Answers

1 (a) Risk diversification, especially into diverse business sectors, has often been stated as a reason for undertaking mergers and acquisitions (M&As). Like individuals holding well-diversified portfolios, a company with a number of subsidiaries in different sectors could reduce its exposure to unsystematic risk. Another possible benefit of diversification is sometimes argued to be a reduction in the volatility of cash flows, which may lead to a better credit rating and a lower cost of capital.

The argument against this states that since individual investors can undertake this level of risk diversification both quickly and cheaply themselves, there is little reason for companies to do so. Indeed, research suggests that markets do not reward this risk diversification.

Nevertheless, for Nahara Co, undertaking M&As may have beneficial outcomes, especially if the sovereign fund has its entire investment in the holding company and is not well-diversified itself. In such a situation unsystematic risk reduction can be beneficial. The case study does not state whether or not the sovereign funds are invested elsewhere and therefore a definitive conclusion cannot be reached.

If Nahara Co is able to identify undervalued companies and after purchasing the company can increase the value for the holding company overall, by increasing the value of the undervalued companies, then such M&As activity would have a beneficial impact on the funds invested. However, for this strategy to work, Nahara Co must:

(i) Possess a superior capability or knowledge in identifying bargain buys ahead of its competitor companies. To achieve this, it must have access to better information, which it can tap into quicker, and/or have superior analytical tools. Nahara Co should assess whether or not it does possess such capabilities, otherwise its claim is not valid;

(ii) Ensure that it has quick access to the necessary funds to pursue an undervalued acquisition. Even if Nahara Co possesses superior knowledge, it is unlikely that this will last for a long time before its competitors find out; therefore it needs to have the funds ready, to move quickly. Given that it has access to sovereign funds from a wealthy source, access to funds is probably not a problem;

(iii) Set a maximum ceiling for the price it is willing to pay and should not go over this amount, or the potential value created will be reduced.

If, in its assessment, Nahara Co is able to show that it meets all the above conditions, then the strategy of identifying and pursuing undervalued companies may be valid.

(b) In a similar manner to the Competition and Markets Authority in the UK, the European Union (EU) will assess significant mergers and acquisitions' (M&As) impact on competition within a country's market. It will, for example, use tests such as worldwide turnover and European turnover of the group after the M&A. It may block the M&A, if it feels that the M&A will give the company monopolistic powers or enable it to carve out a dominant position in the market so as to negatively affect consumer choice and prices.

Sometimes the EU may ask for the company to sell some of its assets to reduce its dominant position rather than not allow an M&A to proceed. It would appear that this may be the case behind the EU's concern and the reason for its suggested action.

(c) Report to the Board of Directors, Avem Co

Proposed acquisition of Fugae Co

This report evaluates whether or not it is beneficial for Avem Co to acquire Fugae Co. Initially the value of the two companies is determined separately and as a combined entity, to assess the additional value created from bringing the two companies together. Following this, the report considers how much Nahara Co and Avem Co will gain from the value created. The assumptions made to arrive at the additional value are also considered. The report concludes by considering whether or not the acquisition will be beneficial to Avem Co and to Nahara Co.

Appendix 1 shows that the additional value created from combining the two companies is approximately $451·5 million, of which $276·8 million will go to Nahara Co, as the owner of Fugae Co. This represents a premium of about 30% which is the minimum acceptable to Nahara Co. The balance of the additional value will go to Avem Co which is about $174·7 million, representing an increase in value of 1·46% [$174·7m/$12,000m].

Appendix 2 shows that accepting the project would increase Fugae Co's value as the expected net present value is positive. After taking into account Lumi Co's offer, the expected net present value is higher. Therefore, it would be beneficial for Fugae Co to take on the project and accept Lumi Co's offer, if the tourism industry does not grow as expected, as this will increase Fugae Co's value.

Assumptions

It is assumed that all the figures relating to synergy benefits, betas, growth rates, multipliers, risk adjusted cost of capital and the probabilities are accurate. There is considerable uncertainty surrounding the accuracy of these, and in addition to the probability analysis conducted in appendix 2 and the assessments of value conducted in appendix 1, a sensitivity analysis is probably needed to assess the impact of these uncertainties.

It is assumed that the rb model provides a reasonably good estimate of the growth rate, and that perpetuity is not an unreasonable assumption when assessing the value of Fugae Co.

It is assumed that the capital structure would not change substantially when the new project is taken on. Since the project is significantly smaller than the value of Fugae Co itself, this is not an unreasonable assumption.

When assessing the value of the project, the outcomes are given as occurring with discrete probabilities and the resulting cash flows from the outcomes are given with certainty. There may be more outcomes in practice than the ones given and financial impact of the outcomes may not be known with such certainty. The Black-Scholes Option Pricing model may provide an alternative and more accurate way of assessing the value of the project.

It is assumed that Fugae Co can rely on Lumi Co paying the $50m at the beginning of year two with certainty. Fugae Co may want to assess the reliability of Lumi Co's offer and whether formal contracts should be drawn up between the two companies. Furthermore, Lumi Co may be reluctant to pay the full amount of money once Fugae Co becomes a part of Avem Co.

Concluding comments
Although Nahara Co would gain more than Avem Co from the acquisition both in percentage terms and in monetary terms, both companies benefit from the acquisition. If Fugae Co were to take on the project, although it is value-neutral to the acquisition, Nahara Co could ask for an additional 30% of $12·3 million value to be transferred to it, which is about $3·7 million. Hence the return to Avem Co would reduce by a small amount, but not significantly.

As long as all the parties are satisfied that the value is reasonable despite the assumptions highlighted above, it would appear that the acquisition should proceed.

Report compiled by:

Date:

Appendices

Appendix 1: Additional value created from combining Avem Co and Fugae Co

Avem Co, current value = $7·5/share x 1,600 million shares = $12,000m
Avem Co, free cash flow to equity = $12,000 million/7·2 = $1,666·7m

The growth rate is calculated on the basis of the rb model.
Fugae Co, estimate of growth rate = 0·227 x 0·11 = 0·025 = 2·5%
Fugae Co, current value estimate = $76·5 million x 1·025/(0·11 – 0·025) = $922·5m

Combined company, estimated additional value created =
([$1,666·7m + $76·5m + $40m] x 7·5) – ($12,000m + $922·5m) = $451·5m

Gain to Nahara for selling Fugae Co, 30% x $922·5m = $276·8m

Avem Co will gain $174·7 million of the additional value created, $451·5m – $276·8m = $174·7m

Appendix 2: Value of project to Fugae Co

Appendix 2.1
Estimate of risk-adjusted cost of capital to be used to discount the project's cash flows

The project value is calculated based on its cash flows which are discounted at the project's risk adjusted cost of capital, to reflect the business risk of the project.

Reka Co's asset beta
Reka Co equity value = $4·50 x 80 million shares = $360m
Reka Co debt value = 1·05 x $340 million = $357m
Asset beta = 1·6 x $360m/($360m + $357m x 0·8) = 0·89

Project's asset beta (PAB)
0·89 = PAB x 0·15 + 0·80 x 0·85
PAB = 1·4

Fugae Co
MVe = $922·5m

MVd
Cost of debt = Risk free rate of return plus the credit spread
= 4% + 0·80% = 4·80%

Current value of a $100 bond: $5·4 x $1·048^{-1}$ + $5·4 x $1·048^{-2}$ + $5·4 x $1·048^{-3}$ + $105·4 x $1·048^{-4}$ = $102·14 per $100
MVd = 1·0214 x $380m = $388·1m

Project's risk adjusted equity beta
1·4 x ($922·5m + $388·1m x 0·8)/$922·5m = 1·87

Project's risk adjusted cost of equity
4% + 1·87 x 6% = 15·2%

Project's risk adjusted cost of capital
(15·2% x $922·5m + 4·8% x 0·8 x $388·1m)/($922·5m + $388·1m) = 11·84%, say 12%

Appendix 2.2

Estimate of expected value of the project without the offer from Lumi Co

(All amounts in $, 000s)

Year	1	2	3	4
Cash flows	3,277·6	16,134·3	36,504·7	35,683·6
Discount factor for 12%	0·893	0·797	0·712	0·636
Present values	2,926·9	12,859·0	25,991·3	22,694·8

Probabilities are assigned to possible outcomes based on whether or not the tourism market will grow. The expected net present value (PV) is computed on this basis.

PV year 1: $2,926,900

50% of PV years 1 to 4: $32,236,000

PV years 2 to 4: $61,545,100
40% PV years 2 to 4: $24,618,040

Expected present value of cash flows = [0·75 x (2,926,900 + (0·8 x 61,545,100 + 0·2 x 24,618,040))] + [0·25 x 32,236,000]
= [0·75 x (2,926,900 + 54,159,688)] + [0·25 x 32,236,000] = 42,814,941 + 8,059,000 = $50,873,941

Expected NPV of project = $50,873,941 – $42,000,000 = $8,873,941

Estimate of expected value of the project with the offer from Lumi Co

PV of $50m = $50,000,000 x 0·893 = $44,650,000

If the tourism industry does not grow as expected in the first year, then it is more beneficial for Fugae Co to exercise the offer made by Lumi Co, given that Lumi Co's offer of $44·65 million (PV of $50 million) is greater than the PV of the years two to four cash flows ($30·8 million approximately) for that outcome. This figure is then incorporated into the expected net present value calculations.

50% of year 1 PV: $1,463,450

Expected present value of project =
[0·75 x (2,926,900 + 54,159,688)] + [0·25 x (1,463,450 + 44,650,000)] = 42,814,941 + 11,528,363 = $54,343,304

Expected NPV of project = $54,343,304 – $42,000,000 = $12,343,304

(Note: Credit will be given for alternative, relevant approaches to the calculations, comments and suggestions/recommendations)

2 (a) Using traded options

Need to hedge against a rise in interest rates, therefore buy put options.
Keshi Co needs 42 March put option contracts ($18,000,000/$1,000,000 x 7 months/3 months).

Expected futures price on 1 February if interest rates increase by 0·5% =
100 – (3·8 + 0·5) – 0·22 = 95·48

Expected futures price on 1 February if interest rates decrease by 0·5% =
100 – (3·8 – 0·5) – 0·22 = 96·48

If interest rates increase by 0·5% to 4·3%

Exercise price	95·50	96·00
Futures price	95·48	95·48
Exercise?	Yes	Yes
Gain in basis points	2	52
Underlying cost of borrowing		
4·7% x 7/12 x $18,000,000	$493,500	$493,500
Gain on options		
0·0002 x $1,000,000 x 3/12 x 42	$2,100	
0·0052 x $1,000,000 x 3/12 x 42		$54,600
Premium		
0·00662 x $1,000,000 x 3/12 x 42	$69,510	
0·00902 x $1,000,000 x 3/12 x 42		$94,710
Net cost	$560,910	$533,610
Effective interest rate	5·34%	5·08%

If interest rates decrease by 0·5% to 3·3%

Exercise price	95·50	96·00
Futures price	96·48	96·48
Exercise?	No	No
Gain in basis points	0	0
Underlying cost of borrowing		
3·7% x 7/12 x $18,000,000	$388,500	$388,500
Gain on options	$0	$0
Premium	$69,510	$94,710
Net cost	$458,010	$483,210
Effective interest rate	4·36%	4·60%

Using swaps

	Keshi Co	Rozu Bank offer	Basis differential
Fixed rate	5·5%	4·6%	0·9%
Floating rate	LIBOR + 0·4%	LIBOR + 0·3%	0·1%

Prior to the swap, Keshi will borrow at LIBOR + 0·4% and swaps this rate to a fixed rate. Total possible benefit is 0·8% before Rozu Bank's charges.

Keshi Co borrows at	LIBOR + 0·4%
From swap Keshi Co receives	LIBOR
Keshi Co gets 70% of the benefit	
Advantage (70% x 0·8 – 0·10)	0·46%
Keshi Co's effective borrowing rate (after swap)	5·04%

Alternatively (Swap)

From swap Keshi Co receives	LIBOR
Keshi Co pays	4·54%
Effective borrowing rate (as above)	4·54% + 0·4% + 0·10% = 5·04%

Discussion and recommendation

Under each choice the interest rate cost to Keshi Co will be as follows:

	Doing nothing	95·50 option	96·00 option	Swap
If rates increase by 0·5%	4·7% floating; 5·5% fixed	5·34%	5·08%	5·04%
If rates decrease by 0·5%	3·7% floating; 5·5% fixed	4·36%	4·60%	5·04%

Borrowing at the floating rate and undertaking a swap effectively fixes the rate of interest at 5·04% for the loan, which is significantly lower than the market fixed rate of 5·5%.

On the other hand, doing nothing and borrowing at the floating rate minimises the interest rate at 4·7%, against the next best choice which is the swap at 5·04% if interest rates increase by 0·5%. And should interest rates decrease by 0·5%, then doing nothing and borrowing at a floating rate of 3·7% minimises cost, compared to the next best choice which is the 95·50 option.

On the face of it, doing nothing and borrowing at a floating rate seems to be the better choice if interest rates increase or decrease by a small amount, but if interest rates increase substantially then this choice will no longer result in the lowest cost.

The swap minimises the variability of the borrowing rates, while doing nothing and borrowing at a floating rate maximises the variability. If Keshi Co wants to eliminate the risk of interest rate fluctuations completely, then it should borrow at the floating rate and swap it into a fixed rate.

(b) Free cash flows and therefore shareholder value are increased when corporate costs are reduced and/or income increased. Therefore, consideration should be given to how the centralised treasury department may reduce costs and increase income.

The centralised treasury department should be able to evaluate the financing requirements of Keshi Co's group as a whole and it may be able to negotiate better rates when borrowing in bulk. The department could operate as an internal bank and undertake matching of funds. Therefore it could transfer funds from subsidiaries which have spare cash resources to ones which need them, and thus avoid going into the costly external market to raise funds. The department may be able to undertake multilateral internal netting and thereby reduce costs related to hedging activity. Experts and resources within one location could reduce duplication costs.

The concentration of experts and resources within one central department may result in a more effective decision-making environment and higher quality risk monitoring and control. Further, having access to the Keshi Co group's entire cash funds may give the company access to larger and more diverse investment markets. These factors could result in increasing the company's cash inflows, as long as the benefits from such activity outweigh the costs.

Decentralising Keshi Co's treasury function to its subsidiary companies may be beneficial in several ways. Each subsidiary company may be better placed to take local regulations, custom and practice into consideration. An example of custom and

practice is the case of Suisen Co's need to use Salam contracts instead of conventional derivative products which the centralised treasury department may use as a matter of course.

Giving subsidiary companies more autonomy on how they undertake their own fund management may result in increased motivation and effort from the subsidiary's senior management and thereby increase future income. Subsidiary companies which have access to their own funds may be able to respond to opportunities quicker and establish competitive advantage more effectively.

(c) Islamic principles stipulate the need to avoid uncertainty and speculation. In the case of Salam contracts, payment for the commodity is made at the start of the contract. The buyer and seller of the commodity know the price, the quality and the quantity of the commodity and the date of future delivery with certainty. Therefore, uncertainty and speculation are avoided.

On the other hand, futures contracts are marked-to-market daily and this could lead to uncertainty in the amounts received and paid everyday. Furthermore, standardised futures contracts have fixed expiry dates and pre-determined contract sizes. This may mean that the underlying position is not hedged or covered completely, leading to limited speculative positions even where the futures contracts are used entirely for hedging purposes. Finally, only a few commodity futures contracts are offered to cover a range of different quality grades for a commodity, and therefore price movement of the futures market may not be completely in line with the price movement in the underlying asset.

(Note: Credit will be given for alternative, relevant discussion for parts (b) and (c))

3 (a) A free trade area like the European Union (EU) aims to remove barriers to trade and allow freedom of movement of production resources such as capital and labour. The EU also has an overarching common legal structure across all member countries and tries to limit any discriminatory practice against companies operating in these countries. Furthermore, the EU erects common external barriers to trade against countries which are not member states.

Riviere Co may benefit from operating within the EU in a number of ways as it currently trades within it. It should find that it is able to compete on equal terms with rival companies within the EU. Companies outside the EU may find it difficult to enter the EU markets due to barriers to trade. A common legal structure should ensure that the standards of food quality and packaging apply equally across all the member countries. Due diligence of logistic networks used to transport the food may be easier to undertake because of common compliance requirements. Having access to capital and labour within the EU may make it easier for the company to set up branches inside the EU, if it wants to. The company may also be able to access any grants which are available to companies based within the EU.

(b) **Project Drugi**

Internal rate of return (IRR)
10% NPV: €2,293,000 approximately

Year	Current	1	2	3	4	5
Cash flows (€000s)	(11,840)	1,230	1,680	4,350	10,240	2,200
Try 20%		0·833	0·694	0·579	0·482	0·402
	(11,840)	1,025	1,166	2,519	4,936	884

NPV = €(1,310,000)

IRR = 10% + 2,293/(2,293 + 1,310) x 10% approximately = 16·4%

Modified internal rate of return (MIRR)
Total PVs years 1 to 5 at 10% discount rate = €11,840,000 + €2,293,000 = €14,133,000

MIRR (using formula) = $[(14{,}133/11{,}840)^{1/5} \times 1{\cdot}10] - 1 = 14\%$

Alternatively:

Year	Cash flows (€000s)	Multiplier	Re-invested amount (€000s)
1	1,230	$1{\cdot}1^4$	1,801
2	1,680	$1{\cdot}1^3$	2,236
3	4,350	$1{\cdot}1^2$	5,264
4	10,240	$1{\cdot}1^1$	11,264
5	2,200	1	2,200

Total re-invested amount approx. = €22,765,000
MIRR = $(€22{,}765{,}000/€11{,}840{,}000)^{1/5} - 1 = 14\%$

Value at risk (VAR)
Based on a single tail test:

A 95% confidence level requires the annual present value VAR to be within approximately 1·645 standard deviations from the mean.

A 90% confidence level requires annual present value VAR to be within approximately 1·282 standard deviations from the mean.

(**Note:** *An approximation of standard deviations to two decimal places is acceptable*)

95%, five-year present value VAR = $400,000 x 1·645 x $5^{0·5}$ = approx. €1,471,000
90%, five-year present value VAR = $400,000 x 1·282 x $5^{0·5}$ = approx. €1,147,000

	Privi	Drugi
Net present value (10%)	€2,054,000	€2,293,000
Internal rate of return	17·6%	16·4%
Modified internal rate of return	13·4%	14·0%
VAR (over the project's life)		
95% confidence level	€1,103,500	€1,471,000
90% confidence level	€860,000	€1,147,000

The net present value and the modified internal rate of return both indicate that project Drugi would create more value for Riviere Co. However, the internal rate of return (IRR) for project Privi is higher. Where projects are mutually exclusive, the IRR can give an incorrect answer. This is because the IRR assumes that returns are re-invested at the internal rate of return, whereas net present value and the modified IRR assume that they are re-invested at the cost of capital (discount rate) which in this case is 10%. The cost of capital is a more realistic assumption as this is the minimum return required by investors in a company. Furthermore, the manner in which the cash flows occur will have a bearing on the IRR calculated. For example, with project Drugi, a high proportion of the cash flows occur in year four and these will be discounted by using the higher IRR compared to the cost of capital, thus reducing the value of the project faster. The IRR can give the incorrect answer in these circumstances. Therefore, based purely on cash flows, project Drugi should be accepted due to the higher net present value and modified IRR, as they give the theoretically correct answer of the value created.

The VAR provides an indication of the potential riskiness of a project. For example, if Riviere Co invests in project Drugi then it can be 95% confident that the present value will not fall by more than €1,471,000 over its life. Hence the project will still produce a positive net present value. However, there is a 5% chance that the loss could be greater than €1,471,000. With project Privi, the potential loss in value is smaller and therefore it is less risky. It should be noted that the VAR calculations indicate that the investments involve different risk. However, the cash flows are discounted at the same rate, which they should not be, since the risk differs between them.

Notwithstanding that, when risk is also taken into account, the choice between the projects is not clear cut and depends on Riviere Co's attitude to risk and return. Project Drugi gives the higher potential net present value but is riskier, whereas project Privi is less risky but gives a smaller net present value. This is before taking into account additional uncertainties such as trading in an area in which Riviere Co is not familiar. It is therefore recommended that Riviere Co should only proceed with project Drugi if it is willing to accept the higher risk and uncertainty.

(c) Possible legal risks

There are a number of possible legal risks which Riviere Co may face, for example:

- The countries where the product is sold may have different legal regulations on food preparation, quality and packaging. The company needs to ensure that the production processes and the transportation of the frozen foods comply with these regulations. It also needs to ensure that the promotional material on the packaging complies with regulations in relation to what is acceptable in each country.
- The legal regulations may be more lax in countries outside the EU but Riviere Co needs to be aware that complying only with the minimum standards may impact its image negatively overall, even if they are acceptable in the countries concerned.
- There may be import quotas in the countries concerned or the governments may give favourable terms and conditions to local companies, which may make it difficult for Riviere Co to compete.
- The legal system in some countries may not recognise the trademarks or production patents which the company holds on its packaging and production processes. This may enable competitors to copy the food and the packaging.
- Different countries may have different regulations regarding product liability from poorly prepared and/or stored food which cause harm to consumers. For example, Riviere Co may use other companies to transport its food and different supermarkets may sell its food. It needs to be aware of the potential legal claims on it and its supplier should the food prove harmful to the customers.

Possible mitigation strategies

- Riviere Co needs to undertake sufficient research of the countries' current laws and regulations to ensure that it complies with the standards required. It may even want to ensure that it exceeds the required standards to ensure that it maintains its reputation.
- Riviere Co needs to ensure that it also keeps abreast of potential changes in the law. It may also want to ensure that it complies with best practice, even if it is not the law yet. Often current best practices become enshrined in future legislation.

– Riviere Co needs to investigate the extent to which it may face difficulty in overcoming quota restrictions, less favourable trading conditions and lack of trademark and patent protection. If necessary, these should be factored into the financial analysis. It could be that Riviere Co has already taken these into account.

– Strict contracts need to be set up between Riviere Co and any agents it uses to transport and sell the food. These could be followed up by regular checks to ensure that the standards required are maintained.

– All the above will add extra costs and if these have not been included in the financial analysis, they need to be. These extra costs may mean that the project is no longer viable.

(Note: Credit will be given for alternative, relevant discussion for parts (a) and (c))

4 (a) Advantages of EVA™

The cost of capital indicates the minimum value which is required by the investors of a company and therefore any positive economic profit greater than the cost of capital times the capital employed should result in an increase in value for the investors. If the debt holders are paid a fixed return, then all the additional value created will go to the shareholders. EVA™ focuses on creating shareholder value.

Capital is needed for investment purposes to create value and EVA™ recognises this when it takes into account the capital employed.

EVA™ captures performance into a single figure, which if positive should increase shareholder value. Ratios on the other hand may require various different targets to be set.

EVA™ is based on the residual income value principle and therefore it is relatively easy to understand. An EVA™ trend would give an indication of how the company is creating value over a number of years.

Drawbacks of EVA™

EVA™ is an annual measure and therefore it is relatively easy to manipulate. Short-term projects with early redemption but low yields may be chosen to the detriment of longer term, high yield projects which may not show immediate high returns. Focusing on annual EVA™ figures may make the company's managers adopt a short-term attitude and this may be to the detriment of the company's long-term success. Paying attention to EVA™ trends instead may reduce or eliminate this drawback.

Furthermore, EVA™ is an absolute measure, making comparison between companies in different industrial sectors more difficult.

(b) EVA™ calculation: Kamala Co

	30 November 2013 $m	30 November 2014 $m
Operating profit	819	1,098
Add: Depreciation	826	1,150
Less: Economic depreciation	(990)	(1,380)
Add: Non-cash expenses	150	170
Taxation excluding finance costs: 2013: 25% x $819m and 2014 25% x $1,098m	(205)	(275)
Economic profit	600	763
Capital employed: 2013: $1,484m + $2,226m; 2014: $2,184m + $2,577m + $616m	3,710	5,377
10% x capital employed	371	538
EVA™	229	225

(c) Additional ratio trends: Kamala Co

	2012	2013	2014	
Return on capital employed	19·2%	17·2%	16·7%	Operating profit/cap employed
Asset turnover	1·01	0·85	0·79	Sales revenue/cap employed
Current ratio	0·80	0·65	0·63	Current assets/current liabilities
Current ratio without bank overdraft (o/d)	0·80	0·92	0·93	(Current assets – bank o/d)/current liabilities
Gearing with bank o/d	40%	52%	60%	(NCL + bank o/d)/(equity + NCL + bank o/d)
Kamala Co PE ratio	11·0:1	12·3:1	13·0:1	Share price/earnings per share
Kamala Co dividend yield	2·7%	2·3%	1·9%	Dividend per share/share price

Activity trends

	Construction %	Hospitals and biomedical %
Profit margin		
2012	19·0%	19·0%
2013	18·5%	23·4%
2014	18·9%	25·8%
Average annual growth: Sales revenue	23·0%	8·2%
Average annual growth: Operating profit	22·7%	26·3%

Share price and indices analysis

	%
Kamala Co: Average annual share price growth	26·2
Market index: Average annual growth	20·1
Industry index: Average annual growth	30·1

Evaluation

A number of ratios and the EVA™ figures support the CEO's assertions. The EVA™ shows that positive value is created in both years and these lend support to the increase in the share price, and this increase in the share price (26·2% annually over the last two years) has grown more rapidly than the market index (20·1% annually over the same period). There is a steady growth in the sales revenue, profit margin, earnings per share and dividend cover, together with significant investment in non-current assets, which seems to indicate a successful company. If the bank overdraft is not included, the current ratio has been improving as well.

On the other hand, there are a number of indicators which suggest that perhaps Kamala Co's investment strategy may be flawed. Even though the economic profit between 2013 and 2014 has increased, the EVA™ in 2014 is less than the EVA™ in 2013. This is because there has been a substantial investment in non-current assets. This is also evidenced by a decline in the asset turnover ratio. Less sales revenue is being generated for every $ invested, leading to a decline in the return on capital employed, even though there has been a small increase in the profit margin in the three-year period.

It may be that Kamala Co is making substantial investment now for deferred benefits in the future, but the markets do not seem to be convinced. In 2012, Kamala Co's price to earnings (PE) ratio was greater than the industry sector's average PE ratio (11·0 against 9·2), but by 2014 it was lower (13·0 against 15·3). The share price growth has also been lower at 26·2% on average annually, compared to the industry's index growth of 30·1% on average annually. Furthermore, the fall in dividend yield between 2012 and 2014 from 2·7% to 1·9% may not be viewed positively by equity holders, possibly leading to a less robust share price growth.

It seems that Kamala Co is making substantial investments in its construction activity (23% annual sales revenue growth) but significantly less in the hospitals and biomedical activity (8·2% annual sales revenue growth). However, the profit margin of the hospitals and biomedical research activity has grown faster, from 19% to 25·8%, compared to the construction activity, which has remained static at between 18·5% and 19%. The markets seemed to have viewed this in a less positive light, especially since the CEO stated that the company wanted to make further investment in an acquisition in the construction activity in 2015.

The financing strategy of Kamala Co is also problematic. There seems to be a higher reliance on debt as a finance source, with no fresh issues of equity between 2012 and 2014. Book value gearing has increased from 40% to 54% from 2012 to 2014. If the overdraft is added to gearing, based on the assumption that it is being used as a long-term source of finance, then the increase is even more pronounced, increasing from 40% to 60% in the same period. It seems that Kamala Co is continuing to carry on with this policy in the future as well, because it wants to acquire a new company using mostly debt finance, by issuing a new bond, with only a small rights issue. This may lead to an increase in financial risk, putting further pressure on the share price.

In conclusion, Kamala Co has been pursuing growth through debt finance. This may increase its financial risk but it is difficult to say for sure. If the industry's norm is to have higher debt levels, then the financial strategy may be acceptable. However, the investment strategy looks to be flawed. The company seems to be pursuing growth in the lower profit margin activity area. This may have led to the share price not increasing at the same rate as the industry sector as a whole. The investment strategy warrants a re-assessment.

(Note: credit will be given for alternative relevant comments for parts (a) and (c))

				Marks
1	**(a)**	Risk diversification		2–3
		Purchasing undervalued companies		4–5
			Max	**7**
	(b)	1–2 marks per point	**Max**	**4**
	(c)	**(i)** Avem Co, current value		1
		Avem Co, free cash flows to equity		1
		Fugae Co, estimate of growth rate		2
		Fugae Co, current value estimate		2
		Combined company, estimated additional value created		2
		Gain to Nahara Co when selling Fugae Co		1
		Gain to Avem Co		1
				10
		(ii) Reka Co asset beta		2
		Project asset beta		1
		Fugae Co's market value of debt		2
		Project's risk adjusted equity beta		1
		Project's risk adjusted cost of equity		1
		Project's risk adjusted cost of capital		1
		Annual PVs of project		1
		Different outcomes PVs (year 1, years 2 to 4, 50% and 40%)		2
		Expected NPV of project before Lumi Co offer		3
		PV of Lumi Co offer		1
		Expected NPV of project with Lumi Co's offer		3
				18
		(iii) Presentation of benefits to each group of equity holders		
		With and without the project		2–3
		Assumptions made		3–4
		Concluding comments		1–2
			Max	**7**
		Note: Maximum 6 marks if no concluding comments given		
		Professional marks		
		Report format		1
		Structure and presentation of the report		3
				4
			Total	**50**

				Marks
2	**(a)**	Buy put options and number of contracts		1
		Futures prices if interest rates increase or decrease		1
		Option contracts calculations: either exercise price		3
		Option contract calculations: second exercise price (or justification for calculations of just one exercise price)		2
		Swap: Keshi Co initially borrows at the floating rate and resulting advantage		2
		Swap impact		2
		Effective borrowing rate		1
		Discussion and recommendation		3–4
			Max	**15**
	(b)	Discussion of why a centralised treasury department may increase value		3–4
		Discussion of reasons for decentralisation		2–3
			Max	**6**
	(c)	1–2 marks per point	**Max**	**4**
			Total	**25**
3	**(a)**	Discussion of the EU as a free trade area		2–3
		Discussion of the possible benefits to Riviere Co		2–3
			Max	**5**
	(b)	Calculation of internal rate of return		2
		Calculation of modified internal rate of return		2
		Determining the two standard deviations (1·645 and 1·282)		1
		Calculations of the two value at risk figures		2
		Explanation of weakness of internal rate of return and why net present value and modified internal rate of return are better		2–3
		Explanation of value at risk figures and what they indicate		2–3
		Recommendation		1–2
			Max	**13**
	(c)	Discussion of possible legal risks		3–4
		Discussion of how these may be mitigated		3–4
			Max	**7**
			Total	**25**

				Marks
4	**(a)**	Advantages of EVA™ (1–2 marks per point)		3–4
		Drawbacks of EVA™ (1–2 marks per point)		2–3
			Max	**6**
	(b)	**For 2013 and 2014**		
		Add depreciation and deduct economic depreciation to operating profit		1
		Adding back non-cash expenses		1
		Calculation of economic profit after tax		1
		EVA™ calculations		2
				5
	(c)	Additional ratio trends (1 mark per key three-year ratio trend)		4–5
		Activity trends		2–3
		Analysis of the share price against market and industry indices		1–2
		Discussion of investment strategy including impact on share price, EVA™ and PE ratios		3–4
		Discussion of financing strategy		1–2
		Other discussion points		1–2
		Concluding comments		1–2
			Max	**14**
		Note: Maximum 13 marks if no conclusion provided		
			Total	**25**