

Technical Guide on
Share Valuation



Research Committee
THE INSTITUTE OF CHARTERED ACCOUNTANTS OF INDIA
(Set up by an Act of Parliament)
NEW DELHI

COPYRIGHT © THE INSTITUTE OF CHARTERED ACCOUNTANTS OF INDIA

All rights reserved. No part of this publication may be translated, reprinted or reproduced or utilised in any form either in whole or in part or by any electronic, mechanical or other means, including photocopying and recording, or in any information storage and retrieval system, without prior permission in writing from the publisher.

Published in 2009

Price : Rs. 80.00

ISBN : 978-81-8441-188-1

Published by : The Publication Department on behalf of
Dr. Avinash Chander, Technical Director, The
Institute of Chartered Accountants of India,
ICAI Bhawan, Indraprastha Marg, New Delhi-
110 002

Printed at : Sahitya Bhawan Publications, Hospital Road,
Agra 282 003
February/2009/2000 Copies

Foreword

The last few decades have witnessed amazing strides in the scope of our profession. We have seen a paradigm shift in the range of services rendered by chartered accountants. It has occurred due to widespread changes in the macro-economic scenario, regulatory and legal environment and prevalent industry practices. With the growing role of SEBI in controlling the financial market, the subject of Share Valuation has gained considerable importance. Whether there is transfer of shares from one person to another or from a resident to a non-resident or for the purpose of restructuring a company, determining the value of a share is an imperative. The valuation of shares is not an exact science, and is driven, inter-alia, by the purpose of valuation, statutory requirements, business factors, etc. Theoretically, there are established approaches for valuation. However, applying the correct approach and correct principles are essential for determining the correct fair value of a share.

The present technical guide has concentrated on the practical aspects and insights that are used by the experts for valuing the shares in practice.

I believe this will prove useful to members as well as to others.

January 27, 2009
New Delhi

CA. Ved Jain
President

Preface

The last edition of the Study on Share Valuation was published in 1994. Since then there have been many changes in law as well as in business environment, leading to a paradigm shift in the approaches used for the valuation of shares. In the competitive world of today, there has been a spat of mergers and acquisitions, necessitating the need for determining the value of the shares so transferred. In view of these developments, we felt that there was a need for revising the earlier study.

The Technical Guide aims to provide a contemporary analysis of change into the field of Share Valuation. It brings together the approaches, rules and principles involved in Share Valuation as laid down by law, the statutory guidelines, and the decisions of courts as well as established valuation practices. All these aspects together make this technical guide an authoritative and readily usable work on the subject. The Guide begins with a discussion of the various approaches to share valuation, followed by a separate chapter on the valuation of intangible assets as well as on other special considerations that influence valuation or the valuation process. The last chapter briefly outlines the manner in which members may furnish the Report on Share Valuation.

I, on behalf of the Research Committee, would like to put on record our appreciation of CA. Rohit Bhasin and his colleague CA. Sumit Chugh who prepared the basic draft of the Technical Guide.

I am confident this Technical Guide will prove to be of immense use to our members in discharging their professional duties and to others interested in the subject.

January 27, 2009
New Delhi

CA. Harinderjit Singh
Chairman
Research Committee

Contents

Foreword

Preface

1. Introduction	1
2. Income Approach	4
3. Market Approach	17
4. Net Assets Approach	21
5. Valuation of Intangible Assets	29
6. Valuation Conclusion	41
7. Valuation of Shares for Other Purposes	52
8. Valuation of Preference Shares	57
9. Report	61
Appendices	
Appendix A	Annexures to Forms 7D and 7E prescribed under Rule 5B of the Companies (Central Government) General Rules and Forms
	65
Appendix B	Examples of Justification of Issue Prices in Prospectuses of Certain Companies
	68

1

Introduction

1.1 The valuation of the shares of a company involves use of judgment, experience and knowledge. The accountant undertaking this work should possess knowledge of the analysis and interpretation of financial statements backed by a practical appreciation of business affairs and investments. A valuation based on quantitative information alone will not be adequate for a real valuation. It should also be recognised that the method of valuation of shares would vary, depending on the purpose for which it is to be used.

1.2 A clear understanding of the purpose of valuation is undoubtedly important, but an equally important imperative is to have a full appreciation of the 'value' emanating from common principles. This 'general purpose value' may be suitably modified for the special purpose for which the valuation is done. The factors affecting that value with reference to the special purpose must be judged and brought into final assessment in a sound and reasonable manner.

1.3 The following is an illustrative list of the circumstances which call for a value to be placed upon shares in companies:

- Sale of shares by a person to another.
- Merger of two or more companies or the absorption of one company by another or in a capital restructuring exercise.
- Tax purposes.

Share Valuation

- Acquisition/ transfer of shares in an Indian company by a non-resident.
- Ascertainment of the premium at which shares are to be issued.
- Acquisition or transfer of shares by certain bodies corporate – under Sections 108A & 108B of the Companies Act, 1956.

1.4 Valuation, being a complex subject, is limited to experts and is surrounded by a number of myths. Some of the very common generalities about valuation are discussed below:

- (a) Valuation models are quantitative and focus on earnings, assets, etc. However, it does not necessarily imply that valuation is free from the subjectivity and bias of a valuer. The fact is that valuation models are driven by the inputs that are prone to subjective judgments and the bias of a valuer. For instance, a target company may typically tend to overvalue itself while valuing.
- (b) Valuation is riddled with a commonplace notion that a detailed valuation exercise will provide a precise estimate of value. The truth is that any valuation is as good as its underlying assumptions, which, in turn, are the function of a number of present and forward-looking factors. A careful valuation exercise, at best, can give an indicative range of value subject to the reasonableness of the assumptions.
- (c) Valuation is pertinent to a particular point of time and varies with changes in business, industry and macro-economic environment. E.g., the movement of US Dollar against Indian Rupee has led to a substantial change in the valuation of IT and other export-driven companies.

1.5 Valuation is not an exact science and is driven, inter-alia, by the purpose of valuation, statutory requirements, business factors,

etc. Valuation, in practice, is guided by a number of approaches as suitably adjusted for subjective circumstances.

1.6 In general terms, there are three approaches to valuation – Income Approach, Market Approach and Net Assets Value Approach. The approaches, rules and principles involved in share valuation as laid down by law, statutory guidelines, decisions of courts as well as established valuation practices are dealt within the following chapters.

1.7 This technical guide incorporates practical aspects of valuation considering current macro-economic scenario, changes in the regulatory and legal environment and prevalent industry practices.

2

Income Approach

2.1 The potential earning power of a company is generally a paramount factor for valuation of share but there may be occasions, especially in valuations for compensation, where other considerations become relatively more important. In the absence of any other special motive, an investor is principally interested in a company's ability to continue earning profits.

2.2 The dominance of profits for valuation of share was emphasised in McCathies case (Taxation, 69 CLR 1) where it was said that "the real value of shares which a deceased person holds in a company at the date of his death will depend more on the profits which the company has been making and should be capable of making, having regard to the nature of its business, than upon the amount which the shares would realise on liquidation". This has had the approval of the Indian Courts in Commissioner of Wealth Tax v. Mahadeo Jalan's case (S.C.) (86 ITR 621) and Additional Commissioner of Gift Tax v. Kusumben D. Mahadevia (S.C.) (122 ITR 38).

2.3 In the case of Ahlenime V. Bunn. L. Humphreys (1934), an American case, the Court went to the extent of saying that, "Mere book value should not govern in determining the value of shares of objecting share-holders..... The use of book value, especially, to measure the value of corporate shares owing to multifarious uses for which they are employed, is generally condemned as unsound." Thus, in several cases, the profits basis has been held to be more appropriate than the assets basis for valuing shares.

2.4 The Income Approach indicates the value of a business based on the value of the cash flows that a business is expected

to generate in future. This approach is appropriate in most going concern situations as the worth of a business is generally a function of its ability to earn income/cash flow and to provide an appropriate return on investment.

2.5 The Income approach includes a number of models/ techniques, such as Discounted Cash Flow, Maintainable Profits Basis, Dividend Discount Model, and others, which are discussed in detail in the following paragraphs.

DISCOUNTED CASH FLOW

2.6 Discounted Cash Flow model indicates the fair market value of a business based on the value of cash flows that the business is expected to generate in future. This method involves the estimation of post-tax cash flows for the projected period, after taking into account the business's requirement of reinvestment in terms of capital expenditure and incremental working capital. These cash flows are then discounted at a cost of capital that reflects the risks of the business and the capital structure of the entity.

2.7 Discounted Cash Flow is the most commonly used valuation technique, and is widely accepted by valuers because of its intrinsic merits, some of which are given below:

- (a) Theoretically, it is a very sound model because it is based upon expected future cash flows of a company that will determine an investor's actual return.
- (b) It is based on expectations of performance specific to the business, and is not influenced by short-term market conditions or non-economic indicators.
- (c) It is not as vulnerable to accounting conventions like depreciation, inventory valuation in comparison with the other techniques/approaches since it is based on cash flows rather than accounting profits.
- (d) It is appropriate for valuing green-field or start-up

Share Valuation

projects, as these projects have little or no asset base or earnings which render the net asset or multiple approaches inappropriate. However, it is important that valuation must recognise the additional risks in such a case (e.g. project execution risk, lack of past track record, etc.) by using an appropriate discount rate.

2.8 Though the Discounted Cash Flow model is one of the widely used models for valuation because of its inherent benefits, it still has its share of drawbacks. Major shortcomings of this model are as follows:

- (a) It is only as good as its input assumptions. Following the “garbage in, garbage out” principle, if the inputs – Cash Flow Projections, Discount Rate, and Terminal Value - are wide off the mark, then the value generated by using this model does not reflect the fair value.
- (b) It does not take into account several other factors, such as investment risk associated with opportunity cost, i.e. investments that could return greater cash flow yields would add an unrealised element of risk, unforeseen variations in future cash flow, and other non-financial factors.

2.9 In this technique valuation of shares is based on three things: Cash Flow Projections, Discount Rate and Terminal Value.

Cash Flow Projections

2.10 The first and most critical input of the Discounted Cash Flow model is the cash flow projections. As stated earlier, the Discounted Cash Flow value is as good as the assumptions used in developing the projections. These projections should reflect the best estimates of the management and take into account various macro and micro-economic factors affecting the business. Some of the important points to be kept in mind with regard to cash flow projections based on the projection of the profitability are stated below:

- (a) Cash flow projections should reasonably capture the growth prospects and earnings capability of a company. The earning margins of a company should be determined based on its past performance, any envisaged savings, pressure on margins due to competition, etc.
- (b) Discontinuation of a part of the business, expansion programmes and any major change in the policies of the company may provide occasions for making a break with the past.
- (c) The discontinuation of a part of the business can be easily dealt with by a valuer. A part of the profits earned by such business in the past will have to be excluded from the projections.
- (d) The effect of expansion schemes can present more complex problems. For these, the valuer will have to use his judgment about their profitability. The state of execution at the time of valuation should be given due consideration. Mere paper plans for expansion should not be taken into account. If reasonable indications of expected future profit are available, then such profits taken on a reasonable basis – to take care of the risk and uncertainty involved – may be included in the projections of the company. If, however, the profits are expected to be realised after a lapse of some years or if material amounts have yet to be incurred before profits are realised, due consideration will have to be given to these circumstances. In such circumstances, separate value may be given to such new investments and the same is added to the value of the existing stream of business.
- (e) In turnaround cases, the uncertainty of higher profits is much greater. Careful evaluation of the steps actually taken to implement a turnaround strategy must be undertaken before a valuer accepts management's claims that in future the company will earn profits. If

Share Valuation

necessary, reports of technical or other consultants should be called for.

- (f) In case of companies witnessing cyclical fluctuations, care should be taken to select the forecast period, which should necessarily cover the entire business cycle of a company.
- (g) Effects of change in the policy of the company may be taken into account if such changes are known in advance and the effects are capable of being quantified. Changes in the utilisation of the productive capacity, changes in the organisational set-up, changes in the product-mix, changes in the financing policy are some examples of the situation that may have to be faced by a valuer. Their treatment in the projection of future profits will depend entirely upon the effect which in the opinion of the valuer, such changes will have on such future profits.
- (h) An appropriate allowance must be made for capital expenditure in projections. They should not include capital expenditure only for capacity expansion or growth but also for maintenance of the existing capacity.
- (i) Working capital requirement forms another important component. Projections should appropriately account for working capital needs of the business in its different phases.
- (j) Income tax outflow also impacts the value of a business and should incorporate any tax benefits like tax holiday, accumulated losses, etc. In making projections, notional tax calculated at the rates expected to be applicable to the company in future should normally be deducted. For instance, the rate may change if the company is planning to undertake activities on which tax incidence is lower. Where such rates are not available, the current rates of taxes may be considered a good indicator. Tax

benefits due to accumulated losses, accumulated development rebates or allowance, investment allowance, unabsorbed depreciation etc. should not generally be adjusted to the tax rate; instead, these should be considered separately. The past unabsorbed tax shelter is valued by using discounted cash flow method, for the actual years in which the tax shelter would be availed of a reduction in the effective tax rate due to exemptions for new industrial unit relief, export profits etc., should be very carefully considered, depending on the period for which they would be available. A cautious valuer would perhaps compute an effective tax rate each year for the forecast period, based on the current year's tax rate and statutory deductions available and a reasonable view of profits.

Discount Rate

2.11 The next step in the Discounted Cash Flow model is the determination of an appropriate rate to discount future cash flows. Discount rate is the aggregate of risk-free rate and risk premium to account for riskiness of the business. Key inputs or adjustments for calculating the discount rate are discussed below:

- (a) Theoretically, risk-free rate is the rate of return on an asset with no default risk. In practice, long-term interest rates on government securities are used as a benchmark.
- (b) It is quite natural to assume that the riskier investments should have a higher return. This necessitates the incorporation of an appropriate risk premium in the discount rate. There exist a number of models for determination of risk premiums, such as the capital asset pricing model, arbitrage pricing model, multi-factor model, etc. Risk premium is also adjusted to incorporate risks associated with the stage and size of business and other company or project-specific risks.
- (c) The rate estimated by using the above will provide the

Share Valuation

discount rate, assuming only equity financing or the cost of equity. For a leveraged company, discount rate should be adjusted for leveraging. Practically speaking, discount rate for a leveraged company is the weighted average cost of capital with appropriate weightages to cost of equity and post-tax cost of debt, considering existing or targeted debt-equity ratio, industry standards and other parameters.

- (d) In the case of a company carrying on two or more different businesses, their cash flow projections should be estimated separately, and apply the discount rates appropriate to the individual businesses.

Terminal Value

2.12 Since a business is valued as a going concern, its value should account for the cash flows over the entire life of a company, which can be assumed to be infinite. Because the cash flows are estimated only for the forecast period, a terminal value is estimated to reflect the value of the cash flows arising after the forecast period. Terminal value can be computed in a number of ways; some prominent ones are discussed below:

- (a) Perpetual growth model assumes that a business has an infinite life and a stable growth rate of cash flows. Terminal value is derived mathematically by dividing the perpetuity cash flows (cash flows which are expected to grow at a stable pace) with the discount rate as reduced by the stable growth rate. Estimation of the stable growth rate is of great significance because even a minor change in stable growth rate can change the terminal value and the business value too. Various factors like the size of a company, existing growth rate, competitive landscape, profit reinvestment ratio, etc. have to be kept in mind while estimating the stable growth rate.
- (b) Multiple approach involves the determination of an appropriate multiple to be applied on perpetuity earnings or revenues. Multiple is estimated by an analysis of the

comparable companies. Though this approach is simpler and brings in the advantages of market approach, it does not qualify as a preferred approach because it mixes the discounted cash flow approach which provides intrinsic or company-specific valuation with the market approach.

- (c) In valuations that assume a finite life of a business, terminal value is estimated to be the liquidation value, which is based on the book value of the assets adjusted for inflation. But this does not reflect the earning power of the assets. Alternatively, discounting expected cash flows from sale of such assets at an appropriate discount rate would provide a better estimation of liquidation value.

MAINTAINABLE PROFITS BASIS

2.13 In this method a reasonable estimate of the average future maintainable profits is made by considering past earnings, their trend and future plans of the company. The estimated average future maintainable profit after deducting the preferred rights, if any, is capitalised at an appropriately selected rate to arrive at the value of the equity.

2.14 This approach to valuation of shares needs the determination of two factors, viz. (1) average future maintainable profits and (2) the rate of capitalisation.

Average Future Maintainable Profits

2.15 Determination of average future maintainable profits is a complicated and delicate task, as it involves not only the objective consideration of the available financial information but also the subjective evaluation of many other factors, such as capabilities of a company's management, general economic conditions, government policies, etc. Guiding principles may be laid down here only in respect of the former; the valuer will have to give due consideration to the latter according to his reading of the situation in each individual case. To arrive at the future maintainable profits of a company, the required steps are: (a) Calculation of the past

Share Valuation

pre-tax average earnings; and (b) projection of the future pre-tax maintainable profits.

Calculation of the Past Pre-Tax Average Earning

2.16 In order to calculate the past average earnings of a company, it is necessary to decide upon the number of years the results of which should be taken for averaging, select these years, and adjust their profits to make them acceptable for averaging. It is also a common practice to assign different weights to different years while working out future maintainable profits.

2.17 The number of years to be selected must be reasonably large so as to cover the length of a business cycle (which would include recovery, peak and recession phases of the cycle) as an average for a shorter period might not be a fair average. This could apply only if the business is subject to cyclical fluctuations. The period, if selected in the aforesaid manner gets closer to the average future earnings. In the present inflationary conditions, there is more value in a shorter, say 3 yearly averages, than in the average of a longer period. Similarly, for companies having a steady and gradual growth, average of a shorter period is more useful. In some unusual circumstances, average of a still shorter period or even one year's profit may be useful for predicting future earnings, such as where change in the business or a change in trading condition force the valuer to discard earlier years and to rely upon one year only or to select certain normal years and exclude others. Whether a 3 yearly or longer or shorter average can reflect the correct future earnings of a company will depend upon the facts of the case, including the length and nature of the business cycle in the industry in which the company is operating.

2.18 The years chosen for averaging the past earnings of a company should be normal years. In case the events occurring in a year could be so adjusted as not to distort the estimated past average profit, the year is included as normal. If the events in a year are such as would yield an average which, even after making adjustments remains distorted, e.g., strike or fire, if affects operations for a substantive part of the year, the year is excluded

as abnormal. If the company has incurred a loss in a particular year, it does not necessarily become an abnormal year.

2.19 Some necessary adjustments need to be made for averaging past earnings. Even though the Companies Act, 1956, makes it obligatory for the companies to disclose a true and fair view of the profit or loss in their accounts (which are the primary source of information for this method of valuation) there is still a need for some adjustments to make the future average maintainable profits more reliable. Some such important adjustments are:

- (a) Elimination of material non-recurring items such as losses of exceptional nature through strikes, fires, floods and theft, etc., profit or loss of any isolated transaction not being part of the business of the company, lump-sum compensation or retiring allowance, damages and costs in legal action, receipt of commission for a special service, etc.
- (b) Elimination of any abnormal or exceptional capital profit or loss or receipt or expense, e.g., abnormal repair charges in a particular year which may have been taken into the profit and loss account.
- (c) Elimination of profits or losses from sale of investments that are not expected to recur in future. In the case of an investment company or the investment division of a manufacturing company, unrealised capital appreciation in the value of investments would also have to be taken into account.
- (d) Adjustments for any interest, remuneration, commission etc. foregone by directors or others.
- (e) Adjustments for any matters suggested by notes appended to the accounts or by qualifications in the auditors' report, such as provision for bad and doubtful debts, gratuities etc.
- (f) Adjustments for any inconsistencies in the accounting

Share Valuation

policies and their compliance with generally accepted accounting principles. For example, in the case of depreciation, it should be ensured that the provision in each year is adequate and is calculated consistently both as to the basis and rates. Similarly, in the case of shares, it should be ensured that the basis of valuation is consistent from year to year and is in accordance with the generally accepted accounting principles.

2.20 In the computation of future maintainable average profit, the courts have, in a number of cases, made the following adjustments and rejections:

- (a) In Abraham's case¹, the judgment approved of estimated additional income from idle cash being included in future maintainable profits.
- (b) In McCathie's case² *McCathie V. Federal Commissioner of Taxation*, 69 C.L.R. 1., directors' fees were reduced to a figure considered to be relevant.
- (c) Applicable portion of profits and assets of controlled subsidiaries were combined with the profit of the parent company in Martin's case³.

Projection of the future pre-tax maintainable profit

2.21 Projection is not an easy matter, because it is essentially an estimation of risks and uncertainties in future. The average profit earned by a company in the past could normally be taken as the average profit that would be maintainable by it in the future, if the future is considered basically as a continuation of the past. If future performance of a company is viewed as departing significantly from the past, then appropriate adjustments will be

¹ Abraham V. Federal Commissioner of Taxation, 70 C.L.R. 23.

² McCathie V. Federal Commissioner of Taxation, 69 C.L.R. 1.

³ Kent and Martin V. Federal Commissioner of Taxation (Not Reported) Adapted from Adamson's "Valuation of Company Shares and Business" (1966) page 111.

called for before accepting the past average profit as the future maintainable profit of the company. The valuer must keep in mind the points related to cash flow projections discussed in paragraph 2.10 under Discounted Cash Flow model for making such adjustments.

2.22 Since the stream of profits are available in the future years and the valuation is normally done for determining the consideration as at present, many valuers use the technique of the discounted cash flow to work out the value of the business. In other words, the future maintainable profits are discounted to their present value before the average profit is worked out. The rate of discount is normally the average cost of capital to the purchaser.

The Rate of Capitalisation

2.23 The next step in the method of valuation is the selection of the rate at which the estimated future average maintainable profit after tax and adjustment of preferred rights is capitalised to arrive at the total value of the equity capital of the company. For calculating the rate of capitalisation, a valuer has to keep in mind the factors discussed under the Discounted Cash Flow model in the paragraph 2.11.

2.24 Where a company is carrying on two or more different businesses, it is appropriate to determine their maintainable profits separately, and apply the rate of capitalisation appropriate to the individual business.

DIVIDEND DISCOUNT MODEL

2.25 It is the simplest model for valuing equity. It equals the value of a share to the present value of dividends expected to be received. It works similar to the discounted cash flow model.

2.26 Two basic ingredients of the model are expected dividends and the cost of equity. To estimate dividends, assumptions about expected future growth rates in earnings and payout ratios have to be made. The required rate of return on a share is determined by

Share Valuation

its riskiness, measured differently in different models, as discussed under the Discounted Cash Flow model.

2.27 This model is not used in most practical situations as dividends may not reflect the true profitability of a business and payout is a management decision. Accordingly, this model suffers from a number of issues like forecasting of dividend pay-outs, non-applicability of the model to non-dividend paying companies, retention of profits for capital expenditure, etc. and is generally considered as limited and outmoded model.

3

Market Approach

3.1 Compared to the income approach that provides a company-specific and intrinsic value, market approach or relative valuation aims to provide the value of a business, based upon how similar assets are priced in the market.

3.2 The use of relative valuation is widespread, especially in equity research reports and acquisition valuations. This is primarily because of its benefits, some of which are listed below:

- (a) It is simple and easy to use. It is less time consuming and easily understood by the users.
- (b) It incorporates information from other valuations in a simple way and provides consistency in the valuation process by ensuring that valuation is in line with other valuations.
- (c) It allows free-ride on market's information and embodies market consensus about discount rate and growth rate. Hence, it reflects the current mood of the market.

3.3 Relative valuation provides a reasonable basis for valuation and is relatively a quick approach, but it suffers from a number of limitations:

- (a) Relative valuation is as good as the valuation of the comparable companies and suffers from volatility of the market. For example, in case the market is overvaluing comparable companies, the relative valuation will also lead to overstatement of value.

Share Valuation

- (b) Identifying comparable companies with similar growth rates, business composition, stage and riskiness of business is a difficult task and finding a perfect match is almost impossible. Adjusting the multiples for company-specific information is subjective and, thus, debatable.
- (c) Differences in accounting policies related to revenue-recognition, depreciation, etc., though adjustable to a certain extent, can result in a distorted valuation.
- (d) Relative valuation is generally based on past data and results in the undervaluation of a company with a significant potential or benefiting circumstances like market expansion.

3.4 Relative valuation includes different methods, namely Market Comparable Method, Market Transaction Method and Prior Sale of Business Method, which are discussed in detail in the following paragraphs.

MARKET COMPARABLE METHOD

3.5 Market Comparable Method involves identification of comparable companies, and derivation and application of multiples after adjustment of differences in fundamentals.

3.6 Theoretically, a comparable company is the one with cash flows, growth potential and risk similar to the company being valued. Conventionally, looking at the companies within the sector provides a better-matched and similar-profiled set of comparable companies. Alternatively, in some cases, it is necessary to look across sectors to identify comparable companies. In practice, one hardly finds exactly similar companies.

3.7 The next step is to arrive at a standardised set of ratios for comparison, commonly known as multiples. Multiples are a ratio of the enterprise value/equity value over different financial parameters like Revenue, Earnings before Interest, Tax, Depreciation and

Amortisation (EBITDA), Profit after Tax (PAT), Earnings per Share (EPS), book value, etc., with some being preferred over the others. For example, EBITDA multiple is preferred over PAT multiple so as to eliminate the effect of differences in depreciation policies and the impact of leveraging.

3.8 As comparable companies are not exactly similar to the company being valued, the multiples derived from such companies cannot be applied sacrosanct: and thus merit various subjective adjustments to account for differences in risk profile, growth rate, etc. For example, a company with higher EBITDA margin should command a better multiple than an average performer or a positive adjustment is required for a company with better growth potential.

3.9 In some cases, multiples of non-financial parameters are also used. For example, it is a common practice to evaluate oil companies using multiples of value per barrel of oil or in case of banking shares using value based on the loan portfolio.

MARKET TRANSACTION METHOD

3.10 A variant of the Market Comparable Method, the Market Transaction Method uses transaction multiples in place of trading multiples. Transaction multiples, as the name suggests, are the multiples implied in the recent acquisitions/disposals of comparable companies.

3.11 This method is specially useful if there are limited comparable companies. Also, it incorporates the market sentiments in a better way, as the multiples, unlike trading multiples which are affected by the inefficiencies of the market, are based on an informed negotiation between buyers and sellers.

3.12 Various factors should be considered while using transaction multiples. These are nature of transaction – hostile deal, group restructuring, industry trends, time of transaction – whether at the high or low of industry cycle, consideration – share or cash, contingent to future performance, etc.

Share Valuation

3.13 This method suffers from limitation of data availability, as the requisite information relating to transactions, specially about private companies, is seldom available.

PRIOR SALE OF BUSINESS METHOD

3.14 Prior Sale of Business method, like the Market Transaction Method, makes use of the transaction multiples. However, transaction multiples used in this case are the ones implied in the prior transactions involving the company itself. For example, an earlier stake sale in business can be used to provide a benchmark valuation of a company, provided the same was between unrelated parties.

3.15 Transaction multiples should be adjusted for timings of the transactions and intermediate changes in the stage of business, earnings margin, growth rate, etc.

4

Net Assets Approach

4.1 Valuation of shares on asset basis attempts to measure the value of the net assets of a company against each share. It is computed by taking the net value of a company's assets, subtracting therefrom the amount of the liabilities and preferred share-holders' claims and dividing the remainder among the equity shareholders according to their individual rights.

4.2 Asset basis has to be used for valuation for certain specific purposes, e.g., special provisions of various tax laws. It may be appropriate to value shares on asset basis under many other circumstances, the more important of which are mentioned below:

- (a) In cases where there is paucity of information about profits that would serve as a basis of valuing shares, such as:
 - (i) In case of new companies whose accounts do not serve as a guide to future profits.
 - (ii) Where a company has been trading at a loss and there are no prospects of earning any profit in the near future. The compensation paid to various airline companies that were nationalised was fixed on the basis of valuation of their assets, because most of the companies had incurred heavy losses in past years. In *Dean V. Prince and others* (1954) 1 All E.R. 749, it was observed:

“In the case of a private company carrying on a profitable business it is no doubt true that a sound and obvious basis of a calculation would be in

Share Valuation

accordance with the expectation of profit for the future, particularly when the shares in question constitute a majority holding. In my judgment, however, Mr. Jenkinson rightly rejected any such basis of valuation in the present case, for a continued expectation of loss would produce necessarily a negative result – a calculation on the basis of profits (that is, upon the basis of expected returns on the footing of the company continuing as a going concern) being out of the way, Mr. Jenkinson, I think, turned clearly to a break-up value as on a forced sale as the only available alternative.”

However, in such cases, the fact that there is no profit earnings capacity should be taken into account and in appropriate cases a discount on net assets value should be worked out.

- (iii) In case of companies where there is no reliable evidence of future profits due to
 - violent fluctuations in business, or
 - disruption in business.
- (b) Other circumstances, such as, when it is intended to liquidate the company and to realise the assets and distribute the net proceeds among shareholders.

4.3 Referring to the asset basis of valuation in Murdoch’s case¹, Justice Williams said that one of the main items to be taken into account is the safety of the capital assets in which the shareholders’ fund is invested and in McCathie’s case², His Lordship again emphasised that a prudent purchaser takes care to ensure that his purchase money is well secured by tangible assets.

¹ Murdoch (Sir James) Re: Perpetual Trustee Co. V. Federal Commissioner of Taxation, 65 C.L.R. 537.

² Mc Cathie V. Federal Commissioner of Taxation, 69 C.L.R. 1.

4.4 'Assets' value also becomes a material factor in valuation of shares where assets are surplus to existing business operations, e.g., excess land in a manufacturing company. 'Assets' value also provides guideline for valuation of shares of companies whose future profits are indeterminable either because of newness, dislocation, losses in business or due to business fluctuations. It is equally important in valuing shares where the merger is not in the nature of a pooling of interests but that of a purchase.

4.5 The liquidated value of net tangible assets is normally the minimum value of a whole company and will prevail even if its earning capacity is very low or in the negative, subject to any discounting in appropriate cases as provided in paragraph 4.2 (a)(ii) above. In adopting this liquidation basis for valuation, the valuer should give adequate consideration to what Justice Kennedy called 'the reluctance to wind-up'. In *Keesings V. Commissioner of Stamp Duties*, he assigned a value of 30 per cent of the net realisation to this factor and added it to the net realisation to arrive at the value of shares. The Judge in another English case suggested $33 \frac{1}{3}$ per cent of the net realisation to this factor. Costs of liquidation and tax consequences thereof should be taken into account. It may, however, be noted that such additions can be made only in the case of concerns, which may at present be incurring losses, but there is a possibility of a turnaround.

4.6 Under appropriate circumstances, a valuer should consider the necessity of physical verification of tangible assets. Factoring in any due diligence findings on assets may also be required while ascertaining the value of the assets in certain cases.

4.7 Based on his assessment of a business and discussions with its management, a valuer should identify and value the intangible assets of a business.

PROCEDURE

4.8 The steps necessary for valuing shares on net assets basis are:

Share Valuation

1. Valuation of assets.
2. Ascertainment of liabilities (including appraisal of contingent liabilities).

Valuation of Assets

4.9 The asset valuation can be on a number of bases. These are

- (a) Book value.
- (b) Net replacement value.
- (c) Net realisable value.

4.10 If valuation of assets is done on the basis of their book value, there is a need for certain adjustments; e.g., adding the amount of heavy replacements and renewals to fixed assets where the same has been debited to the profit and loss account. It should be recognised that book value reflects only the historical cost of assets, which in the case of old concerns may be much lower than their economic value. However, a part of this differential is recognised when goodwill is valued separately and added to the book value of assets. Investments are generally recognised at their market values even where other assets are reckoned at their book value.

4.11 If a concern is being valued on a going concern basis, net replacement value of the assets gives a fair measure of their current value. In this case too goodwill may be valued and added to recognise the fact that individual net replacement values of the assets do not represent the inherent strengths of the concern.

4.12 Where a concern is being wound up, its assets are best valued on the basis of their net realisable value.

4.13 In practice often a combination of book values, replacement values and realisable values is adopted. For example, even where

a concern is being valued on going concern basis, excess assets may be valued at their net realisable values.

4.14 Intangible assets of a company have also to be included with its other assets, no matter whether they are shown in the books or not. Intangible assets generally consist of goodwill, patents, trade-marks, copyrights, etc. Their book value/net replacement cost/net realisable value, as the case may be, has to be included. Goodwill is generally inseparable from business, and it can fetch a price only if the business is sold on a going concern basis. The valuation of goodwill is a complicated matter and is discussed in some detail in chapter 5.

4.15 Some considerations for arriving at the value of the various classes of assets are given below.

Fixed Assets

4.16 When the net realisable value/net replacement value of assets is not ascertained separately by an expert, it has to be seen that book value is arrived at after charging adequate depreciation consistently. Any capital improvements in the past that have been charged-off to revenue should also be taken into account. In the case of land and buildings, one has to take into account whether these are freehold or leasehold. The unexpired period of a lease may also have a great bearing upon the value of leasehold property.

4.17 For assessing the value of plant and machinery, the factor of obsolescence due to technological improvements, changes in design, etc., has to be given due consideration. If the present machinery is so outdated that it has to be discarded, then only the value which the plant and machinery would fetch, if sold piecemeal, has to be taken into account.

Investments

4.18 Shares and securities that are regularly traded in stock exchange may be valued on the basis of the prices quoted thereat.

Share Valuation

It must, however, be seen that there is regular trading in those scrips, as an isolated transaction may lead to erroneous results. In cases of quoted shares with isolated transactions and unquoted shares, a secondary valuation may be necessary, if the amount is material; but if the number or value of unquoted shares is not substantial, then their value can be ascertained on the basis of evidence available in the last annual accounts of the company.

Inventory

4.19 Due allowance should be made for any obsolete, unusable or unmarketable stocks held by the company.

Sundry Debtors

4.20 Appropriate allowance should be made for any bad debts and debts which are doubtful of recovery.

Contingent Assets

4.21 If the company has made escalation claims, insurance claims or other similar claims, then the possibility of their recovery should be carefully made on a conservative basis, particularly having regard to the time frame in which they are likely to be recovered.

Development Expenses

4.22 These arise:

- (a) in the case of a new company, when it is in the process of executing its project; and
- (b) in the case of an old company, when there is an expansion of the existing production lines or diversification for entering into new business.

These should be reviewed and the costs that have been incurred for completing the project should be included.

Ascertainment of Liabilities

4.23 The amount of liabilities shown in the books of companies may generally be accepted after proper scrutiny. Due consideration should, however, be given to contingent liabilities and short provisions for expenses. If necessary, legal opinion should be sought for ascertaining the sustainability of claims or contingent liabilities.

4.24 Where liability for taxation has not been provided in the accounts, appropriate amount should be included in the liability. Similar adjustment may be required for proposed dividend. In case the company has set aside any specific reserves to meet any future losses, it should be ascertained whether they are reserves or provisions. If there is a definite reason to regard them as provisions, they should either be included in liabilities or deducted from the related assets.

4.25 While valuing equity shares, the dues of preference shareholders have also to be included in the liabilities. These rights can be ascertained from the terms of issue. Where such shareholders also have a right to participate in the surplus, the applicable amounts of such surplus should be included as liabilities, together with the paid-up value of such shares.

SPECIAL CONSIDERATION IN CASES OF LIQUIDATION

4.26 Where the business of a company is being liquidated, its assets have to be valued as if they have been sold individually and not on a going concern basis. In such cases, the total net realisable value will often be less than that on the basis of a going concern. When a company itself is in liquidation, but its business is being continued, this consideration does not apply. However, a special provision has to be made for cost of liquidation. On the other hand, if a company itself is in liquidation and its business is also being liquidated, the assets will be valued on a liquidation basis; a provision will also have to be made for the cost of

Share Valuation

liquidation. The tax consequences of liquidation have also to be considered. If fixed assets are to be sold at a price in excess of cost, the capital gains tax and withdrawal of tax relief, such as investment allowance/investment deposit allowed in the past should also be taken into account.

5

Valuation of Intangible Assets

5.1 Intangible assets are the assets that do not have a physical identity. These represent a company's right or claim to future benefits arising from their use. Corporate intellectual property items such as patents, trademarks, copyrights, business methodologies, goodwill and brand recognition are all common intangible assets in today's marketplace.

5.2 A common criticism of valuation approaches is that little attention is paid to the valuation of intangible assets, which is required in the following scenarios:

- (a) It may be required under the applicable accounting standards.
- (b) Further, Income Tax Act, 1961 allows amortisation of certain acquired intangible assets as tax deductible which also necessitates allocation of sales consideration in acquisitions to different tangible and intangible assets.
- (c) Valuation of these assets is also required in the case of transactions involving sale of stand-alone intangible assets like brands, patents, etc.

5.3 Intangible assets can be classified in many ways. Some of these are:

- (a) *Identifiable or Unidentifiable* - Identifiable intangible assets such as patents and copyrights have separate identities and can be bought or sold separately. Unidentifiable intangible assets such as goodwill cannot

Share Valuation

be separated from the owning entity and thus cannot be bought or sold separately.

- (b) *Externally Acquired or Internally Developed* – Externally acquired intangible assets are recorded at their acquisition cost i.e. costs associated with acquiring the rights to the benefits represented by the asset. For internally developed identifiable intangible assets, only the costs directly related to establishing the rights are capitalised.
- (c) *Definite or Indefinite* – Definite intangible assets have a finite life, and are usually limited by a legal right to use them e.g., lease contracts. Indefinite intangible assets have an infinite life and stay with the company as long as the company continues its operations, e.g., its brand name.
- (d) *Based on Function* -
 - Relationship based intangible assets represent relationship of the business with outside agencies, other companies and individuals. These are generally non-contractual and short-lived but extremely important to the enterprise. These assets include Customer Lists, Distribution Network, Circulation Base, and Subscriber List.
 - Knowledge based intangible assets represent intellectual property owned by the enterprise. Such property may or may not be protected by law from its unauthorised exploitation by others. Patents, Copyrights, Engineering Designs, and Trademarks are some of these intangible assets.
 - Rights and Permits represent contractual arrangements with other businesses, individuals or government bodies. These include Employment Agreements, Franchise Agreements/Licenses, and Favourable Lease Contacts.

METHODS OF VALUING GOODWILL

5.4. Goodwill, an important intangible asset of a business enterprise, is difficult to define precisely. In fact, it is an aggregation of many factors and advantages; some may be present in one particular business and not in others. In its simplest form, goodwill may be defined as the capacity of a business to earn in excess of a fair post-tax net return. It includes every advantage connected with location, premises, reputation, personality name, cordial labour relations, etc. It is hard to build, but easy to destroy.

5.5. Goodwill is generally inseparable from a business and can fetch a price only if a business is sold on a going concern basis. It is usual for the value of a business as a whole on a going concern basis to differ from the value of its separable net assets. The difference may arise due to presence of goodwill.

5.6. Goodwill generally does not appear in the accounts of a company except where the company has actually paid for it when purchasing a business. Even where there is a value of goodwill in the accounts, such value does not necessarily represent its fair value. Sometimes, cost of advertising - particularly a major advertising campaign – and cost of research and development are considered equivalent to goodwill. This may perhaps be partly true but it does not give any guide to the fair value of the goodwill of the business.

5.7 Various methods have been and are being used to assess the value of goodwill. These methods may be divided into two categories, namely, (a) rule-of-thumb methods, such as the number of years' purchase of past average profit method and a number of years' purchase of the gross earnings method and (b) methods evaluating goodwill by reference to super profits.

A Number of Years' Purchase of Past Average Profit

5.8 This method has had a very wide application because of its simplicity and general applicability to small business enterprises.

Share Valuation

In this method, sellers and buyers agree to take an average of the past after-tax profits of a particular number of years and such average is multiplied by another number of years which is also mutually agreed upon. It is considered that the total additional advantage of the establishment and performance of the business in the past is confined to the amount thus arrived at and therefore it represents a fair value of the goodwill of a business. The multiplier may differ from business to business or from individual to individual. This method does not take into consideration either the funds invested in business or a fair return thereon.

A Number of Years' Purchase of the Gross Earnings

5.9 This method is similar to the above method except that instead of applying the multiplier to the average post-tax profits, it is applied to the average gross earnings or sales of the business. This method is widely accepted in the evaluation of professional practices.

A Number of Years' Purchase of Super-Profits

5.10 In this method, super-profits are ascertained (the method for this is described in paragraph 5.12) and are multiplied by a predetermined number of years and the resultant is the goodwill of a business. This method presumes that the super-profits which are earned by a business due to extra efficiency or reputation of the present owner or management will last only for a limited number of years and at their end, would be replaced by those earned by the efforts of the buyer or the new management. Therefore, even though super-profits may continue to be earned for a long time, it cannot be said that they are earned all time because of the goodwill at the time of the purchase. In some cases, super-profits are divided into two or more parts and different multipliers are used for each of them.

Capitalisation of Super Profits

5.11 In this method, super profits are capitalised and such capitalised value is considered the goodwill of a business. The rate of capitalisation is either the same as in the maintainable profits basis of valuation or higher.

5.12 Super profits are estimated by deducting the net fair earnings of a business from its maintainable profits (the method of computation of maintainable profits has been discussed in chapter 2). Net fair earnings (after-tax) are the earnings which would be attributable to a business if it earned profits at a normal rate. This calculation will, therefore, involve determination of the investment made in business and the normal rate of return. For this purpose investment may be considered equal to the value of the tangible and intangible assets of a business. The normal rate of return will be equivalent to the earnings rate used for capitalisation in the maintainable profits basis of valuation.

5.13 If the rate of capitalisation of super profits is the same as the earnings rate, then the total value of a business will be more or less equivalent to that arrived at on the maintainable profits basis. Value of goodwill may therefore be arrived at either by capitalising the super profits or by deducting the value of the tangible assets and specific intangible assets from the total value of a business. If, however, a different – generally higher rate - is taken for super profits, then this value will also be different. Taking a higher rate of capitalisation is justified on the ground that an established business is more certain to earn a normal profit than any profits in excess of the normal. This added uncertainty is reflected in the higher rate of capitalisation (i.e., a lower multiplier) taken for super profits.

5.14 In some cases, super profits are divided into two or more parts and different rates are used for capitalising them. This method is justified on the basis of the argument given in the preceding paragraph. When it is assumed that earning super profits is more uncertain than earning normal profit, then it can be accepted that earning of higher levels of super profits will be more uncertain.

Discounted value of Super Profits

5.15 In this method, super profits instead of being capitalised are discounted to their present worth. For this purpose, it has to be established as to how long a period is to be covered and what would be the super profits during that period. Taking super profits only for a limited period is justified on the same grounds as for a number of years' purchase of super profits. In fact, this method is an improvement upon the number of years' purchase of super profits method since instead of taking super profits for a particular period, it takes the present worth of such super profits.

APPROACHES TO VALUATION OF INTANGIBLE ASSETS OTHER THAN GOODWILL

5.16 Different approaches viz. Income, Market and Cost approaches or a combination of these approaches are used to value intangible assets. It is because intangible assets have different attributes and only one approach may not be relevant to all of them. For some assets, various methods are usually attempted to ascertain value, for other assets, one method is usually employed. For example, Franchise Agreements, Licenses, Software Licenses, etc. are valued by using different approaches whereas Customer Lists and Engineering Drawings are generally valued by using Income and Cost approaches respectively.

Cost Approach

5.17 The Cost Approach values intangible assets by accumulating costs that would currently be required to replace the asset. The premise of this approach is that an investor would pay no more for an asset than what would be required to reproduce it.

5.18 The cost approach, though effective for some easily replicable assets, such as simple software, is not always a useful indication of value. It tends to look backwards in time, which is not the way

most buyers and sellers view assets or transactions. Even a relatively simple piece of software, if it provides a competitive advantage that generates incremental profits, may have a value significantly different than its cost. Further, not all costs are incurred wisely, efficiently, or successfully. Many research projects that entail significant outlays of funds do not result in the creation of any asset value. Application of this approach to such intangible assets would produce a meaningless result.

However, because the cost of an item is an indication of what one investor was willing to invest in the hoped-for creation of an asset, the Cost Approach is not without merit.

Market Approach

5.19 The Market Approach values intangible assets by using prices paid in actual transactions. The transaction price, as a ratio of an asset attribute, such as revenues that is observable in both the market transaction and the subject intangible asset are used to derive a market multiple. The market multiple is applied to the attributes of the subject intangible asset to indicate the value of the subject intangible asset.

5.20 The Market Approach is often inapplicable to the valuation of intangible assets. With some exceptions, intangible assets are often purchased “bundled” with other assets, so the price paid for an individual intangible asset is not observable with certainty. Without knowing the amount paid for an asset in a transaction, the calculation of a market multiple would not yield a useful valuation measure for an individual intangible asset.

5.21 However, in certain circumstances, intangible assets are purchased separately or are purchased with assets that have estimable values. For example, a milk delivery service may buy “routes”, meaning customers within a certain area, from a milk delivery service that is exiting a market. The transaction price may indicate only the value of the route if the seller retains all other assets, including building, trucks, refrigeration equipment, and working capital assets (inventory, accounts receivable). If, in another

Share Valuation

transaction, the trucks were included in the purchase price, then subtracting the value of the trucks from the transaction price would indicate the value of the customer relationships.

Income Approach

5.22 The Income Approach bases value on the cash flows an asset is expected to generate over its useful life. This approach entails first the projection of the annual cash flows a prudent investor would expect the subject asset to generate, taking care to reasonably exclude the cash flow contributions of other tangible and intangible assets. The estimated annual cash flows are then converted to present value by applying a rate of return appropriate to the risk of the asset. The present values of such yearly cash flows are summed to determine the fair market value.

5.23 The discount rate to be employed for valuing an intangible asset depends on the risk and liquidity of the type of asset being acquired. For example, patents, in process R&D, goodwill, etc., are more risky and/or less liquid as compared to customer lists, non-competition agreements, etc. It is generally appropriate to address this issue by assigning reasonable premiums or discounts to the overall company discount rate when valuing specific assets.

VALUATION OF OPTIONS

5.24 An option provides the holder with the right to buy or sell a specified quantity of an underlying asset at a fixed price (called a strike price or an exercise price) at or before the expiration date of the option.

A call option gives the buyer of the option the right to buy the underlying asset at the exercise price, at any time prior to the expiration date of the option. The buyer pays a price for this right. If at expiration, the value of the asset is less than the strike price, the option is not exercised and expires worthless. If, on the other hand, the value of the asset is greater than the strike price, the

option is exercised and the buyer of the option buys the asset at the exercise price.

A put option gives the buyer of the option the right to sell the underlying asset at the exercise price, at any time prior to the expiration date of the option. The buyer pays a price for this right. If the value of the underlying asset is greater than the strike price, the option will not be exercised and will expire worthless. If on the other hand, the value of the underlying asset is less than the strike price, the owner of the put option will exercise the option and sell the asset at the strike price.

5.25 A number of business situations have characteristics of options that ultimately affect the valuations of their intangibles. Accordingly such options have to be valued. Some of the prominent ones are illustrated below:

- Natural resource companies, such as oil and mining companies, generate cash flows from their existing reserves but they also have undeveloped reserves that they can develop, if they choose to do so. They will be much more likely to develop these reserves if the price of the resource (oil, gold, copper) increases.
- A patent provides a company with the right to develop and market a product or service and thus can be viewed as an option. While an undeveloped patent may not be financially viable today and generate cash flows, it can still have considerable value to the company owning it because it can be developed in future.
- Employee Stock Options carry the right, but not the obligation, to buy a certain amount of shares in a company at a predetermined price and present a need for using option valuation techniques.

5.26 The value of an option is determined by a number of variables relating to the underlying asset and financial markets.

- *Current Value of the Underlying Asset:* Options are assets

Share Valuation

that derive value from an underlying asset. Consequently, changes in the value of the underlying asset affect the value of the options on that asset. Since calls provide the right to buy the underlying asset at a fixed price, an increase in the value of the asset will increase the value of the calls. Puts, on the other hand, become less valuable as the value of the asset increases.

- *Variance in Value of the Underlying Asset:* The buyer of an option acquires the right to buy or sell the underlying asset at a fixed price. The higher the variance in the value of the underlying asset, the greater will be the value of the option. This is true for both calls and puts.
- *Dividends Paid on the Underlying Asset:* The value of the underlying asset can be expected to decrease if dividend payments are made on the asset during the life of the option. Consequently, the value of a call on the asset is a decreasing function of the size of expected dividend payments, and the value of a put is an increasing function of expected dividend payments.
- *Strike Price of Option:* A key characteristic used to describe an option is the strike price. In the case of calls, where the holder acquires the right to buy at a fixed price, the value of the call will decline with increase in the strike price. In the case of puts, where the holder has the right to sell at a fixed price, the value will increase with increase in the strike price.
- *Time to Expiration on Option:* Both calls and puts become more valuable as the time to expiration increases. This is because the longer time to expiration provides more time for the value of the underlying asset to move, increasing the value of both types of options. Additionally, in the case of a call, where the buyer has to pay a fixed price at expiration, the present value of this fixed price decreases as the life of the option increases, increasing, in turn, the value of the call.

- *Riskless Interest Rate Corresponding to the Life of Option:* Since the buyer of an option pays the price of the option upfront, an opportunity cost is involved. This cost will depend upon the level of interest rates and the time to expiration on the option. The riskless interest rate also enters into the valuation of options when the present value of the exercise price is calculated, since the exercise price does not have to be paid (received) until expiration on calls (puts). Increases in the interest rate will increase the value of calls and reduce the value of puts.

5.27 Various option pricing models, which work on a number of assumptions and inputs, are used to arrive at the value of options. In practice, Black-Scholes and a simpler Binomial Model are preferred for option pricing.

5.28 The Black-Scholes model is a mathematical formula for calculating the theoretical value of call and put options that may be derived from the assumptions of the model. The fundamental insight of Black-Scholes is that the call option is implicitly priced if the share is traded.

The following assumptions underlie the Black-Scholes model of calculating options :

- (a) Share pays no dividends.
- (b) Option can only be exercised upon expiration.
- (c) Market direction cannot be predicted.
- (d) No commissions are charged for the transaction.
- (e) Interest rates remain constant.
- (f) Share returns are normally distributed, thus volatility is constant over time.

Share Valuation

5.29 The Binomial Model produces a binomial distribution of all the possible paths that a share price could take during the life of the option. A binomial distribution, simply known as a “Binomial Tree”, assumes that a share can only increase or decrease in price all the way until the option expires and then maps it out in a “tree”. It then fills in the theoretical value of that share’s options at each time step from the very bottom of the binomial tree all the way to the top, where the final, present, theoretical value of a share option is arrived. Any adjustments to share prices at an ex-dividend rate or option prices as a result of early exercise of options are worked into the calculations at each specific time step.

6

Valuation Conclusion

SELECTION OF BASIS OF VALUATION

6.1 Selection of an appropriate approach — Income, Market, or Net Assets — as well as the technique/model within the selected approach by a valuer is dependent on the facts and circumstances of the case. In practice, however, a combination of all the approaches is used by assigning appropriate weightage to each approach.

6.2 The appropriateness of any approach and also the weightage assigned to each approach in case of a combination of two or more approaches used has been the subject of a number of litigations and deliberations. Various judicial pronouncements have upheld the valuation based on a combination of two or more approaches.

6.3 Supreme Court in *Miheer H. Mafatlal v. Mafatlal Industries Ltd. (Miheer H. Mafatlal v. Mafatlal Industries Ltd. (1996) 4 Comp LJ 124 (SC))* held that once the exchange ratio of the shares of the transferee company to be allotted to the holders of shares in the transferor company has been worked out by a recognised firm of chartered accountants who are experts in the field of valuation, and if no mistake can be pointed out in the said valuation, it is not for the court to substitute its exchange ratio, especially when the same has been accepted without demur by an overwhelming majority of the shareholders of the two companies.

6.4 In *Hindustan Lever Employees Union v. Hindustan Lever Ltd., (1994) 4 Comp LJ 267 (SC)* the Supreme Court held that it is not the part of the judicial process to examine entrepreneurial

Share Valuation

activities to ferret out flaws. The court is least equipped for such oversights, nor indeed it is a function of the judges in our constitutional scheme. It cannot be said that the internal management, business activity or institutional operation of public bodies can be subjected to inspection by the court. It is incompetent and improper to do so and, therefore, out of bounds. Nevertheless, the broad parameter of fairness in administration, bona fides in action and the fundamental rules of reasonable management of public business, if breached, will become justiciable. The court's obligation is to satisfy that the valuation has been in accordance with the law and the same has been carried out by an independent body.

6.5 Although the question of valuation of shares and fixation of exchange ratio is a matter of commercial judgment and not for the court to judge it, yet the court cannot abdicate its duty to scrutinise the scheme with vigilance. It is not expected of the court to act as a rubber stamp simply because the statutory majority has approved the scheme and there is no opposition to it. The court is not bound to treat the scheme as a *fait accompli* and to accord its sanction merely upon a casual look at it. It must still scrutinise the scheme to find out whether it is a reasonable arrangement which can, by reasonable people conversant with the subject be regarded as beneficial to those who are likely to be affected by it. Where there is no opposition, the court is not required to go deeper. However, when there is opposition, the court not only will but must go into the question and if it is not satisfied about the fairness of the valuation, it would be justified in refusing to accord sanction to the scheme, as was held by the court [Carron Tea Co. Ltd. (1966) 2 Comp LJ: 278 (Cal)].

SPECIAL CONSIDERATIONS

6.6 While valuing shares, a number of situations may arise in which special consideration has to be given to several important factors. Some important ones are discussed below.

Controlling Interest

6.7 When a parcel of shares carrying controlling interest in a company is to be valued, special consideration has to be given to controlling interest factor. This flows from the fact that the purchaser of such a parcel of shares does not only acquire the shares of a company but also its control, which in itself is a valuable right. He has, therefore, to pay for this control too. In Murdoch's case¹, Mr. Justice Williams stated: "It is evident that a parcel of shares sufficient to carry a special resolution may have higher value than parcels which are insufficient for that purpose." In *British Columbia Power Corporation Ltd. v. Attorney General of British Columbia*², Chief Justice Lett, admitted that the normal course would be to arrive at a fair market value by a process which would not take account of the value of control and then to add to it an allowance as the value of control. The special value for control is allowed as an inducement to dislodge the existing owners and as a price for the advantages to the purchaser of an existing business in entering into a new territory or the elimination of competition. But because of special circumstance of this particular case, the judge did not allow a special value for control.

6.8 Normally, controlling interest is involved where the shares to be valued constitute more than 50 per cent of the equity shares of a closely held company and a lower limit in the case of a widely held company. If they constitute a large proportion, which is in excess of 75 percent of total equity shares, then the value of the control increases further because additional advantages like powers for alteration of the Articles or the Objects Clause of the Memorandum of Association of the company, or taking the company into liquidation, etc., are also acquired by the purchaser. In many cases, the proportion of shares acquired may be less than 50 percent but because of the special circumstances of a company — that it has a very widely scattered share-holding, the control of

¹ *Perpetual Trustee Co. v. Federal Commissioner of Taxation* (re. Sir James Murdoch) 65 C.L.R. 573.

² (1963) 44 W.W.R. 1965.

Share Valuation

the company might still pass to the purchaser. In such circumstances, it has to be judged on the basis of individual circumstances whether the value of control or a fraction of such value should be included in the value of that parcel of shares. There may also be cases where even the majority of equity shares may not be in effective control or may be in the danger of losing such control; for example, the existence of convertible debentures or the existence of government loan which may be converted into equity shares by a statute or contractually. In such cases, the controlling interest will lose some of its value.

6.9 Controlling interest normally gives the right to the shareholder to appoint at least a majority of directors and to have the effective management of a company, besides advantages like taking a decision to expand or sell a business. The value of the control, therefore, has to be based on an analysis of these advantages. The seller, in such cases, parts not only with the shares of a company but also with its control and, therefore, has to be compensated for the loss of economic power.

6.10 The valuer will have to study many aspects of a case and give due consideration to them to put a monetary value to controlling interest. Some of these aspects are mentioned below:

- (a) If the existing business of a company is not being run with maximum efficiency, then it may be assumed that any additional profits which may accrue because of better management will be derived by the purchaser.
- (b) If a company has surplus funds which are not invested properly, it may be assumed that the purchaser will earn additional profit by investing them in a prudent way.
- (c) If it is possible to increase profit by changing the product-mix or by concentrating on a particular line of business or by a reasonable expansion, then also the additional profit obtained from any of these circumstances has to be taken into account.

- (d) The valuation of a business has to be made in such a way as to ensure that all the intangible assets of a company are given due recognition. These will include goodwill, patents, trademarks, copyrights, secret formulae, expenditure on research and development and on advertisement etc.

In any case, apart from the above, the basic consideration is that control of the business passes for which the purchaser has to pay the consideration.

6.11 In many cases, it will be found that a particular purchaser will also get some additional advantages because of his own individual circumstances as, for example, when he can earn additional profits by combining the business of the company to be acquired with his existing business or by avoiding competition with his existing business. In such cases, such a purchaser will perhaps be prepared to pay a higher amount than others. The additional value to an individual purchaser should be considered as a premium over the fair value which that particular buyer may be willing to pay.

6.12 While the above considerations are relevant, the value of a controlling block of shares can be substantially depressed if the amount required to be invested involves a large sum of money. The very magnitude of the transaction may depress the value because the number of persons likely to be interested in paying such substantial amounts of money may be limited.

Restrictions on Transfers

6.13 Easy marketability is one of the important factors to be considered in the valuation of shares. Though public companies are required not to place any restrictions on such transfers, many of them hold the shares so closely that easy transferability gets restricted. Again, in a number of cases, shares are not listed on Stock Exchange(s). Private companies, by their very definition, are required to restrict the transfer of their shares. Such restrictions may vary considerably in their scope and nature – from a general

Share Valuation

power of the Board to refuse registration of transfer, to a pre-emptive power of the existing shareholders to acquire the shares of a member desirous of selling them at a stated price.

6.14 Section 111 of the Companies Act, 1956 and section 22A of the Securities Contracts (Regulation) Act, 1956, permit an appeal to be made to the Company Law Board if a company refuses to register a transfer in the case of listed shares.

6.15 Restrictions on transfer of shares generally have a depressing effect on their fair value inasmuch as the ready market for sale is restricted. This depends upon the severity of the restriction. A general power of the Board of a public company to refuse registration of a transfer may not have much effect; but the pre-emptive right to buy shares at a price stated in the Articles of Association of a private company may keep the value of shares limited to such prices.

6.16 The following cases illustrate the effect of restricting the free transferability of shares:

- (a) In *Salvesen's case*³ a reduction of 24 percent of the market value per share was made on account of the restrictions imposed on the transfer of shares. In this case there was a somewhat unusual and stringent clause that any holder of less than 10 per cent of equity shares could be compelled to transfer them at any time.
- (b) In *Crossman's case*⁴, an addition of about 1 and a ½ per cent to yield rate was allowed for both the non-marketability and depreciatory effect of the restrictions on transfer present in the Articles of Association of a company. The restriction was that shares had first to be offered to their existing shareholders at a price fixed under a formula laid down in the articles.

³ *Salvesen's Trustees v. C.L.R.* (1930) S.L.T. 387.

⁴ *IRC v. Crossman* (1937) A.C. 26.

- (c) In Myer's⁵ and Murdoch's⁶ cases, where the blocks of shares subject to valuation carried 75 per cent of equity shares and consequently enabled the holders to pass a special resolution to alter the Articles of Association containing the restrictions on transfer, it was held that such restrictions did not depress the value of shares.

- (d) A discordant note has also been struck in the case of *Abreham v. Federal Commission of Taxation*⁷. Mr. Justice Williams stated with regard to the restrictive clauses in the Articles of Association that a share in a partnership would have the same disadvantages, but, it had never been suggested that such a share should be discounted on this account. To a prudent purchaser, willing to give full value for the shares, this restriction should not have any dissuading effect. But this case should not be cited for establishing a new principle.

Capital Structure

6.17 The capital structure of a company may, in some cases, have some effect upon the value of its shares. When the ratio of its equity share capital to the total long term funds employed, i.e., equity plus borrowings, is unduly low, the element of risk involved in such shares will be high. The operating profits of a company have to be applied first to pay interest on borrowed funds and dividends on preference capital and only the remainder is attributable to the equity capital. If the borrowings and preference capital are very large in comparison to the equity capital, a large proportion of profits is used in meeting their claims and only a small amount is left for the equity capital. Because of the smallness of the equity capital in such cases, even a small left-over surplus might give a fair return thereon. But this return will be greatly affected by fluctuations in profit, and even a slight variation in the

⁵ Myer v. Commissioner of Taxes (1937) V.L.R. 106.

⁶ Perpetual Trustee Co. v. Federal Commissioner of Taxation (re Sir James Murdoch) 65 C.L.R. 573.

⁷ 70 C.L.R. 23.

Share Valuation

total profits may increase or reduce the rate of equity dividend to a great extent. In such businesses, it has to be ensured that the rate of return on investment is higher than the rate of interest on borrowed funds.

Different Classes of Shares

6.18 If there is only one type of equity shares, the amount of net surplus has to be divided among them equally. If there are different types of equity shares, the terms of issue of the shares should be considered for arriving at their valuation. For example, if a private limited company, which is not a subsidiary of a public company, has equity capital of two types, this factor should be taken into consideration in the valuation of shares. Further, if the amounts paid for same types of shares are different, the valuation will have to be appropriately pro-rated.

Surplus Assets

6.19 All the assets of a business which are not used in the normal operations of the business such as investments, surplus land, surplus cash at bank, etc. should be identified and segregated from the operating assets. These assets may yield a different return on investment than the operating assets and, accordingly, should be valued separately. Similarly, any liability related to such assets should also be treated separately. It should be ensured that the current or future earnings used for valuation of the business exclude any income or expense pertaining to such surplus assets.

6.20 Surplus assets should be valued at their current net market value and added to the value of a business.

Adjustment for Contingent Liabilities

6.21 Contingent liabilities relate to uncertain events that may or may not create true liabilities. In professional practices, these appear on balance sheets, e.g., due to pending litigation claiming malpractice or disputed billing. The appearance of the word

'contingent' on financial statements should trigger deep exploration by a valuer, and full assessments of potential impacts on business values.

Special Considerations in case of Amalgamations

6.22 Two special issues arise in the case of amalgamations : nature of amalgamation and treatment of losses. An amalgamation could result in a pooling of interests where the shareholders of both the merging companies have a substantial stake in the equity of the merged company; alternatively, it may be a purchase of the undertaking of one company by another through a process of amalgamation. In the latter situation, it has to be considered that the shareholders of the former company have given up their controlling interest in the company. Hence, while computing the fair value of such equity shares, a valuer would be justified in considering a premium for them. If, in such cases, the object of amalgamation is essentially to transfer property then the net realisable value of such assets should be considered for computing the Net Assets Value. The valuer's attention is drawn to Accounting Standard (AS) 14 on 'Accounting for Amalgamations', issued by the Institute of Chartered Accountants of India, wherein the conditions for amalgamation to be considered as a pooling of interests have been spelt out.

6.23 The second special feature is in relation to the tax shelter of one of the merging companies. This is really an off-balance sheet asset which acquires significance by virtue of Section 72A of the Income Tax Act, 1961. This can be explained with the help of an example. A Ltd. has accumulated losses of Rs.1 crore and B Ltd. earns every year taxable profit of Rs. 1 crore. Because of a rehabilitation plan, A Ltd. would start earning taxable profit of Rs.50 lacs from the sixth year. The valuer has to carefully ascertain whether the merging company (A Ltd.) on a stand-alone basis will be able to take advantage of its accumulated tax shelter in future and, if so, from which year. This situation should then be compared with the additional benefit emerging on account of merger. A value may be considered for this benefit and thereafter be shared in an appropriate ratio between the shareholders of the two companies.

Share Valuation

While determining the exchange ratio, the said value has found its way in many Valuation Reports submitted to the Board of Industrial & Financial Reconstruction (BIFR).

Other Factors

6.24 Though valuation is mainly driven by financial factors like earnings, assets, etc., some other factors require careful evaluation as an integral part of the mechanics of share valuation. The most noteworthy of these are:

(a) The nature of a company's business

A company's business may depend on the success of other industries (as with the producer of raw materials for other manufacturers), seasonal conditions, etc.

(b) The caliber of managerial personnel

A business managed by professional managers allied to people with similar ability would command a premium when compared to another which is crucially dependent for its success on a single executive, however outstanding he might be.

(c) Prospects of expansion

A case in point would be that of ancillary small-scale units, which have the potential for growth as they can supply inputs to large companies that are dependent on their products.

(d) Competition

A business may prosper when nurtured under sheltered circumstances (e.g. import restrictions), but may flounder under 'open market' conditions.

(e) Government policy

Government policy in general and in relation to particular industry (as with restriction or banning of manufacture of alcohol in the case of alcohol based chemical industries).

(f) Prevailing political climate

Political climate in an area can affect the prosperity of a business, e.g. tourism trade is directly affected due to breakdown in the law and order situation in a state.

(g) Risk of obsolescence of items manufactured

In case the products manufactured by an enterprise face a higher risk of obsolescence, it may influence the value of its shares adversely.

(h) Existence of convertible rights

Existence of convertible rights would also affect the value of a share.

(i) The effect of other external factors

The value of shares is also affected by factors such as war, embargo or other restrictions on international trade or disruptions in international trade.

Valuation of Shares for Other Purposes

VALUATION FOR PURPOSES OF STAMP DUTY

7.1 When an instrument is chargeable with ad valorem duty in respect of any share, such duty shall be calculated on the value of the share according to the average price or the value thereof on the instrument (Section 21 of Indian Stamp Act, 1899).

7.2 For the purposes of the Indian Stamp Act, 1899, the words 'average price' means perhaps the market price. In case of quoted shares, if there are many quotations of the shares in question on the date of the instrument, then the average price is to be taken for stamp duty purposes. In case of unquoted shares also value has to be ascertained for the purpose of this provision. This view is supported by the Bombay High Court in the case of Madhusudan Dwarkadas Vora vs. Superintendent of Stamp Duty (141 ITR 802). In the said case, the honourable judge quoting the judgment of Mysore High Court, given in case of CED vs. J. Krishnamurty (1974) (96 ITR 87), said ".....the Court was concerned with the valuation of unquoted shares for the purpose of estate duty. There was no such rule under the Estate Duty Act for such valuation. The court observed that in the absence of rules, valuation for the purpose of the Act had to be made in accordance with the well recognised valuation method followed in India. The method of valuation prescribed by rule 1D of Wealth Tax Rules being the only statutorily recognised method of valuation of unquoted shares it would not be wrong to adopt the method for Estate Duty Act purposes."

7.3 Where the stamp duty has to be paid on the sale of shares, the actual selling price will be taken for its calculation.

VALUATION FOR COURT FEES

7.4 For purposes of court fees, if shares have a market value at the date of presentation of the plaint then such market value will be taken into consideration. In case shares have no market value, the value stated by the plaint is accepted for purposes of paying court fees. (Section 7(iii) & (iv) (a) of the Court Fees Act, 1870).

VALUATION FOR PROBATES

7.5 While petitioning for the grant of probate or letters of administration, the probate duty has to be paid on the value of shares calculated at the price of day.

7.6 Although the price of the day is not explained, it seems that it means market price (Section 19-I and Item 11 of Schedule I of Court Fees Act, 1870).

FOR PURPOSES OF BANK ADVANCES

7.7 Bankers value shares because against them they advance loans. They ascertain the value of shares to measure the value of the security that will be provided by them. Generally, banks give advances against quoted shares and therefore it is reasonable to base their value on market quotations. In case, bankers are to advance loans against unquoted shares, their value has to be estimated according to what they would fetch in the market.

VALUATION OF SHARES UNDER COMPANIES ACT, 1956

7.8 Amongst the information required to be furnished to the Central Government in connection with the following matters are

Share Valuation

the break-up value of shares and the value of shares based on yield:-

- Acquisition of shares pursuant to Section 108A (1).
- Proposal to transfer shares pursuant to Section 108B.
- Transfer of shares of foreign companies pursuant to Section 108C.

7.9 The break-up value and the value based on yield have to be worked out in accordance with the methods of calculation given in Annexure I and II of Forms 7D and 7E prescribed under Rule 5B of the Companies (Central Government) General Rules and Forms issued under the Companies Act, 1956. These are reproduced in Appendix 'A'.

VALUATION OF SHARES FOR TRANSFER/ ISSUE OF SHARES BY A NON-RESIDENT

7.10 Transfer/issue of shares by a non-resident is governed by regulations in the Foreign Exchange Management Act, 1999, which also lay down restrictions for transfer/issue of shares by a non-resident and provide a framework for valuation of shares. Valuation guidelines for different types of transactions can be referred from Foreign Exchange Management Act, 1999 and the applicable regulations.

VALUATION OF SHARES FOR FIXATION OF THEIR ISSUE PRICE

7.11 It is often necessary to value equity shares of companies for the purpose of fixation of price at which the same should be issued in the primary market. The valuation exercise is also required to be carried out for pricing the shares to be issued to foreign investors.

SEBI Guidelines for Issue of Securities

7.12 SEBI has issued a set of guidelines to be complied with by all companies listed or proposing to be listed on Stock Exchange for making issue of capital any time after promulgation of the Securities and Exchange Board of India Act, 1992. Subsequently, SEBI has also issued a number of clarifications on these guidelines from time to time.

7.13 The guidelines issued by SEBI provide that companies are free to price their issues subject to adequate disclosure. The onus, therefore, is on investors to evaluate whether the price at which a company issues its shares, is fair or not. SEBI, while vetting the draft prospectus, merely ensures, on the basis of the information furnished to it, that adequate disclosures have been made in the offer document so that the investors can make informed investment decisions. However, the SEBI guidelines also contain stipulation as to minimum promoters' contribution and lock-in period thereof. It is to ensure that the interests of the promoters of the issuing company are fairly tied up with the interests of outside investors.

7.14 The SEBI guidelines require that the issuing company, which decides to price its issue at a premium, gives justification for the issue price in their prospectuses or the letters of offer. However, the guidelines do not provide any guidance for such justification. Appendix 'B' gives some cases of disclosures made by some companies, to give an indication of prevailing practices in this regard.

7.15 It is important to note that the letter of offers and prospectus often refer to terms like net asset value (NAV), earning per share (EPS), profit earnings ratio (PE ratio), etc. The SEBI guidelines also require the net asset value of the issuing company, as per its last audited balance sheet, to be disclosed in the offer document. It is suggested that these terms should be used in the same manner, as discussed in this guide.

SEBI Guidelines in case of Takeover of Listed Companies

7.16 SEBI has laid down guidelines for open offer to the public in case of substantial acquisition of shares or takeover of a listed company. The guidelines, inter-alia, lay down the pricing norms to be followed in case of a takeover.

8

Valuation of Preference Shares

8.1 The two dominant characteristics of a preference share are that it has a preference regarding both the dividend and capital. Besides these, a preference share may have other benefits also; but they are not obligatory and depend on the terms of issue and provisions in the Memorandum and Articles of Association of the company concerned.

8.2 Because of the limit placed on the dividend which may be paid on a preference share and the preferred right for payment of dividend and of capital, the considerations applicable for the valuation of equity shares are not wholly applicable to the valuation of preference shares.

8.3 Consideration should first be given to the rate of capitalisation. As can be readily seen, the risk involved in investment in preference shares is considerably less than that in equity shares. It follows, therefore, that the expected rate of return on preference shares is also lower, with the consequent effect upon the rate of capitalisation. It frequently happens that owing to the attraction of equity investment as a hedge against inflation as also due to possibility of capital appreciation, a company's equity share is generally capitalised at a lower yield on the stock exchange than the same company's preference share. The theoretical considerations mentioned earlier for the valuation of equity shares do not generally apply.

8.4 The rate of capitalisation will depend not only on the percentage of dividend but also on the other benefits attached to the preference shares. Some of these additional benefits which a preference share may carry and their effect on the rate of capitalisation and other aspects of valuation are stated below:

Share Valuation

- (a) Preference shares may be cumulative preference shares. In such cases, the risk involved is still lower, with a corresponding effect on the rate of capitalisation. In cases where there is uncertainty of future dividends, this is an important right and a preference share not carrying this right will be valued at a substantially lower figure.

- (b) A preference share may be a participating preference share. In this case, it partly partakes of the characteristics of equity shares and therefore, the rate of capitalisation in respect of the additional dividend which may be paid will not be the same as for the fixed dividend. If this additional payment is unrestricted, then the rate of capitalisation in respect thereof may be taken considerably near to the rate of capitalisation for equity shares, the difference being due to unequal voting rights. If there are restrictions on the quantum of such additional dividends, then the rate of capitalisation will be somewhere between the rate of capitalisation for the fixed dividend and that for equity shares, depending upon the exact terms of issue. It may also be mentioned here that the possibility of the payment of additional dividend in future will be determined for calculating the maintainable future profits and the payment ratio of the company, and on the terms of payment of such additional dividend. If it is found that the payment of such additional dividend is not expected to be a regular feature, then it would be appropriate to take the present worth of such additional dividend as is expected to be paid in future from time to time.

- (c) Because of changes in the company law, only redeemable preference shares can be issued; if there are non-redeemable ones, they are to be converted into redeemable shares. Thus, this aspect becomes important in two circumstances:
 - (i) When the date of redemption is not very far; and
 - (ii) When the shareholders are also entitled to receive a premium on redemption.

In case the date of redemption is not very far, it would be appropriate to estimate all future receipts in respect of dividends as well as capital and to reduce them to their present worth. In case of premium too the best way is to determine its present worth.

- (d) Preference shares may also carry a right to share in the residual value in the event of winding up. In such cases, a definite value may be placed for this right only when it is known that the winding up is imminent.
- (e) Preference shares may have a right of conversion into equity shares. The additional value to be placed on such preference shares will depend upon the exact terms of the right to convert. The price at which conversion can be effected is also relevant. The price of a preference share will in such a case vary, as the price of an equity share rises above the option price.
- (f) In certain circumstances, preference shares also carry voting rights. In case of private companies which are not subsidiaries of public companies there is no legal provision to regulate such rights; they depend on the Memorandum and Articles of Association of the company concerned. In case of public companies and their private subsidiaries, preference shareholders have voting rights in respect of resolutions that directly affect their rights and also in respect of resolution when dividends on such shares remains unpaid for certain periods as specified in law. Preference shares currently carrying unrestricted voting rights become very important in situations where the control of a company is sought to be transferred. Any additional value in respect of this right should, however, be considered after taking into consideration the circumstances of each individual company.

8.5 Problems can arise in the valuation of preference shares with substantial arrears of cumulative dividends. If a company has reached a profit earning stage, the value of the arrears of dividend should be added to the value of the Share.

Share Valuation

8.6 Apart from the special considerations mentioned above, the value of a preference share is equal to the value arrived at by dividing the actual rate of dividend by the normal expected rate of capitalisation.

9

Report

9.1 A chartered accountant may be called upon to give his report on the valuation of shares in different situations, such as, for take-over of a company/acquisition of a significant block of shares, merger, taxation purposes, submission to authorities like the Reserve Bank of India for FEMA purposes. As such, there is no particular form for preparing a Report, but some general principles could be borne in mind.

GENERAL PRINCIPLES

9.2 While preparing a Report, it is important that one states its purpose explicitly and ensures that the facts are presented with clarity so that the reader of the Report appreciates it in that context.

9.3 The factors that have been considered for arriving at the ultimate valuation should be clearly spelt out.

9.4 While it is difficult to specify the exact form of the Report, the following illustrative outline may be useful.

(a) Introduction/purpose of valuation

This may contain background information about the report and its purpose, say, merger, share buy back, etc.

(b) Valuation date

The valuer may state the valuation date clearly at the outset. As the valuation is time-specific, this information is critical for the reader of the report.

(c) History

This section may deal with the history of a company (or companies, in case of merger). The matter may be divided into sub-sections that deal with the date of incorporation, whether listed or not, authorised and paid-up capital, turnover, profits, dividend and asset base.

(d) Business of the company

This part would explain the business of a company, i.e., whether trading or manufacturing, the items dealt in or manufactured, the location of the factory, factors peculiar to the business, and such other matters.

(e) Sources of information

This section may state the sources of information obtained for the purpose of valuation, such as Articles of Association, audited accounts, profit projections, realisable value of assets, other secondary sources of information, period for which or date on which data is obtained, and other relevant sources.

(f) Methodology

This part may contain the methodology adopted for valuation. It should also include the rationale for appropriateness or otherwise of a particular approach(s) used.

(g) Key valuation considerations

This part may deal with the valuation considerations critical to the valuation process. Some of the factors considered in valuing the shares which may be included in the report are:

- (i) Discussion on the financial projections of a company, highlighting main assumptions and management representations.

- (ii) Discussion on discount rate, growth rate used for computing terminal value considered in the valuation, including the methodology for arriving at the discount rate, sources of information, etc.
- (iii) Any adjustment on account of accumulated losses/ unabsorbed depreciation.
- (iv) Any adjustment for valuing a controlling or minority stake, discount for illiquidity, etc.
- (v) Brief analysis of the peer set companies used in relative valuation.
- (vi) Adjustments to the multiples based on the peer set company, including rationale for the same.
- (vii) Details of the surplus assets and treatment thereof in the valuation.
- (viii) Any other special factors, such as government subsidy, tax breaks, etc.

(h) Fair Value

This paragraph should deal with the valuation of shares on the basis of discussion in the preceding part of the Report (and in case of amalgamation, also the exchange ratio). This paragraph should also offer justification for the approaches actually adopted. It could also deal with the justification of adjustments considered necessary for arriving at the value, for example, of the discounting due to restriction on transfer of shares; reduction made in the net maintainable profit due to changed circumstances; or weightage given to certain recent years in arriving at the fair value, etc.

(i) Computation

Usually, the report should also contain annexures giving

information regarding the working of the approaches employed for valuation.

(j) Limiting conditions

This paragraph should contain the appropriate caveats which limit the scope of valuation. Few indicative caveats are;

- (i) The valuer should state any scope limitations and also the non-availability of any pertinent information and its possible effect on valuation.
- (ii) It is important to draw reader's attention to the fact that the valuation is specific to the time and purpose of valuation. It should also be mentioned that the valuation is not an exact science and the conclusions arrived at in many cases will be subjective and dependent on the exercise of individual judgment.
- (iii) It is also important to mention the extent of reliance placed by the valuer on the information provided by the management and information available in the public domain.
- (iv) Under appropriate circumstances, a valuer should also limit his liability by restricting distribution of report to the management/company.
- (v) A valuer should highlight the fact that valuation does not include the auditing of financial data provided by the management and, therefore, does not take any responsibility for its accuracy and completeness. Further, valuation should not be considered as an opinion on the achievability of any financial projections mentioned in the report.

APPENDIX 'A'

Annexures to Forms 7D and 7E¹ prescribed under Rule 5B of the Companies (Central Government) General Rules and Forms

ANNEXURE I

Break-up value of shares as per latest balance-sheet

Rs. in Thousands

Paid-up capital	
Add : Reserves and Surplus	
Less : (a) Miscellaneous expenditure to the extent not written off :	
(b) Debit balance of profit and loss account :	
(c) Arrears of depreciation not provided for :	
(d) Contingent liabilities such as :	
(i) Gratuity, taxes, etc., with details :	
(ii) Dividends proposed to be paid out of reserves:	
(iii) Income-tax liability not provided for :	
Total net worth (A)	
Preference capital (B)	
Net worth of equity (A-B)	
Break-up value per equity share [(A-B)/ Total No. of equity shares]	

¹ In the relevant Rule, the annexures to Form 7D and 7E are given separately. However, since the contents of the annexures are the same, hence they are reproduced once only.

Share Valuation

ANNEXURE II
Value of shares based on yield

(Figures to be given from Balance-sheets for last three years)

	Year ending	Year ending	Year ending
Profits: (after depreciation but before tax and after providing for development rebate reserve).			
Add : Development rebate reserve : Loss on sale of assets and any item of expenditure of non-recurring nature.			
A:	A1	A2	A3
Less :			
(i) Dividends on investments (other than trade investments).			
(ii) Interest on Government securities.			
(iii) Profit on sale of fixed assets/ investments and other non-business profits.			
(iv) Excess provision written back.	_____	_____	_____
B:	B1	B2	B3
Pre-tax profit (C=A-B)	C1	C2	C3
* Average yearly pre-tax profit (C1+C2+C3) 1/3 rd C			
Less :			
Estimated tax liability @ 60% (T)			
Average net profits after taxation (D=C-T)			
Capitalising 'D' at 15% return : (E=D*100)/15)			
Add : Market value of investments on which dividend has been deducted in the above calculation : (F)			

* Note: In case profit fluctuates considerably during the last three years, average of five years working should be taken

Appendix 'A'

Net worth	(G=E+F)			
Less :				
Preference Capital	(H)			
Net worth of equity :	(G-H)			
Net worth of one equity share	(G-H)/No. of equity shares			

APPENDIX 'B'

EXAMPLES OF JUSTIFICATION OF ISSUE PRICES IN PROSPECTUSES OF CERTAIN COMPANIES¹

The following are the extracts from prospectuses of certain companies which have recently made public issues of shares. These extracts contain the justification given by the respective companies for the premium charged by them. These extracts are given to illustrate the prevailing practices and to generate discussion whether the premium charged was justifiable in the facts and circumstances of the various cases.

Initial Public Offer – Edelweiss Ltd

BASIS FOR ISSUE PRICE

The Issue Price will be determined by the company in consultation with the Book Running Lead Managers (BRLM) on the basis of assessment of market demand for the Equity Shares offered by the Book Building Process and on the basis of the following qualitative and quantitative factors. The face value of the Equity Shares is Rs. 5 and the Issue Price is 145 times the face value at the lower end of the Price Band and 165 times the face value at the higher end of the Price Band.

Quantitative factors

Information presented in this section is derived from the Company's

¹ The prices in the issues illustrated were to be decided by way of book building and accordingly, were not mentioned in the prospectus. Therefore, no price is mentioned in the appendix.

restated, consolidated financial statements prepared in accordance with Indian GAAP. The quantitative factors, which form the basis for computing the price, are as follows.

Weighted average earnings per share (EPS)

<i>Financial period</i>	<i>EPS (Rs.)</i>	<i>Weight</i>
Fiscal year 2005	6.34	1
Fiscal year 2006	9.94	2
Fiscal year 2007	20.59	3
Weighted average	14.67	

Notes:

The earnings per share has been computed on the basis of adjusted profits and losses for the respective years/periods after considering the impact of accounting policy changes, prior period adjustments/re-groupings pertaining to earlier years, as per the auditor's report.

- The face value of each equity share is Rs. 5.

Price/earning (P/E) ratio in relation to the Issue Price of Rs. [] per share of Rs. 5 each

- Based on EPS for the fiscal year ended March 31, 2007, of Rs. 20.59:
 - o P/E ratio in relation to the Floor Price : 35.21 times
 - o P/E ratio in relation to the Cap Price : 40.07 times
- Based on the Weighted average EPS of Rs. 14.67:
 - o P/E ratio in relation to the Floor Price : 49.42 times
 - o P/E ratio in relation to the Cap Price : 56.24 times

Share Valuation

- Industry P/E (For Finance and Investments)*:
 - o Highest : 183.9
 - o Lowest : 2.2
 - o Average : 30.9

**Source: Capital Market, Volume XXII/16 October 8-21, 2007 edition*

Weighted average return on net worth (RoNW)*

Financial period	RoNW (%)	Weight
Fiscal year 2005	55.61	1
Fiscal year 2006	38.2	2
Fiscal year 2007	28.71	3
Weighted average	36.35	

**Net worth has been computed by aggregating share capital, reserves and surplus and adjusting for revaluation reserves, intangible assets and deferred tax assets as per the audited restated financial statements.*

Minimum Return on Total Net Worth required maintaining pre-issue EPS

The minimum Return on total Net Worth after issue required to maintain pre-issue EPS at Rs. [] Is []

Net Asset Value (NAV) per Equity Share

NAV per equity share represents shareholders' equity less miscellaneous expenses as divided by restated weighted average number of equity shares. The NAV per Equity Share as at March 31, 2007 is Rs. 93.54.

NAV per Equity Share after the Issue

The NAV per Equity Share as of March 31, 2007 after the Issue is Rs. []

The Issue Price per Equity Share is Rs. []

The Issue Price per Equity Share will be determined on conclusion of the Book Building Process.

Comparison of accounting ratios with other listed companies

	<i>EPS (Rs.) (TTM)</i>	<i>P/E</i>	<i>Return on Net Worth (%)</i>	<i>NAV (Rs.)</i>
Edelweiss Capital Limited*	20.59	[?]	28.7	93.54
Peer group**				
IL&FS Investsmart	4.2	43.6	5.7	99
India Infoline	13.2	63.5	23	63.6
India Bulls Financial	8.4	71	14.3	113.6

* *The company's EPS, Return on Net Worth and Net Asset Value per Share have been calculated from their audited restated financial statements for the fiscal year 2007 ending March 31, 2007*

** *All the figures except for the P/E ratio are as of September 28, 2007. All figures for peer group are extracted from Capital Market October 8-21, 2007 edition.*

The BRLMs believes that the Issue Price is justified in view of the above parameters.

Initial Public Offer - Fortis

BASIS FOR ISSUE PRICE

Quantitative Factors

The information presented in this section is derived from the Company's unconsolidated audited restated financial statements for the years ended March 31, 2004, March 31, 2005 and March 31, 2006, and the nine month period ended December 31, 2006.

The Company's consolidated financials have historically included its own operations, primarily consisting of two owned hospitals in

Share Valuation

Mohali and Amritsar, and those of IHL consolidated as a board controlled subsidiary since December 20, 2002. The Company acquired a 90% interest in EHIRCL, which owns and operates the Escorts hospital chain (including three majority-owned hospitals) in September, 2005 and a 100% stake in OBTPPL in March, 2006. In addition, the Company also acquired a majority stake in IHL, resulting in IHL becoming a majority owned subsidiary of the Company in March, 2006 and a 100% interest in HHPL in February, 2007. The information presented in this section are derived from the Company's unconsolidated audited restated financial statements for the years ended March 31, 2004, March 31, 2005 and March 31, 2006 and the nine month period ended December 31, 2006.

1. Weighted average adjusted earnings per share (EPS)

Financial Period	EPS Unconsolidated (1) (Rs.)	Weight
Year ended March 31, 2004	-0.78	1
Year ended March 31, 2005	-1.02	2
Year ended March 31, 2006	-1.65	3
Weighted Average	-1.29	

EPS Unconsolidated = Net Profits/(Losses) as restated / Number of equity shares outstanding at the end of each year As on December 31, 2006, based on earnings in the nine month period ended December 31, 2006, the EPS of the Company, on an unconsolidated basis, was Rs. (2.06).

2. Price Earnings Ratio (P/E Ratio)

- P/E based on the Issue Price (Rs. 108.00 per Equity Share) and on the EPS for year ended March 31, 2006 (Rs. (1.65) per Equity Share): Not Meaningful
- Peer group P/E⁽¹⁾
 - (i) Apollo Hospitals: 28.2 times

(1) P/E ratios for peer group from "Capital Market" Volume XXI/ 24 dated January 29, 2007 to February 11, 2007.

3. Weighted average return on net worth

<i>Financial Period</i>	<i>Return on Net Worth - Unconsolidated ⁽¹⁾ (%)</i>	<i>Weight</i>
Year ended March 31, 2004	-25%	1
Year ended March 31, 2005	-36%	2
Year ended March 31, 2006	-34%	3
Weighted Average	-33%	

(1) *Return on Net Worth - Unconsolidated = Net Profits/(losses) after Tax, as restated / Net Worth, as restated, at the end of the year (excluding Preference Share Capital, Securities Premium Account and Share Application Money ending allotment)*

4. Minimum Return on Increased Net Worth Required to Maintain Pre-Issue EPS.

- The minimum return on increased net worth required to maintain pre-Issue EPS on an unconsolidated basis: Not Meaningful.

5. Net Asset Value (NAV)

- NAV per Equity Share after the Issue, based on the Issue Price (Rs. 108.00 per Equity Share) is Rs. 30.73.
- Issue Price per Equity Share is Rs. 108.00.
- NAV per Equity Share for the year ended March 31, 2004, 2005 and 2006 is as follows:

Share Valuation

Financial Period	Net Asset Value per Equity Share (Rs.) - Unconsolidated ⁽¹⁾	Weight
As at March 31, 2004	3.12	1
As at March 31, 2005	2.83	2
As at March 31, 2006	4.78	3
Weighted Average	3.85	

- (1) *Net Asset Value per Equity Share - Unconsolidated = Net Worth, as restated, at the end of the year (excluding Preference Share Capital, Securities Premium Account and Share Application Money pending allotment) / Number of equity shares outstanding at the end of year*

As on December 31, 2006, the NAV per Equity Share of the Company, on an unconsolidated basis, was Rs. 2.71.

The Issue Price of Rs. 108 per Equity Share has been determined on the basis of the demand from investors through the Book Building Process and is justified based on the above accounting ratios.

6. Comparison with Industry Peers

Name	EPS (Rs.)	P/E (times)	Return on Net Worth (%)	Net Asset Value per Equity Share (Rs.)
Fortis Healthcare Limited ⁽¹⁾	-1.65	N.M. ⁽³⁾	-34%	4.78
Peer Group ⁽²⁾				
Apollo Hospitals	12.3	28.2	13.60%	126.3

- (1) Earnings Per Share, Return on Net Worth and Net Asset Value of the Company are based on the last audited unconsolidated restated financial statements for the year ended March 31, 2006.
- (2) Source: "Capital Market" Volume XXI/ 24 dated January 29, 2007 to February 11, 2007.
- (3) Not Meaningful

The Issue Price of 108.00 per Equity Share has been determined by the Company in consultation with the **Book Running Lead Managers (BRLMs)** on the basis of the demand from investors for the Equity Shares through the Book Building Process.

Initial Public Offer - Reliance Power Limited

BASIS FOR ISSUE PRICE

The Price Band for the Issue shall be decided prior to the filing of the Red Herring Prospectus with the RoC. The Issue Price will be determined by the Company, in consultation with the **Book Running Lead Managers (BRLMs)**, on the basis of the assessment of market demand for the offered Equity Shares by the Book Building Process. The face value of the Equity Shares is Rs. 10 each and the Floor Price is 40.5 times the face value and the Cap Price is 45 times the face value.

Quantitative Factors

The information presented below relating to the Company is based on the restated standalone financial statements of the Company for Fiscal 2006, 2007 and for the period ended on September 30, 2007 and restated consolidated financial statements of the Company for fiscal 2007 and for the period ended on September 30, 2007 prepared in accordance with Indian GAAP. As at September 30, 2007, the face value of the equity shares of the Company was Rs. 2 per share (fully paid-up). However, the Board of Directors at its meeting held on November 29, 2007, have approved the consolidation of five equity shares of Rs. 2 each into one equity share of Rs. 10 each fully paid-up and at the Extraordinary General meeting held on November 29, 2007, the shareholders have also approved the consolidation of the equity shares. In view of the above, the financial information along with the annexures have been adjusted on a retrospective basis to facilitate comparison, wherever applicable, to reflect the face value

Share Valuation

of Rs. 10 per share (fully paid-up) instead of Rs. 2 per share (fully paid-up) as at September 30, 2007.

The information relating to the Company's share capital in this chapter is based on a face value of Rs. 10 per equity share.

1. Basic and Diluted Earning Per Share (EPS)

Basic and Diluted earnings per equity share ("EPS") of face value of Rs. 10 on a Standalone basis

Year / Period	EPS (Rs.)	Weight
Fiscal 2006	-25.57	1
Fiscal 2007	0.08	2
Period ended September 30, 2007*	0.04	3
Weighted Average	-4.22	

* Not annualised

Basic and Diluted earnings per equity share ("EPS") of face value of Rs. 10 on a consolidated basis:

Year / Period	EPS (Rs.)	Weight
Fiscal 2007	0.08	1
Period ended September 30, 2007*	0.04	2
Weighted Average	0.05	

* Not annualised

The basic earnings per share has been computed by dividing net profit attributable to equity shareholders, as restated, by the weighted average number of equity shares outstanding during the year, in accordance with Accounting Standard 20 on 'Earnings per share' issued by the Institute of Chartered Accountants of India.

The diluted earnings per share has been computed by dividing net profit attributable to equity shareholders, as restated, by the sum

of the weighted average number of equity shares outstanding during the year considered for deriving basic earnings per share and the weighted average number of equity shares, which could have been issued on the conversion of dilutive potential equity shares such as dilutive options and dilutive convertible preference share, in accordance with Accounting Standard 20 on 'Earnings per share' issued by the Institute of Chartered Accountants of India.

2. (a) Price/Earnings (P/E) ratio in relation to Price Band

(i) On a Standalone basis:

Particulars	P/E at the lower end of Price Band (no. of times)	P/E at the higher end of Price Band (no. of times)
Based on the EPS of Rs. 0.08 for FY 2007	5,062.5	5,625.0
Based on the EPS of Rs. 0.04 for the period ended September 30, 2007	10,125.0	11,250.0
Based on the weighted average EPS of Rs.(4.22)	Not Applicable	Not Applicable

(ii) On a Consolidated basis:

Particulars	P/E at the lower end of Price Band (no. of times)	P/E at the higher end of Price Band (no. of times)
Based on the EPS of Rs. 0.08 for FY 2007	5,062.5	5,625.0
Based on the EPS of Rs. 0.04 for the period ended September 30, 2007	10,125.0	11,250.0
Based on the weighted average EPS of Rs.0.05	8,100.0	9,000.0

Share Valuation

(b) P/E ratio for the industry is as follows:

Industry P/E	
(a) Highest	180.4
(b) Lowest	6.2
(c) Industry Composite	18.0

(Source: Capital Market - Aug 27-Sep 09, 2007)

3. Return on Net Worth

Return on Net Worth ("RoNW") as per restated standalone financial statements

Year / Period	RoNW (%)	Weight
Fiscal 2006	(133.06)	1
Fiscal 2007	0.63	2
Period ended September 30, 2007*	0.06	3
Weighted Average	(21.94)	

Return on Net Worth ("RoNW") as per restated consolidated financial statements:

Year / Period	RoNW (%)	Weight
Fiscal 2007	0.63	1
Period ended September 30, 2007*	0.06	2
Weighted Average	0.25	3

* Not annualised

The return on net worth computed by dividing net profit after tax, as restated, by the net worth excluding share application money at the end of the year.

4. Minimum Return on Increased Net Worth Required to Maintain Pre-Issue EPS:

Minimum Return on post-Issue Net Worth required to maintain pre-Issue EPS is [•]%.

5. Net Asset Value per Equity Share

Particulars	Amount (Rs.)
Net Asset Value per Equity Share (standalone) as of September 30, 2007	10.03
Net Asset Value per Equity Share (consolidated) as of September 30, 2007	10.03
Net Asset Value per Equity Share after the Issue	[•]

The net asset value per equity share has been computed by dividing net worth excluding share application money and preference share capital at the end of the period by number of equity shares outstanding at the end of the period.

6. Peer Group Comparisons (Industry Peers)

Name of the Company	Face Value (Rs.)	EPS (Rs.)	P/E Ratio (times) based on market price on Aug 20, 2007	Return on Net Worth (%)	NAV per share (Rs.)
Reliance Power Limited*	10	0.04	-**	0.1	10.03
REL@	10	34.5	19.4	10.2	378.1
NTPC Limited@	10	7.9	17.6	14.5	59.7
Tata Power Limited@	10	30.4	19.7	12.0	290.8
Gujarat Industries Power Company Limited@	10	12.1	6.2	15.4	71.3

(Source: Capital Market Aug 27-Sep 09, 2007)

* For the period ended September 30, 2007 on the basis of consolidated financial statements

@ For the year ended March 31, 2007

** Reliance Power is developing projects, which are yet to commence operations. Hence, the operations of the Company are not comparable with other companies

Share Valuation

The Issue Price of Rs. [] per Equity Share has been determined by the company, in consultation with the BRLMs and the CBRLMs, on the basis of assessment of market demand for the offered securities by way of Book building process and is justified as above.

Public Offer - Bharat Earth Movers Ltd

BASIS OF ISSUE PRICE

The Issue Price will be determined by the Company in consultation with the Book Running Lead Managers (BRLMs), on the basis of assessment of the market demand for the Equity Shares, by way of the Book Building Process. The price band will be decided by us in consultation with the BRLM and announced and advertised at least one day prior to the Bid/Issue opening date in Business Standard, an English newspaper with wide circulation, Prathakal, a Hindi newspaper with wide circulation and Udayawani, a Kannada language newspaper. In the meantime, with regard to the price band, bidders may be guided by the price of the company's Equity shares listed on NSE and BSE.

Quantitative Factors:

Financial information used in this section has been derived from the restated audited unconsolidated financial statements of the Company for the respective financial year/period.

1. Basic and Diluted Earning Per Share (EPS) of face value of Rs.10

<i>Period</i>	<i>EPS (Rs.)</i>	<i>Weights</i>
Year ended March 31, 2004	6.65	1
Year ended March 31, 2005	47.70	2
Year ended March 31, 2006	50.87	3
9 months ended December 31, 2006 (annualised)	40.42	3
Weighted Average	41.77	

2. P/E Ratio* in relation to Issue Price of Rs. []

- a. Based on the annualised EPS of Rs. 40.42 for the period ended December 31, 2006, P/E is []
- b. Based on the EPS of Rs. 50.87 for the year ended March 31, 2006, P/E is []
- c. Based on weighted average EPS of Rs. 41.77, P/E is []
- d. Industry P/E

	Engineering - Turnkey Services	Engineering
Highest	82.6	65.4
Lowest	9.9	5.0
Average	39.1	21.8

[Source: Capital Market Vol.XXII/05 dated May 07 - May 20, 2007; Segment: Engineering, Engineering - Turnkey Services]

*** would be calculated after discovery of the Issue Price through the Book-Building Process**

3. Return on Net-worth

Period	Adjusted PAT (Rs. in Lakhs)	Adjusted Networth (Rs. in Lakhs)	Return on Net Worth (%)	Weights
Year ended March 31, 2004	2,442.01	56887.55	4.29	1
Year ended March 31, 2005	17,528.33	69438.62	25.24	2
Year ended March 31, 2006	18,692.56	85390.06	21.89	3
Weighted Average			20.07	

Share Valuation

4. Minimum Return on total net-worth required to maintain pre-issue EPS: []

5. Net Asset Value per Equity Share as at December 31, 2006 is: Rs. 263.66

6. Net Asset Value per Equity Share after the Issue: []

7. Comparison of Accounting Ratios

	Year Ended on	Sales (Rs. Lakh)	EPS (Rs.)	P/E*(x)	Return on Net Worth (%)	Net Asset Value (Rs.)
Bharat Earth Movers Limited	March 31, 2006	206,016	50.87	[]	21.9%	232.39
Industry:						
Larsen & Toubro Ltd	March 31, 2006	1,641,831	29.0	68.75	21.7%	166.10
Action Construction Equipment Ltd	March 31, 2006	16,568	6.7	40.69	52.1%	55.20
TIL Ltd	March 31, 2006	52,441	9.1	24.21	15.2%	66.80

[Source: Capital Market Vol.XXII/05 dated May 07 - May 20, 2007; Segment: Engineering, Engineering - Turnkey Services, data for the Company based on restated consolidated financial statements]

*P/E is calculated based on closing price as on May 30, 2007

8. The Issue Price is [] times of the face value at the lower end of the Price Band and [] times of the face value at the higher end of the Price Band. The Issue Price of Rs. [] has been determined by the Company in consultation with the BRLM on the basis of assessment of market demand for the Equity Shares by way of the Book Building Process and is justified on the basis of the above factors.

The BRLM believes that the Issue Price of Rs. [] is justified in view of the above qualitative and quantitative parameters.

Public Offer - Dagger Forst

BASIS FOR ISSUE PRICE

Quantitative Factors

1. Adjusted earning per share (EPS) weighted

<i>Year</i>	<i>EPS</i>	<i>Weightage</i>
12 Months Ended 30th June 2005	0.33	1
9 Months Ended 31st March 2006	2.27	2
12 Months Ended 31st March 2007	2.46	3
Weighted average	2.04	

2. Price Earning ratio (P/E ratio) in relation to the Issue Price of Rs 33 per share in case of Rights Issue and Rs. 45 in case of Public Issue

Particulars

P/E

A Rights Issue Price of Rs. 33 per share

(a) Based on EPS of Year Ended 31st March 2007 i.e. Rs. 2.46	13.41
(b) Based on weighted average (EPS) of Rs. 2.04	16.16

B Public Issue Price of Rs. 45 per share

(a) Based on EPS of Year Ended 31st March 2007 i.e. Rs. 2.46	18.29
(b) Based on weighted average (EPS) of Rs. 2.04	22.06

Share Valuation

C PE Multiple Engineering Industry

Highest 174.40

Lowest 6.10

Average 27.60

[Source: Capital Market Volume XXII/10, dated July 16 - 29, 2007;
Category: Engineering]

The Company is in Cutting Tool business. The accounting ratios of companies in the Industry Group (Engineering) are as follows:

Company	EPS (Rs.)	P/E Ratio	RONW (%)	NAV (Rs.)
Dagger Forst 12 Months Ended 31st March 2007	2.46	27.30	0.05	51.33
Kennametal India - 30th June 2006	14.60	31.90	25.80	70.30
Kulkarni Power - 31st March 2007	14.70	7.60	22.50	62.20
Batliboi Ltd. - 31st March 2007	9.80	15.30	31.30	29.90

[Source: Capital Market Volume XXII/10, dated July 16 - 29, 2007;
Category: Engineering]

Please note the company is in the business of cutting tools. The companies mentioned above are not the exact comparables for the Company. None of the companies who are in the same business as that of DFTL are listed.

3. Return on Net worth

Year	RONW (%)	Weightage
12 Months Ended 30th June 2005	0.67	1
9 Months Ended 31st March 2006	4.52	2
12 Months Ended 31st March 2007	4.80	3
Weighted Average	4.01	

Minimum return on total Net worth after issue needed to maintain pre-issue EPS of Rs 2.46 is 5.57%

4. Net Asset Value (NAV) per share (Rs.)

(a) As on March 31st 2006	50.41
(b) As on March 31st 2007	51.33
(c) After Public Issue*	44.12
(d) Rights Issue Price	33
(e) Public Issue Price	45

* Calculation of NAV after Public Issue also includes the Rights Issue Component.

The face value of shares is Rs.10/- and the Issue price of rights component is 3.3 times of the face value and the issue price of public issue component is 4.5 times of the face value.

The Lead Manager believes that the issue Price of Rs. 33 for the rights component and Rs. 45 of the public issue component is justified in view of the above qualitative and quantitative parameters.

Public Offer - ICICI Bank

BASIS FOR THE ISSUE PRICE

Quantitative Factors

Information presented in this section is derived from the financial statements prepared in accordance with Indian GAAP.

Share Valuation

1. Adjusted earning per share (EPS) (basic)*

Year	EPS (Rs.)		Weight
	Uncon- solidated	Consoli- dated	
Year ended March 31, 2005	27.55	25.45	1
Year ended March 31, 2006	32.49	30.96	2
Year ended March 31, 2007 ¹	34.84	30.92	3
Weighted Average	32.84	30.02	

*Earning per share is computed based on weighted average number of shares.

1. EPS adjusted for the allotment of about 3.5 million Equity Shares to the shareholders of Sangli Bank on May 28, 2007 was Rs. 34.70 and Rs. 30.80 on an unconsolidated and consolidated basis respectively.

2. Price/Earning (P/E) ratio in relation to Issue Price of Rs. []

(a) Based on year ended March 31, 2007 EPS is Rs. 34.84.

(b) P/E based on year ended March 31, 2007 is [].

(c) Industry P/E⁽¹⁾

- | | |
|---------------------------|----------------------|
| (i) Highest | 122.6 ⁽²⁾ |
| (ii) Lowest | 4.8 ⁽²⁾ |
| (iii) Average (composite) | 25.9 ⁽³⁾ |

(1) Source: "Capital Market" Volume XXII/05 dated May 07-20, 2007, for the Category titled 'Banking – Private Sector'. The figures are in respect for trailing twelve months (TTM) EPS as reported.

(2) PE based on market price as on April 27, 2007, and EPS results are for trailing twelve months as on December, 2006.

(3) Data as per reported data for trailing twelve months ending either on March 31, 2007 or on December 31, 2006 as per reported results till date.

3. Average Return on Equity (RoE)

<i>Year</i>	<i>EPS (Rs.)</i>		<i>Weight</i>
	<i>Uncon- solidated</i>	<i>Consoli- dated</i>	
Year ended March 31, 2005	17.9	16.8	1
Year ended March 31, 2006	16.4	14.9	2
Year ended March 31, 2007	13.4	11.9	3
Weighted Average	15.1	13.7	

4. Minimum Return on Increased Net Worth required to maintain Pre-issue EPS

The minimum return on increased net worth required to maintain pre-issue EPS is [].

5. On a consolidated basis Net Asset Value per Equity Share at March 31, 2007 is Rs. 256.62 and at March 31, 2006 is Rs. 242.75.

6. Consolidated Net Asset Value per Equity Share

	NAV
As at March 31, 2007	269.81
After the Domestic Issue	[]
After the ADS Issue	[]
Domestic Issue Price	[]
ADS Issue Price	[]

Share Valuation

7. Comparison of Accounting Ratios

Particulars	Price Per Share⁽¹⁾	NAV (Rs.)⁽²⁾	EPS (Rs.)⁽³⁾	P/E (times)
ICICI Bank	903.60	270.4	31.9	28.3
State Bank of India	1,356.75	589.6	86.3	15.7
Punjab National Bank	499.80	321.6	48.8	10.2
Canara Bank	236.85	197.8	33.5	7.1
Union Bank	120.35	93.7	16.2	7.4
Bank of Baroda	264.80	229.9	28.0	9.5
HDFC Bank	1,091.10	201.4	34.6	31.5
Bank of India	198.80	117.9	22.3	8.9
Peer Group (Simple) Average				14.8

- (1) Price per share has been taken as the closing price on June 8, 2007, which is one day prior to filing of Red Herring Prospectus.
- (2) NAV has been calculated as per data for latest fiscal year i.e. year ended March 31, 2007.
- (3) Trailing twelve months (TTM) EPS for period ended March 31, 2007.

[Source: The EPS and Book Value / Net Asset Value have been calculated from the audited financial statements. Source for the information is "Capital Market" Volume XXII/07 dated June 04-17, 2007.]