PART A : ARTICLE

ANALYSIS AND VALUATION OF PRIVATELY HELD COMPANIES

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Privately owned firms are unlisted firms that are closely held, since usually only a few shareholders control the operations of the firms. Most privately held firms are family- owned business, accounting for a preponderantly large proportion of the businesses in India and large proportion of the businesses in India and elsewhere.

Challenges in Valuing Privately Held Companies

Most of the acquisitions involve privately owned firms. The absence of public market for the securities of these firms makes valuing these firms quite challenging for the following reasons:

Lack of Externally Generated Information Press coverage of private firms is usually quite limited. Since there is no public market for their securities, outside analysts have little interest in covering private firms. As a result, there are few forecasts of their performance besides those provided by their management.

Inadequate Internal Controls and Reporting Systems The internal controls and reporting systems of private firms are often not very comprehensive and rigorous, as they are

not subject to SEBI regulations. There may be inadequate control over how money is spent, providing greater scope for fraud. The documentation of intangible assets such as software, chemical formulas and recipes, and customer lists may be very patchy, posing difficulties in valuation.

Firm-specific Problems Private firms may have inadequate managerial bandwidth to develop new products, diversify, or expand into new markets. Due to inadequate diversification and high operating leverage, the profit of the firm may be highly sensitive to the demand for the main product. Finally, the firm may have little brand recognition, notwithstanding an excellent product, and limited access to distribution channels.

Manipulation of Reported Income Manipulation of revenues and expenses seems to be more prevalent in private firms. Depending on the objectives of the owners, revenues may be over- or under-stated. Revenues may be over-stated by shipping goods to resellers without making adjustments for probable returns; revenues may be under-stated by resorting to unofficial or unrecorded sales. Likewise, expenses may manipulated to suit the convenience of the owners. A common trick for inflating expenses is to pay owner- managers generous compensation or treat their personal expenses as business expenses.

Procedure for Valuing Privately Held Companies

Given the challenges presented by privately held businesses, a four-step procedure may
be followed in valuing privately held companies.
Step 1: Adjustment of financial statements
Step 2: Determination of the appropriate valuation
methodology Step 3: Estimation of the proper
discount rate
Step 4: Adjustment for control premium, liquidity discount, and minority discount.

Step 1: Adjustment of Financial Statements

The purpose of adjusting the statement of profit and loss is to provide a more accurate estimate of the current year's profit or income, defined variously as net profit, profit before tax, earnings before interest and taxes (EBIT), or earnings before interest, taxes, depreciation, and amortisation (EBITDA). Of the various measures of profit, EBITDA is used more commonly for valuing privately held firms, as it is not distorted by differences in depreciation (and amortisation) methods and financial leverage among firms. Since small, privately held businesses are valued on the basis of their current profit and projected profit (which is obtained by applying a projected growth rate to the current profit), the accuracy of the base-year data is very important.

The analysts may search the Internet for references to the target firm. Based on the financial data of similar forms, adjustments of the following kind may be made: salaries and benefits may be lowered; travel and

entertainment expenses may be lowered; advertising and training expense may be increased; LIFO costs may be converted to FIFO costs; and so on.

Step 2: Determination of the Appropriate Valuation Methodology

The approaches used for valuing private firms are similar to those discussed at length in this book. They are:

- Discounted cash flow (DCF) approach
- Relative valuation approach
- Book value approach

Step 3: Estimation of the Proper Discount Rate

In enterprise DCF valuation, the free cash flow to firm (FCFF) is discounted at the weighted average cost of capital (WACC). WACC is defined as:

Proportion of equity × Cost of equity + Proportion of debt × Cost of debt

In this formula, the most important as well as the most difficult-to-estimate element is the cost of equity. The most commonly used model for measuring the cost of equity is the capital asset pricing model (CAPM), for which an estimate of equity beta is required. In the absence of price data for a unlisted company, its equity beta cannot be obtained directly. So the procedure that is commonly employed to estimate the equity beta for an unlisted company involves calculating the asset betas for listed companies engaged in similar business and adjusting the same for the capital structure and tax rate applicable to the unlisted company. This procedure has been described in some detail in Chapter 3. Apart from the approximation and estimation errors that characterise this procedure, there is one more problem. The CAPM assumes that the investor is sufficiently well diversified and hence concerned only with systematic risk. Unlike investors in publicly traded firms, owners of private firms may not be not well diversified. So they would be concerned with total risk, and not just systematic risk. So the analysts has to estimate the total beta. This can be done, but it would add another layer of estimation error.

Given the cumbersomeness and error-proneness of the above procedure, practitioners prefer to use the *buildup* method, which represents the sum of the risks associated with particular class of assets. This builds up the cost of equity as follows:

$$r_e = R_f + \text{ERP} + \text{FSP} + \text{IND} + \text{CSR}$$

where r_e is the cost of equity, R_f is the risk-free return, ERP is the equity risk premium (market return on stocks less the risk-free rate), FSP is the firm-size premium, IND is the industry risk premium, and CSR is the company-specific risk premium.

The buildup method assumes that the firm's market beta is equal to 1 and adds to the firm's cost of equity premia for firm size, industry risk, and company-specific risk. Firm size premium assumes that, on average, larger firms are less likely to default than smaller firms. Industry risk premium assumes that cyclical firms are riskier than non- cyclical firms. Company-specific risks are more for small privately owned firms because of a narrow product focus, lack of professional management, lack of easy access to capital, and excessive dependence on a single customer or supplier.

Although commonly used in practice, the buildup method has its own drawbacks. It assumes that size, industry, and company-specific risk premia are additive. Further, there can be a great deal of subjectively in determining the company-specific risk premium.

Step 4: Applying Control Premiums, Liquidity, and Minority Discounts

The value of a publicly listed company whose shares are traded in liquid markets and where no single shareholder (i.e., block shareholder) can control the activities of the firm would simply be the present value of its future stream of free cash flows, given the way it is currently managed.

The maximum purchase price, if such a publicly traded company is a target company in an acquisition, would be equal to its market or standalone value plus the value of anticipated net synergies.

> Maximum purchase price = Standalone value + Value of anticipated net synergies

The above representations makes sense for companies like General Electric, IBM, and HDFC, whose shares are traded in liquid markets and where no single shareholder (i.e., block shareholder) can control the activities of the firm. However, when markets are illiquid and there are block shareholders with the ability to direct the activities of the firms, the maximum offer price will have to reflect the liquidity risk and the value of control.

Liquidity Discounts An asset is liquid if it can be sold easily at a price that more or less corresponds to its investment value (intrinsic value). The shares of a private company may not be liquid in this sense because of limited interest among potential buyers. Such shares may have to be sold at a discount over their investment value. Such a discount is called *liquidity discount* or *marketability discount* and it may range from 15 percent to 30 percent.

Control Premiums and Minority Discounts In many acquisitions, the purchase price premium includes a premium for synergy as well as a premium for control. While the former represents revenue and cost synergies expected from combining the two firms, the latter reflects the value placed on the right to control the activities of the target firm on an ongoing basis.

Control rights include the ability to influence the strategy, select management, determine compensation, acquire and sell assets, make acquisitions, determine the capital structure and dividend policies, award contracts, and so on. The greater the control a block investor has, the lesser the influence a minority investor has and the lesser the value of the minority investor's stock. Just the way a control premium reflects an increase in the value an investor is willing to pay to direct the activities of the firm, a minority discount represents a reduction in the value of the investment because minority owners have little or no control.

PART B SNIPPETS

The Incentive Bubble

The dramatic rise of high powered incentive contracts for investors and managers, which are often poorly designed, have led to repeated governance failure and rising income inequalities, and the twin crises of modern American capitalism.

As Mihir Desai put it in his article "The Incentive Bubble," (January- February 2012 *Harvard Business Review*) "When risk is repeatedly mispriced because investors enjoy skewed incentive shemes, financial capital is being misallocated. When managers undertake investments or mergers in order to meet expectations that will trigger large compensation packages, real capital is being misallocated." He added, "And when relative compensation is distorted as it has been by the financial incentives bubble over the past several decades, one can only assume that human capital is being misallocated, to a disturbing degree."

Kelly Optimization Model

James Larry Kelly Jr. developed a formula to help investors make portfolio decisions. The Kelly formula determines the optimal size of a series of bets that would maximise the growth rate of a portfolio over time.

The Kelly formula is:

$$x = 2p - 1$$

where x is the fraction of bankroll to bet on an investment and p is the probability of winning associated with the investment.

Some illustrative values are shown below:

P	***x***
0.50	1.0 – 1.0 = 0%
0.55	1.1 – 1.0 = 0.1 or 10%
0.80	1.6 – 1.0 = 0.6 or 60%
1.00	2.0 – 1.0 = 1.0 or 100%

There are two caveats to the Kelly criterion: (a) You need an unlimited bankroll. (2) You need an infinite time horizon. No investor satisfies these criteria. So a modified Kelly approach is needed.

To avoid "gambler's run," you have to reduce risk. This can be done by underbetting. For example if the Kelly criterion implies betting 10% of bankroll, a half- Kelly implies betting 5% of bankroll and a fractional Kelly implies betting say just 2% of bankroll.

Since the risk of overbetting far outweighs the penalties of under- betting, investors should consider fractional Kelly bets. Of course, under- betting reduces the potential gain. However, the penalty for underbetting is not severe because the relationship in the Kelly model is parabolic. For example, a half- Kelly which reduces the amount of bet by 50 percent but reduces the potential growth rate by only 12 percent.

As Ed Thorp said, "The Kelly system is for people who simply want to compound their capital and see it grow to a very large number over time. If you have a lot of time and a lot of patience, then it is the right function for you." Some believe that both Warren Buffett and Bill Gross use the Kelly approach in managing their portfolio.

Asset Allocation

In asset allocation, it is important to combine art and science, as neither informed judgment nor quantitative analysis alone ensures consistently successful results. As David Swensen put it, "At one extreme, seat of the pants decisions lack rigor, omitting some information and either underemphasizing or overemphasizing the information that remains. At the other extreme, mechanistic application of quantitative tools produces naïve somewhat dangerous conclusions." A combination of the art of seasoned judgement and the science of quantitative analysis produces a powerful approach to asset allocation.

PART C : WIT AND WISDOM

HUMOUR

Fool

The renowned clergyman Michael D'Souza once found an envelope in this mailbox which contained a single sheet of paper of paper on which was written in block letters FOOL. In his sermon that day he mentioned that ordinarily people sign their letter but that day he received a letter with the name of the person written on it.

Sweet, Dear

In the shop, the wife looks at a new hat admiringly and tells our husband “Isn’t it just too sweet, dear?” The husband firmly replies, “No, it is just too dear, sweet.”

WISDOM

1. Praise does wonders for the sense of hearing.
2. Why is there so much satisfaction in parking on what’s left of the other guy’s nickel.