

Financial Strategy –November 2002

Question One

Company background and objectives

Emcos plc designs and develops emission control systems for motor vehicles. The company is based in the United Kingdom. It was established in 1990 and obtained a share listing by means of a private placing to institutional investors in 2000. The company became publicly listed in order to raise the substantial amounts of capital needed to develop its designs. At the time of listing, it forecast trading losses for the first three full years of operation (2001 – 2003) but then substantial profits from 2004 onwards.

Emcos plc patents its designs and receives its income in the form of royalty payments from manufacturing companies in the UK, Spain, Norway and Japan to which it licenses its designs. The company's main objective is to become the market leader in its field, as measured by turnover and industry quality standards, by 2006. To achieve these goals, it spent large sums of capital between 1997 and 2002. This investment has yet to yield results in terms of positive cash flow. No other objectives or performance measures, quantitative or qualitative, have been specifically identified.

The company's designs currently exceed regulatory minimum standards. The Directors still believe the capital expenditure required to meet the high standards they have set themselves will prove to be a worthwhile investment for the future. However, they are concerned that their designs could be copied and modified by competitors who could then market them at a fraction of the cost Emcos plc has incurred. Foreign competitors are known to be legitimately working on designs for similar, if inferior, products. Many of the competitors, in the UK and overseas, are private unlisted companies.

Forecast financial statements for 2002

Financial results are available for the first 10 months of the current year. The accounts department has produced the following full-year forecasts based on these first 10 months' results.

FORECAST PROFIT AND LOSS ACCOUNT FOR THE YEAR TO 31 DECEMBER 2002		£000
Turnover		261
Development expenses		5,315
Administration / other expenses (Note 1)		2,615
Operating loss		(7,669)
Interest receivable		140
Loss before taxation		(7,529)
Taxation		0
Loss after taxation		(7,529)

Note 1: Including £1.2 million depreciation.

FORECAST BALANCE SHEET AT 31 DECEMBER 2002

	£000	£000	
Fixed assets (net book value)		751	
Patents and copyright		7,850	
Tangible assets			58
Investments		8,659	
Current assets			
Stock and work-in-progress	98		
Marketable securities (Note 1)		2,150	
Cash and bank	200		
	2,448		
Less amounts falling due within one year			
Trade creditors		(1,450)	
Net current assets			998
Total assets less current liabilities			9,657
Financing			
Called-up share capital (ordinary shares of £0.10)		9,985	
Share premium account			37,522
Profit and loss account			(37,850)
Equity shareholders' funds			9,657

Notes:

- 1: Marketable securities are short-term, interest-bearing investments.
- 2: Today's share price (19 November 2002) is 85 pence.

Forecast receipts for the year to 31 December 2003

The company's UK licensees pay royalties in £ sterling; those overseas pay in their domestic currency. Forecast receipts for the next 12 months are as follows. Assume for simplicity that all receipts are received at the end of the year.

licensee number	Country	Receipts expected		Forward rates to £ sterling at 31.12.2002	Forecast interest rates % per annum
		mount	Currency 000s		
1	UK	260	£ sterling	n/a	4.50
2	Spain	425	Euro	1.68	3.50*
3	Norway	1,365	Kroner	13.60	3.75
4	Japan	25,000	Yen	181.70	0.25

Assume this is rate applicable throughout the countries within the common currency area.

Scenario for question one (continued)

Other forecast financial information for 2003:

- ? Development expenses are expected to fall to £4.5 million.
- ? Administration / other expenses will rise by 10%.
- ? Interest receivable will be £140,000.
- ? Capital purchases planned during the year will be:

Patents	£320,000
Tangible assets	£250,000
- ? Depreciation on tangible assets will be charged at 20% on net book value. Patents are not depreciated at present. Investments are in shares in unlisted companies and their value is not expected to change.
- ? Stock and work-in-progress will increase to £285,000 by the end of the year.
- ? The value of creditors will decrease by 10%.

Other relevant information:

- ? The company has to date agreed with the bank to maintain a minimum cash balance at bank of £200,000. Sales of marketable securities will be used to help maintain this balance.
- ? Ignore any interest payable on overdrawn bank balances.

Required:

(a) Assume you are the Senior Management Accountant with Emcos plc and that today is 19 November 2002. Using the forecast accounts for 2002 as a base, you have been asked to construct:

- (i) a forecast profit and loss account for the year to 31 December 2003;
- (ii) a forecast balance sheet at 31 December 2003;
- (iii) a cash flow forecast, in £ sterling, for the year to 31 December 2003.

(20 marks)

(b) On the basis of your forecast financial statements, you have some concerns about the objectives and financial strategy of the business. Write a report to the company's Directors that:

- (i) discusses and recommends a financing strategy for a business such as Emcos plc that has a requirement for substantial amounts of cash to continue to develop intellectual property whilst maintaining investor confidence;
- (ii) evaluates methods of managing / minimising the risks involved in allowing licensees to pay royalties in their own currency;
- (iii) evaluates methods of managing / minimising the risks of fraudulent sale or copying of designs and of losing technical knowledge and expertise.

(30 marks)

Note: marks are distributed roughly equally between sections of the report.

(Total = 50 marks)

Question One Answer

Requirement (a)

Workings

Turnover 2003

1.	UK			260,000
2.	Spain €425k	$\frac{(1.68 \times 1 + 0.035)}{1 + 0.045}$	=	425 1.6639
				255,424
3.	Norway K1365K	$\frac{(13.60 \times 1 + 0.0375)}{1 + 0.045}$	=	1,365 13.5024
				101,093
4.	Japan ¥25m	$\frac{(181.7 \times 1 + 0.0025)}{1 + 0.045}$	=	25m 174.31
				<u>143,423</u>
	Say, £760,000			<u>759,940</u>

(i) Forecast profit and loss account for year to 31 December 2003

	£000	£000
Sales		760
Development expenses	4,500	
Admin (2,615 - 1,200) x 110%	1,557	
Depn (250 + 7,850) x 20%	1,620	
Operating loss		(6,917)
Interest receivable		140
Net loss		(6,777)

(ii) Forecast balance sheet at 31 December 2003

Fixed assets	£000	£000
Patents and copyright (751 + 320)		1,071
Tangible assets (7,850 + 250 - 1,620)		6,480
Investments		<u>58</u>
		7,609
Current assets		
Stock and WIP	285	
Cash at bank – minimum balance	200	
Current liabilities		
Overdraft	(3,909)	
Creditors (1,450 x 90%)	(1,305)	
Net current liabilities		(4,729)
Total net assets		2,880

Financing	
Share capital (called up)	9,985
Share premium	37,522
Profit & Loss (37,850) + (6,777)	(44,627)
	2880

(iii) Cash flow forecast for year to 31 December 2003

	£000
Operating loss	(6,917)
Depreciation	<u>1,620</u> (20% of 7,850 + 20% of 250)
	(5,297)
Increase in stock and WIP	(187)
Decrease in creditors	<u>(145)</u>
Cash flow absorbed by operations	(5,629)
Interest receivable	140
Fixed assets purchased	(570)
Net cash flow before financing	(6,059)
Sale of marketable securities	<u>2,150</u>
Overdraft balance	<u>(3,909)</u>

Notes:

1. The assumption here is that marketable securities are sold at book value. This is a sensible assumption, as the question gives no alternative indications. It also assumes the cash balance of £200,000 is maintained - in other words finance is required to cover this agreed minimum. A balance of £3,709,000 would be equally acceptable in an answer.

2. The question states that interest receivable remains unchanged from the previous year. This suggests the marketable securities were sold towards the end of the year

Requirement (b)

Report

To: Emcos plc Directors
From: Senior Management Accountant
Date: 19 November 2002
Subject: Objectives and financial strategy for the business

Introduction

I have recently prepared forecast financial statements for the year to 31 December 2003, using the forecast accounts for the first 10 months of this year as a base. These forecasts give me some cause for concern. This report aims to advise the Board on the emerging issues and suggest strategies for overcoming the potential dangers. The discussion is contained in four sections:

- (i) Key issues for future financial strategy and recommendation
- (ii) Methods of managing/minimising the risks involved in allowing licensees to pay royalties in their own currency.
- (iii) Methods of managing/minimising the risks of fraud and of the company losing technical knowledge and/or expertise.
- (iv) Summary and conclusions

Financial strategy

The company currently has a market capitalisation of £85 million compared with a net asset value of under £10 million as forecast for the end of 2002. This suggests the market is expecting us to move into profits in the future. A PIE ratio cannot be calculated but the market might have used a combination of forecast profits and a proxy company's PIE ratio. However, we continue to operate at a significant operating loss. Our forecast negative cash flow will require the sale of all our marketable securities and will still result in an overdraft of £3.9 million assuming we need to maintain a working cash balance of £200,000. Given that we are not likely to be in profit for at least another 2 years, and that the net asset value is forecast to fall even further in 2003 to under £3 million, we should be conscious of the market's very high expectations, which we ourselves have no doubt encouraged.

We now require additional permanent capital and have two broad alternatives: an issue of new equity or debt. The advantages and disadvantages of each are briefly discussed below, but this is an issue that requires further detailed consideration.

New equity

If we raise new equity we must allow our existing shareholders "first refusal" by means of a rights issue. We raised substantial sums of money from them in 2000 and they may not be willing to advance any more. However, we made no secret of the fact that we are a high-risk business. Our investors accepted that risk in expectation of commensurate returns. If we issue equity to new shareholders we may only do so with existing shareholders' permission. Clearly, this will then dilute control and earnings.

Our shareholders may therefore prefer to advance more money in preference to diluting their potential returns or, in a worst-case situation, a potential liquidation for lack of working capital.

New debt

The main problem with debt is that we have limited asset backing for security. Banks are generally reluctant to lend money against "intellectual" assets or expertise. If they do, the interest rate they will demand to compensate for their perceived risk will be high and involve yet more cash outflow unless we can negotiate a deferred payment deal. There is also the consideration of the effect on the required return on equity. At present, we are ungeared and carry only business risk. If we raise debt we introduce financial risk into the business that, in theory, raises the required return on equity.

A possibility is debt with equity warrants or convertible debt. Either of these methods would allow the bank/financier some participation in future profits and keep the interest rate down to a more acceptable level. The pricing of such instruments is tricky and we would require professional advice, which will be costly.

Recommendation

Our major shareholders are institutions. We should discuss our situation with them, within the bounds of legal acceptability. Debt with warrants would be a good solution if we can negotiate acceptable terms. The main advantages are:

1. We can raise money in two (or more) tranches: once when the debt is issued and a second time when the warrants are exercised. This means we do not need to take on more debt than we need at anyone time and avoid the legal and administrative costs of raising money more than once.
2. The interest rate will be kept to a minimum because of the option for the investors of buying into our equity relatively cheaply.
3. If our investors provide debt finance, which they might, there will be no dilution of control or earnings for them. However, we may have to require our small shareholders to waive their pre-emptive rights if we do this.

(ii) Managing currency risk

Allowing our customers to pay royalties in their own currency involves risk and transfers the cost of the transactions to us. Of course, it also allows us to benefit from currency movements favourable to Emcos. However, assuming we wish to minimise the risks of adverse exchange rate movements, we can investigate the use of various hedging techniques.

"External" hedging techniques such as using forward, options or futures contracts are available in leading currencies, but using the foreign currency markets might be difficult in, say, Norwegian Kroner as this may not be a frequently traded currency and transaction costs may be expensive. Derivatives such as options and swaps might be available but these can be risky and/or more expensive and need expertise to arrange. Another alternative is to use the money markets. We could borrow in the currency of our customers, invest and repay the loan and interest out of eventual receipts.

"Internal" hedging techniques would also be possible, such as bi- or multi-lateral netting. However, we purchase very little outside the UK so this technique might not be available. We could consider invoicing in a common currency, say US\$, and use netting techniques. This transfers the risk but many currencies are linked to the US\$ so this might not be a major

problem. However, we could perhaps settle some of our bills in Euros, as this is becoming a widely held currency even outside the common currency area.

Invoicing in a currency other than the customer's own does of course carry a marketing risk, as they may not welcome this transfer of currency risk. It depends to some extent on their own currency cash flows and how much they feel they need to buy our product as opposed to our competitors'

(iii) Managing risk of fraudulent practices and of losing technical knowledge and expertise

The risks here may be summarised as follows:

Customers claiming fewer sales than they have made;

Competitors illegally copying designs, often in collusion with staff;

Highly qualified staff leaving to join competitors.

The main issues we need to consider here are in two broad categories: insurance-type risk management techniques and pro-active personnel and organisational policies.

Insurance-type risk management techniques

Insurance cover may be taken out to cover fraudulent practices, loss of personnel and intellectual property. It may also be possible to obtain patent protection. The terms of the insurance cover would almost certainly require a high level of security for document storage and retrieval, equipment and personnel, which will have a cost that could be substantial. The costs and benefits need to be evaluated.

Pro-active personnel and organizational policies

More pro-active policies could involve working with manufacturers to ensure they have an interest in maintaining the integrity of our designs. The threat of legal action might be heavy handed but could be used as a last resort.

We could also use our political contacts to lobby the government to take diplomatic action if our designs are being illegally copied in some countries.

HRM policies should evaluate remuneration levels, as compared with our competitors, including share options. This is where we may have an advantage over our competitors as we have a share price quoted. Performance-related bonuses and good working conditions should also be reviewed and kept under review.

The company's auditors should be consulted to help design and implement fraud detection policies. Strong controls are needed to ensure license payments are charged and collected in full. This might involve undercover operations if fraud is suspected, including on-the-spot checks of licensees. In extreme cases, the fraud departments of home and overseas police forces may need to be involved.

(iv) Summary and conclusions

We are forecasting continued losses for the next 2-3 years and falling net asset values. This is likely to impact on our ability to meet our stated objectives and, perhaps more importantly for our immediate credibility, market expectations of our move into profitability. However, our existing objectives are very narrowly focussed. Being market leader as measured by turnover is not an appropriate performance measure if costs continually outstrip revenues. We should focus our attention on the extent to which the company is achieving a contribution towards increasing shareholder wealth, perhaps by considering the market capitalisation of the company.

We should review and refine our objectives, then discuss with our major shareholders a financing strategy as a matter of some urgency. Debt with warrants would be my preferred method, but there are issues concerning our small shareholders that need to be addressed. We should also review our risk management strategies for managing the various types of risk that we are likely to face.