**JAIPURIA INSTITUTE OF MANAGEMENT, INDORE**

**PGDM**

**THIRD TRIMESTER (Batch 2019-21)**

**END TERM EXAMINATION, APRIL-2020**

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| --- | --- | --- | --- |
| Course Name | **Advanced Corporate Finance** | Course Code | **FIN 301** |
| Max. Time | **2.5 hours** | Max. Marks | **40** |

1. Rajesh, a manager at Infosys Technologies Limited, received 2000 shares of company stock as part of his compensation package. The stock currently sells for Rs. 3000 a share. Rajesh would like to defer selling the stock until the next January. In February, however, he will need to sell all his holdings to provide for a down payment on his new house. Rajesh is worried about the price risk involved in keeping his shares. If the value of his stock holdings falls below Rs. 55,00,000, his ability to come up with the necessary down payment would be jeopardized. On the other hand, if the stock value rises to Rs. 65,00,000, he would be able to make a small cash reserves even after making the down payment. Rajesh considers three investment strategies:
2. Strategy A is to write February call options on the Infosys shares with strike price Rs. 3250. These calls are currently selling for Rs. 100 each. **(3 Marks)**
3. Strategy B is to buy February put options on Infosys with strike price Rs. 2750. These options also sell for Rs. 100 each. **(3 Marks)**
4. Strategy C is to write the February calls with strike price Rs. 3250 and to buy the February puts with strike price Rs. 2750. (**4 Marks)**

Evaluate each of these strategies with respect to Rajesh’s investment goals. What are the advantages and disadvantages of each? Which would you recommend?

1. A and B wants Rs. 1000000 loan to buy a house and go to their respective banks. The banks offer the following rate of interest

A: Fixed rate :8% B: Fixed rate :12%

Floating rate: Libor +1% Floating rate: Libor +3%

A thinks that the LIBOR will decrease and therefore wants to take loan at LIBOR. Whereas B thinks that LIBOR will increase and therefore want to take the loan at Fixed rate of interest. The commission paid to the intermediary is 1%. Calculate the effective rate of interest and benefit in Rupees to each party after Swap

**(6 Marks)**

1. Diwan Jewellers expects to purchase 2926 grams of platinum in 1 month and decides to use gold futures for hedging. Correlation between the price change of both the commodities is 0.928, and standard deviation of ΔS of platinum is 1.96% per month and ΔF of gold is 1.64% per month. Future contract of gold is traded in a lot of 10 grams. Determine optimal number of contract to be taken by Diwan Jewellers to minimize the risk.

**(4 Marks)**

**MINI CASE**

Rajat Ltd. has spread its cosmetic business across country. This firm started its operations in 1998 and in past 22 years his sales has grown multifold. This firm had adopted strategy of organic growth.

Recently, his team identified that customers are much interested in buying herbal products. CEO of Rajat Ltd. observed that their products are getting lot of competition from herbal products. CEO asked his CFO to adopt aggressive approach especially through acquisitions. In this context, CFO has identified Spa herbal ltd. CFO has looked at sales, rate of growth, operating margins, profit margin and market share.

Spa herbal is 9 year old firm with a market share of 9 percent across India and sales of 4700 million.

The financial statements of both the firms for last year is given below:

# Rajat Ltd.Balance Sheet

|  |  |  |  |
| --- | --- | --- | --- |
| Shareholder's Funds |  |  |  |
| (28 million shares, Rs 10 par) | 3220 | Fixed assets (net) | 2310 |
| Loan funds | 420 | Investments | 350 |
|  |  | Net current assets | 980 |
|  | 3640 |  | 3640 |

**Rajat Ltd. Profit and Loss Account**

|  |  |
| --- | --- |
| Sales | 6776 |
| Profit before depreciation, interest, and taxes | 1344 |
| Depreciation | 350 |
| Profit before interest and taxes | 994 |
| Interest | 56 |
| Profit before tax | 938 |
| Tax | 308 |
| Profit after tax | 630 |

**Spa Herbal Balance Sheet**

|  |  |  |  |
| --- | --- | --- | --- |
| Shareholder's Funds |  |  |  |
| (7 million shares, Rs 10 par) | 910 | Fixed assets (net) | 658 |
| Loan funds | 350 | Investments | 175 |
|  |  | Net current assets | 427 |
|  | 1260 |  | 1260 |

**Spa Herbal Profit and Loss Account**

|  |  |
| --- | --- |
| Sales | 1064 |
| Profit before depreciation, interest, and taxes | 161 |
| Depreciation | 49 |
| Profit before interest and taxes | 112 |
| Interest | 21 |
| Profit before tax | 91 |
| Tax | 24.5 |
| Profit after tax | 66.5 |

The market price per share of Astra Pharma is Rs.252 and the market price per share for Magnum Drugs is Rs. 77.

1. Calculate the exchange ratio that gives equal weightage to book value per share, earnings per share, and market price per share.
2. If the merger is expected to generate a synergy gain of 5 percent, what is the maximum exchange ratio Rajat Ltd. should accept to avoid initial dilution of earnings per share?
3. What will be the post-merger EPS of Rajat Ltd. if the exchange ratio is 1:3? Assume that there is no synergy gain.
4. What is the maximum exchange ratio acceptable to the shareholders of Rajat Pharma if the PE ratio of the combined entity is 15 and there is no synergy gain?
5. What is the minimum exchange ratio acceptable to the shareholders of Spa Herbal if the PE ratio of the combined entity is 14 and there is a synergy benefit of 2 percent?
6. Assuming that there is no synergy gain, at what level of the PE ratio will the lines ER*1* and ER*2* intersect?
7. Assume that the merger is expected to generate gains which have a present value of Rs. 1000 million and the exchange ratio agreed to is 1:3. What is the true cost of the merger from the point of view of Rajat Ltd. ?
8. What are the limitations of earnings per share as the basis for determining the exchange ratio?

**(20 Marks , each part 2.5 marks)**