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Control Premiums and the Value of the Closely-Held Firm

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This paper demonstrates that control premiums are warranted in the valuation of closely-held firms when perquisites exist. The value of control is a function of the ownership structure and the size of perquisite cash flows. The conventional logic of assigning control premiums based upon transactions in the public market is shown to be flawed. A statistic for calculating control premiums based on ownership structure and the size of perquisite flows is developed. The paper closes with a short discussion of how minority discounts and control premiums are related.

A lively debate has arisen concerning the extent and measurement of control premiums and minority discounts in the valuation of closely-held firms. Most analysts believe that premiums for control and minority discounts are warranted (See Lease et al. [4], Maher [5], and De Angelo & De Angelo [2]). Similarly , the Courts and the Internal Revenue Service have accepted the argument that premiums and discounts based upon one's proportional ownership should be assigned (Stann [8]). Typically, control premiums are often added to minority based valuations of closely-held firms by utilizing the price paid to acquire control of publicly traded firms relative to their minority based value prior to the acquisition date (See Pratt [7]). Data sources such as Mergerstat [6] are often used to justify the extent of control premiums. For example Mergerstat indicates that based upon 303 acquisitions in 1989 the average premium paid over market was 41.0%.

This paper shows the important role played by perquisite flows and ownership structure in evaluating control premiums. A statistic for measuring the value of control in a standard multi-period model is developed and an example is presented. The problems with the more traditional methodology for measuring control premiums and the strong incentive for the controlling shareholder to acquire

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perquisites are discussed. We conclude with a brief summary of the importance of this issue.

BASIS FOR CONTROL PREMIUMS

A control premium is an assessment of additional equity value, over and above the value calculated on a pro-rata basis. The additional value has been postulated to exist for several reasons, which can be allocated into one of three categories. First, a controlling party can dictate management decisions concerning firm operations. Second, the controlling party can allocate perquisites (e.g., company automobiles and above-market salaries). Finally, psychological benefits of ownership may accrue to a controlling shareholder.

Control over the direction of the firm is not an adequate reason for assessing a control premium. In the case of management policies designed to increase the value of the firm both controlling and minority interests are served by good business decisions. To our knowledge there is no data indicating that either minority or majority decision-makers are superior managers. In the absence of such data, we should expect that, on balance, similar returns will be earned and value of the firm will be invariant to who makes such decisions.

The psychological benefits of control can not readily be measured and must be analyzed on a case-by-case basis. These benefits and their impact on control premiums are beyond the scope of this paper.

The final category, perquisites, is an important and financially measurable area in which the interests of controlling and minority shareholders differ, thus justifying the assessment of control premiums. Perquisites are earnings that accrue to management personnel over and above normal levels of compensation. Controlling shareholders can control the distribution of perquisites and thereby gain benefits not available to minority shareholders.

Perquisites will have an impact on control premiums in two ways. First, the size of perquisite flows directly contributes to the value of control premiums. Second, control premiums arising from perquisites can only exist to the extent monetary flows can be diverted from minority shareholders. Thus the value of control depends not only on the volume of the perquisites but also upon the structure of ownership. For example, a 90% shareholder who receives $100,000 of perquisites is only diverting $10,000 away from minority shareholders. Therefore, the smaller the margin of control ownership the greater will be the value of control. A 51% shareholder, in this case, can direct up to $49,000 away from the minority shareholder.

MEASUREMENT OF CONTROL PREMIUMS

The total value of perquisites can be divided according to the pro-rata share of ownership in a standard discounted cash flow model as shown below:

$$\frac{P*(1+g)}{k-g} = \frac{P*m*(1+g)}{k-g} + \frac{P*(1-m)*(1+g)}{k-g}$$

Total Value of Perquisites	=	Minority Share of Perquisites	+	Majority Share of Perquisites

where: P = the annual dollar amount of perquisites.
   m = the non-controlling share of ownership.
   g = the constant growth rate of perquisites.
   k = the required rate of return.

The total value of perquisites is the present value of the expected future stream perquisites discounted at the firm's required return on equity. Normally, this value would be allocated in a pro-rata fashion based upon proportional ownership as indicated above.

The value of control results from shifting the minority shareholder's perquisite value to the controlling shareholder. Therefore the control premium is represented by:

$$CP = \frac{P*m*(1+g)}{k-g}$$

Given the above statistic we can now calculate the value of control when determining the value of a closely-held firm. For example, assume a firm has after-tax distributable income of $50,000 per annum. The controlling shareholder owns 75% of equity. Based upon an examination of books and records it is determined that there are $10,000 of perquisites. This increases after-tax distributable income to $60,000. The firm is expected to have long-term earnings growth of 5% and investors have a required rate of return of 25%. Using the Gordon Model to value the equity of an entity, we arrive at a value of $315,000.

$$\frac{\$60,000\,(1.05)}{.25 - .05} = \$315,000$$

However, the perquisite value of $52,500 [$10,000 * 1.05/(.25 − .05)] is not distributed based upon proportional ownership. All this value accrues to the controlling shareholder. Thus the controlling shareholder's value increases by $13,125 beyond his pro-rata share of perquisites as shown below.

$$CP = \frac{P*m*(1+g)}{k-g}$$

$$13,125 = \frac{10,000 * .25 * (1 + .05)}{.25 - .05}$$

Ownership structure has an important effect on the value of control. For example, if the controlling party owned 60% of equity, the value of control would increase to $21,000.

Typically, business appraisers value a control block of a private firm in one of two ways. In the first case, a control block is valued by determining a minority based firm value and applying a control premium to that control block. The size of the control premium employed is often a multiple based on median acquisition prices of acquired public firms (See Pratt [7]). This approach is flawed because it does not provide a mechanism to control for the size of perquisites and the structure of ownership.

In the second case, the appraiser will calculate the value of equity on a control premise and then determine value on a pro-rata basis. Here the value of the control block is understated to the extent a diversion of perquisites from the minority shareholder has taken place.

This failure to properly account for the size of perquisites and ownership structure may explain why empirical studies indicate a large range of control premiums. For example, Houlinhan-Lokey [3] report a range of control premiums from 1% to 187% with a median of 150%.

REINVESTMENT RATE

Even in situations where the firm has the opportunity to reinvest at higher rates than the controlling shareholder, we would expect the controlling shareholder to prefer perquisites. The controlling shareholder will only prefer perquisite earnings over reinvestment earnings if she or he can earn at least as much from perquisite income as she or he would have from having the money reinvested in the firm. This relationship can be expressed as:

$$z = \frac{(1 + r)}{(1 - m)} - 1$$

where: z = breakeven rate where the investor is indifferent between perquisites and reinvestment of earnings.

r = rate of return on funds invested outside the firm by the controlling shareholder.

m = minority share of ownership.

As indicated, if m = 0, (i.e., the controlling shareholder holds 100% of the equity) the controlling shareholder places the funds wherever they earn the highest rate of return. For values of m less than 1 it will almost certainly be in the controlling

shareholder's interest to pay himself perquisites. For example, a controlling shareholder owning 80% of the equity with an ability to earn 10% outside the firm would prefer perquisites unless the firm could earn 37.5% on those funds.

SUMMARY

We have shown that the size of control premiums depends on ownership structure and the extent to which perquisites can be diverted from minority shareholders. Further, control premiums for non-pecuniary reasons may be warranted but must be considered on a case-by-case basis.

We stop short of claiming symmetry for minority discounts and control premiums. While the gain from perquisite income to the controlling shareholder is equal to the loss to the minority shareholder, where reinvestment opportunities are the same for the firm and all investors, the existence of non-pecuniary driven actions by controlling shareholders may have pecuniary effects on minority shareholders. As stated previously, non-pecuniary issues must be analyzed on a case-by-case basis. Therefore, we believe that our measure is the correct measure of the value of the control premium for pecuniary issues, and that the same measure is an excellent starting point for evaluating a minority discount. It is our view that unless there is significant evidence to the contrary both control premiums and minority discounts should be measured using the model presented.

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