DELHI SCHOOL OF BUSINESS
By Vivekananda Institute of Professional Studies - TC

Delhi School of Business
PGDM Program
END-TERM EXAMINATION, APRIL 2024
TERM – III (Batch: 2023-25)

Course Name	Financial Management-1	Course Code	FM-1
Duration	2.5 Hours End-Term Paper [redacted]	Max. Marks	60 [redacted]

Instructions:

1. Mode of Exam is Closed Book.

2. Use of mobile phones is strictly prohibited.

4. Only the use of calculators (preferably manual) is allowed.

5. Any attempt of misconduct will amount to the cancellation of the paper.

Question 5 is compulsory, and you are required to answer any three from the rest:
3 X 12 = 36 + 24 = 60

1. (a) The following information is provided for two mutually exclusive projects under consideration by Bombardier:

PARTICULARS	Project A	Project B
Effective working Life of Machine	10 years	10 years
Initial investment in Fixed assets (₹)	5,36,000	6,00,000
Salvage value at the end of life ₹	40000	50000
Additional Working Capital Invested ₹	1,00,000	1,00,000
Additional investment in Fixed Assets ₹	45,000	–
Expected EBITDA ₹	2,00,000	–
For Project B: First 5 years Last 5 years		 1,70,000 3,60,000

Depreciation is charged under the Fixed installment method and the company is under 50% tax bracket. A minimum rate of objective return has been fixed at 16%. Comment on the acceptability of the projects.

(b) Does Operating Leverage is a measure of Risk? Explain with a suitable example.

8 + 4(CO1, 2)

2. (a) The following is the Balance Sheet is available for Welcon Ltd.:

LIABILITIES	₹	ASSETS	₹
Equity Share Capital @ ₹10 each	60,000	Net Fixed Assets	1,50,000
10% Long term Debt	80,000	Current Assets	50,000
Retained earnings	20,000		
Current Liabilities	40,000		
2,00,000		2,00,000	

The company's total assets turnover ratio is 3.0, its fixed operating costs are ₹1,00,000 and its variable costs ratio is 40%. The income tax rate is 50%. Compute the necessary leverages for the company and determine the likely level of EBIT if EPS is ₹1; ₹3 and ₹0 respectively.

(b) State the empirical relationship between DOL and Margin of Safety.

9 + 3 (CO2)

3. (a) From the following information compute the overall cost of capital of Marco Ltd:

PARTICULARS	₹ (in Lakhs)	Pre-Tax cost
Equity share Capital	4.50	14%
Long-term debt	3.00	14%
Retained Earnings	1.50	14%
Preference Share Capital	1.00	8%

If the firm raises further long-term debt of ₹. 4 lakhs to meet an expansion program at 14% interest, will there be any change in your average cost of capital? (Assume Tax rate is 50%)

(b) Explain Proposition I given by Modigliani and Miller in the context of Capital Structure of the Firm.

6 + 6 (CO1,2)

4. (a) State the combined effect of Corporate Tax and Personal Tax in case of a Levered and Unlevered firm with a suitable example.

(b) A new project is under consideration by Ashok Leyland that requires a capital investment of ₹150 lakhs. Interest on term loan is 12% and tax rate is 50%. If the debt-equity ratio insisted by the financing agencies is 2:1. Create the financing plans that can be arrived at from the information given and compute the point of indifference of the project.

5 + 7 (CO1,3)

5. Please solve the attached Case and answer the respective questions given therein.

24 (CO2)

CENTRAL EQUIPMENT COMPANY LIMITED

In the beginning of January 2011, Mr. L C Tandon, Director of Finance of Central Equipment Company (CEC), was evaluating the pros and cons of debt and equity financing for the purpose of expansion of CEC's existing production facilities. At a recent meeting of the board of directors, a heated discussion took place on the best method of financing the expansion. Mr. K C Soni, Chairman and Managing Director (CMD), had therefore directed Mr. Tandon to critically evaluate the points made by the various members of the board, and to prepare a report on behalf of the company's management to be presented at the board meeting to be held in the last week in January 2011.

BACKGROUND OF THE COMPANY

CEC was started in the late fifties as a government company. It is one of the important engineering companies in the public sector, manufacturing a wide range of products. CEC's products include industrial machinery and equipments for chemicals, paper, cement, and fertilizers industries, super heaters, economizers, and sold material handling and conveying equipments.

CEC had started with a paid-up capital of Rs. 1 crore in 1971. As per the estimated balance sheet at the end of the year 2010–11, it has a paid-up capital of Rs. 18 crore (divided into 18 lakh shares of Rs. 100 each) and reserves of Rs. 45.96 crore. The company's sales have shown a general increasing trend despite a number of difficulties such as recessionary conditions, high input cost, frequent power cuts and un-remunerative regulated prices of certain products. In the last decade, CEC's sales have increased from Rs. 180 crore in 2001 to Rs. 304 crore in 2009–10. The sales for year ending March 31, 2011 are estimated to be Rs. 338 crore. Profit after tax (PAT) has increased from Rs. 1.71 crore in 2001–02 to Rs. 4.35 crore in 2009–10. The company is projecting a profit after tax of Rs. 5.03 crore in the year 2010–11. Due to the recessionary and other economic factors, sales and profit of the company have shown a cyclical behaviour over the last decade. Exhibit I gives sales and profit data for the ten-year period.

THE EXPANSION PROJECT

The need for expansion was felt because the market was fast growing and the company has at times reached its existing capacity. The project is expected to cost Rs. 20 crore, and generate an

average profit before interest and [illegible] a period of eight ten years. The management has already evaluated the financial viability of the project and found it acceptable even under adverse economic conditions. Mr. Soni felt that there would not be any difficulty in getting the proposal approved from the board and relevant government authorities. He also thought that the production could start as early as from September 2011.

FINANCING OF THE PROJECT

CEC has so far followed a very conservative financing policy. All these years, the company has financed its growth through budgetary support form the government in the form of capital and internally generated funds. The company has also been meeting its requirements for working capital finance from the internal funds. The company has, however, negotiated a standing credit limit of Rs. 5 crore from a large nationalized bank. In the past, it has hardly used the bank limit because of sufficient internal resources. As may be seen from the estimated balance sheet as on March 31, 2011 in Exhibit II, CEC's capital employed included paid-up share capital and reserves without any debt. The CMD feels that given the government's current attitude whereby it would like profitable companies to raise funds from the capital markets for their investments, it may look odd for CEC to obtain budgetary support from the government. However, in his assessment, CEC being a profitable company, government may be willing to provide budgetary support for the project. More significantly, he felt that raising equity capital may dilute equity earnings. Thus, he decided to reconsider the company's policy of avoiding long-term debt. It was thought that the use of debt could be justified by the expected profitable position of the company.

Mr. Tandon has determined that the company could sell Rs. 1,000 denomination bonds for an amount of Rs. 20 crore either to the public or to financial institution through private placement. The interest rate on bonds would be 14 per cent per annum, and they could be redeemed after seven years in three equal annual instalments. The bonds and interest thereon would be fully secured against the assets of the company. In Mr. Tandon's view, the company would have to sell a large number of bonds to financial institutions as CEC being a new company in the capital market, the public may not fully subscribe to the issue. He also felt that from the individual investors' point of view, CEC may have to give an option to the bondholders to sell back to the company bonds up to an amount of Rs. 1 crore each year. Also, bond-holders shall have the right to appoint one nominee director on the board of the company which shall, however, be exercised by the bond trustees only if the company defaults in the payment of interest or repayment on the due date.

In Mr. Tandon's opinion, the bond was a cheaper source of finance, since interest amount was tax deductible. Given the company's tax rate of 35 per cent, the 14 per cent interest rate was equal to 9.1 per cent from the company's point of view. On the other hand, he thought that equity capital would be costly to service, as CEC is currently paying a dividend of 15 per cent on its paid-up capital. Thus, the bond alternative looked attractive to Mr. Tandon on the basis of the comparison of costs.

The expansion proposal was discussed in the January 2011 meeting of the board. As most of the members were convinced about the profitability and desirability of the project, they did not take much time to approve it. Immediately after this decision, Mr. Tandon informed the members about the possibility of raising finance through a bond issue. He then presented his report highlighting the comparison between bond and equity financing. His conclusions clearly showed that bond financing was better for the company. Mr. Tandon was surprised to note that substantial disagreement existed among the members regarding the use of bond.

One director questioned the correctness of Mr. Tandon's calculation of the cost of the bond as he had ignored the implications of the annual requirement arising out of investors exercising the option. According to him, this would mean higher cost of bond as compared to equity capital. Yet another director emphasized that a lot of annual cash outflow would also take place under the bond alternative. He felt that the issue of bond would thus add to the company's risk by pressurizing its liquidity. Most of the directors, however, were in agreement with the estimate of post expansion profit before interest and taxes (PBIT) of Rs. 12.5 crore.

One of the directors argued that given the expected higher PBIT, the post-expansion equity return would significantly increase if the funds were raised by issuing bonds. He even emphasized that the job of the management should be to maximize profitability of equity owners by taking reasonable risks. This argument was countered by another director by stating that the equity return could be diluted if the company was unable to earn sufficient profit from the existing business and the new project. The discussion on bond versus equity financing was so involved that there did not seem to be any sign of an unanimous agreement being reached. At this juncture, Mr. Tandon suggested that the discussion on financing alternatives may be postponed until January end to allow him sufficient time to come up with a fresh analysis incorporating the various points raised in the current meeting. Mr. Tandon was wondering what he should do so that a unanimous decision could be reached.

DISCUSSION QUESTIONS

1. Calculate EPS under the alternatives of employing (a) Rs.20 crore debt and no fresh equity, (b) Rs 10 crore debt and Rs 10 crore equity and (c) Rs 20 crore equity and no debt. Also make calculations for uncommitted-EPS. Draw a chart showing PBIT on x-axis and EPS and uncommitted-EPS on y-axis for debt-equity mix. What inferences do you derive?
2. Debt issues raized in the case for and against the use of debt. Why do a large number of board members seem to be against the use of debt? What are the real risks involved? How would you measure them?
3. In addition to profitability and risk factors, what are other considerations before CEC to decide about its debt policy? Should it employ debt to finance its expansion?

Exhibit I

CENTRAL EQUIPMENT COMPANY

Selected Financial and Operating Information

(Rupees in lakh)

Year ending March 31	Sales	PBIT	PAT	Dividend	EPS (Rs.)
2001–02	18,040.00	343.00	171.00	90.00	9.50
2002–03	17,078.00	1.55.00	78.00	90.00	4.33
2003–04	18,940.00	412.00	206.00	90.00	11.44
2004–05	22,708.00	522.00	261.00	90.00	14.50
2005–06	25,200.00	580.00	290.00	108.00	16.11
2006–07	27,750.00	666.00	333.00	108.00	18.50
2007–08	29,492.00	768.00	384.00	144.00	21.33
2008–09	24,338.00	–53.00	–53.00	90.00	–
2009–10	30,423.00	821.00	435.00	180.00	24.17
2010–11$	33,769.00	946.00	503.00	180.00	27.94
2011–12*	35,795.00	850.00	552.00	180.00	30.67
2011–12#	40,323.00	1,250.00	813.00	380.00	21.39

$ Estimates

* Projections excluding the proposed expansion.

Projections include financial impact of proposed expansion and equity financing is assumed.

Note:

It is expected that a new plant will cause significant increase in the firm's fixed costs. The annual total expenses of the company after expansion in 1999 are expected to consist of 45 per cent fixed and 55 per cent variable expenses.

Exhibit II

CENTRAL EQUIPMENT COMPANY

Estimated Balance Sheet as on March 31, 2011

(Rupees in lakh)

Cash and bank balance	890	
Sundry Debtors	1,807	
Inventory	411	
Other current assets471.00		
Current assets		3,579
Gross block	8,199	
Less: accumulated depreciation	2,346	
Net block		5,853
Total assets	9,432	
Sundry creditors	1,518	
Tax provision	303	
Other current liabilities	1,215	
Current liabilities		3,036
Paid-up share capital	1,800	
Reserves and surplus	4,596	
Net worth		6,396
Total liabilities and capital	9,432	