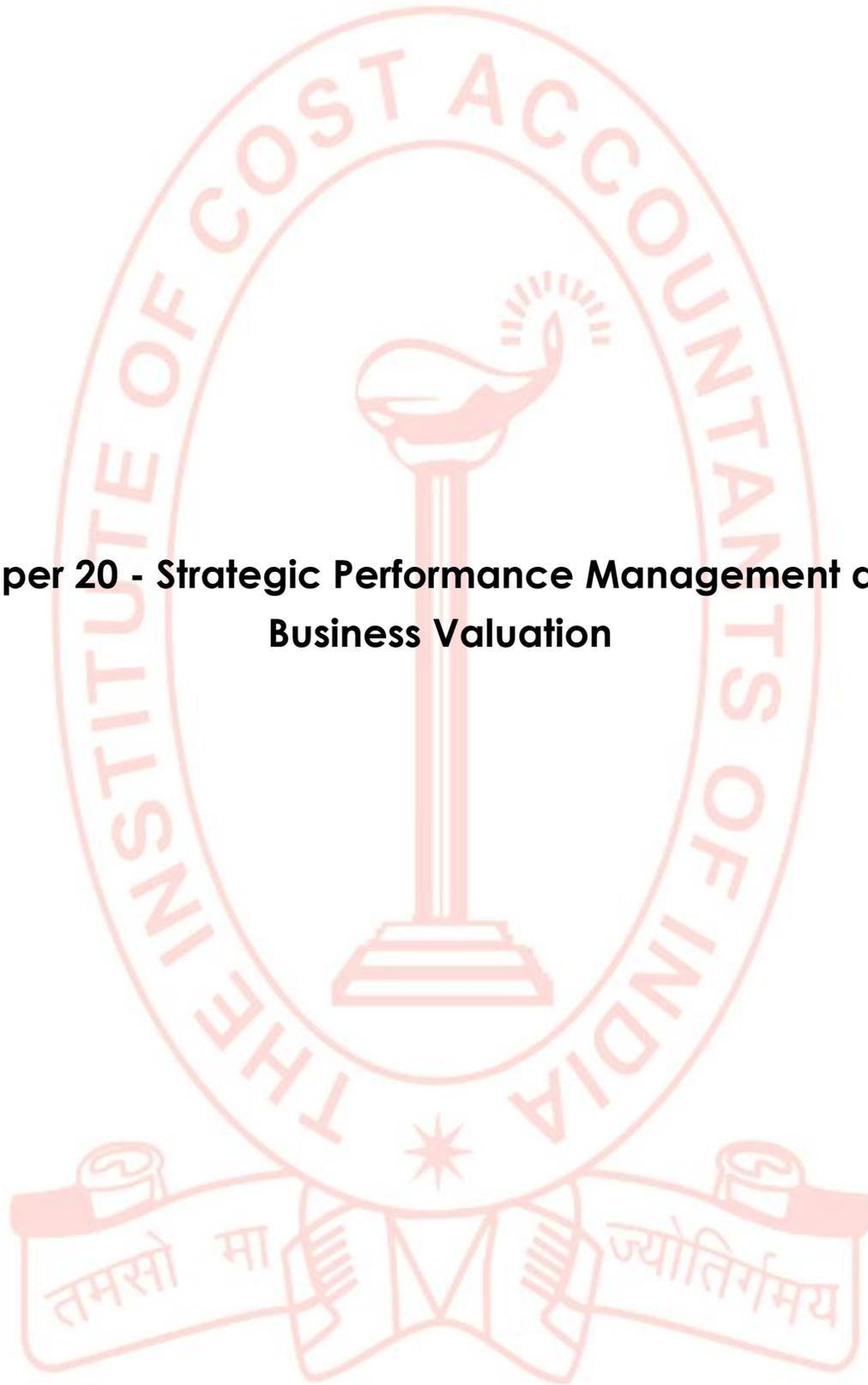


**Paper 20 - Strategic Performance Management and
Business Valuation**



Paper 20- Strategic Performance Management and Business Valuation

Full Marks : 100

Time allowed: 3 hours

Section – A (50 marks)

Strategic Performance Management

Answer Question No. 1 which is compulsory and any two from the rest of this Section.

1. Choose the most appropriate answer from the four alternatives given: [2x5=10]

- (i) Who has prompted the phrases, "Zero Defects"?
- (A) Walter A. Shewhart;
 - (B) Philip Crosby;
 - (C) Peter Drucker;
 - (D) F. W. Taylor.

Answer:

(B) — Philip Crosby

Philip Crosby prompted the phrases, "Zero Defects". It does not mean mistakes never happen, rather than there is no allowable number of errors built into a product or process and that it is to be got right first time.

- (ii) $ROA = (\text{Net Income}/\text{Revenue}) \times (\text{____}/\text{Assets}) = \text{Profit Margin} \times \text{Asset Turnover}$
- (A) Liabilities;
 - (B) Revenue;
 - (C) Equity;
 - (D) None of the above.

Answer:

(B) — Revenue

$ROA = (\text{Net Income}/\text{Revenue}) \times (\text{Revenue}/\text{Assets}) = \text{Profit Margin} \times \text{Asset Turnover}$

Answer to MTP_ Final_Syllabus 2016_June 2019_Set1

(iii) The revenue function of a firm given by $R = (2200 - 3x) \frac{x}{2}$, the firm's marginal revenue function will be _____.

- (A) $2200 - 3x$
- (B) $1100 - 3x$
- (C) $1100 - 2x$
- (D) $2200 - 2x$

Answer:

(B) — $1100 - 3x$

$$R = (2200 - 3x) \frac{x}{2} = \frac{2200x}{2} - \frac{3}{2}x^2 = 1100x - \frac{3}{2}x^2$$

$$MR = \frac{dr}{dx} = 1100 - 3x$$

(iv) The risk which is primarily influenced by the level of financial gearing, interest cover, operating leverage, and cash flow adequacy, is called:

- (A) Financial risk;
- (B) Business risk;
- (C) External risk;
- (D) Exchange risk.

Answer:

(A) — Financial risk

Financial risk is primarily influenced by the level of financial gearing, interest cover, operating leverage, and cash flow adequacy. The financial risk depends on the capital structure and method of financing adopted by the company.

(v) The 5 S's concepts in Quality Management are:

- (A) SEIRI, SETOIN, SEISO, SEIKETSU, SHITSKUE
- (B) SEIRI, SEITON, SEISO, SEIKETSU, SHITSUKE
- (C) SEIRI, SETOIN, SEISO, SEIKESTU, SHITSUKE
- (D) SIERI, SETOIN, SEISO, SEIKETSU, SHITSUKE.

Answer:

Answer to MTP_ Final_Syllabus 2016_June 2019_Set1

(B) — SEIRI, SEITON, SEISO, SEIKETSU, SHITSUKE

The 5 S's concepts in Quality Management are — SEIRI, SEITON, SEISO, SEIKETSU, and SHITSUKE. These all are Japanese words and used to focuses on quality improvement in an organization.

2. (a) (i) Discuss the components of Supply Chain Management.

[5]

(ii) List the advantages of 'Customer Relationship Management'. [Mention any ten]

[5]

Answer:

(i) There are five basic components of Supply Chain Management.

2. Plan: This is the strategic portion of SCM. You need a strategy for managing all the resources that go toward the meeting customer demand for your product and services.
3. Source: Choose the suppliers that will deliver the goods and services you need to create your product. Develop a set of pricing, delivery and payment processes with suppliers and create metrics for monitoring and improving the relationships.
4. Make: This is the manufacturing step. Schedule the activities necessary for production, testing, packaging and preparation for delivery.
5. Deliver: This is the part that many insiders refer to as logistics. Coordinate the receipt of orders from customers, develop a network of warehouses, pick carriers to get products to customers and set up an invoicing system to receive payments.
6. Return: The problem part of the supply chain. Create a network for receiving defective and excess products back from customers and supporting customers who have problems with delivered products.

(ii) The following are the advantages of Customer Relationship Management:

- satisfied customer does not consider leaving
- Product Development can be defined according to current customer needs
- a rapid increase in quality of products and services.
- the ability to sell more products
- optimization of communication costs

Answer to MTP_ Final_Syllabus 2016_June 2019_Set1

- trouble-free run of business processes
- fast and reliable predictions
- increase effectiveness of team work
- increase in staff motivation
- real time access to information
- more time for customers
- better communication between Marketing, Sales and Services.

(b) “An iron ore mining company excavates iron-ore, crushes over-sized lumps and washes a part of it for higher grade. Thus, there are three grades viz. sized ore (washed & unwashed) and fines, each serving a distinct group of customers. Company’s machineries comprise mobile equipments (drills, excavators, loaders, dumpers and dozers), stationery crusher, washing plant and conveyor system connecting crusher, washing plant and stockyard.” List the Key Performance Indicator of the Managing Director of this company.

[10]

Answer:

KPIs for Managing Director of the above company may include the following:

- (a) Grade-wise production of iron ore in tonnages for the year in question
- (b) Output per man-shift (OMS)
- (c) Equipment utilization %
- (d) Cost per ton of each grade for the year in question
- (e) Average sales revenue per ton for each grade for the year in question
- (f) Order fulfillment % for sales and purchases
- (g) Inventory ceiling for iron ore, spares and consumables (each in quantity & value)
- (h) Ceiling values of debtors and creditors
- (i) Statutory compliance in terms of payment of dues, return filing, etc (Number of show causes received may be used for measuring non-compliance. In such cases, response times may also be included as KPI).
- (j) Time limits for resolving complaints of customers, suppliers, employees, etc.
- (k) Development of mining in new areas within the lease (in terms of iron ore reserve targeted, additional machinery & manpower, Government' clearances, time-schedule, etc).

3.(a) (i) A manufacturer can sell “X” items ($X \geq 0$) at a price of $(330 - X)$ each; the cost of producing “X” items is ₹ $(X^2 + 10X + 12)$. How many items should he sell to make the

Answer to MTP_Final_Syllabus 2016_June 2019_Set1

maximum profit? Also determine the maximum profit.

[8]

Answer:

Given price (p) = 330-x

Cost(c) = $x^2 + 10x + 12$

Output = $x \geq 0$

Revenue (R) = $p \times x = (330 - x) \times x = 330x - x^2$

Profit = R - C

$$= (330x - x^2) - (x^2 + 10x + 12)$$

$$= 320x - 2x^2 - 12 \text{ (say } y)$$

In order to achieve maximum profit

$$\frac{dy}{dx} = 0 \text{ and } \frac{d^2y}{dx^2} = \text{positive}$$

$$\frac{dy}{dx} = 320 - 4x = 0$$

$$\text{or, } x = 80$$

$$\frac{d^2y}{dx^2} = -4, \text{ which is negative.}$$

Therefore profit is maximum at $x = 80$ units.

$$\text{Maximum profit} = 320(80) - 2(80)^2 - 12$$

$$= 25600 - 12800 - 12 = 12788$$

(ii) The Cost Function of a particular firm is $C = (1/3)x^3 - 5x^2 + 75x + 10$. Find at which level the Marginal Cost attains its minimum. [4]

Answer:

$$C = (1/3)x^3 - 5x^2 + 75x + 10$$

$$\text{Marginal Cost} = dc/dx = (1/3)3x^2 - 5(2x) + 75 = x^2 - 10x + 75 \text{ (say } y)$$

In order that the MC to be at minimum, its second derivative value must be positive.

$$dc/dx = 2x - 10 \text{ or } 2x = 10 \text{ or } x = 5.$$

$d^2c/dx^2 = 2$, which is positive, so that the function will have minimum values, when $x = 5$.

$$\text{Therefore, Minimum Marginal Cost} = 5^2 - (10 \times 5) + 75 = 25 - 50 + 75 = 100 - 50 = 50.$$

(a) Discuss the following aspects regarding Corporate Failure:

[3+2+3=8]

- (i) **Technical causes;**
- (ii) **Over-expansion and diversification;**
- (iii) **Working Capital Problem.**

Answer:

Technological Causes

Traditional methods of doing work have been turned upside down by the development of new technology. If within an industry, there is failure to exploit information technology and new production technology, the firms can face serious problems and ultimately fail.

By using new technology, cost of production can be reduced and if an organization continues to use the old technology and its competitors start using the new technology; this can be detrimental to that organization. Due to high cost of production, it will have to sell its products at higher prices than its competitors and this will consequently reduced its sales and the organization can serious problems.

This situation was seen in the case of Mittal Steel Company taking over Arcelor Steel Company. Arcelor Steel Company was using its old technology to make steel while Mittal Steel Company was using the new technology and as a result, Mittal Steel Company was able to sell steel at lower price than Arcelor Steel Company due to its low cost of production. Arcelor Steel Company was approaching corporate failure and luckily, Mittal Steel Company merged with Arcelor Steel Company and became Arcelor Mittal Steel Company, thus preventing Arcelor from failure.

Over-expansion and Diversification

Research has shown that dominant CEO is driven by the ultimate need to succeed for their own personal benefits. They neglect the objective set for the company and work for their self-interest. They want to achieve rapid growth of the company to increase their status and pay level. They may do so by acquisition and expansion.

The situation of over expansion may arise to the point that little focus is given to the core business and this can be harmful as the business may become fragment and unfocused. In addition, the companies may not understand the new business field. Enron and WorldCom can be an example for this situation where the managers did

not understand how growing overcapacity would influence its investment and therefore did not comprehend the risks associated with it.

Working Capital Problems

Organizations also face liquidity problems when they are in financial distress. Poor liquidity becomes apparent through the changes in the working capital of the organization as they have insufficient funds to manage their daily expenses.

Businesses, which rely only on one large customer or a few major customers, can face severe problems and this can be detrimental to the businesses. Losing such a customer can cause big problems and have negative impact on the cash flows of the businesses.

Besides, if such a customer becomes bankrupt, the situation can even become worst, as the firms will not be able to recover these debts.

4. (a) (i) What is Risk Mapping? Does it benefit the organisation? – Discuss. [5+5=10]

Answer:

Risk mapping is the process of identifying, quantifying and prioritizing the risks that may interfere with the achievement of organizational objectives. Its aim is to arrive at a clear set of action plans that improve risk management controls, in areas where these are necessary and help the management of the organization's direct resources.

Risk mapping should start from process mapping and from identifying critical risks in each process phase, linked either to key people, to systems, to interdependencies with external players, or to any other resource involved in the process. Subsequently, potential effects of errors, failures or improper behavior should be analyzed. This may also lead to identifying priorities in terms of control actions. Of course, special care should be given to high-severity risks, even if they appear unlikely to occur.

Benefits of Risk Mapping:

- Promotes awareness of significant risks through priority ranking, facilitating the efficient planning of resources.
- Enables the delivery of solutions and services across the entire risk management value chain.

Answer to MTP_ Final_Syllabus 2016_June 2019_Set1

- Serves as a powerful aid to strategic business planning.
- Aids the development of an action plan for the effective management of significant risks.
- Assigns clear responsibilities to individuals for the management of particular risk areas.
- Provides an opportunity to leverage risk management as a competitive advantage.
- Facilitates the development of a strategic approach to insurance programme design.
- Supports the design of the client's risk financing and insurance programmes, through the development of effective/optimal retention levels and scope of coverage etc.

(b) Write a note on each of the following:

[4+3+3=10]

- Value at Risk**
- On-Line Analytical Processing**
- Tactical-level information systems**

Answer:

- (i) Value at Risk (VaR)** is one of the popular methods of measuring financial risks. There are different types of VaR — long-term VaR, marginal VaR, factor VaR, and shock VaR.

VaR is also defined as the threshold value such that the probability of a portfolio making a market to a market loss over a specific time horizon exceeds this value. For example, if a portfolio stock has a one day 3 per cent VaR of ₹10 million, there is 0.03 probability that the portfolio may face a reduction in value by more than ₹10 million over a specific time period. This is on assuming that normal market operations and there is no trading.

A loss which exceeds VaR threshold is known as 'VaR break'. VaR has applications in financial risk management, risk measurement, control and reporting. It can also be used in calculating regulatory capital. VaR essentially identifies the boundary between normal days and extreme occurrences. The probability level is specified as 1 minus probability of a VaR Break. Normally VaR parameters are 1 per cent and 5 per cent probabilities and 1 day and 2 week horizons. While VaR represents loss, a negative VaR would indicate that a portfolio has a high probability for making profits. There are two types of VaR—one is applied primarily in risk management and the other in risk measurement.

(ii) **On-Line Analytical Processing**

On-Line Analytical Processing (OLAP) is a category of software technology that enables analysts, managers and executives to gain insight into data through fast, consistent, interactive access to a wide variety of possible views of information that has been transformed from raw data to reflect the real dimensionality of the enterprise as understood by the user. OLAP functionality is characterized by dynamic multi-dimensional analysis of consolidated enterprise data supporting end user analytical and navigational activities including:

- calculations and modeling applied across dimensions, through hierarchies and/or across members
- trend analysis
- slicing subsets for on-screen viewing
- drill-down to deeper levels of consolidation
- reach-through to underlying detail data etc.

(iii) **Tactical-level information systems** serve middle level managers and help in taking decisions for a period of 2-3 years. The managers are typically concerned with planning, controlling and use summaries of transactions to aid their decision-making. In other words, these systems provide middle-level managers with the information they need to monitor and control operations and to allocate resources more effectively. In tactical systems, transactions data are summarized, aggregated, or analysed. Their purpose is not to support the execution of operational tasks but to help the manager control these operations.

Section - B (50 marks)

Business Valuation

Answer Question No. 5 which is compulsory and any two from the rest of this Section.

5. Choose the most appropriate answer from the four alternatives given: [2x5=10]

- (i) Estimated fair value of an asset is based on the _____ value of operating cash flows.
- (A) current
 - (B) discounted
 - (C) future

Answer to MTP_ Final_Syllabus 2016_June 2019_Set1

(D) none of these

Answer:

(B) — discounted.

In Discounted Cash Flow (DCF) valuation, the value of an asset is the present value of the expected cash flows on the asset.

(ii) Economic Value Added for all years = Net Operating Profit after Taxes – WACC × _____

- (A) Capital Invested
- (B) Gross Capital Expenditure
- (C) Net sales growth
- (D) None of the above

Answer:

(A) — Capital Invested

Economic Value Added for all years = Net Operating Profit after Taxes – WACC × Capital Invested

(iii) X Ltd. has ₹300 crores worth of common equity on its balance sheet comprising of 60 lakhs shares. The company's Market Value Added (MVA) is ₹42 crores. What is company's stock price?

- (A) ₹570
- (B) ₹500
- (C) ₹42
- (D) None of the above

Answer:

(A) — ₹570

₹(300+42) crores / 60 lakhs shares = ₹570

(iv) A intends to acquire B (by merger) based on market price of the shares. The following information is available of the two companies.

	A	B

Answer to MTP_Final_Syllabus 2016_June 2019_Set1

No. of Equity shares	5,00,000	3,00,000
Earnings after tax (₹)	25,00,000	9,00,000
Market value per share	₹30	₹25
New EPS of A after merger?		

- (A) ₹3.40
- (B) ₹5.00
- (C) ₹3.00
- (D) ₹4.53

Answer:

- (A) — ₹4.53

No. of shares B Ltd. will get in A Ltd. based on market price = $25/30 \times 3,00,000$
= 2,50,000 Shares

Total No. of Equity shares of A Ltd = 5,00,000 + 2,50,000 = 7,50,000 shares

Total earnings = 25,00,000 + 9,00,000 = ₹34,00,000.

The new EPS of A Ltd. after merger = $34,00,000/7,50,000 = ₹4.53$.

- (v) If a company has a P/E ratio of 20 and a ROE (Return on Equity) of 0.20%, then the Market to Book Value Ratio is
- (A) 4 times
 - (B) 4%
 - (C) cannot be calculated from the given information
 - (D) None of the above

Answer:

- (A) 4 times

4 times, (Since $P/E \times ROE = 20 \times 0.20$)

6. (a) Consider a bond selling at its par value of ₹1,000, with 6 years to maturity and a 7% coupon rate (with annual interest payment), what is bond's duration? If the YTM of this bond increases to 10%, how it affects the bond's duration? and why? Why should the duration of a coupon carrying bond always be less than the time to its maturity? [10]

Answer to MTP_Final_Syllabus 2016_June 2019_Set1

Answer:

We are given the price of the bond as ₹1000.

We also know that duration is given by:

$$D = \frac{\sum_{t=1}^n \frac{t \times C}{(1+i)^t} + \frac{n \times M}{(1+i)^n}}{P}$$

Where

n = number of cash flows = 6

t = time to maturity = 6

C = Coupons - ₹ 70

i = required yield = 7%

M = maturity (par) value = 1000

P = bond price = ₹1000

D = Required

$$D = \frac{\frac{1 \times 70}{1.07} + \frac{2 \times 70}{(1.07)^2} + \frac{3 \times 70}{(1.07)^3} + \frac{4 \times 70}{(1.07)^4} + \frac{5 \times 70}{(1.07)^5} + \frac{6 \times 70}{(1.07)^6} + \frac{6 \times 1000}{(1.07)^6}}{1000} = 5.098 \text{ years}$$

If the YTM increases to 10%, then the coupons would be re-invested at higher rates, thereby decreasing the time required for getting the initial investment. Hence, duration, which is nothing but, weighted discounted payback period, decreases. We can re-calculate to verify the same:

$$D = \frac{\frac{1 \times 70}{1.1} + \frac{2 \times 70}{(1.1)^2} + \frac{3 \times 70}{(1.1)^3} + \frac{4 \times 70}{(1.1)^4} + \frac{5 \times 70}{(1.1)^5} + \frac{6 \times 70}{(1.1)^6} + \frac{6 \times 1000}{(1.1)^6}}{1000} = 4.373 \text{ years}$$

1000 The term duration is a measurement of how long in years it takes for the price of a bond to be repaid by its internal cash flows. In a zero coupon bond we do not receive any intermediate cash flows and the entire money is available only on maturity, and hence duration of a Zero-Coupon Bond is equal to maturity period. On the same lines since coupon bonds, pays coupons (intermediate interest), we get our price much earlier to maturity period. Moreover, we receive the re-investment income too. Therefore, duration of a coupon bond will always be less than its maturity period.

(b) Alpha India Ltd., is trying to buy Beta India Ltd., Beta India Ltd., is a small biotechnology firm that develops products that are licensed to major pharmaceutical firms. The development costs are expected to generate negative cash flows of ₹ 10 lakhs during the first year of the forecast period. Licensing fee is expected to generate positive cash flows of ₹ 5 lakhs, ₹ 10 lakhs, ₹ 15 lakhs and ₹ 20 lakhs during

Answer to MTP_ Final_Syllabus 2016_June 2019_Set1

2-5 years respectively. Due to the emergence of competitive products, cash flows are expected to grow annually at a modest 5% after the fifth year. The discount rate for the first five years is estimated to be 15% and then drop to 8% beyond the fifth year. Calculate the value of the firm.[10]

Given: The discount rate @ 15% will be:

Year	1	2	3	4	5
Discount Rate	0.869	0.756	0.6575	0.572	0.497

Answer:

Year	Cash flows (₹ In lakhs)	Discount rate @15%	Present Value (₹ in lakhs)
1	(10)	0.869	(8.69)
2	5	0.756	3.78
3	10	0.6575	6.575
4	15	0.572	8.58
5	20	0.497	9.94
Total sum of present value			20.185

Terminal Value t = Cash Flow $_{t+1}$ / $r-g_{stable}$

Cash flow $_{t+1}$ = Cash flow $(1+g) = 20(1+0.05) = 21$ Lakhs

Terminal Value = $21 / (0.08 - 0.05) = ₹700$ Lakhs.

Present value of terminal value = $700 \times 0.497 = ₹ 347.9$ Lakhs

Value of the firm = Total sum of present value + Present value of terminal value
 = ₹20.185 + ₹ 347.9 = ₹ 368.085 Lakhs.

7. (a) The following information is provided in relation to the acquiring firm P Ltd. and the target firm Q Ltd.

Particulars	P Ltd.	Q Ltd.
Earnings after tax (₹)	300 lakhs	60 lakhs
Number of shares outstanding	20 lakhs	10 lakhs
P /E Ratio	10	5

Required:

- (i) What is the swap ratio in terms of current market price?
- (ii) What is the EPS of P Ltd. after acquisition?
- (iii) What is the expected market price per share of P Ltd. after acquisition assuming that P / E ratio of P Ltd. remains unchanged?
- (iv) Determine the market value of the merged firm. [8]

Answer:

Answer to MTP_ Final_Syllabus 2016_June 2019_Set1

Particulars	P Ltd.	Q Ltd.
Earnings after tax (₹)	300 lakhs	60 lakhs
Number of shares outstanding	20 lakhs	10 lakhs
P / E Ratio	10	5
ESP	15	6
Market price (₹)	150	30

- (i) Swap ratio in terms of market prices: $30/150 = 0.20$
- (ii) EPS of P Ltd. after acquisition: $(300 + 60) / (20 + 0.2 \times 10) = 360/22$ or say ₹16.36
- (iii) Expected market price per share of P Ltd. with the same P/E ratio of 10 will be:
 $16.36 \times 10 = ₹163.6$
- (iv) Market value of merged firm: Total number of outstanding shares \times market price
 $= ₹ 3599.2$ lakhs.

(b) Bibi Ltd. is planning to acquire Titi Ltd. and the following information is provided in relation to the acquisition about both the companies:

Particulars	Bibi Ltd.	Titi Ltd.
Profit after tax (₹ in lakhs)	250	50
Number of shares outstanding (in lakhs)	20	10
P/E Ratio	16	12

Required:

- (i) What will be the swap ratio it is to be determined on the basis of market prices?
- (ii) Assuming that the swap ratio is on the basis of market price, what will be the market value of Bibi Ltd. after acquisition if the merged entity expected to have a P/E ratio of 18?
- [12]

Answer:

Particulars	Bibi Limited	Titi Limited
Profit After Tax (₹ in lacs)	₹250.00	₹50.00
Number of Shares Outstanding (in lakhs)	20	10
P/E Ratio	16	12
EPS	₹12.50	₹5.00
Price	₹200.00	₹60.00
Swap Ratio on the basis of Market Price	0.30:1 (That is 0.3 share of	

Answer to MTP_ Final_Syllabus 2016_June 2019_Set1

	Bibi Ltd. for one share of Titi Ltd.)
--	---------------------------------------

Assuming that there is no synergy gains, Profits After Tax of the merged entity will be (in lacs)	₹300.00
Given the swap ratio of 0.30 shares of Bibi Limited for one share of Titi Ltd, the number of new shares issued by Bibi Ltd will be	3 lacs
Total Number of shares outstanding of Bibi Ltd after acquisition will be	23 lacs
EPS of merged entity will be	₹13.04
Given the P/E Ratio of 18, the market price of the merged entity will be	₹234.72

8. (a) The following information is available of a concern; calculate E.V.A.:

Debt capital 12%	₹4,000 crores
Equity capital	₹1,000 crores
Reserve and Surplus	₹15,000 crores
Capital employed	₹20,000 crores
Risk-free rate	8%
Beta factor	1.05
Market rate of return	18%
Equity (market) risk premium	10%
Operating profit after tax	₹4,200 crores
Tax rate	30%

[10]

Answer:

E.V.A. = NOPAT – COCE
 NOPAT = Net Operating Profit after Tax
 COCE = Cost of Capital Employed
 COCE = Weighted Average Cost of Capital x Average Capital Employed
 = WACC x Capital Employed

Debt Capital = ₹4,000 crores
 Equity capital 1,000 + 15,000 = ₹16,000 crores
 Capital employed = 4,000 + 16,000 = ₹20,000 crores

Answer to MTP_ Final_Syllabus 2016_June 2019_Set1

$$\text{Debt to capital employed} = \frac{4,000}{20,000} = 0.20$$

$$\text{Equity to capital employed} = \frac{16,000}{20,000} = 0.80$$

Debt cost before tax 12%

Less: Tax (30% of 12%) 3.6%

Debt cost after Tax 8.4%

According to capital Asset Pricing Model (CAPM)

Cost of Equity Capital = Risk Free Rate + Beta x Equity Risk Premium

Or

$$= 9 + [1.05 \times (18 - 8)]$$

$$= 9 + (1.05 \times 10) = 19.5\%$$

WACC = Equity to CE x Cost of Equity capital + Debt to CE x Cost of Debt

$$= 0.8 \times 19.5\% + 0.20 \times 8.40\%$$

$$= 15.60\% + 1.68\% = 17.28\%$$

COCE = WACC x Capital employed

$$= 17.28\% \times ₹20,000 \text{ crores} = ₹3,456 \text{ crores}$$

E.V.A = NOPAT – COCE

$$= ₹4,200 - ₹3,456 = ₹744 \text{ crores}$$

(b) Veer Ltd. wants to acquire Shakti Ltd. and has offered a swap ratio of 1 : 2 (0.5 shares for every one share of Shakti Ltd.).

Following information is provided:

Particulars	Veer Ltd.	Shakti Ltd.
Profit after tax (₹)	36,00,000	7,20,000
Equity shares outstanding (Nos.)	12,00,000	3,60,000
EPS (₹)	3	2
P/E Ratio	10 times	7 times
Market price per share (₹)	30	14

Required:

- (i) The number of equity shares to be issued by Veer Ltd., for acquisition of Shakti Ltd.**
- (ii) What is the EPS of Veer Ltd., after the acquisition?**
- (iii) Determine the equivalent earnings per share of Shakti Ltd.**
- (iv) What is the expected market price per share of Veer Ltd., after the acquisition, assuming its P/E multiple remains unchanged?**

Answer to MTP_ Final_Syllabus 2016_June 2019_Set1

(v) Determine the market value of the merged firm.

[2x5=10]

Answer:

(i) The number of shares to be issued by Veer Ltd.:

The Exchange ratio is 0.5

So, the new shares = 3,60,000 × 0.5 = 1,80,000 shares.

(ii) EPS of Veer Ltd., after acquisition:

Total Earnings = ₹ (36,00,000 + 7,20,000)	₹ 43,20,000
No. of Shares (12,00,000 + 1,80,000)	13,80,000
EPS (₹ 43,20,000) / 13,80,000	₹ 3.13

(iii) Equivalent EPS of Shakti Ltd.,

No. of new shares	0.5
EPS(₹)	3.13
Equivalent (3.13 × 0.5) (₹)	1.57

(iv) New Market price of Veer Ltd., (P/E remaining unchanged):

Present P/E Ratio of Veer Ltd.,	10 times
Expected EPS after merger (₹)	3.13
Expected Market Price (3.13 × 10) (₹)	31.30

(v) Market Value of merged firm:

Total number of Shares	13,80,000
Expected Market Price (₹)	31.30
Total Value (13,80,000 × 31.30) (₹)	4,31,94,000