
Answers

1 (a) Post-completion audits

A post-completion audit is a part of monitoring and appraising capital investment projects. Its aims are to compare income, costs and timing of projects against the original budget and any subsequent changes to the budget as more information becomes known. It can be a useful learning tool to help Zhichi Co manage projects more effectively and efficiently in the future. This can lead to setting realistic budget targets, better control of costs and reduction of bottlenecks to help complete projects on time. This is especially so for similar projects. It can be an expensive process and its usefulness may be limited to projects which are unique. In order to maximise the effectiveness of post-completion audits, Zhichi Co would need to ensure that sufficient resources are provided to undertake the audit and the aims of the audit are clear and achievable.

Fixed discount rate

A fixed discount rate to appraise new investment projects, which Zhichi Co uses, can be ineffective when a decision is being made whether or not to undertake the project. This is because projects will have different risks attached to them and therefore the returns required from these projects would differ. This could result in low-risk projects being rejected which could have added to Zhichi Co's corporate value, and high-risk projects being accepted which could reduce corporate value. Zhichi Co should instead estimate an appropriate discount (or hurdle) rate which accounts for the risk of the project. In this way, the company can assess the value of projects more accurately and thereby add to its corporate value.

New project finance

Observations of how companies raise new finance for projects show that they typically prefer internal funds before accessing external markets. If new finance is raised through external markets, then companies prefer debt to equity. Debt finance may have advantages such as tax benefits and controlling the actions of managers. Investors have less information compared to managers and directors in a company, and use companies' actions on raising finance as a signal. Issuing debt finance can also be seen as a sign of confidence that the company can fulfil its interest payment commitments, and can therefore be considered to be stable and less risky by investors. Information asymmetry between investors and a company's managers sends signals that the company is only raising equity finance when share prices have peaked or shares are over-valued. This causes share prices to fall following announcements that a company is raising new equity finance. It is likely that Zhichi Co has experienced this. Therefore, Zhichi Co should finance through a long-term strategy of internal finance, followed by debt issues and then equity issues as a last resort.

(b) Report to the board of directors (BoD), Zhichi Co

Introduction

This report evaluates whether or not the new motor scooter project should be undertaken. It discusses the assumptions made in estimating the value of the project and whether the adjusted present value (APV) method, which is used to estimate the value of the project, is more appropriate than the conventional net present value (NPV) method.

Evaluation

Although the NPV based on an all-equity financed discount rate is negative \$0.9m (appendix 2), when the impact of the financing side effects is taken into account, the APV is positive \$4.9m (appendix 3). On that basis, the project should be accepted if the project is funded using the subsidised loan, but not necessarily without it.

However, both values are marginal and a small change in the variables (see below) could easily mean that the project is no longer viable. In addition to this, it should be noted that a large proportion of the present value of cash inflows from the project, \$51.5m (appendix 2), occur in the fourth year of the project. Projections further into the future tend to be more uncertain.

Zhichi Co may benefit from undertaking sensitivity and scenario analysis to assess the impact of changes in the input variables instead relying solely on the results of appendices 2 and 3.

Assumptions

The assumptions made in each of the three appendices are discussed in turn.

In appendix one, Liyu Co's and Sanwenyu Co's asset betas are calculated by degearing each company's equity beta to eliminate the company specific financial risk. The asset betas of both companies represent just the business risk element. It is assumed that Sanwenyu Co's asset beta represents the business risk of the wind farm business and Liyu Co's asset beta represents the business risks of both the wind farm and the environmentally friendly motor scooter businesses. From these it is assumed that the asset beta, representing a suitable proxy for the business risk of environmentally friendly motor scooters, can be computed and used to estimate the all-equity financed discount rate.

In appendix two, it is assumed that all input variables are known with certainty or reasonable accuracy. It is also assumed that these variables, and the factors which determine the variables, do not change in the future. Uncertainty increases as cash flows are predicted further into the future, and the majority of the positive cash flows for the new project occur in year 4.

In appendix three, it is assumed that the interest rates of the subsidised loan and the corporate tax rates remain unchanged for the period of the project. The normal borrowing rate of 6% is used to determine the present value of the financing side effects, although the risk-free rate could also be used and this will give a higher APV. The debt capacity of Zhichi Co could change as a result of undertaking the project.

In the computations, debt beta is assumed to be zero, although in practice, corporate debt is not free of default risk.

Adjusted present value or net present value

With NPV, future cash flows are discounted using Zhichi Co's average cost of capital (discount rate) since a positive NPV will ensure that the minimum return requirement of all Zhichi Co's investors is met. However, the discount rate often does not take into account (i) the changing business risk profile (since the project is a diversification) nor (ii) the changing financial risk profile (since the new project will be entirely financed by debt). With the new project, both these risks are changing and the APV method takes both changes into account.

Furthermore, the APV method will provide significantly more information about the sources of value and also about the different levels of risk applicable to different cash flows. When using the average cost of capital as the discount rate to generate the NPV, it is not possible to tell where the project's value is generated from, whether the value is from undertaking the project or from the changing capital structure. It also assumes that all cash flows have the same risk profile and should therefore be discounted at the same rate. The APV method considers the risk elements separately and considers the cash flow impact of each. It also assigns a suitable cost of capital which is relevant to each cash flow (for example, the ungeared cost of equity to base case NPV and the cost of debt to the financing side effects).

APV does not normally take into account costs of financial distress, possibility of tax exhaustion and agency costs related to financing using debt. However, in Zhichi Co's case, none of these is likely to be an issue because it has only used equity financing previously and therefore the impact of the above is likely to be minimal.

For these reasons, APV is the more appropriate method to use to evaluate Zhichi Co's new project.

Conclusion

After considering the assumptions made in the calculations and discussing why the APV is the more appropriate method, the recommendation is that the new project is undertaken because it generates a positive APV. However, sensitivity and scenario analysis should be undertaken because of the assumptions made and because the decision to accept is marginal.

Report compiled by:

Date

Appendices:

Appendix 1: (Part (b)(i)):

Liyu Co

$$\text{Asset beta} = 1.2 \times \$172\text{m} / (\$172\text{m} + \$48.26\text{m} \times 0.8) = 0.98$$

Sanwenyu Co

$$\text{Equity beta} = (15.4\% - 4.8\%) / 8\% = 1.325$$

$$\text{Asset beta} = 1.325 \times 0.8 / (0.8 + 0.2 \times 0.8) = 1.1 \text{ approx.}$$

[Assumption: asset beta of 1.1 reflects the business risk attributable to manufacturing wind farms and related equipment]

Asset beta attributable to business risk of manufacturing motor scooters

$$0.98 = 0.6 \times [\text{asset beta, motor scooters}] + 0.4 \times 1.1$$

$$\text{Asset beta} = (0.98 - 0.44) / 0.6 = 0.9$$

$$\text{Base case discount rate} = 4.8\% + 8\% \times 0.9 = 12\%$$

Appendix 2: (Part (b)(ii)): Motor scooter project, all-equity financed

Year	0	1	2	3	4	5
	\$m	\$m	\$m	\$m	\$m	\$m
Sales revenue		10.0	40.0	48.0	57.6	
Costs		(12.0)	(32.0)	(19.2)	(23.0)	
Cash flow before tax		(2.0)	8.0	28.8	34.6	
Taxation (w1)			2.5	0.2	(4.2)	(2.3)
Investment	(70.0)				42.0	
Working capital (w2)	(10.0)	4.0	(1.2)	(1.4)	8.6	
Cash flows	(80.0)	2.0	9.3	27.6	81.0	(2.3)
Discounted at 12% (appendix 1)	1	0.893	0.797	0.712	0.636	0.567
Present value of cash flows	(80.0)	1.8	7.4	19.7	51.5	(1.3)

All-equity financed net present value is approximately \$(0.9)m.

Working 1 (w1): Taxation

Year	TAD (Tax allowable depreciation) (\$m)	Balance (\$m)
1	Investment	70.0
	TAD (15%)	(10.5)
		<hr/> 59.5
2	TAD (15%)	(8.9)
		<hr/> 50.6
3	TAD (15%)	(7.6)
		<hr/> 43.0
4	Balancing allowance	(23.0)
		<hr/> 20.0

Year	1	2	3	4
	\$m	\$m	\$m	\$m
Cash flow before tax	(2.0)	8.0	28.8	34.6
TAD	(10.5)	(8.9)	(7.6)	(23.0)
Taxable cash flows	<hr/> (12.5)	<hr/> (0.9)	<hr/> 21.2	<hr/> 11.6
Tax (20%)	(2.5)	(0.2)	4.2	2.3
Year payable	2	3	4	5

Working 2 (w2) Working capital

Year	0	1	2	3	4
	\$m	\$m	\$m	\$m	\$m
Required		10	6.0	7.2	8.6
Invested/(released)	10	(4)	1.2	1.4	(8.6)

Appendix 3: (Part (b)(iii): Motor scooter project, adjusted present value

Issue costs

$$3/97 \times \$80\text{m} = \$2.5\text{m}$$

Tax shield

$$\text{Annual interest payable} = \$80\text{m} \times 0.03 \times 0.2 = \$0.5\text{m}$$

$$\text{Present value of interest payable} = \$0.5\text{m} \times (4.212 - 0.943) = \$1.6\text{m}$$

Subsidised loan benefit and cost

$$\text{Present value of subsidised loan benefit} = \$80\text{m} \times 0.03 \times 3.465 = \$8.3\text{m}$$

$$\text{Present value of tax shield lost} = \$80\text{m} \times 0.03 \times 0.2 \times (4.212 - 0.943) = \$1.6\text{m}$$

[Note: Although 6% is used as the discount rate to calculate the present value of the tax shield and subsidised loan benefits, the risk-free rate of 4.8%, could be used as an alternative]

Adjusted present value

$$\$(-0.9)\text{m (from appendix 2)} + \$(-2.5)\text{m} + \$1.6\text{m} + \$8.3\text{m} + \$(-1.6)\text{m} = \$4.9\text{m}$$

- (c) There are many similarities between debt finance and asset securitisation, and Zhichi Co would face similar obligations which it would need to fulfil. Conventional debt finance would raise an initial borrowed amount, on which Zhichi Co will pay interest and make capital repayments as required. When using asset securitisation, the borrowing aspect for Zhichi Co is similar in terms of repayments of interest and capital. The main differences are the bases on which the borrowing takes place.

In order to mitigate or take account of risk, lenders of conventional debt would probably impose restrictive covenants on Zhichi Co and require a charge to be placed on specific assets or a pool of Zhichi Co's assets. It is likely that Zhichi Co would find it easier to raise conventional debt either through approaching specific lenders or issuing debt securities like bonds. It is also likely that raising conventional debt would be cheaper. This is because markets for conventional debt are more readily available.

Asset securitisation provides a means to capitalise future income flows into an asset, in this case Zhichi Co's rental income, and then use this asset as a means of borrowing funds. Converting the future rental income into an asset would likely be undertaken through the use of a special purpose vehicle (SPV). Zhichi Co would then manage the rent collection and use the rental income stream to pay the interest and capital over a specified time period.

It is likely that obtaining funding through asset securitisation can be expensive due to search costs, management costs, legal fees and continuing administrative costs. Additionally, it is unlikely that Zhichi Co would be able to borrow funds equivalent to the full value of the rental income, and if rental incomes fall, Zhichi Co would need to fund the interest and capital from alternative sources. This could open up Zhichi Co to lower credit ratings and increased risk of financial distress.

The advantages of asset securitisation are that Zhichi Co's debt capacity is maintained for future projects, and it provides a way for Zhichi Co of utilising income from non-core business areas.

Ultimately, the choice to Zhichi Co between debt finance and asset securitisation is that the latter probably provides greater flexibility and opportunity, but at a higher cost.

(Note: Credit will be given for alternative and valid comments and approaches, where relevant, for all parts of the question)

- 2 (a) There are a number of ways the functional areas of a treasury department could add value to Brandon Co's expansion plans.

Liquidity management

As Brandon Co expands, the increase in the volume of transactions across the group will require a greater emphasis on liquidity management, including the need to support Brandon Co's working capital requirement. A centralised treasury department could add value by netting off subsidiaries' debit and credit balances, which would reduce the number of transactions and hence transaction costs.

Currency management

The expansion outside the eurozone introduces foreign exchange risk into the group and the need to manage the impact of currency flows on Brandon Co's earnings and shareholder value. Effective currency management, including the use of derivatives, can have a significant impact on shareholder value for companies with overseas assets. A centralised treasury department will have the resources to employ experts with the knowledge required to manage these risks. It would also be possible to employ techniques across the group, such as matching income earned by one subsidiary with expenditure by another subsidiary in the same currency, reducing risk and the need for external hedging methods.

Funding

The treasury department will play a role in sourcing the appropriate debt instruments and matching maturities to the time horizon of the investment as well as managing the relationship with lenders. A centralised treasury department could add value by pooling funding requirements across the group to achieve better rates by borrowing in bulk.

Corporate finance

The corporate finance function would undertake the equity issue(s) to raise part of the funds required for the overseas expansion and be involved with the strategic decision-making such as formulating a dividend policy which meets the needs of shareholders. A centralised treasury department would have the appropriate level of oversight of Brandon Co's group activities to provide operational, strategic and corporate finance advice to enhance value. It can advise on short-term investment strategies, evaluate subsidiary performance and manage Brandon Co's financial structure to minimise the cost of capital.

- (b) FRAs

FRA rate 5.90% (3–7) since the funds will be required in three months' time for a period of four months.

If central bank rate increases to 6.6%

	\$
Interest payment: $(6.6\% + 0.4\%) \times 4/12 \times \$36,000,000$	840,000
Receipt from bank: $(6.6\% - 5.9\%) \times 4/12 \times \$36,000,000$	(84,000)
Net borrowing cost	<u>756,000</u>
Effective annual interest rate: $756,000/36,000,000 \times 12/4$	6.3%

Futures

Hedge against an increase in interest rates, therefore go short in futures market. Use March contracts, as funds will be required on 31 January.

Number of contracts = $\$36,000,000/\$500,000 \times 4 \text{ months}/3 \text{ months} = 96 \text{ contracts}$

Basis

Spot price (1 November) – futures price = basis
 $(100 - 5.70) - 93.95 = 0.35$
 Unexpired basis on 31 January = $2/5 \times 0.35 = 0.14$

If central bank rate increases to 6.6%

	\$
Interest payment as above	840,000
Expected futures price: $100 - 6.6 - 0.14 = 93.26$	
Profit on the futures market: $(0.9395 - 0.9326) \times \$500,000 \times 3/12 \times 96$	(82,800)
Net borrowing cost	<u>757,200</u>
Effective annual interest rate: $757,200/36,000,000 \times 12/4$	6.31%

Options on interest rate futures

Buy March put options to hedge against an increase in interest rates. As above, 96 contracts are required.

$$\text{Premium} = 0.00087 \times \$500,000 \times 3/12 \times 96 = \$10,440$$

If central bank base rate increases to 6.6%

	Buy put
Exercise price	93.75
Expected futures price, as above	93.26
Exercise?	Yes
Gain in basis points	49
	\$
Interest payment as above	840,000
Profit on options $0.0049 \times \$500,000 \times 3/12 \times 96$	(58,800)
Premium	10,440
Net borrowing cost	<u>791,640</u>
Effective annual interest rate: $791,640/36,000,000 \times 12/4$	6.60%

Advice

The forward rate agreement and futures market provide broadly similar results. The outcome of the forward rate agreement hedge is marginally lower and may be the preferred choice. In theory, both methods provide a fixed interest payment and a certain cash outflow but futures contracts are subject to basis risk and margin requirements.

If the central bank rate increases to 6.6%, the option is the least attractive hedging method due to the expensive premium. Unlike forward rate agreements and futures contracts, however, options do not have to be exercised and allow Brandon Co to benefit from upside potential if the central bank base rate falls. Treasury staff would need to assess the likelihood and amount of a possible reduction in interest rates when assessing the viability of the option.

If the board is to achieve its objective of minimising risk exposure, the certain cash flow associated with the forward rate agreement will be more attractive than the variable outcome associated with the options.

(c) Smoothing

Smoothing is a relatively straightforward technique for managing interest rate risk. Under this approach, Brandon Co would make an assessment about possible interest rate movements and divide its debt between variable and fixed rate loans according to what it could afford.

If the central bank increases the base rate to 6.6%, only the variable rate loans will cost more. The fixed rate will be relatively cheaper and will reduce the overall financial burden compared to the scenario where all the loans are at a variable rate. If the base rate falls, Brandon Co benefits from a cheaper variable rate but will still have to service its fixed rate debt at the higher rate.

3 (a) Proceeds from sales of children's shoes division

Year	1	2	3	4
	\$m	\$m	\$m	\$m
Free cash flows	76	81	85	88
Discount factor 10%	0.909	0.826	0.751	0.683
Present value	<u>69</u>	<u>67</u>	<u>64</u>	<u>60</u>
Present value	260			

Growth rate year 5 onwards = 3.5%

Present value in year 5 onwards = $(\$88m \times 1.035 / (0.10 - 0.035)) \times 0.683 = \$957m$

Total present value = $\$260m + \$957m = \$1,217m$

Impact on statement of financial position (\$m)

Profit on sale = $\$1,217m - \$608m - \$349m = \$260m$

Current assets receipt from sale = $\$1,217m$

Current assets adjustment = $(\$894m \times 1.4) - (\$909m - \$349m) - \$1,217m = (\$525m)$

Gain in current assets = $\$1,217m - \$525m = \$692m$

Alternative working

Gain in current assets = $(\$894m \times 1.4) - (\$909m - \$349m) = \$692m$

Non-current asset adjustment = $\$525m - \$175m = \$350m$

	Original \$m	Sales \$m	Adjustments \$m	Final \$m
Assets				
Non-current assets	1,200	(608)	350	942
Current assets	909	1,217 (349)	(525)	1,252
Total assets	<u>2,109</u>			<u>2,194</u>
Equity and liabilities				
Called-up share capital	50			50
Reserves	737	260		997
Total equity	<u>787</u>			<u>1,047</u>
Non-current liabilities				
9% loan notes	175		(175)	0
7% loan notes	145			145
Bank loans	108			108
Total non-current liabilities	<u>428</u>			<u>253</u>
Current liabilities	894			894
Total equity and liabilities	<u>2,109</u>			<u>2,194</u>

Impact on eps (\$m)

	Current forecast	Revised forecast
Predicted post tax profits	217	217
Less: Profits from children's shoes		(76)
Add: Interest saved, net of tax (\$175m x 9% x (1 - 0.2))		13
Add: Return on additional non-current assets (\$350m x 18% x (1 - 0.2))		50
Add: Return on additional current assets (\$692m x 6% x (1 - 0.2))		33
Adjusted profits	<u>217</u>	<u>237</u>
Number of shares	50m	50m
Adjusted eps	\$4.34	\$4.74

(b) Sale

Investors may query the need for the sale at this time. Although the board expects the children's shoes market to become more competitive in a few years' time, this has not yet happened. Investors may wonder if a better sales price could be obtained in a few years' time with a few more years' growth. Although some investors are concerned about gearing, a sale to reduce debt funding may seem to be a forced sale, and investors may ask whether alternative strategies could resolve the problems.

Investors may also wonder why Hanwood Shoes Co is not exploring the possibility of selling the production facilities (if sale proceeds equalled net book value, that would be enough to pay off the 9% loan notes). Hanwood Shoes Co could then use the same outsourcing business model for producing children's shoes which it does for adults' shoes.

Investors may also be concerned whether Hanwood Shoes Co is achieving best value from the sale if the company is going to be selling the division at \$1,217m. Assuming a higher growth rate (perhaps by taking the geometric average of growth over the next four years) would give a higher selling price. Hanwood Shoes Co could also be expected to ask for a premium on the sale, given that a number of companies looking to develop their sales of children's shoes may be interested. That said, the cash flows in the calculation are taken to infinity, which is optimistic.

Investors would also wonder about the decreased diversification that the sale would mean. Although adults' shoes achieve higher margins than children's shoes, they may need more investment to maintain their position, and the appeal of fashionable ranges may be uncertain. Children's school shoes have been a reliable cash generator. Ultimately also, the investors may feel that they are investing in a smaller company, given the decrease in the non-current base and range of products, and may want to invest elsewhere in a company offering better growth prospects.

Profits

The forecast increase in earnings per share is 9.2%, but investors will question whether the assumptions on which the forecast is based are optimistic. They will also take into account the risks of the business being less diversified as it will solely be selling adult shoes. However, part of the increase in profits is a fall in the commitment to paying interest, which investors may view positively if they are concerned about gearing.

Funding

The sale will help fund an improvement in the gearing of the company. The funds will not only be available to pay off the 9% loan notes immediately, they could also be used to pay off the bank loan and/or the other loan notes in time, or reduce trade payables as they may be being used as a source of short-term funding. However, investors might also wonder how future investment in adults' shoe shops would be funded, particularly if future sales did not meet current expectations. Current lenders

may have placed restrictions on Hanwood Shoes Co seeking new borrowing from other sources. If Hanwood Shoes Co was able to seek additional loan capital, it would have a smaller non-current asset base to offer as security, which may affect lenders' attitudes.

(c) Implications for profits

If the surplus after the loan repayment was solely used to fund non-current asset investment, this would, based on the assumptions about the return on non-current assets, increase earnings by \$33m ($(\$1,252m - \$909m) \times (18 - 6)\% \times (1 - 0.2)$), representing a total increase of \$53m or 24.4%. This would be more acceptable to the shareholders. However, it might not be possible to sustain the 18% return on non-current assets over a larger investment, certainly in the short term. Hanwood Shoes Co might also consider the impact of the total investment occurring over a longer period of time.

Implications for liquidity

However, the proposed policy would not result in the one-off improvement in liquidity. Hanwood Shoes Co is currently having difficulty paying suppliers, suggesting its current ratio is too low at present. Going forward, the increased volume of activity together with the longer turnover time of adult shoes compared with children's shoes would probably mean an increase in inventory, and decreased liquidity, making it more difficult to pay suppliers on time. Problems paying suppliers would become more significant as Hanwood Shoes Co would be dependent in future on suppliers for all its shoes, rather than having children's shoes made in the factory.

Hanwood Shoes Co might have to review its mix of working capital, particularly how much inventory it holds, in order to maintain sufficient liquidity. There might need to be a reduction in inventory holding times and a reduction in lines being stocked, particularly slow-moving lines.

		<i>Marks</i>
1 (a)	2–3 marks per policy failure	Max 8
	(For example, post-completion audits: compare to budget, useful for future budget development, can be expensive and needs sufficient resources, all projects can be unique and different so not universal. Fixed discount rate: need project specific discount rate to take account of project risk, otherwise low-risk projects can be rejected and high-risk projects might be accepted. Using equity finance. Not observed in practice. Instead pecking order of internal, then debt, then equity sources of finance. Due to information asymmetry, signalling and tax advantage of debt)	
(b) (i)	(Appendix 1)	
	Liyu Co, asset beta	1
	Sanwenyu Co, equity beta	2
	Sanwenyu Co, asset beta	1
	Asset beta attributable to business risk of motor scooter manufacturing	1
	Cost of equity/discount rate	1
		<hr/> 6
(ii)	(Appendix 2)	
	Sales revenue	1
	Costs	2
	Tax allowable depreciation	1
	Tax and timing	2
	Working capital invested/released: years 0 and 1	1
	Working capital invested/released: years 2–4	1
	Cash flows and all-equity financed NPV	1
		<hr/> 9
(iii)	(Appendix 3)	
	Issue costs	1
	Present value of tax shield	2
	Present value of loan subsidy benefit and cost	3
	Adjusted present value	1
		<hr/> 7
(iv)	Report	
	Evaluation	2–3
	Discussion of assumptions (For example, rival companies' asset betas represent business risk, all-equity financed project from asset beta, variable known with certainty and will not change, interest rates will not change, debt capacity is sufficient, cost of debt represents appropriate discount rate)	4–5
	Discussion of appropriateness of APV (For example, limitations of cost of capital re changes in business and financial risk, APV takes account of both risks, APV separates out areas where value is derived from, APV takes into account different levels of risk and required return, but APV does not consider financial distress, tax exhaustion or agency issues)	4–5
		<hr/> Max 10
	Professional marks for part (b)	
	Report format	1
	Structure and presentation of the report	3
		<hr/> 4
(c)	Up to 2 marks per relevant point (Maximum 3 marks if only either debt finance or asset securitisation discussed) (For example, similarity of interest and capital repayment, conventional debt imposes restrictive covenants, security provided on assets, securitisation's security provided by pooling income, creating assets of this pool and creating different risk levels of securities, securitisation is expensive and not all income is pooled, but it gives more flexibility and does not impact debt capacity so it provides flexibility to the company)	Max 6
		<hr/> Total 50

		<i>Marks</i>
2	(a) Functional areas (e.g. liquidity management, currency management, funding and corporate finance)	3–4
	Advantages of centralised treasury (e.g. netting off, expertise, pooling, strategic oversight and dividend policy)	3–4
	Max	<u>7</u>
(b)	FRA	2
	Go short on March futures	1
	Number of contracts	1
	Basis	1
	Impact of interest rate increase with futures	2
	Buy March puts	1
	Premium calculation	1
	Exercise	1
	Impact of interest rate increase on options	2
	Discussion	3–4
	Max	<u>15</u>
(c)	Smoothing explanation	1–2
	Smoothing application	1–2
	Max	<u>3</u>
	Total	<u>25</u>
3	(a) PV of free cash flows Years 1–4	2
	PV of free cash flows Year 5 onwards	2
	Revised statement of financial position	4
	Revised eps	5
		<u>13</u>
(b)	Up to 2 marks per relevant point	Max <u>7</u>
	(relevant points can include need to sell, timing, amount, less diversification, alternative strategies, impact on eps impact on funding)	
(c)	Impact on profits	2–3
	Impact on liquidity	2–3
	Max	<u>5</u>
		<u>25</u>