
Answers

Section 1 – Financial Strategy

1 The case study can be approached in various ways. Below are some calculations and points that may have been made by candidates. However, they should only be regarded as indicative.

(a) Book value of ordinary shares

The book value of an ordinary share in Whinchat Ltd is:

	£000	£000
Fixed assets		14,223·9
Current assets		4,850·2
		<u>19,074·1</u>
Less Creditors		
– falling due within 1 year	4,357·2	
– falling due after 1 year	7,000·0	11,357·2
		<u>7,716·9</u>
Book value of net assets		<u>7,716·9</u>
Book value per share	£7,716·9/2,000	£3·86

Market value/book value

The mean market value/book value ratio of similar companies is 3·15:1. Using this as a guide, the market value of a share in Whinchat Ltd is $3·15 \times £3·86 = \underline{£12·16}$.

Sales/market value

The mean sales/market value ratio of similar companies is 1·73:1. Using this as a guide, the market value of a share in Whinchat Ltd is $[(£45,924·8/1·73)/2,000] = \underline{£13·27}$.

Market value

The market value measure is based on the assumption that all assets, other than the freehold premises, are valued at book value and that the lowest market price stated is valid for the freehold premises:

	£000	£000
Fixed assets		
Freehold premises		32,000·0
Plant and equipment		3,948·1
Motor vans		2,290·2
Current assets		4,850·2
		<u>43,088·5</u>
Less Creditors		
– falling due within 1 year	4,357·2	
– falling due after 1 year	7,000·0	11,357·2
		<u>31,731·3</u>
Market value of net assets		<u>31,731·3</u>
Market value per share	£31,731·3/2,000	£15·87

Price/earnings ratio

The mean P/E ratio of similar companies is 9·88. Using this as a guide, the value of an ordinary share is $(£3,123·1/2,000) \times 9·88 = \underline{£15·43}$.

Dividend yield basis

Assuming a dividend in the mid-range of dividends paid in previous years (and ignoring the exceptional dividend), the dividend per share is £0·12 (i.e. $£240,000/2,000,000$). Using the average dividend yield of similar quoted companies as a guide, a dividend yield approach would provide a value of $[(£0·12 \times 100/90)/0·02067] = \underline{£6·45}$.

This figure is above the book value of the shares but considerably below the figures derived using other valuation methods.

Free cash flows

The calculations assume:

- a growth rate in sales of two per cent (i.e. at the lower rate mentioned in the case study) for Whinchat Ltd.
- the loan figure shown in the balance sheet of Whinchat Ltd reflects its current market value.
- the cost of capital of 8% of Scaup plc is relevant to an assessment of this investment opportunity.

	2004 £m	2005 £m	2006 £m	2007 £m	2008 £m	After 2008 £m
Sales	46.84	47.77	48.73	49.70	50.70	50.70
Operating profit (10%)	4.68	4.78	4.87	4.97	5.07	5.07
Less						
Cash tax (20%)	(0.94)	(0.96)	(0.97)	(0.99)	(1.01)	(1.01)
Operating profit after cash tax	3.74	3.82	3.90	3.98	4.06	4.06
Less						
Additional Fixed assets	(0.60)	(0.60)	(0.60)	–	–	–
Additional W Capital	(0.19)	(0.19)	(0.19)	(0.19)	(0.20)	–
Free cash flows	2.95	3.03	3.11	3.79	3.86	4.06

Year	Free cash flows £m	Discount rate 8%	Present value £m
2004	2.95	0.93	2.74
2005	3.03	0.86	2.61
2006	3.11	0.79	2.46
2007	3.79	0.74	2.80
2008	3.86	0.68	2.62
Terminal value 4.06/0.08	50.75	0.68	34.51
Value of business			47.74
Less loan capital			7.0
Value of ordinary shares			40.74
Value per ordinary share £40.74m/2.0m			£20.37

Determining a reserve price for each company may take account of various issues, including the validity of the various share valuation models employed. The highest share valuation is the one obtained from the free cash flow approach. This is theoretically the most appealing of the methods employed above and the figure derived represents the maximum amount that Scaup plc would normally be prepared to pay given its commitment to maximise shareholder wealth. However, the case study indicates that savings can be made as a result of the takeover. Assuming these savings are £100,000 per year (i.e. at the lower end of expectations) and continue into perpetuity, the capitalised value of the savings is $(£100,000/0.08) = £1,250,000$. This will mean that Scaup plc would be prepared to pay an additional £0.63 per share $(£1,250,000/2,000,000)$ in order to obtain the savings. Thus, the maximum value per share for Scaup plc would be £20.37 per share obtained by the free cash flow approach *plus* the value of the savings of £0.63 per share = £21.00.

However, Scaup plc is unlikely to be prepared to pay the maximum amount for the shares as calculated above. A lower amount is required if the company is to increase shareholder wealth. In determining this lower figure, Scaup plc should take into consideration the value of the shares to the Whinchat family. It has been made clear that the Whinchat family is willing to sell and is not prepared to continue the business without family involvement in the running of the company. It has also been made clear that there are no family members wishing to take over the business. Unless a buyer can be found that would like to acquire the business as a going concern, an asset-based approach to share valuation is relevant for the family.

Given the calculations above, it seems that the value of the shares based on the market value of the net assets of £15.87, is likely to be the minimum figure that the Whinchat family would be prepared to consider and represents a possible reserve price for the family. However, if the market value of the freehold is £33 million (i.e. the higher figure mentioned) this would add a further £0.50 per share to the value of the shares.

The reserve price for the shareholders of Scaup plc should be somewhere between the reserve price for the Whinchat family (£15.87) and the maximum value per share to Scaup plc that was calculated earlier (£21.00). Although the Whinchat family is anxious to sell, there may be another suitor waiting in the wings. A figure of around £18.00 per share (which would allow for the market value of the freehold premises being at the higher end of the range mentioned and provide a premium to the Whinchat family as an incentive to sell to Scaup plc) might be an appropriate reserve price for Scaup plc. This figure would provide Scaup plc with a profit of £3.00 for each share acquired in Whinchat Ltd, assuming the free cash flow and savings estimates are correct.

- (b) There are various steps that should be taken in ensuring a successful acquisition programme. These may include the following:
- developing a clear understanding of the nature of the business Scaup plc is in (with the aid of strategic models such as PEST analysis, SWOT analysis, Porter's five forces etc). This will help to identify how value may be added through acquisition (e.g. economies of scale, acquiring expertise in strategically important areas etc).

- identifying possible acquisition targets. Scaup plc appears to be interested in acquiring more companies and so the identification of targets should be regarded as a continuous process that should be undertaken by a dedicated business unit. Appropriate criteria for the identification of possible targets such as size, nature of the industry, location etc should be agreed and possible targets should be ranked according to the agreed criteria.
- undertaking due diligence. An examination of all the key features of the target company should be carried out including legal obligations, integrity of the financial accounts, future prospects, condition of assets, profiling of key personnel etc.
- agreeing a negotiating price range for possible candidates. This range should be based on the use of appropriate valuation models. In addition there should be some assessment of the position of the seller and the likelihood of competition for the acquisition target in order to derive a suitable reserve valuation figure. When carrying out the valuation process, possible synergies should be taken into account as well as opportunities for restructuring.
- developing a negotiating strategy. An experienced negotiating team is often an important ingredient to a successful deal. This will usually help in ensuring the agreed reserve price is not exceeded and that information gained concerning the target company and the threat of competitive bidders is properly taken into account so that no more is paid than is necessary.
- structuring the deal. The form of bid consideration and the advantages and disadvantages of each form of bid consideration to each party involved in the negotiations must be clearly understood.
- managing the integration of the takeover company. Once a deal has been agreed there should be a clear plan as to how the target company will be successfully integrated. This will usually involve establishing a senior management team to ensure good communications between the two companies, to develop team building across the two companies, and to reach agreement concerning key organizational issues.

(c) Assuming the reserve price of £18 is paid, the amount to be raised is £36 million (2m x £18). If the free cash flow calculations provide the best estimate of the value of the ordinary shares in the business, the net present value of the deal will be:

	£m
Present value of shares and cost savings (£21 x 2m)	42.00
Less Cost of acquiring shares (£18 x 2m)	36.00
Net present value	6.00

(As mentioned earlier, the NPV calculations assume that the cost of capital of Scaup plc is appropriate to an evaluation of this investment opportunity.)

Assuming that the market is able to assess the value of the deal to Scaup plc correctly, the market value per share following the deal should be:

	£m
Market capitalisation of Scaup plc (10m x £10.64)	106.40
Add NPV of Whinchat Ltd deal	6.00
Market capitalisation following the announcement	112.40
Market value per share (£112.4m/10m)	£11.24

A discount on the market price of the existing share price is needed when setting the rights price. Assume a discount of 20 per cent will be required in order to ensure a successful issue. This means that the rights shares would be offered at (£11.24 x 0.8) = £9.00 (approx).

A 2-for-5 rights issue would raise the required amount (4m x £9.00) = £36.0m.

Assuming an additional 4.0 million shares are issued, the value of a share following the rights issues would be:
 $\frac{£(112.40m + 36.0m)}{14.0m} = \underline{\underline{£10.6}}$.

In view of :

1. the problems experienced by Scaup plc over recent years
2. the sharp decline in share price of Scaup plc over the past five years (which may decline further during the rights offer period),
3. the risks associated with a new Board of Directors with little experience of acquiring companies
4. the new strategic direction taken by Scaup plc,

a deeper rights discount on the current market price may be appropriate.

Section 2 – Risk Management

2 Jodson

(a) Subject – Dividends

(i) Dividends and Share Valuation

The theoretical models of share valuation show that dividends are of fundamental importance in determining share value. The basic model is the dividend valuation model which shows that, rationally, share values are simply the discounted value of all future dividends (or other cash flows) to be received by the shareholder. With a constant level of growth this reduces to the simple dividend growth model of

Share Value = Next Year's Dividend/(Required Return – Growth Rate)

$$SP = D_1/(K - G)$$

This appears to indicate that as dividends increase then so too will the share price. However there may be a connection between dividends and future growth. As dividends increase the level of retained earnings will reduce and this may (see below) reduce funds for investment and so reduce future growth. If future growth is reduced it will lower share values. Hence an increase in dividends will tend to both increase share price (via increased dividends) and reduce share price (by lowering growth) – a reduction in dividends has the opposite effect (lower dividends tending to reduce share price but greater expected growth increasing it). The interactions between dividend and growth levels being crucial to the impact this would have on share price.

However Miller and Modigliani (M&M) proposed that, in a world with no taxes and other imperfections, dividend policy (like capital structure) is merely a packaging of returns. It is the underlying cash flows which generate the returns which are of importance – the way in which the return is given (dividends or capital growth) is mere packaging which does not impact on that return. However this does assume that retained earnings are fully reflected in the share price and there are no taxes (or that all taxes impact equally on both dividends and capital gains).

Three views were expressed concerning the impact of dividends:

- (a) Dividends will increase share price. This appears to be consistent with the traditional views. As future earnings and growth expectations are uncertain the payment of dividends may also reduce uncertainty and so reduce required return (see also section (iii)) and this may in turn increase the share price.
- (b) Dividends will reduce share price. This argument is relying on the reduction in future growth caused by the reduction in retained earnings. If the payment of dividends will reduce the firm's ability to expand then there may be an impact on share price. Jodson appears to be a 'growth' company with all its return currently being in the form of future growth expectations. To pay out money as dividends may reduce this growth and make the shares less attractive. It does seem to make sense to invest money on the shareholders' behalf if the returns are higher than those which the shareholders could normally obtain, e.g. if the shareholders require a return of 12% and there are opportunities available which return 15% then it would be in the shareholders' interests to not pay money as a dividend but to invest it instead. However, it may be possible for Jodson to finance growth by external means – Jodson has a policy of internally financed expansion and this has reduced gearing from 40% to 15% over about 14 years. The current level of gearing is quite low and Jodson could borrow money to assist financing expansion. If this is possible then there is less validity to the argument that paying dividends will reduce the level of investments which can be undertaken. However an increase in gearing will increase the cost of equity or return required by shareholders.

Taxation usually treats capital gains (caused by retained earnings) and dividends differently. If dividends are taxed more than capital gains then there will be a preference for lower dividends.

- (c) Dividends are irrelevant. This is the M&M position and in the absence of taxation differences between dividends and capital gains and within a perfect, frictionless capital market this may hold true.

(ii) Issues in determining dividend policy

- (a) Ability to pay. To justify a dividend the firm must have distributable profits and sufficient liquidity.
- (b) Loan covenants. A loan agreement may restrict the level of dividend which can be paid.
- (c) Opportunities available for investment. The greater the opportunities the lower will be the optimum dividend. There is a need to integrate dividend policy with planned investments and financing.
- (d) Taxation. The impact of taxation on dividends versus capital gains needs considering.
- (e) Stability of dividends and earnings. A stable dividend payment (with steady increases over time) appears to be preferred to one that changes and cannot be relied upon. Therefore the level must be set such that it can be normally maintained. It appears to be better to pay a low but steady (and slowly increasing) dividend than a higher dividend which cannot be relied upon.
- (f) Dividend Cover. The level of dividend cover should be considered. Too low a cover implies a risky (possibly unsustainable) dividend level and poor future growth. A high cover implies high future growth and the scope for future dividend increases. Jodson's EPS is currently 8p and with growth of 12% this is likely to rise to about 9p next year when the proposed dividend would be paid. This would give the following dividend covers:

Dividend (Pence)	Cover
5	1.80
4	2.25
3	3.00
2	4.50
1	9.00
0	NA

For dividends up to 3p per share the covers are high. At 4p per share the cover is reasonable. At 5p per share the cover may be considered to be a little low. From the viewpoint of dividend cover most of the possible dividend levels are reasonable.

- (g) Information content of dividends. In theory it is the discounted value of future dividends which determines share prices, but in practice estimating those future dividends is difficult. Accounting data is historic and not always reliable hence it is only, at best, an indirect guide to the future. Dividend levels themselves are thought to contain information about the firm's future prospects and dividend levels. Hence dividend changes are often regarded as being significant. An increase in dividends appearing to signal both an increase in future levels of dividends (due to the expected stability of dividends) and an indication that the firm's prospects have improved to enable it to afford the higher dividend. (Contrast this interpretation with the previously argued reduction in dividends to improve reinvestment to exploit investment opportunities when the firm's prospects are good.)
- (h) Shareholder Satisfaction. What are the preferences of shareholders? Some shareholders may prefer low dividends and higher retained earnings – perhaps because of tax or other differences (see Clientele Effect below) – other shareholders may prefer income rather than capital gains. If the broad preferences of shareholders can be determined it may be possible to tailor the dividend policy towards their preferences. It should be noted that from the shareholders' viewpoint the payment of dividends actually gives them more choice. If dividends are paid then shareholders can choose what to do with that dividend – they can choose whether to spend the money or re-invest it in the same or another company. If dividends are not paid then the money is automatically re-invested in the same company and shareholders, unless they wish to sell part of their share holding, do not have the choice of whether to consume or re-invest elsewhere.
- (i) Clientele Effect. This is associated with shareholder satisfaction. Some investors, because of their tax brackets or other reasons, may have a preference for a particular payout policy. An example of this being a pension fund needing liquidity to pay its own regular pension liabilities investing mainly in firms with a good and reliable dividend payout ratio to assist its own cash flow requirements. A further example being an investor wishing to maximise wealth at some distant future point in time e.g. 20 years' time, and who is currently not in need of regular investment income; such an investor may concentrate investments in firms which pay no dividends in order to maximise growth and terminal value. If a dividend policy has already been determined and been in operation for some years then it is likely that the shareholders are relatively content with the mix of dividends and retained earnings. Indeed the clientele of shareholders may have deliberately chosen that particular firm in order to obtain the particular packaging of return. A change to an existing dividend policy may adversely impact on shareholder satisfaction and this can, at least in the short term, impact on share prices. In such cases any changes should be made slowly and with caution.

(iii) Dividend levels and Jodson's share price and equity beta

As indicated above, future returns are uncertain and the payment of a dividend may help reduce the level of uncertainty. Hence the payment of a dividend may result in a lower required shareholder rate of return and this would be reflected in a lower beta.

With a current beta of 1.20 the required return to equity is
 $6 + (11 - 6) \times 1.2 = 12\%$

Using this required rate of return and applying the parameters to the dividend growth model would give a share price of 58.8 pence for a dividend level of 5p:

$$\text{Share Price} = 5 / (.12 - .035) = 5 / .085 = 58.8\text{p}$$

The impact on all proposed dividends is:

Dividend	Beta	Required Rate of Return Growth	Expected	Share price
5	1.20	12.00%	3.50%	58.8p
4	1.20	12.00%	5.30%	59.7p
3	1.20	12.00%	7.50%	66.7p
2	1.20	12.00%	9.30%	74.1p
1	1.20	12.00%	10.75%	80.0p

If the beta changes to 1.04 the required rate of return becomes $6 + (11 - 6) \times 1.04 = 11.20\%$ and this gives a share price of $5 / (.112 - .035) = 5 / .077 = 64.9\text{p}$.

The impact on all proposed dividends is:

Dividend	Beta	Required Rate of Return	Expected Growth	Share price
5	1.04	11.20%	3.50%	64.9p
4	1.06	11.30%	5.30%	66.7p
3	1.10	11.50%	7.50%	75.0p
2	1.13	11.65%	9.30%	85.1p
1	1.19	11.95%	10.75%	83.3p

If the beta is constant at 1.20 then a small dividend of 1p per share will increase the share price to 80p. But if the beta will react to the dividend level in the way suggested then a higher dividend of 2p per share is optimal as it will increase the share price to 85.1p.

In both cases a high level of dividend does appear to reduce shareholder wealth. This appears to be due to the interactions between dividends and future growth. However consideration should be given to the position which would result from both paying a dividend and borrowing external funds to finance further expansion.

Recommendation

- 1 Jodson should consider the effect of borrowing external debt finance to facilitate its expansion plans – this may have a significant impact on shareholder wealth. The dividend policy should be considered in the light of such external financing.
- 2 In the absence of external financing Jodson should commence paying a dividend at the modest level of 1 or 2 pence per share with effect from next year.

(b) Subject – Directors' Remuneration

(i) Remuneration Committee

The Greenbury report recommended that a remuneration committee should be a committee of the board. Both the Greenbury and the Hampel report recommended that this committee should be given the responsibility of determining executive remuneration. The Greenbury report recommended that the committee should be entirely comprised of non-executive directors and should report to shareholders. These recommendations are included in the combined code.

The purpose and scope of the committee would be to determine and report on

- (a) Remuneration levels
- (b) How these remuneration levels compare with similar firms
- (c) The main components of remuneration
- (d) Pension provision
- (e) Directors' service contracts
- (f) Compensation for loss of office

The Stock Exchange incorporated the Greenbury recommendations into the listing rules. As a result Chapter 16.9 of the listing rules state 'copies of each director's service contract must be made available for inspection by any person: (a) at the registered office of the company ... during normal business hours on each business day; and (b) at the place of the annual general meeting for at least 15 minutes prior to and during the meeting.'. Hence directors' service contracts are, effectively, in the public domain.

The advantages of a remuneration committee include

- (a) Responsibility for setting executive remuneration is formalised
- (b) Details of service contracts are now more open and are available for public scrutiny
- (c) No director is involved in setting his own remuneration.

(ii) Incentive schemes

Again the Greenbury report and the combined code recommend a link between directors' remuneration and performance. The advantages for shareholders of such a scheme include goal congruence. A properly structured scheme will help to align the interests of the directors with those of the shareholders. Without such a scheme the interests of these parties could diverge. Hence shareholders should welcome the introduction of such a scheme.

For incentive scheme purposes the measure used should:

- 1 be consistent with the objectives of the company, the interests of the shareholders and the interests of other stakeholders,
- 2 reflect the performance of management,
- 3 not be subject to manipulation – some accounting based methods could be manipulated in the short term and the Association of British Insurers have a preference for a measure based on performance over a number of years rather than restricted to just one period.

The advantages and disadvantages of a scheme based on profits include:

- (a) The measure is based on historical performance – this can be a function of earlier decisions or actions resulting in current good performance or a current operating constraint.
- (b) There may be a time lag between the actual decision (which if good ought to be immediately rewarded and if bad immediately penalised) and the impact of that decision.

- (c) It ignores the risk element in generating those earnings.
- (d) The earnings measure can, at least in the short term, be distorted. For example a decision to undertake no maintenance of plant and equipment can boost short-term earnings but to the detriment of the longer term position.
- (e) Earnings performance is not directly connected with shareholder well being.
- (f) The measure is one of aggregate performance and does not apply to any one individual.

The advantages and disadvantages of a scheme based on share price performance include:

- (a) Share price performance is dependent on market conditions as well as individual firm performance.
- (b) The market returns are consistent with shareholder benefits and so there is an element of goal congruence with such schemes.
- (c) If the measure is based only on increased remuneration associated with positive share price performance, or on share options, then there may be an incentive to accept high risk projects. If these pay off then a bonus will be earned but if they do not then there will be no negative remuneration aspects.
- (d) The measure is one of aggregate performance and does not apply to any one individual.
- (e) Share price performance is a function of both achieved results and expectations. The timing of share price movements may then not coincide with the period in which the actual effort/work was undertaken.

Recommendation

- (a) A remuneration committee should be set up.
- (b) An incentive scheme should be introduced based on share price performance perhaps augmented by another, perhaps earnings based, performance measure. The share price performance part of the scheme should be based on risk adjusted excess returns (i.e. returns greater than market returns for the actual level of risk) rather than total returns. The earnings based part should be based on performance over a period of several years rather than just one year and may also include some internal measures in order to relate reward to the performance of an individual executive, or small groups of executives, rather than all in aggregate.

Section 1 – Financial Strategy

Marks

1	Some flexibility in marking case studies is required. The following is, however, a guide.	
(a)	Share price options available (5 x 4 marks)	20
	Justification for reserve prices chosen	5
(b)	2 marks per point (maximum 15)	15
(c)	(i) 4 marks, (ii) 4 marks, (iii) 2 marks	10
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Section 2 – Risk Management

2	A difficult question to mark. Need to be flexible and use judgement.	
	Dividends	
	Reward understanding of theory and practice	10
	Look for understanding of policy issuers	10
	Discussion	5
	Calculations	10
	Remuneration	
	Reward understanding	5
	Expect some understanding of merits and deficiencies of each	10
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