange rates, help countries to achieve balance of payments and facilitate in the country's development through influencing the economic policies of the country in question. Where necessary, it offers temporary loans, from member states' deposits, to countries facing severe financial and economic difficulties. These temporary loans are often offered with different levels of conditions or austerity measures.

The IMF believes that in order to regain control of the balance of payments, the country should take action to reduce the level of demand for goods and services. To achieve this, the IMF often requires countries to adopt strict austerity measures such as reducing public spending and increased taxation, as conditions of the loan. It believes these conditions will help control the inflationary pressures on the economy, and reduce the demand for goods and services. As a result, this will help the country to move away from a position of a trade deficit and achieve control of its balance of payments.

However, these deflationary pressures may cause standards of living to fall and unemployment to rise. The IMF regards these as short-term hardships necessary to help countries sort out their balance of payment difficulties and international debt problems. The IMF has faced a number of criticisms for the conditions it has imposed, including the accusation that its policies impact more negatively on people with lower or mid-range incomes, hinder long-term development and growth, and possibly result in a continuous downward spiral of economic activity.

Strom Co trades throughout Europe and economic activity in these countries has been curtailed in the last few years due, initially, to the banking crisis, and then due to the austerity measures that governments have adopted. For retailers, this could pose two possible problems. First, with limited growth and higher taxes, people would have less money to spend. Secondly, increasing levels of unemployment would also limit disposable incomes. It is possible that customers may have curtailed their expenditure on clothes and clothing accessories in order to meet other needs.

Some companies may have to spend proportionally more on marketing and possibly offer more discounts and other customer incentives in order to stay competitive and to maintain market share. This additional cost would hit their profit levels negatively. From the details in the question, it is evident that in 2011 profits have reduced by more than the fall in sales revenue. This could be due to Strom Co being forced to spend more on activities such as marketing or it could be because it has found it difficult to reduce its cost base. More analysis is needed to determine the exact cause.

It seems that Strom Co is trying to address the problem of declining profitability by trimming its costs. In circumstances where sales revenues are declining, and it is not possible to stabilise or increase these, then cost structures may need to be altered in order to make reasonable profits.

(b) The low-price clothing retailers might have benefited from the austerity measures because of a switch by customers from mid-price clothes to low-price clothes. If, due to the austerity measures, people have less money to spend, and if, as stated above, austerity measures impact the mid-income and low-income earners more negatively, then it is possible that their buying preferences change from mid-price to low-price clothes. This would be especially true if there is limited brand loyalty and customers perceive that the low-price items are of a similar quality or provide a better value-for-money.

On the other hand, it is possible that brand loyalty is more significant with high-price clothes, making switching to mid-price clothes difficult. Customers who buy these clothes may prefer not to switch and would rather spend less elsewhere. It is also possible that the austerity measures did not affect the population who buy high-price clothes to the same extent as other groups of the population. Or it may be that this population group is more resilient to the austerity measures imposed by the government, especially if the assertion is true that the IMF conditions affect people who are in the low or mid income categories more than the people in the high income category.

(c) The obvious risk in reducing resources allocated to the quality control functions would be that some inspections would be reduced. This may result in defective goods being sold. The costs related to processing returns of defective goods may outweigh the savings made. Reduction in monitoring the working conditions of employees of the clothing suppliers may encourage them to retain their questionable employment practices. This may compromise the company's ethical stance and standards.

The less obvious, but more significant, risk is the impact that unethical labour practices and working conditions may have on the reputation of the company and its products. Potentially, lower quality and defective clothes could seriously harm the company's reputation and result in lower sales revenue over a long period of time. Once damaged, such reputation would be hard to rebuild. The damage in reputation of the company regarding its ethical stance could also be potentially disastrous. Different stakeholder groups could react in negative ways, for example, customers may switch their custom, investors may sell their shares and the press may run negative campaigns against the company. The consequences of such damage could be long term and sometimes permanent.

Strom Co will need to review where and how resources are allocated in order to decrease or minimise the detrimental impact of a reduction in the quality control costs. For example, savings could be made by eliminating duplicated quality control processes or eliminating processes that are not necessary. Strom Co should also evaluate whether alternative, less resource intensive processes and procedures can be implemented without compromising the quality control and monitoring of working conditions. Experts should be used to undertake the assessment. Critical processes and procedures should be retained even if they require significant resources. The risk of making errors in the assessment should be evaluated and discussed at a senior level to ensure that Strom Co is comfortable with undertaking the likely risk.

				Marks
1	**(a)**	**Prior to implementation of proposal**		
		Cost of equity		1
		Cost of debt		1
		Market value of debt		2
		Market value of equity		3
		Cost of capital		1
		After implementing the proposal		
		Coeden Co's current asset beta		1
		Asset beta of hotel services business only		2
		Equity beta of hotel services business only		2
		Cost of equity		1
		Cost of capital		1
		Assumptions (1–2 marks per explained assumption, award marks for reasonable alternative assumptions not in the model answer)		2–3
		Comments		2–3
			Max	**20**
	(b)	Discussion (1–2 marks per point)		**5**
	(c)	Explanation of a demerger		2–3
		Benefits		2–3
		Drawbacks		2–3
			Max	**8**
			Total	**33**
2		**Requirement (i)**		
		1 mark per exposure explained		**3**
		Requirement (ii)		
		Calculation of forward rate		1
		Calculation of income using the forward rate		1
		Calculation of cash flows using option contracts		3
		Discussion of relative merits of forwards and options		2–3
		Discussion of alternative hedging possibilities and conclusion		1–2
			Max	**9**
		Requirement (iii)		
		Calculation of devalued rate		1
		Calculation of translation loss		3
		Discussion of whether risk of translation loss should be managed		2–3
		Discussion of how risk of translation loss should be managed		1–2
			Max	**8**
		Requirement (iv)		
		1 mark per point		**3**
		Professional Marks		
		Structure and presentation of report		**4**
			Total	**27**

				Marks
3	**(a)**	Calculation of Sigra Co PE ratio		2
		Calculation of Dentro Co share value		2
		Calculation of percentage gain under cash offer		1
		Total equity value of combined company		1
		Estimate of per share value of combined company		1
		Calculation of percentage gain under share-for-share offer		1
		Estimation of bond required rate of return		2
		Estimation of value per share under bond offer		2
		Calculation of percentage gain under bond offer		1
		Comments (1 mark per relevant point)		3–4
			Max	**16**
	(b)	Discussion of each proposal (2 marks per proposal)		**4**
			Total	**20**
4	**(a)**	Calculation of project PDur05 net present value		2
		Calculation of percentage fall of selling price		3
		Comment		1
				6
	(b)	Formulation of objective function		1
		Formulation of constraints		2
				3
	(c)	Category 1		1
		Category 2		2
		Category 3		2
				5
	(d)	**(i)** Explaining the need for capital rationing		**2**
		(ii) Explanation of the features of a capital investment monitoring system		1–2
		Benefits of maintaining a capital investment monitoring system (1 mark per benefit)		2–3
			Max	**4**
			Total	**20**
5	**(a)**	Explanation of the role and aims of the IMF		5–6
		Reasons for austerity measures affecting Strom Co negatively		4–5
			Max	**10**
	(b)	Suggestion(s) for not affecting low-price retailers		2
		Suggestion(s) for not affecting high-price retailers		2
				4
	(c)	Discussion of the risks		3–4
		Reduction of the detrimental impact		2–3
			Max	**6**
			Total	**20**