Valuation of Equity Shares in India.
Prasanna Chandra. New Delhi, Sultan Chand
& Sons. 148 p ; Rs. 30.00.

Share valuation is a topic that continues
to interest many sections of the population
besides the usual Governmental agencies.
Its charm lies mainly in the endeavour to ex-
plain a phenomenon that continues to elude
explanation in a way as to allow very little
scope to make consistent profits in the stock
market. Those who look for a magic formula
to make easy money in the stock market are
likely to be disappointed as they do not find
any such formula in the book under review.
Dr. Prasanna Chandra's is a scholarly work on
the relationship between share prices and a
set of carefully chosen explanatory variables.
The explanatory variables chosen for the study
are : (i) Returns (ii) Growth of returns (iii)
Risk (iv) Financial leverage and (v) Company
size. The study uses cross-sectional analysis
for the period from 1960 to 1975. Multiple
regression techniques have been employed
to analyse the relative influence the explana-
tory variables on share prices.

The book has been divided into eight
chapters and five appendices, followed by an
impressive bibliography. The first five chap-
ters provide a proper perspective for the
present study while the meat of the study is
contained in the last three chapters.

Chapter 1 provides the introduction where
the purpose, focus and relevance of the study
have been explained. The usefulness of
cross-sectional analysis for a study of this
sort has been clearly indicated. The relevance
of the study has been highlighted by linking
it to the objective of financial management
which is maximization of the market value of
equity capital. Then the author has noted, for
some inexplicable reason, that the Net
Present Value maximization criterion is un-
satisfactory under conditions of risk/uncer-
tainty and share price maxmization provides
a better and eminently suitable alternative.
This point has been further elaborated in a
lengthy footnote on pp. 4 and 5. As share
price models can be regarded as present value
formulations, one wonders whether the
author has in mind the superiority of wealth
maximization over Income Maximization
or share price maximization over NPV
maximization.

Chapter 2 gives the 'Main findings and
their implications' which should be better
taken up along with the results of empirical
analysis. Chapter 3 presents data on Indian
Stock Exchanges, ownership pattern of shares,
shareholder preferences and the Index numbers
of Variable Divided Security Prices in India.

The meaning and relevance of the expla-
natory variables have been discussed in
chapter 4. The concept of 'Returns' is consi-
dered in the context of Earnings Capitalization
and Dividends Capitalization Models. Equa-

tion (3) on page 20 which gives the earnings capitalization Model for share price determination has been made complicated by a difficult notation, typographical error and omission of underlying assumptions. It has not been made clear why the rate of return on retained earnings be equal to the rate of capitalization for all times to come ; it is also not clear whether earnings per share after the 'deduction to avoid double counting' is equal to the initial adjusted earnings per share. A little more elaboration on this basic equation would have been very useful. The 'growth rate' has been neatly summarized in the form of an equation. The numerical example given in the footnote will be useful for those who find the lengthy mathematical derivation difficult to digest. 'Risk' has been considered as (i) Variance of Returns and (ii) Covariance between the returns of the security under consideration and market rate of return. As the 'Returns' are considered from the point of view of ordinary shareholders, the variance measure will indicate the total risk — comprising both business and financial risk. This makes the 'financial leverage' variable redundant for the model. The covariance measure for risk is especially suited for portfolio analytic purposes. For the present study it becomes only a partial measure of total risk, as the covariance indicates only the 'Systematic' component of risk. 'Leverage' and 'Company size' have also been included as other explanatory variables.

Chapter 5 presents a brief but pointed summary of earlier empirical studies conducted in India and abroad. Research workers will find this chapter quite useful.

A discussion on the method of investi-gation, sample selection and operational measures of the variables chosen for the study has been given in chapter 6. The study has adopted multiple regression approach. Much of the discussion contained in pp. 50-54 is on the assumption of regression models and their implications. The section on sample selection is quite important as the selection criteria adopted seem to have an impact on the findings of the study. Shares are considered eligible for the study if the following conditions are satisfied :

i) should belong to a non-banking, non-insurance company
ii) should enjoy some degree of trading in the market
iii) should have available the needed financial data

Because of the third criterion shares of companies "which skipped dividend for any two successive years in the period 1958-69 and also those for which average equity earnings for any three successive years in the period 1957-69 was zero or negative" have been excluded. This implies that shares of what may be regarded as risky companies have been excluded. This may have dampened the influence of risk variable. A total of 166 shares have become eligible and they have been categorized under two groups. A group of 56 shares belonging to cotton textile industry and another of 110 shares belonging to the rest of the industries, called 'Across the board' group. Random samples of sizes 50 and 30 are drawn from the 'Across-the-board' and 'Cotton Textile' groups respectively. In view of the restrictive criteria adopted for the choice of shares, the findings of the study cannot be generalised

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to the Indian Private Corporate Sector.

The last section of chapter 6 provides operational measures for the explanatory variables chosen. Here the author has taken pains to obtain the views of shareholders. He has been considerably influenced by the views expressed by "a sample of 15 shareholders" in the choice of measures for explanatory variables. Since the author himself has pointed out in chapter 3 that there are nearly 1 to 2 million individual shareholders (based on the study of Bombay Stock Exchange) and since a sample of 15 shareholders is too small, some information on the background of the 15 shareholders and the criteria for selection should have been given. After considering several measures for each explanatory variable, some measures have been eliminated on a prior considerations. However, at least two alternative measures have been retained for each explanatory variable in the final analysis. The measures adopted are listed below using the following notation for simplicity :

e_n = Earnings per share in year n.
d_n = Dividends per share in year n.

Returns (R) :

$$R_1 = \tfrac{1}{3}(e_{n-3} + e_{n-2} + e_{n-1})$$

$$R_2 = \begin{cases} d_{n-1} & \text{if } d_{n-1} > 0 \\ d_{n-2} & \text{if } d_{n-1} = 0 \text{ but } e_{n-1} > d_{n-2} \end{cases}$$

$$R_3 = \begin{cases} \tfrac{1}{2}(d_{n-2} + d_{n-1}). & \text{if both } d_{n-2} \text{ and } d_{n-1} > 0 \\ d_{n-1} & \text{if } d_{n-2} = 0 \text{ but } d_{n-1} > 0 \end{cases}$$

One may ask what value should be put for R_2 when $0 < e_{n-1} < d_{n-2}$

Growth (G) :

G_1 : $1+g$ where g stands for percentage growth in the four year moving total of e upto year $n-1$; g is put equal to zero when the actual value is less than or equal to zero.

G_2 : A similar measure taking dividends per share into consideration.

G_3 : $1 + \dfrac{\bar{R}_{-1}}{\bar{E}_{-1}}\%_{-1}$

where $\bar{R}_{-1}$: Average Retained earning per share in the preceding years.

$\bar{E}_{-1}$: Average of EPS in the preceding 3 years.

$\%_{-1}$: Arithmetic Average of the Return on Equity for four preceding years.

Risk (0) :

0_1 : $1+$Coefficient of variation of the EPS for the preceding 5 years.

0_2 : $1+$Coefficient of correlation between the gross yields of the share and that of variable Dividend industrial securities for preceding 7 years.

0_3 : $1 + \dfrac{\Sigma\,|\,d\,|\ /5}{\bar{E}_{-1}}$

where : $\Sigma\,|\,d\,|$: Absolute sum of negative changes in EPS overthe preceding 6 years.

$\bar{E}_{-1}$: Average of the EPS of preceding 3 years.

O_4 : A similar measure taking dividends into consideration.

Leverage (F) :

$$F_1 : 1 + \frac{\frac{Preference}{Capital} + \frac{Debenture}{Capital}}{Net\ worth} \quad \text{for the preceding year}$$

$$F_2 : 1 + \frac{\frac{Total}{Assets} - \frac{Net}{worth}}{Total\ Assets} \quad \text{for the preceding year}$$

$$F_3 : \frac{Total\ assets}{Net\ Worth} \quad \text{for the preceding year}$$

It is not clear why Term loans, an important source of long-term debt capital, did not figure in F_1.

Size (S) :

S_1 : Total Assets for the preceding year.

S_2 : Sales during the preceding year.

A preliminary empirical analysis has been carried out to consider the suitability of model employed and the nature of groupings of observations based on the financial year of companies whose shares are selected for the study. The results of this analysis have been discussed in chapter 7. The pilot study for two cross-section years 1965 and 1970 and for 3 sample groupings revealed that log-linear model is preferable to the ratio model and groupings based on financial years did not really matter. For the final analysis, therefore, log-linear model has been adopted and the groupings abandoned.

The results of the econometric analysis have been discussed in the last chapter. The analysis has been made for the periods 1960-70 and 1971-75 for both the samples. 'Restricted combinations' procedure has been employed in choosing the best measure for a given variable. R_3, G_3, O_3 and S_1 emerged as the best measures in the case of 'across-the-board' sample. The same measures also emerged best for the 'cotton textile' sample with the exception that risk measure has now become redundant. For both the samples 'leverage' turned out to be a superfluous variable. $\bar{R}$ is consistently quite high for both the samples. The results for both samples for the 1971-75 period are more or less similar to the results obtained for the earlier period. The study reveals that dividend return is the single largest influencing variable on share price. Growth and size also have some influence. Risk and leverage do not seem to have any significant influence on share prices. These results are in agreement with those of other American studies. The author has also drawn some interesting conclusions that emerge as implications of the regression results.

Dr. Prasanna Chandra has done a commendable job in presenting a systematic and comprehensive analysis of the factors influencing share prices in India. As very little published work is available for the Indian data one can hope that the present study will inspire other researchers in this area.

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