

W. P. : 355

Working Paper

WP355



WP

1981

(355)



**INDIAN INSTITUTE OF MANAGEMENT
AHMEDABAD**

**A STUDY ON SHARE VALUATIONS
OF INDIAN COMPANIES**

By

C.D. Bhattacharya

W P No. 355

March 1981

The main objective of the working paper series of the IIMA is to help faculty members to test out their research findings at the pre-publication stage.

**INDIAN INSTITUTE OF MANAGEMENT
AHMEDABAD-380015
INDIA**

A STUDY ON SHARE VALUATIONS OF INDIAN COMPANIES

For the purpose of valuation of shares the Central Board of Direct taxes draws a distinction between quoted and unquoted shares. The valuation problem is less pronounced in the former case as the market price of the shares prevailing in the stock exchange is usually regarded as the fair market value of shares unless there is evidence showing manipulation of the market price of shares by shareholders carrying substantial interest. In the case of shares not quoted, the break-up value is calculated by deducting total liabilities from total assets and dividing the net amount by the number of shares outstanding. Rule I-D of the Central Board of Direct Taxes states that the market value of such shares for wealth tax purposes is taken as 85 per cent of the break up value. If, however, the unit has not declared any dividends for the three years preceding the valuation date, this percentage is lowered to 82.5. If it has not declared dividends for the preceding four years, this is lowered further to 80. If no dividends have been declared for the preceding five years, it goes down to 77.5 per cent and finally, if no dividends have been declared for the preceding six or more years, it goes down to 75 per cent.

However, break up value is not regarded as the true indicator of the fair market value particularly for growth companies having bright prospects and good profit earning capacity. It is appropriate

for companies which are ripe for winding up. In the case of growth companies the two methods widely used are the earning method and the yield method. These two methods are not mutually exclusive; both these ascertain the profit earning capacity of the unit. The earning capacity can be reflected by earnings per share or dividends per share. The yield method, whether it is earnings' yield or dividends' yield is, however, not possible to be employed in the case of unquoted shares.

What is the relationship between the five methods described above? Are they associated with each other? If they are associated, what is the degree of association? This paper tries to analyse the nature and degree of association between all these methods. While doing so it studies the cases of quoted shares of twelve private sector industrial giant companies. The twelve companies included in the study are selected from the first twenty giant units in the private sector (in terms of net sales) as reported by the Economic Times dated March 18, 1980. Necessary data have been collected from the Bombay Stock Exchange Directory.

The twelve companies included in the study are : Tata Engineering, Tata Steel, Delhi Cloth Mills, Brooke Bond, ITC Ltd., ACC, Dunlop, Escorts, Ashok Leyland, Century Spinning, Hindustan Motors. and Larsen & Toubro.

The data relating to book value of shares, EPS, Yield (%), average of the high-low market-price of shares, and DPS for the ten years ending 31-12-79 relating to these twelve companies are given in Exhibit I. The averages of these five value measures for the last ten years have also been arrived at (Exhibit II). Exhibit III assigns ranks to all these companies in terms of different valuation methods. It is interesting to note that Century Spinning gets the first place as per all the methods excepting the yield method where it gets the second place from the bottom. At the other extreme is placed Hindustan Motors which gets the 12th place in all the methods excepting the Book Value and Market price methods; in both of these cases it obtains the place only second from the bottom one. Going back to top ranks it is worth noting that TELCO gets the second place in all the methods excepting the yield method, where it gets the eighth place. One can easily observe a fair degree of consistency in terms of results shown by different methods excepting the yield method. The reason is obvious, for the yield method is influenced by the market price information which is placed in the denominator. If the market price of shares is very high the yield will be very low and vice versa. A fair degree of consistency in terms of different value methods excepting the yield method is as a matter of fact observable in the case of almost all the units.

The average market price of Century Spinning shares is as high as Rs 653.30 where as that of Ashok Leyland is as low as Rs 9.12. In terms of Book Value of shares as well one may note the wide difference between these two units. Such differences amongst other units are also visible. In order to eliminate the effect of the extreme values, the rank correlation coefficients have been

computed (Exhibit IV). The rank correlation coefficient between Book Value and Market price ranks is 0.986, between EPS and Market price ranks it is 0.963, between Book value and EPS ranks it is 0.972, between Book Value and DPS ranks it is 0.965, between EPS and DPS it is 0.937, and between Market price and DPS ranks it is 0.986. All these coefficients suggest a very high degree of association. However, the correlation coefficients with the yield method are all in negatives excepting the one between DPS and Yield methods. Moreover, these coefficients are also of very low magnitude. The coefficient between Book value and yield ranks is -0.777, between EPS and Yield ranks it is -0.028, between Market price and yield ranks it is -0.077, and between DPS and yield ranks it is 0.007. There is, therefore, no association between the yield method and the other four methods of valuation of shares. All the five methods excepting the yield method may therefore be used for the purpose of share valuations. The other four methods employed in this study have given more or less identical results. Though the study is restricted to industrial giants, it is possible to extend it to companies of medium size (size may be measured in terms of sales or total assets). Likewise, though the study is restricted to shares which are quoted, it is possible to extend it to the shares which are not quoted; the market price information will obviously be not available in those cases. In either of these cases, the results are not expected to differ substantially.

Conclusion

Different share valuation methods are suggested by the Central Board of Direct Taxes for wealth tax purposes. While market price of shares is widely regarded as the fair market value of the shares of quoted companies, the break up value is advocated in the case of units which are ripe in liquidation. In the case of growth companies, the earnings or dividend paying capacity is considered to be a better value indicator. Is there any relationship between all these valuation methods? This study shows that all these methods excepting the yield method are highly associated with each other. They can be relied upon without making much discrimination. The study can, however, be extended to the companies of lower size. It is also possible to extend it to shares which are unquoted.

* * *

EXHIBIT I

1. ESCORTS LTD

Year end	Book Value per share Rs	EPS Rs	Yield %	Market price per share Rs	DPS (Gross) Rs
31-12-70	17.92	3.10	5.78	22.25	1.30
31-12-71	18.95	2.08	7.52	18.26	1.10
31-12-72	20.63	2.88	8.44	15.64	1.20
31-12-73	23.08	3.45	5.68	16.44	1.00
31-12-74	17.46	3.14	6.07	20.50	1.20
31-12-75	20.43	4.17	9.90	12.75	1.20
31-12-76	24.85	6.53	7.85	16.75	1.60
31-12-77	19.64	4.88	5.93	26.75	1.60
31-12-78	24.96	6.78	4.76	33.00	2.00
31-12-79	19.08	5.07	6.24	44.75	2.00
Total	207.00	42.08	68.17	227.09	14.20
Average	20.70	4.21	6.82	22.71	1.42

EXHIBIT I (Contd)

2. ASHOK LEYLAND

Year end	Book Value per share Rs	EPS Rs	Yield %	Market price per share Rs	DPS (Gross) Rs
30-09-70	7.58	0.72	6.55	6.41	0.45
30-09-71	6.07	0.65	7.98	6.30	0.48
30-09-72	7.91	0.53	6.98	5.88	0.38
30-09-73	8.36	1.07	8.82	6.58	0.62
30-09-74	9.32	1.54	8.96	7.75	0.60
30-09-75	10.56	2.17	9.74	7.58	0.75
30-09-76	11.54	3.49	11.32	8.33	0.90
30-09-77	13.51	2.87	8.68	9.28	0.90
30-09-78	10.67	2.46	3.50	17.05	0.80
30-09-79	12.09	2.68	6.56	16.08	0.85
Total	97.61	18.18	79.09	91.24	6.73
Average	9.76	1.82	7.91	9.12	0.67

EXHIBIT I (Contd)

3. LARSEN & TOUBRO

Year end	Book value per share Rs	EPS Rs	Yield %	Market price per share Rs	DPS (Gross) Rs
31-3-70	17.25	2.70	5.26	21.25	1.00
31-3-71	19.22	3.19	5.21	21.63	1.25
31-3-72	21.36	3.77	6.10	22.63	1.40
31-3-73	24.09	4.23	5.26	26.62	1.50
31-3-74	20.83	3.70	3.76	29.00	1.12
31-3-75	23.63	5.18	6.99	29.38	1.00
31-3-76	26.75	5.33	6.43	25.33	1.80
31-3-77	21.50	5.41	4.79	35.50	1.60
31-3-78	24.22	4.24	4.78	33.88	1.60
31-3-79	28.70	6.21	4.69	36.13	1.70
Total	227.55	43.96	53.27	281.35	14.77
Average	22.76	4.40	5.33	28.14	1.48

EXHIBIT I (Contd)

4. TELCO

Year end	Book value per share Rs	EPS Rs	Yield %	Market price per share Rs	DPS (Gross) Rs
31-3-70	177.56	17.19	7.58	249.38	13.50
31-3-71	189.26	26.21	6.23	236.75	14.50
31-3-72	216.33	27.31	6.84	230.00	15.00
31-3-73	227.58	26.76	7.11	220.00	15.00
31-3-74	246.53	27.80	3.76	232.25	9.30
31-3-75	269.47	37.63	7.54	234.38	115.00
31-3-76	316.88	46.00	7.35	195.50	15.00
31-3-77	302.82	55.87	7.12	231.00	15.00
31-3-78	349.82	55.25	6.67	225.00	15.00
31-3-79	274.69	51.10	4.95	317.25	16.00
Total	2570.94	371.12	65.15	2371.51	143.30
Average	257.09	37.11	6.52	237.15	14.33

EXHIBIT I (Contd)

5. HINDUSTAN MOTORS

Year end	Book value per share Rs	EPS Rs	Yield	Market price per share Rs	DPS (Gross) Rs
31-3-70	20.75	-0.42	-	16.96	-
31-3-71	17.39	-0.24	-	14.20	-
31-3-72	18.20	0.59	-	10.72	-
31-3-73	17.26	1.11	-	6.68	-
31-3-74	17.25	-0.16	-	10.53	-
31-3-75	15.24	2.22	-	8.90	-
31-3-76	11.53	-3.89	-	6.38	-
31-3-77	12.68	0.97	-	7.93	-
31-3-78	13.48	0.62	-	6.80	-
31-3-79	13.55	0.11	-	10.45	-
Total	157.53	0.91	0	99.55	0
Average	15.75	0.09	0	9.96	0

EXHIBIT I (Contd)

6. TISCO

Year end	Book value per share Rs	EPS Rs	Yield %	Market price per share Rs	DPS (Gross) Rs
31-3-71	172.42	12.79	8.54	109.75	8.60
31-3-72	175.03	10.35	9.61	98.25	8.60
31-3-73	178.43	9.09	10.24	86.50	8.60
31-3-74	191.39	17.36	4.72	97.75	4.75
31-3-75	211.94	27.86	10.23	75.75	8.30
31-3-76	226.60	16.68	8.64	81.75	7.75
31-3-77	238.36	21.79	11.59	85.75	10.00
31-3-78	243.11	13.47	11.43	92.00	11.00
31-3-79	255.31	32.48	11.68	108.00	12.00
31-3-80	270.54	29.32	12.83	104.38	13.50
Total	2165.13	191.19	99.51	939.88	93.10
Average	216.51	19.12	9.95	93.99	9.31

EXHIBIT I (Contd)

7. DCM

Year end	Book value per share Rs	EPS Rs	Yield %	Market price per share Rs	DPS (Gross) Rs
30-6-70	77.55	21.58	6.27	51.00	4.00
30-6-71	49.66	9.04	4.96	71.63	2.50
30-6-72	53.24	6.00	5.54	43.22	2.50
30-6-73	54.33	3.59	4.86	46.78	2.50
30-6-74	66.96	3.31	1.45	58.12	0.88
30-6-75	57.82	3.85	3.40	47.81	1.25
30-6-76	59.62	0.40	5.38	36.96	1.80
30-6-77	61.11	8.94	8.85	31.33	2.50
30-6-78	65.36	6.78	5.57	36.59	2.50
30-6-79	73.26	8.97	6.55	41.03	3.80
Total	618.91	72.46	52.83	464.47	24.23
Average	61.89	7.25	5.28	46.45	2.42

EXHIBIT I (Contd)

B. CENTURY SPINNING

Year end	Book value per share Rs	EPS Rs	Yield %	Market price per share Rs	DPS (Gross) Rs
31-12-70	572.07	134.60	5.24	824	45.00
31-12-71	645.08	118.00	6.06	812	45.00
31-12-72	340.76	48.21	8.57	875	40.00
31-12-73	380.97	73.20	6.13	538	33.00
31-12-74	544.56	127.85	6.69	545	33.00
31-12-75	663.26	135.42	6.17	532	33.00
31-12-76	720.24	107.76	3.93	617	23.00
31-12-77	525.52	68.37	4.70	506	23.00
31-12-78	634.69	110.42	4.21	563	26.00
31-12-79	755.96	147.27	3.42	721	26.00
Total	5783.11	1071.10	55.12	6533	327.00
Average	578.31	107.11	5.51	653.30	32.70

EXHIBIT I (Contd)

9. BROOKE BOND

Year end	Book value per share Rs	EPS Rs	Yield %	market price per share Rs	DPS (Gross) Rs
30-6-70	17.59	2.47	7.75	21.00	2.00
30-6-71	19.31	2.99	6.79	30.10	2.00
1-7-72	20.05	2.74	7.55	26.66	2.00
30-6-73	22.10	3.48	6.73	27.36	2.00
29-6-74	24.19	3.19	2.50	37.70	1.10
28-6-75	24.69	2.50	7.02	37.10	2.00
3-7-76	24.76	2.07	6.39	31.30	2.00
2-7-77	14.36	1.28	8.67	17.33	1.30
30-6-78	14.93	1.74	8.15	14.63	1.20
30-6-79	15.80	2.47	9.23	15.48	1.50
Total	197.78	24.93	70.78	258.66	17.10
Average	19.78	2.49	7.08	25.87	1.71

EXHIBIT I (Contd)

10. DUNLOP INDIA LTD.

Year end	Book value per share Rs	EPS Rs	Yield %	Market price per share Rs	DPS (Gross) Rs
31-12-70	21.41	4.02	5.42	35.75	2.00
31-12-71	23.80	3.80	6.64	34.42	2.00
31-12-72	23.38	1.79	9.12	27.78	2.00
31-12-73	23.72	2.55	5.62	31.55	2.00
31-12-74	29.12	2.97	6.75	37.45	2.00
31-12-75	31.03	3.97	6.11	31.58	2.00
31-12-76	24.14	2.87	7.69	32.00	2.00
31-12-77	24.25	1.12	4.52	21.48	0.80
31-12-78	24.91	1.88	5.09	21.15	1.20
31-12-79	27.04	4.13	8.65	23.28	2.00
Total	252.80	29.10	65.61	296.34	18.00
Average	25.28	2.91	6.56	29.63	1.80

EXHIBIT I (Contd)

11. ITC LTD.

Year end	Book value per share Rs	EPS Rs	Yield %	Market price per share Rs	DPS (Gross) Rs
31-3-70	16.41	1.70	8.79	15.40	1.35
31-3-71	16.90	1.89	8.22	16.35	1.40
31-3-72	17.58	2.13	8.81	15.88	1.45
31-3-73	17.36	1.23	8.24	16.99	1.45
31-3-74	18.73	2.07	3.20	19.72	0.70
31-3-75	19.36	2.13	12.03	18.28	1.50
31-3-76	20.10	2.01	12.48	11.91	1.50
31-3-77	20.69	2.08	11.60	12.44	1.50
31-3-78	21.38	2.17	8.62	16.08	1.50
31-3-79	18.41	2.03	6.76	21.10	1.50
Total	186.92	19.44	88.75	164.15	13.85
Average	18.69	1.94	8.88	16.42	1.39

EXHIBIT I (Contd)

12. ASSOCIATED CEMENT COMPANY

Year end	Book value per share Rs	EPS Rs	Yield %	Market price per share Rs	DPS (Gross) Rs
31-07-70	153.17	20.97	8.17	133.38	12.00
31-07-71	150.79	9.58	9.28	144.25	12.00
31-07-72	144.82	6.75	10.43	120.88	12.00
31-07-73	154.51	2.35	7.67	112.75	8.00
31-07-74	148.22	6.35	-	115.75	-
31-07-75	170.12	36.04	17.53	81.75	14.00
31-07-76	170.73	12.65	12.03	92.75	12.00
31-07-77	175.75	20.14	16.62	99.38	15.00
31-07-78	186.54	25.81	8.92	140.25	15.00
31-07-79	190.43	19.89	9.20	169.00	16.00
Total	1645.08	160.55	97.85	1210.14	116.00
Average	164.51	16.06	9.78	121.01	11.60

EXHIBIT II

S.No.	Name	Book value per share			EPS			Yield			Market price per share			DPS		
		Rs		Rank	Rs		Rank	%		Rank	Rs		Rank	Rs		Rank
1.	Escorts Ltd	20.70	VIII	4.21	VII	6.82	VI	22.71	IX	1.42	IX					
2.	Ashok Leyland	9.76	XII	1.82	XI	7.91	IV	9.12	XII	0.67	XI					
3.	Larsen & Toubro	22.78	VII	4.40	VI	5.33	IX	28.14	VII	1.48	VIII					
4.	TELCO	257.09	II	37.11	II	6.52	VIII	237.15	II	14.33	II					
5.	Hindustan Motors	15.75	XI	0.09	XII	-	XII	9.96	XI	-	XII					
6.	TISCO	216.51	III	19.12	III	9.95	I	93.99	IV	9.31	IV					
7.	DCM	61.89	V	7.25	V	5.28	X	46.45	V	2.42	V					
8.	Century Spinning	578.31	I	107.11	I	5.51	XI	653.30	I	32.70	I					
9.	Brooke Bond	19.78	IX	2.49	IX	7.08	V	25.87	VIII	1.71	VII					
10.	Dunlop India	25.28	VI	2.91	VIII	6.56	VII	29.63	VI	1.80	VI					
11.	ITC	18.69	X	1.94	X	8.88	III	16.42	X	1.39	X					
12.	Associated Cement	164.51	IV	16.06	IV	9.78	II	121.01	III	11.60	III					

EXHIBIT III

S.no.		Book Value ranks	EPS ranks	Yield ranks	Market price ranks	DPS ranks
1.	Escorts	8	7	6	9	9
2.	Ashok Leyland	12	11	4	12	11
3.	Larsen & Toubro	7	6	9	7	8
4.	TELCO	2	2	8	2	2
5.	Hindustan Motors	11	12	12	11	12
6.	TISCO	3	3	1	4	4
7.	DCM	5	5	10	5	5
8.	Century Spinning	1	1	11	1	1
9.	Brooke Bond	9	9	5	8	7
10.	Dunlop India	6	8	7	6	6
11.	ITC	10	10	3	10	10
12.	Associated Cement	4	4	2	3	3

EXHIBIT IV

Rank Correlation Coefficients
between

(a) Book value and Market price	0.986
(b) EPS and Market Price	0.963
(c) Book Value and EPS	0.972
(d) Book Value and DPS	0.965
(e) EPS and DPS	0.937
(f) Market Price and DPS	0.986
(g) Book Value and Yield	-0.077
(h) EPS and Yield	-0.028
(i) Market Price and Yield	-0.077
(j) DPS and Yield	0.007

* * *