

**Paper – 2: STRATEGIC FINANCIAL MANAGEMENT**

**QUESTIONS**

**Security Valuation**

1. Rahul Ltd. has surplus cash of ₹ 100 lakhs and wants to distribute 27% of it to the shareholders. The company decides to buy back shares. The Finance Manager of the company estimates that its share price after re-purchase is likely to be 10% above the buyback price-if the buyback route is taken. The number of shares outstanding at present is 10 lakhs and the current EPS is ₹ 3.

You are required to determine:

- (i) The price at which the shares can be re-purchased, if the market capitalization of the company should be ₹ 210 lakhs after buyback,
  - (ii) The number of shares that can be re-purchased, and
  - (iii) The impact of share re-purchase on the EPS, assuming that net income is the same.
2. ABC Ltd. has ₹ 300 million, 12 per cent bonds outstanding with six years remaining to maturity. Since interest rates are falling, ABC Ltd. is contemplating of refunding these bonds with a ₹ 300 million issue of 6 year bonds carrying a coupon rate of 10 per cent. Issue cost of the new bond will be ₹ 6 million and the call premium is 4 per cent. ₹ 9 million being the unamortized portion of issue cost of old bonds can be written off no sooner the old bonds are called off. Marginal tax rate of ABC Ltd. is 30 per cent. You are required to analyse the bond refunding decision.

**Portfolio Management**

3. Amal Ltd. has been maintaining a growth rate of 12% in dividends. The company has paid dividend @ ₹ 3 per share. The rate of return on market portfolio is 15% and the risk-free rate of return in the market has been observed as 10%. The beta co-efficient of the company's share is 1.2.

You are required to calculate the expected rate of return on the company's shares as per CAPM model and the equilibrium price per share by dividend growth model.

4. A Ltd. has an expected return of 22% and Standard deviation of 40%. B Ltd. has an expected return of 24% and Standard deviation of 38%. A Ltd. has a beta of 0.86 and B Ltd. a beta of 1.24. The correlation coefficient between the return of A Ltd. and B Ltd. is 0.72. The Standard deviation of the market return is 20%. Suggest:
  - (i) Is investing in B Ltd. better than investing in A Ltd.?
  - (ii) If you invest 30% in B Ltd. and 70% in A Ltd., what is your expected rate of return and portfolio Standard deviation?
  - (iii) What is the market portfolios expected rate of return and how much is the risk-free rate?

**Join Us on Telegram [http://t.me/canotes\\_final](http://t.me/canotes_final)**

(iv) What is the beta of Portfolio if A Ltd.'s weight is 70% and B Ltd.'s weight is 30%?

**Mutual Funds**

5. On 1-4-2012 ABC Mutual Fund issued 20 lakh units at ₹ 10 per unit. Relevant initial expenses involved were ₹ 12 lakhs. It invested the fund so raised in capital market instruments to build a portfolio of ₹ 185 lakhs. During the month of April 2012 it disposed off some of the instruments costing ₹ 60 lakhs for ₹ 63 lakhs and used the proceeds in purchasing securities for ₹ 56 lakhs. Fund management expenses for the month of April 2012 was ₹ 8 lakhs of which 10% was in arrears. In April 2012 the fund earned dividends amounting to ₹ 2 lakhs and it distributed 80% of the realized earnings. On 30-4-2012 the market value of the portfolio was ₹ 198 lakhs.

Mr. Akash, an investor, subscribed to 100 units on 1-4-2012 and disposed off the same at closing NAV on 30-4-2012. What was his annual rate of earning?

**Derivatives Analysis & Valuation**

6. Mr. Dayal is interested in purchasing equity shares of ABC Ltd. which are currently selling at ₹ 600 each. He expects that price of share may go upto ₹ 780 or may go down to ₹ 480 in three months. The chances of occurring such variations are 60% and 40% respectively. A call option on the shares of ABC Ltd. can be exercised at the end of three months with a strike price of ₹ 630.

- (i) What combination of share and option should Mr. Dayal select if he wants a perfect hedge?
- (ii) What should be the value of option today (the risk free rate is 10% p.a.)?
- (iii) What is the expected rate of return on the option?

7. Ram buys 10,000 shares of X Ltd. at a price of ₹ 22 per share whose beta value is 1.5 and sells 5,000 shares of A Ltd. at a price of ₹ 40 per share having a beta value of 2. He obtains a complete hedge by Nifty futures at ₹ 1,000 each. He closes out his position at the closing price of the next day when the share of X Ltd. dropped by 2%, share of A Ltd. appreciated by 3% and Nifty futures dropped by 1.5%.

What is the overall profit/loss to Ram?

**Foreign Exchange Exposure & Risk Management**

8. A Ltd. of U.K. has imported some chemical worth of USD 3,64,897 from one of the U.S. suppliers. The amount is payable in six months' time. The relevant spot and forward rates are:

Spot rate	USD 1.5617-1.5673
6 months' forward rate	USD 1.5455 –1.5609

The borrowing rates in U.K. and U.S. are 7% and 6% respectively and the deposit rates are 5.5% and 4.5% respectively.

**Join Us on Telegram [http://t.me/canotes\\_final](http://t.me/canotes_final)**

Currency options are available under which one option contract is for GBP 12,500. The option premium for GBP at a strike price of USD 1.70/GBP is USD 0.037 (call option) and USD 0.096 (put option) for 6 months period.

The company has 3 choices:

- (i) Forward cover
- (ii) Money market cover, and
- (iii) Currency option

Which of the alternatives is preferable by the company?

9. On April 3, 2016, a Bank quotes the following:

Spot exchange Rate (US \$ 1)	INR 66.2525	INR 67.5945
2 months' swap points	70	90
3 months' swap points	160	186

In a spot transaction, delivery is made after two days.

Assume spot date as April 5, 2016.

Assume 1 swap point = 0.0001,

You are required to:

- (i) ascertain swap points for 2 months and 15 days. (For June 20, 2016),
- (ii) determine foreign exchange rate for June 20, 2016, and
- (iii) compute the annual rate of premium/discount of US\$ on INR, on an average rate.

### **International Financial Management**

10. A USA based company is planning to set up a software development unit in India. Software developed at the Indian unit will be bought back by the US parent at a transfer price of US \$10 millions. The unit will remain in existence in India for one year; the software is expected to get developed within this time frame.

The US based company will be subject to corporate tax of 30% and additional withholding tax of 10% in India and will not be eligible for tax credit in the US. The software developed will be sold in the US market for US \$ 12.0 millions. Other estimates are as follows:

Rent for fully furnished unit with necessary hardware in India	₹ 1500000
Man power cost (80 software professional will be working for 10 hours each day)	₹ 400 per man hour
Administrative and other costs	₹ 12,00,000

Advise the US Company on the financial viability of the project. The rupee-dollar rate is ₹48/\$.

Note: Assume 365 days a year.

**Join Us on Telegram [http://t.me/canotes\\_final](http://t.me/canotes_final)**

**Interest Rate Risk Management**

11. XYZ Limited borrows £ 15 Million of six months LIBOR + 10.00% for a period of 24 months. The company anticipates a rise in LIBOR, hence it proposes to buy a Cap Option from its Bankers at the strike rate of 8.00%. The lump sum premium is 1.00% for the entire reset periods and the fixed rate of interest is 7.00% per annum. The actual position of LIBOR during the forthcoming reset period is as under:

Reset Period	LIBOR
1	9.00%
2	9.50%
3	10.00%

You are required to show how far interest rate risk is hedged through Cap Option.

For calculation, work out figures at each stage up to three decimal points and amount nearest to £. It should be part of working notes.

**Corporate Valuation**

12. Delta Ltd.'s current financial year's income statement reports its net income as ₹ 15,00,000. Delta's marginal tax rate is 40% and its interest expense for the year was ₹ 15,00,000. The company has ₹ 1,00,00,000 of invested capital, of which 60% is debt. In addition, Delta Ltd. tries to maintain a Weighted Average Cost of Capital (WACC) of 12.6%.
- (i) Compute the operating income or EBIT earned by Delta Ltd. in the current year.
  - (ii) What is Delta Ltd.'s Economic Value Added (EVA) for the current year?
  - (iii) Delta Ltd. has 2,50,000 equity shares outstanding. According to the EVA you computed in (ii), how much can Delta pay in dividend per share before the value of the company would start to decrease? If Delta does not pay any dividends, what would you expect to happen to the value of the company?

**Mergers, Acquisitions & Corporate Restructuring**

13. AFC Ltd. wishes to acquire BCD Ltd. The shares issued by the two companies are 10,00,000 and 5,00,000 respectively:
- (i) Calculate the increase in the total value of BCD Ltd. resulting from the acquisition on the basis of the following conditions:

Current expected growth rate of BCD Ltd.	7%
Expected growth rate under control of AFC Ltd., (without any additional capital investment and without any change in risk of operations)	8%
Current Market price per share of AFC Ltd.	₹ 100

***Join Us on Telegram [http://t.me/canotes\\_final](http://t.me/canotes_final)***

PAPER 2: STRATEGIC FINANCIAL MANAGEMENT

5

Current Market price per share of BCD Ltd. ₹ 20

Expected Dividend per share of BCD Ltd. ₹ 0.60

- (ii) On the basis of aforesaid conditions calculate the gain or loss to shareholders of both the companies, if AFC Ltd. were to offer one of its shares for every four shares of BCD Ltd.
- (iii) Calculate the gain to the shareholders of both the Companies, if AFC Ltd. pays ₹ 22 for each share of BCD Ltd., assuming the P/E Ratio of AFC Ltd. does not change after the merger. EPS of AFC Ltd. is ₹ 8 and that of BCD is ₹ 2.50. It is assumed that AFC Ltd. invests its cash to earn 10%.

**Theoretical Questions**

14. Explain different forms of divestitures.
15. Briefly explain how a Centralized Cash Management system helps MNCs in their treasury management.

**SUGGESTED ANSWERS/HINTS**

1. (i) **Let P be the buyback price decided by Rahul Ltd.**

Market Capitalisation after Buyback

1.1P (Original Shares – Shares Bought Back)

$$= 1.1P \left( 10 \text{ lakhs} - \frac{27\% \text{ of } 100 \text{ lakhs}}{P} \right)$$

$$= 11 \text{ lakhs} \times P - 27 \text{ lakhs} \times 1.1 = 11 \text{ lakhs} P - 29.7 \text{ lakhs}$$

Again, 11 lakhs P – 29.7 lakhs

or 11 lakhs P = 210 lakhs + 29.7 lakhs

$$\text{or } P = \frac{239.7}{11} = ₹ 21.79 \text{ per share}$$

- (ii) **Number of Shares to be Bought Back :-**

$$\frac{₹ 27 \text{ lakhs}}{₹ 21.79} = 1.24 \text{ lakhs (Approx.) or } 123910 \text{ share}$$

- (iii) **New Equity Shares:-**

$$10 \text{ lakhs} - 1.24 \text{ lakhs} = 8.76 \text{ lakhs or } 1000000 - 123910 = 876090 \text{ shares}$$

**Join Us on Telegram [http://t.me/canotes\\_final](http://t.me/canotes_final)**

6

FINAL EXAMINATION: NOVEMBER, 2022

$$\therefore \text{EPS} = \frac{3 \times 10 \text{ lakhs}}{8.76 \text{ lakhs}} = ₹ 3.43$$

Thus, EPS of Rahul Ltd., increases to ₹ 3.43.

2. (i) Calculation of initial outlay:-

	₹ (million)
a. Face value	300
Add: Call premium	<u>12</u>
Cost of calling old bonds	<u>312</u>
b. Gross proceed of new issue	300
Less: Issue costs	<u>6</u>
Net proceeds of new issue	<u>294</u>
c. Tax savings on call premium and unamortized cost 0.30 (12 + 9)	6.3

$$\therefore \text{Initial outlay} = ₹ 312 \text{ million} - ₹ 294 \text{ million} - ₹ 6.3 \text{ million} = ₹ 11.7 \text{ million}$$

(ii) Calculation of net present value of refunding the bond:-

	₹ (million)
Saving in annual interest expenses [300 x (0.12 – 0.10)]	6.00
Less:- Tax saving on interest and amortization 0.30 x [6 + (9-6)/6]	<u>1.95</u>
Annual net cash saving	<u>4.05</u>
PVIFA (7%, 6 years)	4.766
$\therefore$ Present value of net annual cash saving	₹ 19.30 million
Less:- Initial outlay	<u>₹ 11.70 million</u>
Net present value of refunding the bond	<u>₹ 7.60 million</u>

**Decision:** The bonds should be refunded

3. Capital Asset Pricing Model (CAPM) formula for calculation of expected rate of return is

$$E_R = R_f + \beta (R_m - R_f)$$

$E_R$  = Expected Return

$\beta$  = Beta of Security

$R_m$  = Market Return

$R_f$  = Risk free Rate

$$= 10 + [1.2 (15 - 10)]$$

**Join Us on Telegram [http://t.me/canotes\\_final](http://t.me/canotes_final)**

$$= 10 + 1.2 (5)$$

$$= 10 + 6 = 16\% \text{ or } 0.16$$

Applying dividend growth mode for the calculation of per share equilibrium price:-

$$E_R = \frac{D_1}{P_0} + g$$

$$\text{or } 0.16 = \frac{3(1.12)}{P_0} + 0.12 \quad \text{or } 0.16 - 0.12 = \frac{3.36}{P_0}$$

$$\text{or } 0.04 P_0 = 3.36 \quad \text{or } P_0 = \frac{3.36}{0.04} = ₹ 84$$

Therefore, equilibrium price per share will be ₹ 84.

4. (i) A Ltd. has lower return and higher risk than B Ltd. investing in B Ltd. is better than in A Ltd. because the returns are higher and the risk, lower. However, investing in both will yield diversification advantage.

(ii)  $r_{AB} = .22 \times 0.7 + .24 \times 0.3 = 22.6\%$

$$\sigma_{AB}^2 = 0.40^2 \times 0.7^2 + 0.38^2 \times 0.3^2 + 2 \times 0.7 \times 0.3 \times 0.72 \times 0.40 \times 0.38 = 0.1374$$

$$\sigma_{AB} = \sqrt{\sigma_{AB}^2} = \sqrt{.1374} = .37 = 37\% *$$

\* Answer = 37.06% is also correct and variation may occur due to approximation.

- (iii) This risk-free rate will be the same for A and B Ltd. Their rates of return are given as follows:

$$r_A = 22 = r_f + (r_m - r_f) 0.86$$

$$r_B = 24 = r_f + (r_m - r_f) 1.24$$

$$r_A - r_B = -2 = (r_m - r_f) (-0.38)$$

$$r_m - r_f = -2 / -0.38 = 5.26\%$$

$$r_A = 22 = r_f + (5.26) 0.86$$

$$r_f = 17.5\% *$$

$$r_B = 24 = r_f + (5.26) 1.24$$

$$r_f = 17.5\% *$$

$$r_m - 17.5 = 5.26$$

$$r_m = 22.76\% **$$

**Join Us on Telegram [http://t.me/canotes\\_final](http://t.me/canotes_final)**

8

**FINAL EXAMINATION: NOVEMBER, 2022**

\*Answer = 17.47% might occur due to variation in approximation.

\*\*Answer may show small variation due to approximation. Exact answer is 22.73%.

(iv)  $\beta_{AB} = \beta_A \times W_A + \beta_B \times W_B$   
 $= 0.86 \times 0.7 + 1.24 \times 0.3 = 0.974$

5.

	Amount in ₹ lakhs	Amount in ₹ lakhs	Amount in ₹ lakhs
Opening Bank (200 - 185 - 12)	3.00		
Add: Proceeds from sale of securities	63.00		
Add: Dividend received	<u>2.00</u>	68.00	
Deduct:			
Cost of securities purchased	56.00		
Fund management expenses paid (90% of 8)	7.20		
Capital gains distributed = 80% of (63 - 60)	2.40		
Dividend distributed = 80% of 2.00	<u>1.60</u>	<u>67.20</u>	
Closing Bank			0.80
Closing market value of portfolio			<u>198.00</u>
			198.80
Less: Arrears of expenses			<u>0.80</u>
Closing Net Assets			<u>198.00</u>
Number of units (Lakhs)			20
Closing NAV per unit (198.00/20)			9.90

Rate of Earning (Per Unit)

	Amount
Income received (₹ 2.40 + ₹ 1.60)/20	₹ 0.20
Loss: Loss on disposal (₹ 200 - ₹ 198)/20	<u>₹ 0.10</u>
Net earning	<u>₹ 0.10</u>
Initial investment	₹ 10.00
Rate of earning (monthly)	1%
Rate of earning (Annual)	12%

**Join Us on Telegram [http://t.me/canotes\\_final](http://t.me/canotes_final)**

6. (i) To compute perfect hedge we shall compute Hedge Ratio ( $\Delta$ ) as follows:

$$\Delta = \frac{C_1 - C_2}{S_1 - S_2} = \frac{150 - 0}{780 - 480} = \frac{150}{300} = 0.50$$

Mr. Dayal should purchase 0.50 share for every 1 call option.

- (ii) Value of Option today

If price of share comes out to be ₹780 then value of purchased share will be:

Sale Proceeds of Investment (0.50 x ₹ 780)	₹ 390
Loss on account of Short Position (₹ 780 – ₹ 630)	₹ 150
	₹ 240

If price of share comes out to be ₹ 480 then value of purchased share will be:

Sale Proceeds of Investment (0.50 x ₹ 480)	₹ 240
--	-------

Accordingly, Premium say P shall be computed as follows:

$$(\text{₹ } 300 - P) 1.025 = \text{₹ } 240$$

$$P = \text{₹ } 65.85$$

- (iii) Expected Return on the Option

$$\text{Expected Option Value} = (\text{₹ } 780 - \text{₹ } 630) \times 0.60 + \text{₹ } 0 \times 0.40 = \text{₹ } 90$$

$$\text{Expected Rate of Return} = \frac{90 - 65.85}{65.85} \times 100 = 36.67\%$$

7. No. of the Future Contract to be obtained to get a complete hedge

$$= \frac{10000 \times \text{₹ } 22 \times 1.5 - 5000 \times \text{₹ } 40 \times 2}{\text{₹ } 1000}$$

$$= \frac{\text{₹ } 3,30,000 - \text{₹ } 4,00,000}{\text{₹ } 1000} = 70 \text{ contracts}$$

Thus, by purchasing 70 Nifty future contracts to be long to obtain a complete hedge.

Cash Outlay

$$= 10000 \times \text{₹ } 22 - 5000 \times \text{₹ } 40 + 70 \times \text{₹ } 1,000$$

$$= \text{₹ } 2,20,000 - \text{₹ } 2,00,000 + \text{₹ } 70,000 = \text{₹ } 90,000$$

Cash Inflow at Close Out

$$= 10000 \times \text{₹ } 22 \times 0.98 - 5000 \times \text{₹ } 40 \times 1.03 + 70 \times \text{₹ } 1,000 \times 0.985$$

$$= ₹ 2,15,600 - ₹ 2,06,000 + ₹ 68,950 = ₹ 78,550$$

Gain/Loss

$$= ₹ 78,550 - ₹ 90,000 = - ₹ 11,450 \text{ (Loss)}$$

8. In the given case, the exchange rates are indirect. These can be converted into direct rates as follows:

Spot rate

$$\text{GBP} = \frac{1}{\text{USD}1.5617} \quad \text{to} \quad \frac{1}{\text{USD}1.5673}$$

$$\text{USD} = \text{GBP } 0.64033 \quad - \quad \text{GBP } 0.63804$$

6 months' forward rate

$$\text{GBP} = \frac{1}{\text{USD}1.5455} \quad \text{to} \quad \frac{1}{\text{USD}1.5609}$$

$$\text{USD} = \text{GBP } 0.64704 \quad - \quad \text{GBP } 0.64066$$

**Payoff in 3 alternatives**

**i. Forward Cover**

Amount payable	USD 3,64,897
Forward rate	GBP 0.64704
Payable in GBP	GBP 2,36,103

**ii. Money market Cover**

Amount payable	USD 3,64,897
PV @ 4.5% for 6 months i.e. $\frac{1}{1.0225} = 0.9779951$	USD 3,56,867
Spot rate purchase	GBP 0.64033
Borrow GBP 3,56,867 x 0.64033	GBP 2,28,512
Interest for 6 months @ 7 %	7,998
	-
Payable after 6 months	<u>GBP 2,36,510</u>

**iii. Currency options**

Amount payable	USD 3,64,897
Unit in Options contract	GBP 12,500
Value in USD at strike rate of 1.70 (GBP 12,500 x 1.70)	USD 21,250

**Join Us on Telegram [http://t.me/canotes\\_final](http://t.me/canotes_final)**

PAPER 2: STRATEGIC FINANCIAL MANAGEMENT

11

Number of contracts USD 3,64,897/ USD 21,250	17.17
Exposure covered USD 21,250 x 17	USD 3,61,250
Exposure to be covered by Forward (USD 3,64,897 – USD 3,61,250)	USD 3,647
Options premium 17 x GBP 12,500 x 0.096	USD 20,400
Premium in GBP (USD 20,400 x 0.64033)	GBP 13,063
Total payment in currency option	
Payment under option (17 x 12,500)	GBP 2,12,500
Premium payable	GBP 13,063
Payment for forward cover (USD 3,647 x 0.64704)	<u>GBP 2,360</u>
	<u>GBP 2,27,923</u>

Thus, total payment in:

(i) Forward Cover	2,36,103 GBP
(ii) Money Market	2,36,510 GBP
(iii) Currency Option	2,27,923 GBP

The company should take currency option for hedging the risk.

9. (i) Swap Points for 2 months and 15 days

	Bid	Ask
Swap Points for 2 months (a)	70	90
Swap Points for 3 months (b)	160	186
Swap Points for 30 days (c) = (b) – (a)	90	96
Swap Points for 15 days (d) = (c)/2	45	48
Swap Points for 2 months & 15 days (e) = (a) + (d)	115	138

(ii) Foreign Exchange Rates for 20<sup>th</sup> June 2016

	Bid	Ask
Spot Rate (a)	66.2525	67.5945
Swap Points for 2 months & 15 days (b)	0.0115	0.0138
	66.2640	67.6083

(iii) Annual Rate of Premium

	Bid	Ask
Spot Rate (a)	66.2525	67.5945

Join Us on Telegram [http://t.me/canotes\\_final](http://t.me/canotes_final)

12

FINAL EXAMINATION: NOVEMBER, 2022

Foreign Exchange Rates for 20 <sup>th</sup> June 2016 (b)	66.2640	67.6083
Premium (c)	0.0115	0.0138
Total (d) = (a) + (b)	132.5165	135.2028
Average (d) / 2	66.2583	67.6014
Premium	$\frac{0.0115}{66.2583} \times \frac{12}{2.5} \times 100$ = 0.0833%	$\frac{0.0138}{67.6014} \times \frac{12}{2.5} \times 100$ = 0.0980%

10. Proforma profit and loss account of the Indian software development unit

	₹	₹
Revenue		48,00,00,000
Less: Costs:		
Rent	15,00,000	
Manpower (₹400 x 80 x 10 x 365)	11,68,00,000	
Administrative and other costs	12,00,000	11,95,00,000
<u>Earnings before tax</u>		36,05,00,000
Less: Tax		10,81,50,000
Earnings after tax		25,23,50,000
Less: Withholding tax(TDS)		2,52,35,000
Repatriation amount (in rupees)		22,71,15,000
Repatriation amount (in dollars)		\$ 4.7 million

**Advise:** The cost of development software in India for the US based company is \$5.268 million. As the USA based Company is expected to sell the software in the US at \$12.0 million, it is advised to develop the software in India.

11. First of all we shall calculate premium payable to bank as follows:

$$P = \frac{rp}{\left[ (1+i) - \frac{1}{i \times (1+i)^t} \right]} \times A \text{ or } \frac{rp}{PVA(3.5\%, 4)} \times A$$

Where

P = Premium

A = Principal Amount

rp = Rate of Premium

Join Us on Telegram [http://t.me/canotes\\_final](http://t.me/canotes_final)

i = Fixed Rate of Interest

t = Time

$$= \frac{0.01}{\left[ (1/0.035) - \frac{1}{0.035 \times 1.035^4} \right]} \times \text{£}15,000,000 \text{ or } \frac{0.01}{(0.966 + 0.933 + 0.901 + 0.871)} \times \text{£}15,000,000$$

$$= \frac{0.01}{\left[ (28.571) - \frac{1}{0.0402} \right]} \times \text{£}15,000,000 = \text{£} 40,595 \text{ or } \frac{\text{£}150,000}{3.671} = \text{£} 40,861$$

Now we see the net payment received from bank

Reset Period	Additional interest due to rise in interest rate	Amount received from bank	Premium paid to bank*	Net Amt. received from bank
1	£ 75,000	£ 75,000	£ 40,861	£ 34,139
2	£ 112,500	£ 112,500	£ 40,861	£ 71,639
3	£ 150,000	£ 150,000	£ 40,861	£ 109,139
TOTAL	£ 337,500	£ 337,500	£ 122,583	£ 214,917

Thus, from above it can be seen that interest rate risk amount of £ 337,500 reduced by £ 214,917 by using of Cap option.

\* Alternatively, if premium paid is considered as £ 40,595, then above figure of £ 214,917 shall be changed to £ 215,715.

12. (i) Taxable income = Net Income / (1 - 0.40)  
 or, Taxable income = ₹ 15,00,000 / (1 - 0.40) = ₹ 25,00,000  
 Again, taxable income = EBIT - Interest  
 or, EBIT = Taxable Income + Interest  
 = ₹ 25,00,000 + ₹ 15,00,000 = ₹ 40,00,000

- (ii) EVA = EBIT (1 - T) - (WACC × Invested capital)  
 = ₹ 40,00,000 (1 - 0.40) - (0.126 × ₹ 1,00,00,000)  
 = ₹ 24,00,000 - ₹ 12,60,000 = ₹ 11,40,000

- (iii) EVA Dividend = ₹ 11,40,000 / 2,50,000 = ₹ 4.56

If Delta Ltd. does not pay a dividend, we would expect the value of the firm to increase because it will achieve higher growth, hence a higher level of EBIT. If EBIT is higher, then all else equal, the value of the firm will increase.

13. (i) For BCD Ltd., before acquisition

The cost of capital of BCD Ltd. may be calculated by using the following formula:

$$\frac{\text{Dividend}}{\text{Price}} + \text{Growth \%}$$

Cost of Capital i.e.,  $K_e = (0.60/20) + 0.07 = 0.10$

After acquisition  $g$  (i.e. growth) becomes 0.08

Therefore, price per share after acquisition =  $0.60/(0.10-0.08) = ₹30$

The increase in value therefore is =  $₹(30-20) \times 5,00,000 = ₹50,00,000/-$

(ii) To share holders of BCD Ltd. the immediate gain is  $₹100 - ₹20 \times 4 = ₹20$  per share

The gain can be higher if price of shares of AFC Ltd. rise following merger which they should undertake.

To AFC Ltd. shareholders	(₹ (In lakhs))
Value of Company now	1,000
Value of BCD Ltd.	<u>150</u>
	<u>1,150</u>
No. of shares	11.25
∴ Value per share	$1150/11.25 = ₹ 102.22$

Gain to shareholders of BCD Ltd. =  $₹102.22 - ₹(4 \times 20) = ₹22.22$

Gain to shareholders of AFC Ltd. =  $₹102.22 - ₹100.00 = ₹2.22$

(iii) Gain to shareholders of AFC Ltd:-

Earnings of BCD Ltd. (5,00,000 x 2.50) ₹ 12,50,000/-

Less: Loss of earning in cash (5,00,000 x ₹ 22 x 0.10) ₹ 11,00,000/-

Net Earning ₹ 1,50,000/-

Number of shares 10,00,000

Net increase in earning per share 0.15

P/E ratio of AFC Ltd. =  $100/8 = 12.50$

Therefore, Gain per share of shareholders of AFC Ltd. =  $0.15 \times 12.50 = ₹ 1.88$

Gain to the shareholders of BCD Ltd.  $₹ (22-20) = ₹ 2/-$  per share

Alternatively, it can also be computed as follows:

Post-Merger Earnings (10,00,000 x ₹ 8 + 5,00,000 x ₹ 2.5 – 11,00,000)	₹ 81,50,000
EPS after Merger $\left( \frac{81,50,000}{10,00,000} \right)$	₹ 8.15
PE Ratio	12.50
Post Merger Price of Share (₹ 8.15 x 12.50)	₹ 101.875
Less: Price before merger	<u>₹ 100.00</u>
	<u>₹ 1.875</u>
Say	₹ 1.88

**14. Different ways of divestment or demerger or divestitures are as follows:**

- (a) *Sell off / Partial Sell off:* A sell off is the sale of an asset, factory, division, product line or subsidiary by one entity to another for a purchase consideration payable either in cash or in the form of securities. Partial Sell off, is a form of divestiture, wherein the firm sells its business unit or a subsidiary to another because it deemed to be unfit with the company's core business strategy.

Normally, sell-offs are done because the subsidiary doesn't fit into the parent company's core strategy. The market may be undervaluing the combined businesses due to a lack of synergy between the parent and the subsidiary. So, the management and the board decide that the subsidiary is better off under a different ownership. Besides getting rid of an unwanted subsidiary, sell-offs also raise cash, which can be used to pay off debts. In the late 1980s and early 1990s, corporate raiders used debt to finance acquisitions.

- (b) *Spin-off:* In this case, a part of the business is separated and created as a separate firm. The existing shareholders of the firm get proportionate ownership. So, there is no change in ownership and the same shareholders continue to own the newly created entity in the same proportion as previously in the original firm. The management of spin-off division is however, parted with. Spin-off does not bring fresh cash. The reasons for spin off may be:
- (i) Separate identity to a part/division.
  - (ii) To avoid the takeover attempt by a predator by making the firm unattractive to him since a valuable division is spun-off.
  - (iii) To create separate Regulated and unregulated lines of business.
- (c) *Split-up:* This involves breaking up of the entire firm into a series of spin off (by creating separate legal entities). The parent firm no longer legally exists and only the newly created entities survive. For instance, a corporate firm has 4 divisions namely

**Join Us on Telegram [http://t.me/canotes\\_final](http://t.me/canotes_final)**

A, B, C, D. All these 4 divisions shall be split-up to create 4 new corporate firms with full autonomy and legal status. The original corporate firm is to be wound up. Since de-merged units are relatively smaller in size, they are logistically more convenient and manageable. Therefore, it is understood that spin-off and split-up are likely to enhance shareholders value and bring efficiency and effectiveness.

- (d) *Equity Carve outs*: This is like spin off, however, some shares of the new company are sold in the market by making a public offer, so this brings cash. More and more companies are using equity carve-outs to boost shareholder value. A parent firm makes a subsidiary public through an initial public offering (IPO) of shares, amounting to a partial sell-off. A new publicly listed company is created, but the parent keeps a controlling stake in the newly traded subsidiary.

A carve-out is a strategic avenue a parent firm may take when one of its subsidiaries is growing faster and carrying higher valuations than other businesses owned by the parent. A carve-out generates cash because shares in the subsidiary are sold to the public, but the issue also unlocks the value of the subsidiary unit and enhances the parent's shareholder value.

15. A Centralized Cash Management system helps MNCs in their treasury management as follows:
- (a) To maintain minimum cash balance during the year.
  - (b) To manage judiciously liquidity requirements of the centre.
  - (c) To optimally use various hedging strategies so that MNC's foreign exchange exposure is minimised.
  - (d) To aid the centre to generate maximum returns by investing all cash resources optimally.
  - (e) To aid the centre to take advantage of multinational netting so that transaction costs and currency exposure are minimised.
  - (f) To make maximum utilization of transfer pricing mechanism so that the firm enhances its profitability and growth.
  - (g) To exploit currency movement correlations:
    - (i) Payables & receivables in different currencies having positive correlations.
    - (ii) Payables of different currencies having negative correlations.
    - (iii) Pooling of funds allows for reduced holding – the variance of the total cash flows for the entire group will be smaller than the sum of the individual variances.