Institute of Actuaries of India

Subject CB1-Business Finance

November 2023 Examination

INDICATIVE SOLUTION

Introduction

The indicative solution has been written by the Examiners with the aim of helping candidates. The solutions given are only indicative. It is realized that there could be other points as valid answers and examiner have given credit for any alternative approach or interpretation which they consider to be reasonable.

Solution 1: Answer D **[2 Marks]**

Solution 2: Answer B **[2 Marks]**

Solution 3: Answer C **[2 Marks]**

Solution 4: Answer D **[2 Marks]**

Solution 5: Answer C **[2 Marks]**

Solution 6: Answer A **[2 Marks]**

Solution 7: Answer B **[2 Marks]**

Solution 8: Answer C **[2 Marks]**

Solution 9: Answer D **[2 Marks]**

Solution 10: Answer D **[2 Marks]**

Solution 11:

i)

a) Income Cover = Profit on ordinary activities before interest and taxation/(Annual interest payments due on that issue of loan stock + all prior loan stock)

Limitations: -

- It does not consider volatility of profits
- Does not consider length of time for which loan is outstanding

[1.5]

b) Asset Cover = (total assets – current liabilities – intangible assets)/(loan capital + all prior charges)

Limitations: -

- Assets may not be the actual reflection of realizable market value if the company is wound up.
- Ignores value accretive assets like Brand value within intangible assets.

[1.5]

ii)

- Return on capital employed is generally regarded as reliable measure of profitability.
- Business needs to get the highest possible Return on capital employed for a given level of investment.
- Other ratios which can give an idea about profitability are difficult to interpret in isolation
- Higher gross profit in A Ltd may not mean the company is better managed as it could be overpricing the sales.
- Higher net profit suggests that A Ltd may be spending less on non-trading operating expenses.
- But it is possible that B Ltd may be making valuable investments in better administrative systems and advertising which may be the explanation for its higher returns.

[3]

[6 Marks]

Solution 12:

i) If Ram and Shyam decide that the business is in partnership then, both are jointly liable for any business debts. They will be 'severally liable' for the business.

This means if the business fails then they will have to make the shortfall from their own estate/assets.

It also means if one partner cannot or will not make settlement then the other will be liable for the unpaid share and will have to make that good as well.

This implies that the individuals trust each other. But as far as Ram and Shyam are concerned, they know each other for a short time. .

If the business is a limited company, then the business has a separate legal entity separate from the owners of the business. Ram and Shyam will not be directly liable for the company.
If the business fails then both will be able to walk away and leave unpaid creditors to gather as much as they can from remaining assets of the company.

Creditors cannot claim further payments from the shareholders personal wealth beyond the fully paid-up value of their shares.

The company will however require more time and effort to administer.

[Max 5]

ii) Ram's initial finance must be treated as a loan, for which she should be paid interest.

If Ram receives additional shares, this means Ram will receive disproportionate amount of profit if the company grows and succeeds.
It also means that Ram will receive nothing in recognition his advance while profits are poor.

They should split the equity equal between them

They should agree on their salaries at the beginning itselef. This will ensure that they do not take excessive amounts.
If shares are also distributed amongst other sharedholders, they may may decide how many funds are needed to run the business. Therefore, with the agreement of the owners, the remaining profits will be available to pay dividends respectively.

[Max 5]
[10 Marks]

Solution 13:

i)		
a) Present cost of equity	5%+(1.8*7%)=	17.60%
b) Estimated ungeared beta, with investment	(1.8*90/122)+(1.2*32/122)=	1.643
c) Debt/equity ratio	32/90=	0.356
Estimated geared beta, with investment	1.643*(1+(0.356*(1-0.23))=	2.093
d) Cost of equity, with investment	5%+(2.093*7%)=	19.65%
Cost of debt	9%*(1-0.23)=	6.93%
Weighted average cost of capital	(19.65%*90/122)+(6.93%*32/122)=	16.31%

[6]

ii)

- The director may not be correct as the new investment project should be evaluated in terms of its impact on shareholders wealth
- The shareholder may have already diversified their portfolios and hence the additional diversification may not add any value to them
- The project has a lower beta than the company, so this project will reduce the shareholder's weighted average beta and hence their overall risk profile.
- This may not be a good thing as the shareholders may have preferred a slightly higher risk while investing in this company to generate slightly higher expected return.
- The debt-free characteristic of this company may be liked by its shareholders and the gearing for this new project may make them unhappy
- The company entering into a significantly new line of business without any prior experience may create a negative perception among the company's strategies.

[5]

[11 Marks]

Solution 14:

Variation of the basic ordinary shares

i) 1. Deferred Shares
2. Redeemable Ordinary Shares
3. Non-voting Shares
4. Shares with multiple voting rights
5. Golden Shares

[Max 2]

ii) 1. Deferred Shares-
These come in two varieties: either no dividends are paid until normal ordinary shareholder's dividends or profits reach a given level, or dividends are paid until a given date.

2. Redeemable Shares
These are repaid by the company at a certain date.

3. Non-Voting rights
Non-voting shares may arise when a family-controlled company needs to raise more cash, but does not want the loss of control (and potential takeover) that comes with it.

4. Shares with multiple voting rights
When a company goes public with multiple voting rights structure, it shows two or more classes of shares, one to the public and another to the insiders.
The shares that are issued publicly have limited voting rights allowing the insiders to control business without owning a majority shares of the company.

5. Golden shares
Golden Shares give certain rights, for example voting rights and veto rights on certain issues. They could be held by the government following privatization.

[Max 4]

[6 Marks]

Solution 15:

Use of Swaps

1. Risk Management

a) Swap is used as a risk management tool. Swap can be used to manage Asset-liability mismatch.
b) Currency swap is used by the company because it has overseas investments and has liabilities in domestic currency.

2. Reducing the cost of capital
   a) The company has a comparative advantage in borrowing at a floating rate while another company has a comparative advantage in borrowing at a fixed rate.
   b) This will reduce the total cost of financing and both benefit from lower cost of debt

3. Hedging of risk
   Swap can also be used to hedge risk. For instance, company has issued fixed rate bonds. It strongly feels that the interest rate will decline in future due to change in the economic scene. So, to protect itself in future from the fall in interest rate, it has to exchange the fixed rate obligation with floating rate obligation. Company does so by entering into an agreement with the counterparty. The fixed rate it has to pay is compensated by the fixed rate the company receives from swap contract. Company pays floating rate.

4. Access to New Financial Markets:
   Swap is used to have access to new financial markets for funds by exploring the comparative advantage possessed by the other party in that market. Thus, the comparative advantage possessed by parties is fully exploited through swap. Hence, funds can be obtained from the best possible source at cheaper rates.

[Max 9 Marks]

Solution 16:

The company needs to consider offer for sale at a fixed price.
This is exclusively used when a company first obtains the quotation. This would involve selling new shares to the general public at a fixed price.
The advantage of this is that it raises additional capital at the same time as introducing the company to stock exchange.

Rather than selling shares directly to the public, the company or the existing shareholders sell the shares to the issuing house.
The issuing house is responsible for selling the shares to the general public.
Thus, the issuing house underwrites the issue. This means the company knows in advance how much the issue will generate because the issuing house is responsible for the lack of demand and the issuing house will be left with unsold shares.

There is, therefore, less risk of such type of transactions going wrong.

Issuing houses are usually part of investment bank. As well as underwriting an offer for sale, their role is to act as professional advisors to the company, overseeing the whole process and coordinating the activities of the other professional advisors.

This provides the company with the source of experience and advice in the selection of other professionals and in coordination of their various efforts.
The issuing house will also generate interest in the launch, for example by publishing positive news that might be picked up by the financial press.

[Max 6 Marks]

Solution 17: The key effects of the capital markets on the firm's decision include

1. Capital markets allow the company to assess the cost of raising capital via various alternate methods

2. Capital Markets help a company to assess the availability of size of capital in various geographies and industries
3. Mergers and takeovers information from the capital market help a company to identify or create threats and/or exploit opportunities as a predator
4. External factors or systemic risks can be identified in time and necessary actions can be taken

[Max 4 Marks]

Solution 18:

A1-Fashion's plans for growth/expansion can be constrained for a number of reasons which are as follows

1. Difficulty in raising Finance- Potential investors such as shareholders, venture capitalist, creditors will consider the expected outlook for the economy in general and A1-fashions investment plans, its reputation and its creditworthiness.

2. Fears of fall in the share price- If A1-fashion does not have confidence of its shareholders, a fall in dividends because of profits being invested in the business may cause the shareholders to sell their shares.

   The resulting fall in share price might lead to a welcome takeover bid.

3. Lack of managerial expertise -running a large business is more complex, expensive and time-consuming than running a small business. It requires skilled manager, clear management structure and delegation.
4. Limited time to prepare the workforce including management
5. Language and geographical infrastructure barrier
6. Change in tax laws and political situations for different states
7. Difference in demand pattern and levels of competition

[Max 5 Marks]

Solution 19:

Revenue Account for year ended 31st March 2023 of HH Insurance Co Ltd.		
Particulars	**Amount**	
Beginning of the year, Reserve for unexpired risk	10,23,000	
Premium less Re-insurance	28,47,908	
	38,70,908	
Claims Incurred(net)	8,15,866	[Note1]
Commission	3,42,979	[Note3]
Expense on Health account	4,13,542	[Note2]
Reserve for unexpired risk 40% of net premium	11,39,163	
	27,11,550	
Operating profit from Health business	**11,59,358**	
Note 1:		
Claims paid	6,63,097	
less recovered from reinsurance	-23,231	

add claim related expense	22,000	
add legal and survey expense	39,600	
Add: Claims intimated not paid	1,14,400	
	8,15,866	
Note 2:		
Expenses on Health account	4,75,142	
less survey fees, legal fees and claim related	61,600	
	4,13,542	
Note 3:		
Commission on direct business	329,755	
add: Commission on reinsurance accepted	66,042	
less: Commission on reinsurance ceded	52,818	
	3,42,979	

Profit and Loss Account for the year ended 31st March 2023	
Particulars	**Amount**
Operating Profit from Health Insurance	11,59,358
Income from Investments	1,68,300
	13,27,658
Expense other than Insurance Business related	
Rent	74,250
Rates and Taxes	6,384
Audit fee	39,600
	1,20,234
Profit before Tax	**12,07,424**
Taxation @ 40%	482,970
	7,24,454
Proposed Dividend@36%	2,60,804
Dividend distribution tax@12%	31,296
Transfer to General Reserve	2,20,000
	2,12,354
Balance B/F from last year	82,500
Balance C/F to Balance sheet of this year	**2,94,854**

Balance Sheet as on 31st March 2023			
Liabilities			
Share capital		9,90,000	
General reserve at the end of the year		2,69,500	[Note 4]
Profit and loss account balance carried forwad		2,94,854	
Health risk reserve		11,39,163	
Other liabilities			
Claims intimated but not paid		1,14,400	
Provision for taxation and dividends		7,75,069	[Note 5]
Sundry creditors		24,751	
		36,07,738	
Assets			

Investments		33,82,500	
Outstanding premium on direct business		24,530	
Cash in hand and bank balances		2,00,708	
		36,07,738	

Note 4:	
General reserve	49,500
Transfer of to be made from current profit to General reserve	2,20,000
General reserve at the end of the year	**2,69,500**
Note 5:	
Provisions	
For tax	4,82,970
For Dividends	2,60,804
For Dividend distribution tax	31,296
	7,75,069

[23 Marks]

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