

The Valuation of a Closely Held Firm: Comment

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In "The Valuation of a Closely Held Firm: Difference in Expert Opinion," (*JFE*, 1988) Carl M. Hubbard and Darryl G. Waldron present the results of a survey in which the respondents were asked to place a value on a non-publicly traded firm. The authors classified the responses into four categories: the net asset valuation (NAV) approach; the discounted cash flow (DCF) approach; the earnings multiple (EM) approach; and the capitalized earnings (CE) approach. As the title of their paper states, there were differences of opinion among the respondents. The respondents disagreed not only on which approach to use but also on the details within each approach (e.g. what constitutes cash flow in the DCF approach).

However interesting the results of the Hubbard and Waldron survey may be, the results of a survey cannot replace economic reasoning when justifying the use of a particular approach to valuing a firm for purposes of litigation. Even if the respondents had agreed upon an approach, the survey would not serve as a substitute for economic reasoning when explaining to the court the logic of a particular assumption within an approach. Viewing the approaches from an economic perspective provides insights concerning the necessary assumptions associated with each approach. With an understanding of the assumptions necessary, the expert can aid the court by choosing the approach which minimizes the speculation involved in valuing the firm.

Few economists would disagree over the general proposition that the value of a firm is the present value of the stream of future earnings generated by the firm. Each of the four approaches to valuing a firm is a method of calculating the present value of the stream of future earnings. It is necessary for the expert to decide upon (make assumptions about): (1) the definition of earnings for the purpose of valuing the firm; (2) the forecast of the stream of future earnings; and (3) the discount rate used to calculate the present value. There are different approaches because there are different strategies for making these three decisions. An analysis of the four approaches shows that the EM approach takes direct advantage of market-generated information and, as such, may reduce speculation and be more appropriate for use by the expert in assisting the court.

The NAV approach values the firm as the net value of the tangible assets (i.e. not goodwill) of the firm. Here the stream of future earnings consists of one payment. The advantage of this approach is that the assumption necessary by the expert is limited. Certainly, in this context earnings would be defined as the amount of money that could be received through the liquidation of the assets of the firm less the liabilities of the firm. To place a liquidation value on the tangible assets the expert may be able to get an objective appraisal. Then the balance sheet liabilities would be subtracted to obtain the stream of earnings. It

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would not be necessary for the expert to choose a discount rate. This approach is valid when it yields a value greater than the present value of a stream of earnings realized when the firm retains the assets and uses them as an on-going business. If the NAV approach yields a lesser value, its use would undervalue the firm. Thus, the value of the firm as an on-going business must be calculated by comparison.

The DCF approach is the step-by-step procedure of calculating the present value of the future stream of earnings of the firm as an on-going concern. First, the cash flow appropriate for this context must be defined. However, the definition which is most appropriate when valuing a firm by discounting its future stream of earnings is not agreed upon in the survey.¹ The second step is to forecast the future values of cash flow. Even if the expert developed an accepted econometric model for the cash flow, there would likely be right hand side variables which would need to be forecasted, an exercise inviting controversy. Finally, a discount rate must be decided upon. The choice of a discount rate is complicated in this context in that the discount rate must reflect the amount of risk inherent in the forecasted earnings. Taken at face value, this approach makes little direct use of market-generated information. Thus, the details of the assumptions that the expert must make may be regarded as highly speculative. So, although few economists would object to the DCF approach on a theoretical basis, its implementation may detract from its validity.

Like the DCF approach, the CE approach consists of defining earnings, forecasting earnings and calculating the present value. The difference between the two approaches is that the CE approach stipulates that all of the future earnings values are equal and continue indefinitely.² The assumption that future earnings remain constant allows the present value to be readily calculated. As was the case with the DCF approach the definition of earnings and the value of the discount rate must be determined by the expert using the CE approach. The survey by Hubbard and Waldron showed little agreement in the definition of earnings but some agreement on the discount rate when the CE approach was used (as before, the discount rate must incorporate the risk). Although the CE approach initially appears to relieve the expert of forecasting earnings, that is not the case; the forecast is implicit rather than explicit.

When the EM approach is used the expert can to a large extent rely on market-generated information to value a firm. The expert can calculate the value of the firm as the product of the market-generated Price/Earnings (P/E) ratio of publicly traded companies in the same industry (the average of P/E ratios in the industry, say) and the most recent earnings of the firm. The definition of earnings used in the calculation of the P/E ratio is defined by the Securities and Exchange Commission (SEC) so it is not open to definition. Using the industry P/E ratio to value the firm in question does not require a separate forecast of earnings and a discount rate. When the EM approach is utilized with the SEC definitions and the market-generated value of the P/E ratio, the only necessary assumption is that the firm in question not be significantly different from the average firm in

¹ For the purposes of this paper, "cash flow" and "earnings" are interchangeable; each refers to the amount of money used in the calculation of the value of the firm.

² The authors use expected earnings when defining the CE approach but it is common to use the most recent earnings.

the industry in terms of expected earnings growth rate and risk or that the differences off-set each other. And it should be recognized that both the growth rate of earnings and risk would, to some extent, be controlled by market forces which are common to all firms in the industry. Certainly, assuming average performance is, a priori, a reasonable assumption.

Each of the four approaches to valuing a firm can be viewed in the theoretical context of calculating the present value of a future stream of earnings. Using the EM approach allows for greater utilization of market-generated information. Using market-generated information reduces speculation in the court and thus better serves the court.

References

- Hubbard, Carl M. and Waldron, Darryl G., "The Valuation of a Closely Held Firm: Difference in Expert Opinion," *Journal of Forensic Economics*, Vol. II, No. 1, December 1988, pp. 47-54.