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FINAL CA
MAY '19
REVISION NOTES
Strategic Financial Management

Mergers & Acquisitions Including Corporate Valuation

MERGERS & ACQUISITIONS INCLUDING CORPORATE VALUATION

Q.1. A Ltd. is keen or reporting an earning per share of ₹ 6 after acquiring T Ltd. The following financial data are given :

	A Ltd.	T Ltd.
EPS	₹ 5	₹ 5
Market price per share	₹ 60	₹ 50
No. of shares	10,00,000	8,00,000

There is an exected synergy gain of 5%. What exchange ratio will result in post - merger EPS of ₹ 6 for A Ltd.?

Q.2. You have been provided the following financial data of two companies :

	T Ltd.	A Ltd.
Earnings after taxes	₹ 7,00,000	₹ 10,00,000
Equity shares outstanding	2,00,000	4,00,000
Earnings per share	3.50	2.50
Price - earnings (P / E) ratio	10 times	14 times
Market price per share	₹ 35	₹ 35

Company A is acquiring the Company T, exchanging its shares on a one to one basis for Company T's shares. The exchange ratio is based on the market prices of the shares of the two companies.

(i) What will be the EPS subsequent to merger ?
(ii) What is the change in EPS for the shareholders of companies A and T ?
(iii) Determine the market value of the post - merger firm. P.E. Ratio is likely to remain same.
(iv) Ascertain the profits accruing to shareholders of both the firms.
(v) T Ltd. wants to be sure that it's shareholders' earnings will not be dimished by the merger. What should be the exchange ratio in that case?
(vi) Determine gain (loss) for shareholders of the two companies after acquisition.

Q.3. T Ltd. and E Ltd. are in the same industry. The former is in negotiation for acquisition of the latter. Important information about the two companies as per their latest financial statements is given below:

	T Ltd.	E Ltd.
₹ 10 Equity shares outstanding	12 Lakhs	6 Lakhs
Debt:		
10% Debentures (₹ Lakhs)	580	--
12.5% Institutional Loan (₹ Lakhs)	--	240
Earnings before interest, depreciation and tax (EBIDAT) (₹ Lakhs)	400.86	115.71
Market Price/share (₹)	220.00	110.00

T Ltd. plans to offer a price for E Ltd., business as a whole which will be 7 times EBIDAT reduced by outstanding debt, to be discharged by own shares at market price.

E Ltd. is planning to seek one share in T Ltd. for every 2 shares in E Ltd. based on the market price. Tax rate for the two companies may be assumed as 30%.

Calculate and show the following under both alternatives - T Ltd.'s offer and E Ltd.'s plan:

(i) Net consideration payable.
(ii) No. of shares to be issued by T Ltd.
(iii) EPS of T Ltd. after acquisition.
(iv) Expected market price per share of T Ltd. after acquisition.
(v) State briefly the advantages to T Ltd. from the acquisition.

Calculations (except EPS) may be rounded off to 2 decimals in lakhs.

Q.4. The shares of Nisha Ltd., are currently being traded for ₹ 24 per share. The top management together with their families control 40% of the 10 lakh shares outstanding. Sangeeta Ltd. wishes to acquire Nisha Ltd. because of likely synergies. The estimated present value of these synergies is ₹ 80 lakh. Moreover, Sangeeta feels that the management of Nisha is overpaid. It feels with better management motivation, lower salaries and fewer perks for the top management, approximately ₹ 4 lakh of expenses per annum can be saved. This would add ₹ 30 lakh in value to the acquisition. The following additional information is available regarding Sangeeta :

Earnings per share	₹ 4.00
Number of shares outstanding	15 lakh
Market price of shares	₹ 40.00

(a) What is the maximum price per share which Sangeeta can offer to pay for Nisha?

(b) What is the minimum price per share at which the management of Nisha will be willing to give up their controlling interest?

Q.5. Following are the financial statements for A Ltd. and B Ltd. for the current financial year. Both firms operate in the same industry.

Balance Sheet

	A Ltd.	B Ltd.
Total current assets	₹ 14,00,000	₹ 10,00,000
Total fixed assets (net)	10,00,000	5,00,000
Total Assets	**24,00,000**	**15,00,000**
Equity capital (of ₹ 10 each)	10,00,000	8,00,000
Retained earnings	2,00,000	----
14% Long term debt	5,00,000	3,00,000
Total current liabilities	7,00,000	4,00,000
	24,00,000	**15,00,000**

Income Statements

	A Ltd.	B Ltd.
Net sales	₹ 34,50,000	₹ 17,00,000
Cost of goods sold	27,60,000	13,60,000
Gross profit	6,90,000	3,40,000
Operating expenses	2,00,000	1,00,000
Interest	70,0000	42,000
Earnings before taxes	4,20,000	1,98,000
Taxes (50%)	2,10,000	99,000
Earnings after taxes (EAT)	2,10,000	99,000
Additional Information :		
Number of equity shares	1,00,000	88,000
Dividend payment ratio	40%	60%
Market price per share (MPS)	₹ 40	₹ 15

Assume that the two firms are in the process of negotiating a merger through an exchange of equity shares. You have been asked to assist in establishing equitable exchange terms, and are required to :

(i) Decompose the share prices of both the firms into EPS and PE components, and also segregate their EPS figures into return on equity (ROE) and book value / intrinsic value per share (BVPS) components.

(ii) Estimate future EPS growth rates for each firm.

(iii) Calculate the post - merger EPS based on an exchange ratio of 0.4 : 1 being offered by A Ltd. Indicate the immediate EPS accretion or dilution, if any, that will occur for each group of shareholders.

(iv) Based on a 0.4 : 1 exchange ratio, and assuming that A's pre - merger PE ratio will continue after the merger, estimate the post - merger market price. Show the resulting accretion or dilution in pre - merger market prices.

Q.6. The following information is provided relating to the acquiring company. Efficient Ltd., and the target Company Healthy Ltd.

	Efficient Ltd.	Healthy Ltd.
No. of shares (F.V. ₹ 10 each)	10.00 lakhs	7.5 lakhs
Market Capitalisation	500.00 lakhs	750.00 lakhs
P / E ratio (times)	10.00	5.00
Reserves and Surplus	300.00 lakhs	165.00 lakhs
Promoter's Holding (No. of shares)	4.75 lakhs	5.00 lakhs

Board of Directors of both the Companies have decided to give a fair deal to the shareholders and accordingly for swap ratio the weights are decided as 40%, 25% and 35% respectively for Earning. Book Value and Market Price of share of each company :

(i) Calculate the swap ratio and also calculate Promoter's holding % after acquisition.
(ii) What is the EPS of Efficient Ltd., after acquisition of Healthy Ltd.?
(iii) What is the expected market price per share and market capitalization of Efficient Ltd. after acquisition, assuming P/E ratio of Firm Efficient Ltd., remains unchanged.
(iv) Calculate free float market capitalization of the merged firm.

Q.7. The following information is relating to Fortune India Ltd., having two division, viz. Pharma Division and Fast Moving Consumer Goods Division (FMCG Division). Paid up share capital of Fortune India Ltd., is consisting of 3,000 Lakhs equity shares of Re. 1 each. Fortune India Ltd., decided to de - merge Pharma Division as Fortune Pharma Ltd., w.e.f. 1.4.2005. Details of Fortune India Ltd., as on 31.3.2005 and of Fortune Pharma Ltd., as on 1.4.2005 are given below :

Particulars	Fortune Pharma Ltd.	Fortune India Ltd.
	₹	₹
Outside Liabilities		
Secured Loans	400 lakh	3,000 lakh
Unsecured Loans	2,400 lakh	800 lakh
Current Liabilities & Provisions	1,300 lakh	21,200 lakh
Assets		
Fixed Assets	7,740 lakh	20,400 lakh
Investments	7,600 lakh	12,300 lakh
Current Assets	8,800 lakh	30,200 lakh
Loans & Advances	900 lakh	7,300 lakh
Deferred tax / Miscellaneous Expenses	60 lakh	(200) lakh

Board of Directors of the Company have decided to issue necessary equity shares of Fortune Pharma Ltd., of Re. 1 each, without any consideration to the shareholders of Fortune India Ltd. For that purpose following points are to be considered :

1. Transfer of Liabilities & Assets at Book value.
2. Estimated Profit for the year 2005-06 is ₹ 11,400 Lakh for Fortune India Ltd. & ₹ 1,470 lakhs for Fortune Pharma Ltd.
3. Estimated Market Price of Fortune Pharma Ltd. is ₹ 24.50 per share.
4. Average P/E Ratio of FMCG sector is 42 & Pharma sector is 25, which is to be expected for both the companies.

Calculate :

1. The Ratio in which shares of Fortune Pharma are to be issued to the shareholders of Fortune India Ltd.
2. Expected Market price of Fortune India Ltd.
3. Book Value per share of both the Companies immediately after Demerger.

Q.8. A Ltd. Wants to value T Ltd. in accordance with Chop Shop method. T Ltd. is carrying out 3 streams of business namely telecom, real estate, toys. The market capitalization of equity shares of T Ltd. is ₹ 15,200 crores. The other financial details of T Ltd. are as follows :

Particulars	Telecom	Real Estate	Toys	Total
Turnover	5000 cr.	4000 cr.	1000 cr.	10000 cr.
Assets	1250 cr.	2000 cr.	1000 cr.	4250 cr.
Net operating profits after tax	1000 cr.	500 cr.	400 cr.	1900 cr.
Industry Statistics				
Market Capitalization to Sales	1.65	1.40	0.7	
Market Capitalization to Assets	3	4	2	
Market Capitalization NOPAT	12	9	11	

Q.9. The total value (equity + debt) of two companies, A Ltd. and B Ltd. are expected to fluctuate according to the state of the economy.

State of the economy	Probability	Value of A Ltd. ₹ in lakh	Value of B Ltd. ₹ in lakh
Rapid growth	0.30	720	1150
Slow growth	0.50	520	750
Recession	0.20	380	600

A Ltd. and B Ltd. currently have a debt of ` 420 lakhs and ` 80 lakhs, respectively.

The two companies are deciding for merger. Assuming that no operational synergy is expected as a result of the merger, you are required to calculate the expected value of debt and equity of the merged company.

Also explain the reasons for any difference that exists from the expected values of debt and equity, if they do not change.

Q.10. Timby Ltd. is in the business of making sports equipment. The company operates from Thailand. To globalize its operations, Timby has identified Find Toys Ltd. an Indian Company, as a potential takeover candidate. After due diligence of Find Toys Ltd. the following information is available.

(a)

	Cash Flow Forecasts (₹ in crore):									
Year	10	9	8	7	6	5	4	3	2	1
Find Toys Ltd.	24	21	15	16	15	12	10	8	6	3
Timby Ltd.	108	70	55	60	52	44	32	30	20	16

(b) The net worth of Find Toys Ltd. (`in lakhs) after considering certain adjustments suggested by the due diligence team reads as under:

Tangible		750
Inventories		145
Receivables		75
		971
Less:Creditors	160	
Bank Loans	250	(415)
Represented by equity shares of ₹1,000 each		**555**

Talks for takeover have crystallized on the following:

1. Timby Ltd. will not be able to use Machinery worth ₹ 75 lakhs which will be disposed of by them subsequent to take over. The expected realization will be ₹ 50 lakhs.
2. The inventories and receivables are agreed for takeover of values of ₹100 and ₹50 lakhs respectively which is price they will realize on disposal.

3. The liabilities of Fine Toys Ltd. will be discharged in full on take over along with an employee settlement of ₹90 lakhs for the employees who are not interested in continuing under the new management.
4. Timby Ltd. will invest a sum of ₹150 lakhs for upgrading the Plant of Find Toys Ltd. on takeover. A further sum of ₹50 lakhs will also be incurred in the second year to revamp the machine shop floor of Find Toys Ltd.
5. The Anticipated Cash Flows (in ₹crore) post takeover are as follows:

Year	1	2	3	4	5	6	7	8	9	10
	18	24	36	44	60	80	96	100	140	200

You are required to advice the management the maximum price which they can pay per share of Find Toys Ltd. if a discount factor of 20 per cent is considered appropriate.

Q.11. AB Ltd., is planning to acquire and absorb the running business of XY Ltd. The valuation is to be based on the recommendation of merchant bankers and the consideration is to be discharged in the form of equity shares to be issued by AB Ltd. As on 31.3.2006, the paid up capital of AB Ltd. consists of 80 lakhs shares of ₹ 10 each. The highest and the lowest market quotation during the last 6 months were ₹ 570 and ₹ 430. For the purpose of the exchange, the price per share is to be reckoned as the average of the highest and lowest market price during the last 6 months ended on 31.3.2006.

XY Ltd.'s Balance Sheet as at 31.3.2006 is summarised below :

	₹ in lakhs
Sources	
Share Capital	
20 lakhs equity shares of ₹ 10 each fully paid	200
10 lakhs equity shares of ₹ 10 each ₹ 5 paid	50
Loans	100
Total	**350**
Uses	
Fixed Assets (Net)	150
Net Current Assets	200
Total	**350**

An independent firm of merchant bankers engaged for the negotiation, have produced the following estimates of cash flows from the business of XY Ltd. :

Year ended	By way of	₹ lakhs
31.3.07	after tax earnings for equity	105
31.3.08	do	120
31.3.09	do	125
31.3.10	do	120
31.3.11	do	100
	terminal value estimate	200

It is the recommendation of the merchant banker that the business of XY Ltd., may be valued on the basis of the average of (i) Aggregate of discounted cash flows at 8% and (ii) Net assets value. Present value factors at 8% for years.

1 - 5 :	0.93	0.86	0.79	0.74	0.68

You are required to :

(i) Calculate the total value of the business of XY Ltd.

(ii) The number of shares to be issued by AB Ltd.; and

(iii) The basis of allocation of the shares among the shareholders of XY Ltd.

Q.12. Chennai Limited and Kolkata Limited have agreed that Chennai Limited will take over the business of Kolkata Limited with effect from 31st March, 2009. It is agreed that :

(i) 10,00,000 shareholders of Kolkata Limited will receive shares of Chennai Limited. The swap ratio is determined on the basis of 26 weeks average market prices of shares of both the companies. Average price have been worked out at ₹ 50 and ₹ 25 for the shares of Chennai Limited and Kolkata Limited respectively.

(ii) In addition to (i) above shareholders of Kolkata Limited will be paid cash based on the projected synergy that will arise on the absorption of the business of Kolkata Limited by Chennai Limited. 50% of the projected benefits will be paid to the shareholders of Kolkata Limited.

The following projection has been agreed upon by the management of both the companies.

Year ended 31.3. Benefit	2010	2011	2012	2013	2014
(in ₹ Lakhs)	50	75	90	100	105

The benefit is estimated to grow at the rate of 2% after 2014 perpetually.

It has been further agreed that a discount rate of 20% should be used to calculate the cash that the holder of each share of Kolkata Limited will receive.

(i) Calculate the cash that holder of each share of Kolkata Limited will receive.

(ii) Calculate the total purchase consideration.

[Discounting factor : Discounting rate 20% : 1 year. 833, 2 year. 694, 3 year. 579, 4 year. 482, 5 year. 402, 6 year. 335;
Discounting rate 18%; 1 year. 842, 2 year. 718,3 year. 609, 4 year. 516, 5 year. .437, 6 year. 370;
Discounting rate 16% : 1 year. 862, 2 year. 743, 3 year. 641, 4 year. 552, 5 year. .476, 6 year. 410]

Q.13. Adonis Ltd., makes thermal clothing for winter sports and outdoor work, and is considering acquiring Sking Ltd. which manufactures and sells ski clothing. Sking Ltd. is about one quarter of Adonis size and manufactures its entire product line in a small rented factory on a mountaintop in Manali. It costs about 10,00,000 a year in overhead to operate in the factory. Adonis Ltd. produces its output in a less popular in North but more popular north - east locations. Its factory has at least 50% excess capacity. Adonis plan is to acquire Sking Ltd., and combine production operations in its north - eastern factory, but otherwise run the companies separately.

Sking Ltd. beta is 2.0, Treasury bills currently yield 5% and the Nifty Index is yielding 9%. The corporate income tax rate for both firms is 40%. Because Sking Ltd. will no longer be maintaining its own production facilities, it can be assumed that only a minimal amount of cash will have to be reinvested. This amount is estimated at 1,00,000 per year.

The financial information for Sking Ltd. is as follows :

Revenue	₹ 1,25,00,000
EAT	₹ 13,00,000
Depreciation	₹ 6,00,000

(a) Calculate the appropriate discount rate for evaluating the Sking Ltd. acquisition.

(b) Determine the annual cash flow expected by Adonis Ltd. from Sking Ltd. if the acquisition is made (considering the synergy).

(c) Calculate the value of the acquisition to Adonis Ltd. assuming the benefits last for (1) five years, (2) 10 years, and (3) 15 years.

(d) Sking Ltd. has 2,50,000 shares outstanding. Calculate the maximum price Adonis Ltd. should be willing to pay per share to acquire the firm under the three assumptions in part C.

(e) If Adonis Ltd. is willing to assume the benefits of the Sking Ltd. acquisition will last indefinitely without growth, what should it be willing to pay per share?

(f) Assume that the cash flow from the Sking Ltd. acquisition grows at 10% from its initial value for one year and then grows at 5% indefinitely (starting in the third year). Calculate the value of the firm and the implied stock price under these conditions. Use a terminal value at the beginning of the period of 5% growth. What price premium is implied in Rupees and as a percent of market price if Sking Ltd. stock is currently selling at ₹ 62?

Q.14. Zed Ltd. is considering the immediate purchase of some or all, of the shares of one of two firms Red Ltd. and Yellow Ltd. Both Red and Yellow have 1,00,000 equity shares issued and neither company has any debt capital outstanding.

Both firms are expected to pay a dividend in 1 years' time, Red's expected dividend amounting to ₹ 3 per share and Yellow's being ₹ 2.70 per share. Dividends will be paid annually and are expected to increase over time. Red's dividends are expected to display perpetual growth at a compound rate of 6 per cent per annum. Yellow's dividend will grow at a high annual compound rate of 331/3% until a dividend of ₹ 6.40 per share is reached in year 4.

Thereafter Yellow's dividend will remain constant.

If Zed is able to purchase all the equity capital of either firm then the reduced competition would enable Zed to save some advertising and administrative costs which would amount to ₹ 2,25,000 per annum indefinitely and, in year 2, to sell some office space for ₹ 8,00,000. These benefits and savings would only occur if a complete takeover were to be carried out. Zed would change some operations of any company completely taken over. The details are :

(i) In case of Red : No dividend would be paid until year 2. Year 3 dividend would be ₹ 2.50 per share and dividends would then grow at 10% per annum indefinitely.

(ii) In case of Yellow : No change in total dividends in years 1 to 4, but after year 4 dividend growth would be 25% per annum compound until year 7. Thereafter, annual dividends would remain constant at the year 7 amount per share.

An appropriate discount rate for the risk inherent in all the cash flows mentioned is 15%.

You are required to present.

(i) The valuation per share for a minority investment in each of the firms, Red and Yellow, which would provide the investor with a 15% rate of return.

(ii) The maximum amount per share which Zed should consider paying for each company in the event of a complete takeover.

Q.15. Y Ltd. which is specialized in manufacturing garments is planning for expansion to handle a new contract which it expects to obtain. An investment bank have approached the company and asked whether the Co. had considered venture Capital financing. In 2001, the company borrowed ₹ 100 lacs on which interest is paid at 10% p.a. The Company shares are unquoted and it has decided to take your advice in regard to the calculation of value of the Company that could be used in negotiations using the following available information and forecast.

Company's forecast turnover for the year to 31st March, 2005 is ₹ 2,000 lacs which is mainly dependent on the ability of the Company to obtain the new contract, the chance for which is 60%, turnover for the following year is dependent to some extent on the outcome of the year to 31st March, 2005. Following are the estimated turnovers and probabilities:

Year - 2005		Year - 2006	
Turnover ₹ (in lacs)	Prob.	Turnover ₹ (in lacs)	Prob.
2,000	0.6	2,500	0.7
		3,000	0.3
1,500	0.3	2,000	0.5
		1,800	0.5
1,200	0.1	1,500	0.6
		1,200	0.4

Operating costs inclusive of depreciation are expected to be 40% and 35% of turnover respectively for the years 31st March, 2005 and 2006. Tax is to be paid at 30%. It is assumed that profits after interest and taxes are free cash flows. Growth in earnings is expected to be 40% for the years 2007, 2008 and 2009 which will fall to 10% each year after that. Industry average cost of equity (net of tax) is 15%.

Q.16. A valuation done of an established company by a well-known analyst has estimated a value of ₹ 500 lakhs, based on the expected free cash flow for next year of ₹ 20 lakhs and an expected growth rate of 5%.

While going through the valuation procedure, you found that the analyst has made the mistake of using the book values of debts & equity in his calculation. While you do not know the book value weights he used, you have been provided with the following information:

(i) Company has a cost of equity of 12%

(ii) After tax cost of debt is 6%

(iii) The market value of equity is three times the book of equity, while the market value of debt is equal to the book value of debt.

You required to estimate the correct value of the company.