# Ans.1 TNS Textiles

## (a) Valuation of Premium Fabrics

### (i) Asset-based valuation

| | Rs'm | Rs'm |
|---|---|---|
| *Assets* | | |
| Owned land, buildings, plant and machinery | | 6,500 |
| Assets held under finance leases | | 150 |
| Other non-current assets – office equipment | | 474 |
| Current assets | | 4,755 |
| *Liabilities* | | |
| Loans | (1,855) | |
| Finance leases | (45) | |
| Current liabilities | (4,604) | |
| Total liabilities | | (6,504) |
| Forecast net asset valuation at 31 Dec. 20X6 | | 5,375 |

### (ii) Free cash flow valuation of Premium Fabrics

| | Workings | 20X6 (baseline) *Rs'm* | 20X7 *Rs'm* | 20X8 *Rs'm* | 20X9 and thereafter *Rs'm* |
|---|---|---|---|---|---|
| Revenue | 1 | 15,764 | 15,764 | 15,764 | 18,917 |
| Cost of sales | 2 | (14,114) | (13,364) | (12,614) | (15,137) |
| Gross profit | | 1,650 | 2,400 | 3,150 | 3,780 |
| Operating expenses | 3 | (702) | (632) | (632) | (632) |
| Finance costs on loans | 4 | (23) | (23) | (23) | (23) |
| Finance costs on finance leases | 4 | (5) | (5) | (5) | (5) |
| Add back accounting depreciation on existing assets | | 1,121 | 1,009 | 908 | 300 |
| Adjusted profit before tax | | 2,041 | 2,749 | 3,398 | 3,420 |
| Subtract tax depreciation on existing assets | | | (150) | (100) | (300) |
| | | | | | |
| Subtract tax depreciation on new investment | 5 | | (163) | (196) | – |
| Taxable profit | | 2,041 | 2,436 | 3,102 | 3,120 |
| Tax due | 6 | | (500) | (722) | (936) |
| Add back tax depreciation | | | 313 | 296 | 300 |
| Add back finance costs (included in WACC) | 7 | | 16 | 16 | 16 |
| Additional capital expenditure | | | (500) | (500) | (300) |
| Residual cash flow | | | 1,765 | 2,192 | 2,200 |

**Valuation of cash flow**

| | | |
|---|---|---|
| 1,765 / 1.15 = | 1,534 | Discounting for one year |
| 2,192 / $(1.15)^2$ = | 1,657 | Discounting for two years |
| $2{,}200/(1.15)^3 =$ | 1,446 | Discounting for three years |
| $\frac{(2{,}200\ (1+\ 0.03)}{(0.15-0.03)}/(1.15)^3$ | 12,416 | Valued as a perpetuity, adjusted for growth, then discounted. |
| Total enterprise value (equity and debt) | 17,053 | **Note:** As valuation is at WACC, and excludes interest, then this valuation is total market capitalisation |
| Less value of debt (W7) | (1,855) | |
| **Value of equity** | **15,198** | **Rs15.2 billion** |

**Workings**

1 As per question, assume this is constant for 2 years, then increases by 20%.

2 Allowing for reductions of Rs0.75bn each year for 2 years, then increasing by 20%.

3 Allowing for expected reduction, then static.

4 Assume these are static. It may be that the profits will allow for repayment of debt so we are being prudent here.

5 20X7: Rs'm500 × 25% + 375 × 10% = Rs'm163. 20X8: (Rs'm500 × 25%) + (Rs'm375 × 10%) + (Rs'm337.5×10%) = Rs'm196. Tax depreciation is assumed 25% in the first year and 10% in the subsequent year on a reducing balance basis.

6 Taxable profit at 30%.

7 Post tax finance cost on loan 23 × (1 – tax 30%) = 16.

8 Assuming market value of debt is the same as balance sheet value.

**Conclusions and commentary**

Our calculations suggest a value of approximately Rs15.2bn on a free cash flow basis and Rs5.4bn on an asset basis. Valuation is not exact, and these calculations can give guidance only, but they could set upper and lower boundaries for negotiation. The ultimate value of the company will depend on the outcome of our negotiations with the shareholders of Premium Fabrics.

The asset-based valuation reflects the amount realisable if the company was broken up and the assets sold off. As such, the shareholders will definitely not be willing to accept less than this. It is a good way of providing a 'floor' for negotiations but is not a realistic estimate of the value of the business as a going concern.

The free cash flow valuation is more realistic as it considers the company as a series of cash flows. However, the valuation is heavily dependent on the assumptions used and even a small change in these will affect the valuation significantly. In particular, it seems unlikely that revenues and costs will continue to grow by 3% forever from 20X9. This also assumes the discount rate is constant, whereas it is also likely to change over time. The calculations have been performed using WACC, so the entire enterprise has been valued, and then the value of debt subtracted. As a simplifying assumption, the market value of debt has been assumed to be the same as the value in the statement of financial position, but this would need to be verified.

For negotiating purposes, and given the assumptions involved, it would be prudent to discount the valuation of Rs15.2bn, at least as a starting point.

**(b) Evaluation of two strategic options**

Option 1 – Marketing campaign

**Growth in sales and profitability**

This option will deliver growth more slowly than the second option (acquisition), because the effects of getting customers to purchase more as a result of the marketing campaign may take time to filter through. This will raise the risk that shareholders may become impatient.

As TNS is selling into a number of different markets overseas, the marketing campaign may need to be targeted differently in each country, which could be very expensive.

**Foreign exchange risk**
Seeking to grow export markets will increase the foreign exchange risk. TNS is exposed to, as sales will be in a foreign currency and any depreciation of that currency will reduce revenue. The purchase of machinery from Germany also leads to foreign exchange risk, due to the time delay between agreeing the price and making the payment for the machines.

**Implications of failure**
The marketing drive may not be successful, in which case it will represent significant financial spend and management effort for no return.

Option 2 – Acquisition of Premium Fabrics

**Growth in sales and profitability**
Strategically, the acquisition should result in rapid growth in TNS sales and market share, which is likely to appeal to shareholders. By taking over existing customer relationships, TNS is guaranteed to increase revenue. The retirement of Mr Ahmad means that there is an opportunity to acquire Premium Fabrics, possibly at a discount, and an opportunity to purchase a company of this type without a hostile bid might be rare.

**Foreign exchange risk**
From a foreign exchange point of view, the acquisition will increase the proportion of export sales, which will increase the risk of depreciation in the currencies of revenue reducing the value of our revenue.

**Implications of failure**
Acquisitions always carry a risk of overpaying, which would undermine the benefits originally envisaged. In addition, there are risks of failed integration, culture clash and losing key management figures. This may be particularly significant as Premium Fabrics is owner-managed, and given that TNS has a mixed history of integrating acquisitions.

**Recommendation**
Overall, the risks of the acquisition are very significant and TNS has no experience on this scale. The option of purchasing equipment and a marketing drive is much less risky, and should see significant benefits. This is therefore the better strategic fit and recommended course of action.

(**Note.** A different conclusion, if good reasons are given, should be awarded full credit. Candidates could argue that the acquisition offers an opportunity to meet growth objectives much more quickly than the marketing campaign. Here it is important that a candidate's conclusion is in line with the analysis provided and is commercially reasonable.)

**(c) Key implementation challenges and overcoming them**

**Option 1 – Marketing campaign and production process**
Acquiring and supporting new customers in many different countries could be difficult if we do not have enough trained account managers. If the sales team are trained in more aggressive marketing techniques, there is a risk of alienating customers in some regions. This could be overcome by careful training of staff to adopt an appropriate sales approach for each market.

Key challenges relating to the production process would include making changes to working practices in order to get the best value from the new machinery. It is possible that staff will resist this, especially if it involves redundancies.

In order to overcome staff resistance within TNS, timely communication with staff will be essential, including being open about redundancies required. Staff should be consulted as far as possible on changes to ensure that they feel involved in the changeover to new machinery. Any staff made redundant should be treated fairly, with decisions about redundancy made according to agreed, transparent criteria. Thorough training in the new processes will also be essential to ensure that benefits can be gained.

**Option 2 – Acquisition of Premium Fabrics**
This would present many challenges, including integration of the two companies' operations, in terms of both manufacturing and support functions, retraining of staff and potential redundancies, and decisions about whether to retain the Premium Fabrics brand.

Successful integration of Premium Fabrics will require a plan which sets out clear steps and shows who will be affected at each point. Staff affected should be informed as soon as possible and where possible offered options of retraining or redeployment as an alternative to redundancy. It is important that all workers are seen to have been fairly treated.

It is also important that a decision is taken quickly about whether to retain the Premium Fabrics brand or rebrand it as TNS. Either way, the decision will need to be communicated to customers of Premium Fabrics and, given that most of them are overseas, it would be helpful to visit as many of them as possible in person and explain what is happening.

**(d) Managing exchange risk**
The purchase of the machinery means that TNS is exposed to transaction risk – the risk that the euro will strengthen between agreeing the price and making the payment, thus increasing the cost. This can be managed using a forward contract. If TNS buys EUR20m on 1 January 20X7, it will ensure that it pays Rs2,227m on 30 June, thus locking in the price:

On 1/1/X7, buy forward contract for EUR20m.

| | |
|---|---|
| Spot rate | 112.44 |
| Subtract premium | (1.08) |
| 6-month forward rate | 111.36 |
| | |
| Cost in Rs'm | 2,227 |

Not using forward would mean using the spot exchange rate on 30 June:

| | |
|---|---|
| Spot rate | 116.45 |
| Cost in Rs'm | 2,329 |
| Therefore, would cost an extra | Rs.102m |

If the assumption given is correct and the actual spot rate on 30/6/X7 is 116.45, then if the company had not used a forward contract, the cost would have been Rs. 2,239m, an extra Rs. 102m. On the other hand, if the euro had depreciated, this would have reduced the cost.

Alternative ways of managing this risk would be:

(i) Money market hedge – borrow in euros on 1 January, put the money on deposit and then use it to pay the bill.

(ii) Do not specifically hedge the transaction, but use euro revenues from European customers to pay this amount. As TNS has customers in Europe, it seems likely that it will have sufficient euro income to do this.

**(e) Option 1 – Tax implications of marketing campaign and production improvements**

**Option 1: Tax implication under Marketing Campaign**

**Marketing expenses**

Cost of marketing campaign can be treated in either of the following ways by the tax authorities:

1. Allowed as an expense in the year of incurrence. TNS would obviously like this but the taxation authorities may not agree. The aggressive nature of the campaign implies that the cost will be significant and if accepted by the tax authorities, TNS would incur tax losses initially which may be carried forward and offset against future profits generated by TNS once its operations become profitable. However, the maximum carried forward period allowed for tax losses is 6 years.
2. As per section 24(11) of the Income Tax Ordinance, 2001, marketing expenses may be treated as intangible assets as its benefits are spread over more than one year. For tax purposes, the maximum amortisation period of the intangible assets is 10 years, though TNS may be able to have it amortised in 3–5 years.

It is quite evident that the cash flows under the two alternatives would be significantly different.

**Purchase of plant and machinery from Germany**

Any depreciable asset put into service for the first time in Pakistan during a tax year will be entitled to an initial allowance of 25% of the cost of the asset. Further, TNS is also allowed to claim depreciation at the rate of 10% annually on reducing balance method. In case of taxable losses, TNS is allowed to carry forward the tax depreciation for indefinite period.

**Option 2: Tax implication of acquiring Premium Fabrics**

It appears that TNS is currently a standalone company without any subsidiaries. The acquisition of Premium Fabrics, given its size, is likely to result in a group with TNS as a holding company. This gives rise to a number of options with regards to its tax affairs, as under:

**TNS is able to acquire 100% shareholdings of Premium Fabric (Most Likely)**
By default, both companies would be taxed separately but it is possible to make an irrevocable election to tax the group as a single entity. In such a case, any losses made by either entity would be automatically offset against the profit made by other entity. However, the option of group taxation shall be available to those group companies which comply with such corporate governance requirements and group regulations as may be specified by SECP from time to time.

Any income derived by TNS on account of dividend from Premium Fabrics will be exempt from tax subject to the condition that return of the group has been filed for the tax year.

Subsequently if TNS decides to acquire the assets of PF as has been its practice in the past, no gain or loss shall arise in case of such acquisition subject to meeting the conditions specified in section 97 of the ITO-2001.

**TNS is able to acquire less than 100% shareholdings in Premium Fabrics**
In case TNS acquires at least 55% of the share capital in Premium Fabrics it may be able to surrender its tax losses (excluding capital losses) in favour of TNS, to the extent of TNS's percentage of holding in Premium Fabrics.

Inter-company dividend would not be exempt from tax and hence any profits transferred from Premium Fabrics to TNS by way of dividend would be taxed again.

On the basis of above information, it is obvious that TNS would be able to obtain tax benefit under this option only if it is able to acquire 100% shareholding in Premium Fabrics. However, this rule has no practical advantage for TNS as PF has significant profits whereas TNS is at breakeven.

**Conclusion**
The tax benefit of acquisition is quite limited because it is only limited to adjustment of losses whereas none of the company is expected to incur a significant loss. On the other hand, at least in the case of a favourable stance of the tax authorities with regard to marketing expenses TNS would make a significant tax savings in the initial years. Even if all the marketing expenses are spread over more than one year, the marketing option would still be better from a tax point of view because of the initial depreciation on imported machinery.

## Ans.2 YSJ Chartered Accountants

### (a) Assessment of office performance

Both offices are generating a positive net income. Similarly, both offices generate positive residual incomes (RI) and achieve returns on capital employed (ROCE) of 15% or more. On the other hand, YSJ does not operate in a capital-intensive business so ROCE and RI may not be the most relevant measures to use.

There are significant differences in the performance of the two offices. The Islamabad office has grown revenue by only 0.7% and operating profit has declined by 4%. It appears that costs continued to rise despite a lack of growth in revenue. The main cost is staff, and staff costs as a proportion of revenue have risen from 51.4% to 52.1%. Staff costs have increased by 2% which may represent pay rises, and which have not been matched by revenue increases.

By contrast, the Lahore office grew revenue by 20.5%, and operating profit by 50.8%. Staff costs increased by 11.1% but as a proportion of revenue fell from 56.6% to 52.2%, which is a similar proportion to Islamabad. In 20X6, Lahore's operating margin is 30.3% compared to 26% in Islamabad, suggesting that costs overall are under better control. The relatively strong performance of Lahore may represent the difference in management or local business conditions, or both.

However, the figures also suggest that the growth in Lahore may be leading to a strain on cash flow. The figures for current ratio and receivable days are stable for Islamabad but in Lahore have deteriorated from 1.8 to 1.6 and 154 to 188 days respectively. Receivable days were already higher than in Islamabad, so this suggests there may be some issues with credit control and possibly a provision is required for bad and doubtful debts.

One measure often used in professional firms is profit per partner and here there is a striking difference between the offices. Islamabad has dropped from Rs13.8 million to Rs12.3 million while Lahore has increased from Rs14.3 million to Rs21.4 million. This disparity may cause some issues in terms of profit-sharing among the partners.

Overall, the Lahore office is performing very well and driving the success of the firm. However, the partners will need to ensure that this growth does not lead to a loss of control over and problems with cash flow. They will need to prioritise cash collection to avoid this.

It is also notable that total head office costs have increased from Rs48.2 million to Rs67.5 million, which is an increase of 40%, a much greater percentage increase than revenue. There seems to be a lack of cost control at head office, which should be investigated. As the firm is growing fast, it seems that many head office roles are being created to support it. This may well be driving the significant growth in costs.

## Appendix – Calculations

**Management accounts for the two offices of YSJ for the years ended 31 December 20X5 and 20X6 – analysis**

(**Note:** Marks are not specifically awarded for calculations but are they are supplied here for completeness.)

| | *Islamabad* | | | | *Lahore* | | | |
|---|---|---|---|---|---|---|---|---|
| | ***20X6*** | ***20X5*** | **Change** | **% change** | ***20X6*** | ***20X5*** | ***Change*** | **% change** |
| | **Rs'm** | **Rs'000** | | | **Rs'm** | **Rs'000** | | |
| Revenue | 730,136 | 725,364 | 4,772 | 0.7% | 436,044 | 361,917 | 74,127 | 20.5% |
| Staff costs | (380,337) | (372,730) | (7,607) | 2.0% | (227,469 ) | (204,722 ) | (22,747 ) | 11.1% |
| Other operating expenses | (159,790) | (154,996) | (4,794) | 3.1% | (76,570) | (69,679) | (6,891) | 9.9% |
| Operating profit | 190,009 | 197,638 | (7,629) | (3.9%) | 132,005 | 87,516 | 44,489 | 50.8% |
| Allocated head office costs | (42,250) | (31,688) | (10,562 ) | 33.3% | (25,232) | (16,534) | (8,698) | 52.6% |
| Profit before interest and tax | 147,759 | 165,950 | (18,191 ) | (11.0%) | 106,773 | 70,982 | 35,791 | 50.4% |
| Current ratio | 2.8 | 2.7 | 0.1 | 3.7% | 1.6 | 1.8 | (0.2) | (11.1%) |
| Receivable days | 139 | 137 | 2 | 1.5% | 188 | 154 | 34 | 22.1% |
| ROCE | 16% | 19% | (3%) | | 20% | 15% | 4% | |
| RI | 56,502 | 79,256 | (22,754 ) | (28.7%) | 52,274 | 23,567 | 28,707 | 121.8% |
| Capital employed | 912,577 | 866,948 | 45,629 | 5.3% | 544,995 | 474,146 | 70,849 | 14.9% |
| Staff costs as % of revenue | 52.1% | 51.4% | | | 52.2% | 56.6% | | |
| Operating margin | 26.0% | 27.2% | | | 30.3% | 24.2% | | |
| PBIT margin | 20.2% | 22.9% | | | 24.5% | 19.8% | | |
| Head office costs | (67,482) | (47,498) | (19,984 ) | 42.1% | | | | |
| | (42,250+25,232 ) | (31,688+16,534) | | | | | | |
| Number of partners | 12 | 12 | | | 5 | 5 | | |
| Profit per partner | 12,313 | 13,829 | | | 21,355 | 14,196 | | |

**(b) Likely impact of proposed remuneration schemes**

**Impact on recruitment**

The current system of partners being paid equally will clearly be attractive for those joining the partnership – they will be paid the same as long-established partners. However, this approach will make existing partners extremely careful about they admit to the partnership. Any new partners must be able to generate as much income as the existing ones, otherwise all partners will see a reduction in pay. This will remain largely the same if the proposal for a 25% bonus is adopted.

On the other hand, moving to a 'points system' may make recruitment harder, as new partners will earn less than existing ones. Existing partners will be more willing to admit new members, knowing that the risk of diluting their current earnings will be reduced.

**Motivation**

Paying partners equally will motivate them to improve the firm's overall performance, but, with 17 partners, there is a risk that the link between their own behaviour and the performance of the firm as a whole is too weak to provide a strong motivator.

Providing a bonus for exceeding the PBIT target is better in this respect, as partners can see a closer link between their performance and their office results, however PBIT is stated after deducting the share of head office costs which are allocated to that office, and these are outside the office managing partner's control. This could have a negative impact on motivation. It would be better to use operating profit, as this is more controllable by the local partners.

A points system would provide motivation for partners to improve their performance, provided the system was developed on a fair and transparent basis, and rewarded revenue generation and cost control.

**Behaviour**

If the partners are paid a bonus based on beating targets for profit before interest and tax, there is a danger that the partners will focus on this short-term measure and take action that will damage the business in the longer term. For example, they might be reluctant to invest in training and development of their staff. It would therefore be helpful to include other, more long-term key performance indicators (KPIs) as part of their performance management.

The targets may also increase competition between offices. The desire to achieve the target and trigger the bonus may mean that the two offices are less inclined to help each other if doing so reduces the likelihood of triggering their bonus. For example, they may refuse to second staff, or share knowledge of specialist technical areas with partners from the other office.

On the other hand, a 'points' system also carries risks. Partners may focus entirely on generating new business and extra work and neglect the existing business.

**(c) Additional KPIs**

These KPIs could include:

(i) The firm should focus on maximising the productivity of its staff. Revenue per member of professional staff, or revenue earned by each partner, could therefore be a useful metric.

(ii) It seems that the growth in the Lahore office is causing problems in terms of credit control. If not dealt with, this could lead to liquidity problems and bad debts. It would therefore be appropriate to have a KPI relating to cash collection for each office.

(**Note.** Full credit should be given for any other reasonable KPIs and explanations.)

**(d) Potential benefits of new database and executive information system (EIS)**

Facilitates improved decision making – By summarising key information, and providing partners with easy access to it, the EIS should help them to be better informed when making strategic decisions. However, the EIS should also allow management to drill down to the more detailed operational records to help understand the reasons for any variances in performance, and to identify ways of improving performance. For example, they will be able to analyse differences between budgeted time to complete an audit and the actual time taken.

Amount of information available – The new system should increase the amount of information that will be available to partners, and the speed with which it becomes available to them. In particular, the system will allow the partners to use more up to date (real-time) information than they are currently able to. In turn, having more information available to them should increase the amount of analysis that partners, and those supporting them, can perform in relation to any strategic decisions. For example, if one office has a lot of financial services clients with specialist requirements, a decision could be made to increase the number of specialists employed in that office.

There may also be scope to develop new and more relevant KPIs which can be used in determining bonus payments.

Consistency – Whereas summary data used to come from a range of different systems, it will now come from a single database, which should again improve the quality of data available to partners. For example, there should no longer be any inconsistencies in the data being submitted by different locations, or any need for manual reconciliations.

Reduced risk – If staff only have access to the parts of the system most relevant to them, it will reduce the risk of errors or data being tampered with.

**Practical issues connected with the introduction of new systems**

YSJ's partners will need to consider the following:

(i) Cost – Sufficient funds will need to be available to make the investment, and it will need to be justified by the expected benefits.

(ii) Staff capability – Staff will need to receive adequate training to use the system so time and money will need to be provided for this. There may also be some resistance from staff so open communication is key.

(iii) Choice of supplier – This will be a critical decision and a thorough tender process will need to be conducted. Considerations of supplier's stability and performance will be at least as important as cost and functionality of the system itself in making a decision.

**Ans.3 Chromium Mining Ltd**

**DRAFT REPORT**

To: Husain, Finance Director, CML
From: Zaheer Khan & Company, Chartered Accountants
Subject: Financing for Chromium Mining Ltd (CML)

Thank you for commissioning us to report on these matters. Our report is divided into two sections which deal with the cash flow forecast and evaluation of the financing packages.

**(a) Cash flow forecast**

We have completed a cash flow forecast on the basis of the assumptions provided (Appendix 1). Unfortunately, this shows that, based on these assumptions, CML will be unable to make repayments in full on the planned loan from 20Y0 onwards. Obtaining loan finance would therefore not be suitable, especially as there is a risk that expected improvements in revenue and profitability may not be realised.

CML could revisit these projections and consider ways of conserving cash. In particular, the planned capital investment of Rs800m per year for 3 years is very substantial. If this could be reduced or deferred, it would improve the forecast cash position.

**(b) Financing packages**

We have calculated the overall cost of finance as follows:
The bank loan will cost 15% before tax, although taking account of tax this will be 10.5% (15 × (1 – 0.3)). This does assume, however, that CML is making sufficient profits to pay tax and realise these savings, or else carry forward losses.

The conversion is dependent on the expected increase of 5% per year in the share price. If the market value of CML shares is below Rs83 (1,000/12) at the time of the conversion, the investors will choose to redeem their bonds at par and CML will need to pay Rs3bn in cash. Given that share prices are always unpredictable, particularly looking five years ahead, this is a significant risk. CML's position and the uncertainty around its business will increase this risk. However, if the conversion does take place and the price increases by 5% per annum as assumed, the cost of the convertible bonds will be 16.9% before tax and 13.5% after tax (W1).

For the rights issue, we have used the Capital Asset Pricing Model to estimate the cost of equity at 15.9% (W2). This will apply to all equity, including that raised in the rights issue.

The riskiest form of financing will be the bank loan, as payments must be made regardless of the cash position of CML at the time. On the other hand, a loan means there is no risk of current shareholders reducing control.

The convertible bond will solve the repayment issue provided the share price is above Rs83 at the time of the option to convert. On the other hand, if the conversion is exercised it will reduce the control of current shareholders. In addition, no dividends can be paid while the bonds are held so shareholders may become unhappy about this. On the other hand, the cash flow forecast suggests that CML may not have sufficient cash to pay dividends during this period, at least in the latter part of the period.
Given the cash flow issues which CML faces, it would be preferable to raise the additional finance using a rights issue. This will allow CML to make the necessary investments to improve the business without facing a short-term need to pay out cash for interest and loan repayments.

We hope this report is helpful to you.

**Appendix 1 – Cash flow forecast**

**Baseline:**

| | Rs'm | |
|---|---|---|
| Sales | 15,875 | |
| Cost of sales | (11,310) | Gross margin |
| Gross profit | 4,565 | 28.8% |
| Other costs | (4,374) | |
| Finance costs | (390) | |
| Net loss before taxation | (199) | |
| Taxation | 0 | |
| Net loss after taxation | (199) | |

| | *20X8* | *20X9* | *20Y0* | *20Y1* | *20Y2* |
|---|---|---|---|---|---|
| | **Rs'm** | **Rs'm** | **Rs'm** | **Rs'm** | **Rs'm** |
| Sales | 14,288 | 15,002 | 15,752 | 16,540 | 17,367 |
| Cost of sales | (10,030) | (10,381) | (10,743) | (11,280) | (11,844) |
| Gross profit | 4,258 | 4,621 | 5,009 | 5,260 | 5,523 |
| Other costs | (3,937) | (4,133) | (4,340) | (4,557) | (4,785) |
| Interest on loan | (450) | (360) | (270) | (180) | (90) |
| Other interest | (120) | (120) | (120) | (120) | (120) |
| Taxable profit | (249) | 8 | 279 | 403 | 528 |
| Less losses brought forward | 0 | (8) | (279) | (262) | 0 |
| Adjusted taxable profit | (249) | 0 | 0 | 141 | 528 |
| Tax payable | 0 | (0) | (0) | (42) | (158) |
| Profit after tax | (249) | 8 | 279 | 99 | 370 |
| Add back depreciation | 350 | 350 | 350 | 350 | 350 |
| Cash generated from operations | 101 | 358 | 629 | 449 | 720 |
| Capital investment | (800) | (800) | (800) | (200) | (200) |
| Cash from refinancing | 3,000 | | | | |
| Loan repayment | (600) | (600) | (600) | (600) | (600) |
| Opening cash | (500) | 1,201 | 159 | (612) | (963) |
| **Closing cash balance** | **1,201** | **159** | **(612)** | **(963)** | **(1,043)** |

**Assumptions:**

- Apart from capital expenditure, there are no material timing differences between accounting entries and cash flow.
- This assumes brought forward tax losses can be fully utilised, as well as losses incurred during the period.

**Workings**

**1 Calculation of cost of capital of convertible loan stock**

Work out cost of finance by doing internal rate of return (IRR) calculation

Annual interest payment will be Rs3bn × 12% = Rs360m.

Assuming shares grow in line with revenue and profits, market value in 5 years' time will be Rs85 × $(1.05)^5$.

Therefore, predicted share price is 108 and option will be exercised for 36 million shares (3bn/1,000 × 12).

**Pre-tax IRR**

| | *Rs'm* | *DF @ 10%* | *PV Rs'm* | *DF @ 15%* | *PV Rs'm* |
|---|---|---|---|---|---|
| T0 | (2,935) | 1 | (2,935) | 1 | (2,935) |
| T1–5 | 360 | 3.791 | 1,365 | 3.352 | 1,207 |
| T5 | 3,888 | 0.621 | 2,414 | 0.497 | 1,932 |
| | | | 844 | | 204 |
| IRR = | 16.59% | | | | |

**Post-tax IRR**

| | *Rs'm* | *DF @ 10%* | *PV Rs'm* | *DF @ 15%* | *PV Rs'm* |
|---|---|---|---|---|---|
| T0 | (2,935) | 1 | (2,935) | 1 | (2,935) |
| T1–5 | 252 | 3.791 | 955 | 3.352 | 845 |
| T5 | 3,888 | 0.621 | 2,414 | 0.497 | 1,932 |
| | | | 434 | | (158) |
| IRR = | 13.67% | | | | |

**2 Cost of capital – rights issue**

To calculate cost of capital using rights issue, first need to ungear current equity beta.

$$\beta g = \beta u \left(1 + \frac{D(1-T)}{E}\right)$$

$$1.7 = \beta u \left(1 + \frac{0.4(1-0.3)}{1}\right)$$

$\beta u = 1.7 \times 1/(1 + 0.4(1 - 0.3)) = 1.328$

Regear it with gearing of 0.1

$$\beta g = 1.328 \left(1 + \frac{0.1(1-0.3)}{1}\right) = 1.421$$

Therefore, new cost of equity is 6 + 1.421(13 – 6) = 15.9%.

**(c) Memo to manager**

Unfortunately, we are unable to make the adjustments suggested in this memo in order to show CML being able to meet its repayments. It would conflict with key ethical principles to which we adhere as Chartered Accountants. In particular, the principle of integrity means that we should not be associated with information which we believe may be false or misleading. The principle of objectivity means that we cannot be influenced in this respect by our relationship with CML as a client. We also have a responsibility to exercise professional competence and due care, which would not be the case if we knowingly adjusted forecasts in a way we knew may be misleading.

We could make adjustments to the forecasts, provided the assumptions used are reasonable and backed up with evidence, or circumstances change following the initial preparation of the figures. However, in order to safeguard our reputation and that of the profession, it is important that we do not comply with this request as it stands.

Another issue raised by the memo is that the breach of loan covenants has not yet been discussed with the Board of Directors. Section ix of the Code of Corporate Governance states:

'The CEO shall immediately bring before the board, as soon as it is foreseen that the company will not be in a position of meeting its obligations on any loans (including penalties on late payments and other dues, to a creditor, bank or financial institution or default in payment of public deposit), TFCs, Sukuks or any other debt instrument.'

The CEO is therefore in breach of the Code and we need to recommend that he should discuss the breach of loan covenants with the full Board of Directors as soon as possible.